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

FORM 10-Q

☑ **Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the Quarterly Period Ended June 30, 2024

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from to

Commission File Number 001-35406

Illumina, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**33-0804655**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

5200 Illumina Way , San Diego , CA 92122
(Address of principal executive offices) (Zip code)

(858) 202-4500
(Registrant's telephone number, including area code)

N/A
(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, $0.01 par value	ILMN	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer þ	Accelerated filer ☐	Non-accelerated filer ☐	Smaller reporting company ☐	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13a of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No þ

As of August 2, 2024, there were 159.3 million shares of the registrant's common stock outstanding.

ILLUMINA, INC.
FORM 10-Q
FOR THE FISCAL QUARTER ENDED JUNE 30, 2024

TABLE OF CONTENTS

See "Form 10-Q Cross-Reference Index" within Other Key Information for a cross-reference to the parts and items requirements of the Securities and Exchange Commission Quarterly Report on Form 10-Q.

Consideration Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains, and our officers and representatives may from time to time make, “forward-looking statements” within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Words such as: “anticipate,” “intend,” “plan,” “goal,” “seek,” “believe,” “continue,” “project,” “estimate,” “expect,” “strategy,” “future,” “likely,” “may,” “potential,” “predict,” “should,” “will,” or similar words or phrases, or the negatives of these words, may identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward looking. Examples of forward-looking statements include, among others, statements we make regarding:

- our expectations as to our future financial performance, results of operations, or other operational results or metrics;
- the benefits that we expect will result from our business activities and certain transactions we have completed, or may complete, such as product introductions, increased revenue, decreased expenses, and avoided expenses and expenditures;
- our expectations of the effect on our financial condition of claims, litigation, contingent liabilities, and governmental investigations, proceedings, and regulations;
- our strategies or expectations for product development, market position, financial results, and reserves;
- our ability to successfully implement cost reduction plans in a timely manner and the possibility that costs associated with our cost reduction plans are greater than we anticipate;
- risks relating to the recent divestiture of GRAIL, Inc. (f/k/a GRAIL, LLC) (GRAIL);
- the European Commission proceedings in respect of our acquisition and divestiture of GRAIL;
- the Article 14(2)(b) fine imposed by the European Commission on July 12, 2023; and
- other expectations, beliefs, plans, strategies, anticipated developments, and other matters that are not historical facts.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations, and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy, and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results and financial condition may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others, the following:

- our expectations and beliefs regarding prospects and growth for our business and the markets in which we operate;
- the timing and mix of customer orders among our products and services;
- challenges inherent in developing, manufacturing, and launching new products and services, including expanding manufacturing operations and reliance on third-party suppliers for critical components;
- the impact of recently launched or pre-announced products and services on existing products and services;
- risks and uncertainties regarding legal and regulatory proceedings;

- risks associated with contracts or other agreements containing provisions that might be implicated by the divestiture of GRAIL or other aspects of the EC Divestment Decision, including our ability to fully realize the anticipated economic benefits of our commercial arrangements with GRAIL and our obligations with respect to contingent value rights (the CVRs) issued by us in connection with the GRAIL acquisition, which may adversely affect us and our business and/or the market value of the CVRs;
- the risk of additional litigation arising against us in connection with the GRAIL acquisition;
- the assumptions underlying our critical accounting policies and estimates;
- our assessments and estimates that determine our effective tax rate;
- our assessments and beliefs regarding the outcome of pending legal proceedings and any liability that we may incur as a result of those proceedings, as well as the cost and potential diversion of management resources associated with these proceedings;
- uncertainty, or adverse economic and business conditions, including as a result of slowing or uncertain economic growth, public health crisis, or armed conflict; and
- other factors detailed in our filings with the Securities and Exchange Commission (SEC), including the risks, uncertainties, and assumptions described in “Risk Factors” within the Business & Market Information section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, the “Other Key Information” section of our Quarterly Report on Form 10-Q for the period ended March 31, 2024, the “Risk Factors” section below, or in information disclosed in public conference calls, the date and time of which are released beforehand.

Any forward-looking statement made by us in this Quarterly Report on Form 10-Q is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation, and do not intend, to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, or to review or confirm analysts’ expectations, or to provide interim reports or updates on the progress of any current financial quarter, in each case whether as a result of new information, future developments, or otherwise.

CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

ILLUMINA, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In millions)

	June 30, 2024	December 31, 2023
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 920**	$ 1,048
Short-term investments	**74**	6
Accounts receivable, net	**641**	734
Inventory, net	**561**	587
Prepaid expenses and other current assets	**263**	234
Total current assets	**2,459**	2,609
Property and equipment, net	**859**	1,007
Operating lease right-of-use assets	**460**	544
Goodwill	**1,079**	2,545
Intangible assets, net	**278**	2,993
Deferred tax assets, net	**632**	56
Other assets	**314**	357
Total assets	**$ 6,081**	$ 10,111
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	**$ 199**	$ 245
Accrued liabilities	**1,265**	1,325
Term debt, current portion	**744**	—
Total current liabilities	**2,208**	1,570
Operating lease liabilities	**616**	687
Term debt	**1,490**	1,489
Other long-term liabilities	**331**	620
Stockholders' equity:		
Common stock	**2**	2
Additional paid-in capital	**7,347**	9,555
Accumulated other comprehensive income (loss)	**14**	(1)
Accumulated deficit	**(2,133)**	(19)
Treasury stock, at cost	**(3,794)**	(3,792)
Total stockholders' equity	**1,436**	5,745
Total liabilities and stockholders' equity	**$ 6,081**	$ 10,111

See accompanying notes to condensed consolidated financial statements.

ILLUMINA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(In millions, except per share amounts)

	Three Months Ended		Six Months Ended	
	June 30, 2024	**July 2, 2023**	**June 30, 2024**	**July 2, 2023**
Revenue:				
Product revenue	**$ 927**	$ 1,001	**$ 1,803**	$ 1,923
Service and other revenue	**185**	175	**385**	340
Total revenue	**1,112**	1,176	**2,188**	2,263
Cost of revenue:				
Cost of product revenue	**250**	305	**504**	591
Cost of service and other revenue	**95**	91	**202**	190
Amortization of acquired intangible assets	**46**	48	**94**	96
Total cost of revenue	**391**	444	**800**	877
Gross profit	**721**	732	**1,388**	1,386
Operating expense:				
Research and development	**325**	358	**660**	699
Selling, general and administrative	**147**	462	**588**	839
Goodwill and intangible impairment	**1,886**	—	**1,889**	—
Total operating expense	**2,358**	820	**3,137**	1,538
Loss from operations	**(1,637)**	(88)	**(1,749)**	(152)
Other income (expense):				
Interest income	**13**	17	**25**	34
Interest expense	**(20)**	(19)	**(39)**	(39)
Other (expense) income, net	**(332)**	1	**(323)**	(10)
Total other expense, net	**(339)**	(1)	**(337)**	(15)
Loss before income taxes	**(1,976)**	(89)	**(2,086)**	(167)
Provision for income taxes	**12**	145	**28**	64
Net loss	**$ (1,988)**	$ (234)	**$ (2,114)**	$ (231)
Loss per share:				
Basic	**$ (12.48)**	$ (1.48)	**$ (13.28)**	$ (1.46)
Diluted	**$ (12.48)**	$ (1.48)	**$ (13.28)**	$ (1.46)
Shares used in computing loss per share:				
Basic	**159**	158	**159**	158
Diluted	**159**	158	**159**	158

See accompanying notes to condensed consolidated financial statements.

ILLUMINA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited)
(In millions)

	Three Months Ended		Six Months Ended	
	June 30, 2024	**July 2, 2023**	**June 30, 2024**	**July 2, 2023**
Net loss	**$ (1,988)**	$ (234)	**$ (2,114)**	$ (231)
Unrealized gain on cash flow hedges, net of deferred tax	**2**	13	**15**	9
Total comprehensive loss	**$ (1,986)**	$ (221)	**$ (2,099)**	$ (222)

See accompanying notes to condensed consolidated financial statements.

ILLUMINA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)
(In millions)

	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Retained Earnings	Treasury Stock		Total Stockholders'
	Shares	Amount	Capital	Income (Loss)	(Accumulated Deficit)	Shares	Amount	Equity
Balance as of January 1, 2023	198	$ 2	$ 9,207	$ 3	$ 1,142	(40)	$ (3,755)	$ 6,599
Net income	—	—	—	—	3	—	—	3
Unrealized loss on cash flow hedges, net of deferred tax	—	—	—	(4)	—	—	—	(4)
Issuance of common stock, net of repurchases	—	—	37	—	—	—	(9)	28
Share-based compensation	—	—	67	—	—	—	—	67
Balance as of April 2, 2023	198	2	9,311	(1)	1,145	(40)	(3,764)	6,693
Net loss	—	—	—	—	(234)	—	—	(234)
Unrealized gain on cash flow hedges, net of deferred tax	—	—	—	13	—	—	—	13
Issuance of common stock, net of repurchases	—	—	—	—	—	—	(3)	(3)
Share-based compensation	—	—	77	—	—	—	—	77
Reclassification of liability-classified awards	—	—	9	—	—	—	—	9
Balance as of July 2, 2023	198	2	9,397	12	911	(40)	(3,767)	6,555
Net loss	—	—	—	—	(754)	—	—	(754)
Unrealized gain on cash flow hedges, net of deferred tax	—	—	—	9	—	—	—	9
Issuance of common stock, net of repurchases	—	—	30	—	—	—	(2)	28
Share-based compensation	—	—	60	—	—	—	—	60
Balance as of October 1, 2023	198	2	9,487	21	157	(40)	(3,769)	5,898
Net loss	—	—	—	—	(176)	—	—	(176)
Unrealized loss on cash flow hedges, net of deferred tax	—	—	—	(22)	—	—	—	(22)
Issuance of common stock, net of repurchases	1	—	(3)	—	—	—	(23)	(26)
Share-based compensation	—	—	71	—	—	—	—	71
Balance as of December 31, 2023	199	$ 2	$ 9,555	$ (1)	$ (19)	(40)	$ (3,792)	$ 5,745

See accompanying notes to condensed consolidated financial statements.

ILLUMINA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)
(In millions)

	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Treasury Stock		Total Stockholders'
	Shares	Amount	Capital	(Loss) Income	Deficit	Shares	Amount	Equity
Balance as of December 31, 2023	199	$ 2	$ 9,555	$ (1)	$ (19)	(40)	$ (3,792)	$ 5,745
Net loss	—	—	—	—	(126)	—	—	(126)
Unrealized gain on cash flow hedges, net of deferred tax	—	—	—	13	—	—	—	13
Issuance of common stock, net of repurchases	—	—	36	—	—	—	(1)	35
Share-based compensation	—	—	67	—	—	—	—	67
Balance as of March 31, 2024	199	2	9,658	12	(145)	(40)	(3,793)	5,734
Net loss	—	—	—	—	(1,988)	—	—	(1,988)
Unrealized gain on cash flow hedges, net of deferred tax	—	—	—	2	—	—	—	2
Issuance of common stock, net of repurchases	—	—	—	—	—	—	(1)	(1)
Share-based compensation	—	—	88	—	—	—	—	88
Spin-Off of GRAIL (see Note 2)	—	—	(2,399)	—	—	—	—	(2,399)
Balance as of June 30, 2024	199	$ 2	$ 7,347	$ 14	$ (2,133)	(40)	$ (3,794)	$ 1,436

See accompanying notes to condensed consolidated financial statements.

ILLUMINA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(In millions)

	Six Months Ended	
	June 30, 2024	July 2, 2023
Cash flows from operating activities:		
Net loss	**$ (2,114)**	$ (231)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation expense	**116**	116
Amortization of intangible assets	**97**	99
Share-based compensation expense	**208**	199
Deferred income taxes	**(180)**	36
Goodwill and intangible (IPR&D) impairment	**1,889**	—
Property and equipment and right-of-use asset impairment	**32**	7
Net losses on strategic investments	**330**	19
Gain on Helix contingent value right	**(11)**	(3)
Change in fair value of contingent consideration liabilities	**(255)**	28
Other	**(11)**	14
Changes in operating assets and liabilities:		
Accounts receivable	**72**	(78)
Inventory	**4**	(49)
Prepaid expenses and other current assets	**(16)**	(6)
Operating lease right-of-use assets and liabilities, net	**(14)**	(10)
Other assets	**(9)**	4
Accounts payable	**(30)**	(44)
Accrued liabilities	**83**	29
Other long-term liabilities	**(34)**	(15)
Net cash provided by operating activities	**157**	115
Cash flows from investing activities:		
Purchases of property and equipment	**(67)**	(99)
Purchases of strategic investments	**(22)**	(11)
Sales of strategic investments	**—**	18
Cash paid for intangible asset	**—**	(1)
Net cash used in investing activities	**(89)**	(93)
Cash flows from financing activities:		
GRAIL cash deconsolidated as a result of spin-off	**(968)**	**—**
Borrowings on delayed draw term loan, net of issuance costs	**744**	—
Debt issuance costs paid for credit facility	**—**	(1)
Payments on contingent consideration liabilities	**(1)**	—
Payments on term notes	**—**	(500)
Taxes paid related to net share settlement of equity awards	**(2)**	(12)
Proceeds from issuance of common stock	**36**	37
Net cash used in financing activities	**(191)**	(476)
Effect of exchange rate changes on cash and cash equivalents	**(5)**	(4)
Net decrease in cash and cash equivalents	**(128)**	(458)
Cash and cash equivalents at beginning of period	**1,048**	2,011
Cash and cash equivalents at end of period	**$ 920**	$ 1,553
Supplemental cash flow information:		
GRAIL net assets, excluding cash and cash equivalents, deconsolidated as a result of spin-off	**$ 1,770**	$ —

See accompanying notes to condensed consolidated financial statements.

ILLUMINA, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

Unless the context requires otherwise, references in this report to "Illumina," the "Company," "we," "us," and "our" refer to Illumina, Inc. and its consolidated subsidiaries.

1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Business Overview

We are a provider of sequencing- and array-based solutions, serving customers in the research, clinical and applied markets. Our products are used for applications in the life sciences, oncology, reproductive health, agriculture and other emerging segments. Our customers include leading genomic research centers, academic institutions, government laboratories, and hospitals, as well as pharmaceutical, biotechnology, commercial molecular diagnostic laboratories, and consumer genomics companies.

On June 24, 2024, we completed the separation (the Spin-Off) of GRAIL into a new public company through the distribution of 26,547,021 shares of GRAIL common stock to Illumina stockholders on a pro rata basis. The distribution reflected approximately 85.5 % of the outstanding common stock of GRAIL as of 5:00 p.m. New York time on June 13, 2024, the record date for the distribution (the Record Date). We retained approximately 14.5 % of the shares of GRAIL common stock immediately following the Spin-Off. The disposition of GRAIL did not meet the criteria to be reported as a discontinued operation and accordingly, GRAIL's assets, liabilities, results of operations and cash flows have not been reclassified. Refer to note 2. GRAIL Spin-Off for additional details.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. Interim financial results are not necessarily indicative of results anticipated for the full year. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and footnotes included in the Annual Report on Form 10-K for the fiscal year ended December 31, 2023, from which the prior year balance sheet information herein was derived. The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expense, and related disclosure of contingent assets and liabilities. Though macroeconomic factors such as inflation, exchange rate fluctuations and concerns about an economic downturn present additional uncertainty, we continue to use the best information available to form our critical accounting estimates. Actual results could differ from those estimates.

The unaudited condensed consolidated financial statements include our accounts, our wholly-owned subsidiaries, and majority-owned or controlled companies. All intercompany transactions and balances have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform to the current period presentation. In management's opinion, the accompanying unaudited condensed consolidated financial statements reflect all adjustments, consisting of normal recurring adjustments, considered necessary for a fair presentation of the results for the interim periods presented.

Fiscal Year

Our fiscal year is the 52 or 53 weeks ending the Sunday closest to December 31, with quarters of 13 or 14 weeks ending the Sunday closest to March 31, June 30, September 30, and December 31. References to Q2 2024 and Q2 2023 refer to the three months ended June 30, 2024 and July 2, 2023, respectively, which were both 13 weeks, and references to year-to-date (YTD) 2024 and 2023 refer to the six months ended June 30, 2024 and July 2, 2023, respectively, which were both 26 weeks.

Significant Accounting Policies

During YTD 2024, there were no changes to our significant accounting policies as described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, with the exception of the following for income taxes:

Historically, we calculated the provision/(benefit) for income taxes for interim periods utilizing an estimated annual effective tax rate applied to the income/(loss) for the reporting period, except in Q1 2024 and Q2 2023 when a year-to-date effective tax rate method was utilized. In accordance with the authoritative guidance for accounting for income taxes in interim periods, we determined the estimated annual effective tax rate method would provide a more reliable estimate of the provision for income taxes for Q2 2024 and YTD 2024 since minor changes in the estimated income/(loss) before income taxes would not result in significant changes in the estimated annual effective tax rate.

Accounting Pronouncements Pending Adoption

In December 2023, the FASB issued ASU 2023-07, *Segment Reporting (Topic 280) - Improvements to Reportable Segment Disclosures* . The new standard requires a company to disclose incremental segment information on an annual and interim basis, including significant segment expenses and measures of profit or loss that are regularly provided to the chief operating decision maker (CODM). The standard is effective for us beginning in fiscal year 2024 and interim periods within fiscal year 2025, with early adoption permitted. We do not expect to early adopt the new standard. We are currently evaluating the impact of ASU 2023-07 on the consolidated financial statements and related disclosures and will adopt the new standard using a retrospective approach.

In December 2023, the FASB also issued ASU 2023-09, *Income Taxes (Topic 740) - Improvements to Income Tax Disclosures* . The new standard requires a company to expand its existing income tax disclosures, specifically related to the rate reconciliation and income taxes paid. The standard is effective for us beginning in fiscal year 2025, with early adoption permitted. We do not expect to early adopt the new standard. The new standard is expected to be applied prospectively, but retrospective application is permitted. We are currently evaluating the impact of ASU 2023-09 on the consolidated financial statements and related disclosures.

Loss per Share

Basic loss per share is computed based on the weighted average number of common shares outstanding during the period. Diluted loss per share is computed based on the sum of the weighted average number of common shares and potentially dilutive common shares outstanding during the period. In loss periods, basic and diluted loss per share are identical since the effect of potentially dilutive common shares is antidilutive and therefore excluded. Potentially dilutive common shares from equity awards are determined using the average share price for each period under the treasury stock method. In addition, proceeds from exercise of equity awards and the average amount of unrecognized compensation expense for equity awards are assumed to be used to repurchase shares.

The following table presents the weighted average shares used to calculate basic and diluted loss per share:

In millions	Q2 2024	Q2 2023	YTD 2024	YTD 2023
Weighted average shares used in calculating basic loss per share	**159**	158	**159**	158
Weighted average shares used in calculating diluted loss per share	**159**	158	**159**	158
Antidilutive shares:				
Equity awards	**5**	3	**4**	3
Convertible senior notes	**—**	2	**—**	2
Potentially dilutive shares excluded from calculation due to antidilutive effect	**5**	5	**4**	5

2. GRAIL Spin-Off

On June 24, 2024, we completed the Spin-Off of GRAIL into a separate, independent publicly traded company through the distribution of 26,547,021 shares of GRAIL common stock to Illumina stockholders on a pro rata basis. The GRAIL common stock distributed in the Spin-Off consisted of approximately 85.5 % of the outstanding common stock of GRAIL as of the Record Date. The Spin-Off was structured as a tax-free spin-off and Illumina stockholders received one share of GRAIL common stock for every six shares of Illumina common stock held on the Record Date. We retained approximately 14.5 % of the shares of GRAIL common stock immediately following the Spin-Off. The disposition of GRAIL did not meet the criteria to be reported as a discontinued operation and accordingly, GRAIL's assets, liabilities, results of operations and cash flows have not been reclassified.

As part of the Spin-Off, we contributed to GRAIL an amount, in cash, to cover 2.5 years of GRAIL's operations (the Disposal Funding), which was determined to be $ 974 million, less the cash and cash equivalents held by GRAIL.

The carrying amounts of GRAIL's assets and liabilities included as part of the disposal group were as follows:

In millions		
Cash and cash equivalents	$	968
Accounts receivable, net		13
Inventory, net		22
Prepaid expenses and other current assets		27
Property and equipment, net		80
Operating lease right-of-use assets		74
Intangible assets, net		2,201
Other assets		14
Accounts payable		(12)
Accrued liabilities		(118)
Operating lease liabilities		(62)
Other long term-liabilities		(469)
GRAIL net assets	$	2,738
Amount of GRAIL net assets recorded to short-term investments	$	397
Amount of GRAIL net assets recorded to additional paid-in capital	$	2,341

Additional adjustments recorded to additional paid-in capital as a result of the GRAIL Spin-Off:		
Non-contingent indemnification liability (see Note 6)		1
Tax adjustment for difference between the book and tax values of our retained investment in GRAIL		57
Total recorded to additional paid-in capital as a result of the GRAIL Spin-Off	$	2,399

See note 10. Segment Information for GRAIL's results of operations included in our consolidated statements of operations for the three and six months ended June 30, 2024 and July 2, 2023, respectively.

In planning for and executing the Spin-Off, we incurred $ 37 million and $ 52 million in separation-related transaction costs during Q2 2024 and YTD 2024, respectively, which were recorded in selling, general, and administrative expense. These transaction costs primarily related to financial advisory, legal, regulatory and other professional services fees directly related to the Spin-Off.

In connection with the Spin-Off, Illumina and GRAIL entered into various agreements to effect the Spin-Off and provide a framework for GRAIL's relationship with Illumina after the Spin-Off, including a separation and distribution agreement, an employee matters agreement, a tax matters agreement, an amended supply and commercialization agreement and a stockholder's and registration rights agreement (the Agreements). The Agreements determine the treatment of the assets, employees, liabilities and obligations (including certain tax-related assets and liabilities) of Illumina attributable to periods prior to, at and after GRAIL's separation and also govern certain relationships between Illumina and GRAIL after the Spin-Off.

3. REVENUE

Our revenue is generated from the sale of products and services. Product revenue consists of sales of instruments and consumables used in genetic analysis. Service and other revenue consists of revenue generated from genotyping and sequencing services, instrument service contracts, development and licensing agreements, and, prior to the Spin-Off of GRAIL on June 24, 2024, cancer detection testing services related to the GRAIL business.

Revenue by Source

	Q2 2024			Q2 2023		
In millions	**Sequencing**	**Microarray**	**Total**	**Sequencing**	**Microarray**	**Total**
Consumables	**$ 729**	**$ 78**	**$ 807**	$ 734	$ 70	$ 804
Instruments	**116**	**4**	**120**	193	4	197
Total product revenue	**845**	**82**	**927**	927	74	1,001
Service and other revenue	**171**	**14**	**185**	156	19	175
Total revenue	**$ 1,016**	**$ 96**	**$ 1,112**	$ 1,083	$ 93	$ 1,176

	YTD 2024			YTD 2023		
In millions	**Sequencing**	**Microarray**	**Total**	**Sequencing**	**Microarray**	**Total**
Consumables	**$ 1,420**	**$ 149**	**$ 1,569**	$ 1,419	$ 148	$ 1,567
Instruments	**226**	**8**	**234**	346	10	356
Total product revenue	**1,646**	**157**	**1,803**	1,765	158	1,923
Service and other revenue	**349**	**36**	**385**	293	47	340
Total revenue	**$ 1,995**	**$ 193**	**$ 2,188**	$ 2,058	$ 205	$ 2,263

Revenue by Geographic Area

Based on region of destination (in millions)	Q2 2024	Q2 2023	YTD 2024	YTD 2023
Americas	**$ 640**	$ 640	**$ 1,243**	$ 1,256
Europe	**289**	303	**568**	564
Greater China[1]	**75**	115	**153**	206
Asia-Pacific, Middle East, and Africa[2]	**108**	118	**224**	237
Total revenue	**$ 1,112**	$ 1,176	**$ 2,188**	$ 2,263

(1) Region includes revenue from China, Taiwan, and Hong Kong.

(2) Region includes revenue from Russia and Turkey.

Performance Obligations

We regularly enter into contracts with multiple performance obligations. These contracts are believed to be firm as of the balance sheet date. However, we may allow customers to make product substitutions as we launch new products. The timing of shipments depends on several factors, including agreed upon shipping schedules, which may span multiple quarters. Most performance obligations are generally satisfied within a short time frame, approximately three to six months , after the contract execution date. As of June 30, 2024, the aggregate amount of the transaction price allocated to remaining performance obligations was $ 717 million, of which approximately 82 % is expected to be converted to revenue in the next twelve months , approximately 13 % in the following twelve months , and the remainder thereafter.

Contract Assets and Liabilities

Contract assets, which consist of revenue recognized and performance obligations satisfied or partially satisfied in advance of customer billing, were $ 16 million and $ 18 million as of June 30, 2024 and December 31, 2023, respectively, and were recorded in prepaid expenses and other current assets.

Contract liabilities, which consist of deferred revenue and customer deposits, as of June 30, 2024 and December 31, 2023, were $ 305 million and $ 329 million, respectively, of which the short-term portions of $ 238 million and $ 252 million, respectively, were recorded in accrued liabilities and the remaining long-term portions were recorded in other long-term liabilities. Revenue recorded in Q2 2024 and YTD 2024 included $ 70 million and $ 165 million, respectively, of previously deferred revenue that was included in contract liabilities as of December 31, 2023.

4. INVESTMENTS AND FAIR VALUE MEASUREMENTS

Strategic Investments

Marketable Equity Securities

Our short-term investments consist of marketable equity securities. As of June 30, 2024 and December 31, 2023, the fair value of our marketable equity securities totaled $ 74 million and $ 6 million, respectively. The increase in our marketable equity securities relates to the investment we retained in GRAIL subsequent to the Spin-Off, which was initially recorded as $ 397 million, representing 14.5 % of GRAIL's net assets disposed of at Spin-Off. Refer to note 2. GRAIL Spin-Off for further details. Subsequent to the Spin-Off, we recorded an unrealized loss of $ 328 million in Q2 2024 and YTD 2024 based on the fair value of our investment in GRAIL as of quarter-end.

Gains and losses recognized in other (expense) income, net on our marketable equity securities were as follows:

In millions	Q2 2024	Q2 2023	YTD 2024	YTD 2023
Net losses recognized during the period on marketable equity securities	**$ (330)**	$ —	**$ (329)**	$ (2)
Less: Net gains (losses) recognized during the period on marketable equity securities sold during the period	**—**	1	**—**	(2)
Net unrealized losses recognized during the period on marketable equity securities still held at the reporting date	**$ (330)**	$ (1)	**$ (329)**	$ —

Non-Marketable Equity Securities

As of June 30, 2024 and December 31, 2023, the aggregate carrying amounts of our non-marketable equity securities without readily determinable fair values, included in other assets, were $ 28 million.

Venture Funds

We invest in two venture capital investment funds (the Funds) with capital commitments of $ 100 million, callable through April 2026, and up to $ 150 million, callable through July 2029, respectively, of which $ 3 million (plus recallable distributions of approximately $ 10 million) and up to $ 52 million, respectively, remained callable as of June 30, 2024. Our investments in the Funds are accounted for as equity-method investments. The aggregate carrying amounts of the Funds, included in other assets, were $ 189 million and $ 168 million as of June 30, 2024 and December 31, 2023, respectively. We recorded an unrealized loss of $ 2 million and an unrealized gain of $ 3 million in Q2 2024 and YTD 2024, respectively, and unrealized losses of $ 2 million and $ 14 million in Q2 2023 and YTD 2023, respectively, in other (expense) income, net.

Revenue recognized from transactions with our strategic investees was $ 4 million and $ 7 million for Q2 2024 and YTD 2024, respectively, and $ 28 million and $ 64 million for Q2 2023 and YTD 2023, respectively.

Fair Value Measurements

The following table presents the hierarchy for assets and liabilities measured at fair value on a recurring basis:

	June 30, 2024				December 31, 2023			
In millions	**Level 1**	**Level 2**	**Level 3**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:								
Money market funds (cash equivalents)	**$ 724**	**$ —**	**$ —**	**$ 724**	$ 774	$ —	$ —	$ 774
Marketable equity securities	**74**	**—**	**—**	**74**	6	—	—	6
Helix contingent value right	**—**	**—**	**79**	**79**	—	—	68	68
Deferred compensation plan assets	**—**	**67**	**—**	**67**	—	61	—	61
Total assets measured at fair value	**$ 798**	**$ 67**	**$ 79**	**$ 944**	$ 780	$ 61	$ 68	$ 909
Liabilities:								
Contingent consideration liabilities	**$ —**	**$ —**	**$ 131**	**$ 131**	$ —	$ —	$ 387	$ 387
Deferred compensation plan liability	**—**	**63**	**—**	**63**	—	59	—	59
Total liabilities measured at fair value	**$ —**	**$ 63**	**$ 131**	**$ 194**	$ —	$ 59	$ 387	$ 446

Our marketable equity securities are measured at fair value based on quoted trade prices in active markets. Our deferred compensation plan assets consist primarily of investments in life insurance contracts carried at cash surrender value, which reflects the net asset value of the underlying publicly traded mutual funds. We perform control procedures to corroborate the fair value of our holdings, including comparing valuations obtained from our investment service provider to valuations reported by our asset custodians, validating pricing sources and models, and reviewing key model inputs, if necessary.

Helix Contingent Value Right

In conjunction with the deconsolidation of Helix Holdings I, LLC (Helix) in April 2019, we received a contingent value right with a 7-year term that entitles us to consideration dependent upon the outcome of Helix's future financing and/or liquidity events. We elected the fair value option to measure the contingent value right received from Helix. Historically, we estimated the fair value of the contingent value right using a Monte Carlo simulation. Estimates and assumptions used in the Monte Carlo simulation included probabilities related to the timing and outcome of future financing and/or liquidity events, assumptions regarding collectability and volatility, and an estimated equity value of Helix. During Q2 2024, discussions took place to settle the contingent value right early. Accordingly, the fair value of the contingent value right, as of June 30, 2024, was derived using a discounted cash flow model. Estimates and assumptions used in the discounted cash flow model include an estimated settlement amount, a term based on the expected payment period, and a discount rate. These unobservable inputs, including those used in the Monte Carlo simulation, represent a Level 3 measurement because they are supported by little or no market activity and reflect our own assumptions in measuring fair value. On July 31, 2024, we received cash of $ 82.5 million to settle the contingent value right. Changes in the fair value of the Helix contingent value right, included in other (expense) income, net during YTD 2024 were as follows:

In millions		
Balance as of December 31, 2023 (included in other assets)	$	68
Change in estimated fair value		11
Balance as of June 30, 2024 (included in prepaid expenses and other current assets)	$	79

Contingent Consideration Liabilities

We reassess the fair value of contingent consideration related to acquisitions on a quarterly basis. Changes in the fair value of contingent consideration subsequent to the acquisition date are recognized in selling, general and administrative expense. The contingent value rights issued as part of the GRAIL acquisition entitle the holders to receive future cash payments on a quarterly basis (Covered Revenue Payments) representing a pro rata portion of certain GRAIL-related revenues (Covered Revenues) each year for a 12 -year period. As defined in the Contingent Value Rights Agreement, this will reflect a 2.5 % payment right to the first $ 1 billion of revenue each year for 12 years. Revenue above $ 1 billion each year will be subject to a 9 % contingent payment right during this same period. Covered Revenues for Q4 2023 and Q1 2024 were $ 57 million in aggregate and Covered Revenues for Q4 2022 and Q1 2023 were $ 42 million in aggregate, driven primarily by sales of GRAIL's Galleri test. Covered Revenue Payments relating to such periods were approximately $ 535,000 and $ 400,000 in YTD 2024 and YTD 2023, respectively. We use a Monte Carlo simulation to estimate the fair value of contingent consideration related to the GRAIL acquisition. Estimates and assumptions used in the Monte Carlo simulation include forecasted revenues for GRAIL, a revenue risk premium, a revenue volatility estimate, an operational leverage ratio and a counterparty credit spread. These unobservable inputs represent a Level 3 measurement because they are supported by little or no market activity and reflect our own assumptions in measuring fair value. The fair value of our contingent consideration liability related to GRAIL was $ 131 million and $ 387 million as of June 30, 2024 and December 31, 2023, respectively, of which $ 130 million and $ 385 million, respectively, was included in other long-term liabilities, with the remaining balances included in accrued liabilities. The significant decrease in the liability was due to an increase in the revenue risk premium assumption used in Q2 2024 as a result of reconciling GRAIL's long-range revenue forecast to observed market values of GRAIL based on GRAIL's when-issued trading activity in June 2024.

Changes in the estimated fair value of our contingent consideration liabilities during YTD 2024 were as follows:

In millions		
Balance as of December 31, 2023	$	387
Change in estimated fair value		(255)
Cash payments		(1)
Balance as of June 30, 2024	$	131

5. DEBT

Summary of Term Debt Obligations

In millions	June 30, 2024	December 31, 2023
Principal amount of 2025 Term Notes outstanding	**$ 500**	$ 500
Principal amount of 2027 Term Notes outstanding	**500**	500
Principal amount of 2031 Term Notes outstanding	**500**	500
Principal amount of 2025 Delayed Draw Term Loan outstanding	**750**	—
Unamortized discounts and debt issuance costs	**(16)**	(11)
Net carrying amount of term debt	**$ 2,234**	$ 1,489
Less: current portion	**(744)**	—
Term debt, non-current	**$ 1,490**	$ 1,489
Fair value of term debt outstanding (Level 2)	**$ 2,168**	$ 1,440

Interest expense recognized on our term debt, which included amortization of debt discounts and issuance costs, was $ 20 million and $ 38 million in Q2 2024 and YTD 2024, respectively, and $ 18 million and $ 37 million in Q2 2023 and YTD 2023, respectively.

5.800 % Term Notes due 2025 (2025 Term Notes) and 5.750 % Term Notes due 2027 (2027 Term Notes)

In December 2022, we issued $ 500 million aggregate principal amount of 2025 Term Notes and $ 500 million aggregate principal amount of 2027 Term Notes. The 2025 Term Notes, which mature on December 12, 2025, and the 2027 Term Notes, which mature on December 13, 2027, accrue interest at a rate of 5.800 % and 5.750 % per annum, respectively, payable semi-annually. Interest for the 2025 Term Notes is payable on June 12 and December 12 of each year, beginning on June 12, 2023. Interest for the 2027 Term Notes is payable on June 13 and December 13 of each year, beginning on June 13, 2023.

We may redeem for cash all or any portion of the 2025 or 2027 Term Notes, at our option, at any time prior to maturity. Prior to November 12, 2025 for the 2025 Term Notes and prior to November 13, 2027 for the 2027 Term Notes, the notes are redeemable at make-whole premium redemption prices as defined in the applicable forms of note. After November 12, 2025 for the 2025 Term Notes and after November 13, 2027 for the 2027 Term Notes, the notes are redeemable at a redemption price equal to 100 % of the principal amount of the notes to be redeemed, plus any accrued and unpaid interest up to, but excluding, the redemption date.

2.550 % Term Notes due 2031 (2031 Term Notes)

In March 2021, we issued $ 500 million aggregate principal amount of 2031 Term Notes. The 2031 Term Notes, which mature on March 23, 2031, accrue interest at a rate of 2.550 % per annum, payable semi-annually on March 23 and September 23 of each year. We may redeem for cash all or any portion of the 2031 Term Notes, at our option, at any time prior to maturity. Prior to December 23, 2030, the 2031 Term Notes are redeemable at make-whole premium redemption prices as defined in the applicable forms of note. After December 23, 2030, the notes are redeemable at a redemption price equal to 100 % of the principal amount of the notes to be redeemed, plus any accrued and unpaid interest up to, but excluding, the redemption date.

Delayed Draw Term Loan due 2025

On June 17, 2024, we entered into a 364 -day delayed draw credit agreement (the Delayed Draw Credit Agreement), which provides us with a senior unsecured term loan credit facility in an aggregate principal amount of up to $ 750 million (the Delayed Draw Credit Facility). On June 20, 2024, we borrowed $ 750 million on the Delayed Draw Credit Facility in order to provide a portion of the Disposal Funding payable to GRAIL as part of the Spin-Off. The delayed draw term loan currently bears interest at a variable rate equal to the term secured overnight financing rate (Term SOFR), plus an applicable rate that varies with the Company's debt rating and a credit spread adjustment equal to 0.10 % per annum. The current borrowing rate under the Delayed Draw Credit Facility is 6.7 %. The Delayed Draw Credit Facility matures, and all amounts outstanding thereunder become due and payable in full, on June 19, 2025. We may prepay the delayed draw term loan at any time without premium or penalty (other than customary breakage costs) and we are not permitted to re-borrow once the term loan is repaid. The terms and conditions, including the financial and operating covenants, applicable to the Delayed Draw Credit Agreement are substantially similar to those applicable to the Revolving Credit Agreement. As of June 30, 2024, we were in compliance with all financial and operating covenants applicable to the Delayed Draw Credit Agreement.

Revolving Credit Agreement

On January 4, 2023, we entered into a new credit agreement (the Revolving Credit Agreement), which provides us with a $ 750 million senior unsecured five-year revolving credit facility, including a $ 40 million sublimit for swingline borrowings and a $ 50 million sublimit for letters of credit (the Revolving Credit Facility). The proceeds of the loans under the Revolving Credit Facility may be used to finance working capital needs and for general corporate purposes.

The Revolving Credit Facility matures, and all amounts outstanding thereunder become due and payable in full, on January 4, 2028, subject to two one-year extensions at our option, the consent of the extending lenders and certain other conditions. We may prepay amounts borrowed and terminate commitments under the Revolving Credit Facility at any time without premium or penalty. As of June 30, 2024, there were no borrowings or letters of credit outstanding under the Revolving Credit Facility, and we were in compliance with all financial and operating covenants.

Any loans under the Revolving Credit Facility will have a variable interest rate based on either the term secured overnight financing rate or the alternate base rate, plus an applicable rate that varies with the Company's debt rating and, in the case of loans bearing interest based on the term secured overnight financing rate, a credit spread adjustment equal to 0.10 % per annum. The Revolving Credit Agreement includes an option for us to elect to increase the commitments under the Revolving Credit Facility or to enter into one or more tranches of term loans in the aggregate principal amount of up to $ 250 million, subject to the consent of the lenders providing the additional commitments or term loans, as applicable, and certain other conditions.

The Revolving Credit Agreement contains financial and operating covenants. Pursuant to the Revolving Credit Agreement, we are required to maintain a ratio of total debt to adjusted annual earnings before interest, taxes, depreciation and amortization (EBITDA), calculated based on the four consecutive fiscal quarters ending with the most recent fiscal quarter, of not greater than 3.50 to 1.00 as of the end of each fiscal quarter. Upon the consummation of any Qualified Acquisition (as defined in the Revolving Credit Agreement) and us providing notice to the Administrative Agent, the ratio increases to 4.00 to 1.00 for the fiscal quarter in which the acquisition is consummated and the three consecutive fiscal quarters thereafter. The operating covenants include, among other things, limitations on (i) the incurrence of indebtedness by our subsidiaries, (ii) liens on our and our subsidiaries assets, and (iii) certain fundamental changes and the disposition of assets by us and our subsidiaries. The Revolving Credit Agreement contains other customary covenants, representations and warranties, and events of default.

6. STOCKHOLDERS' EQUITY

As of June 30, 2024, approximately 5.4 million shares remained available for future grants under the Amended and Restated 2015 Stock and Incentive Compensation Plan (the 2015 Stock Plan). In connection with the Spin-Off of GRAIL, all unvested RSU and PSU were equitably adjusted pursuant to the 2015 Stock Plan in order to preserve their intrinsic value and, accordingly, the number of shares reserved for issuance under the 2015 Stock Plan was also increased by 160,000 shares.

Restricted Stock

Restricted stock activity was as follows:

Units in thousands	Restricted Stock Units (RSU)	Performance Stock Units (PSU)[1]	Weighted-Average Grant Date Fair Value per Share RSU	PSU
Outstanding at December 31, 2023	2,198	—	$ 236.32	$ —
Awarded	2,666	457	$ 134.22	$ 145.49
Unvested adjustment for GRAIL Spin-Off	107	12	$ —	$ —
Vested	(52)	—	$ 266.34	$ —
Cancelled	(234)	(19)	$ 209.42	$ 167.68
Outstanding at June 30, 2024	4,685	450	$ 174.03	$ 146.23

(1) We issue three types of PSU. We issue PSU for which the number of shares issuable is based on our performance relative to specified earnings per share targets (EPS PSU) and PSU with a market condition that vest based on the Company's relative total shareholder return as compared to a peer group of companies (rTSR PSU). In Q1 2024, we began to issue PSU for which the number of shares issuable is based on our performance relative to specified operating margin targets (OM PSU). For EPS and OM PSU, the number of units reflect the estimated number of shares to be issued at the end of the performance period. For rTSR PSU, the number of units reflect the estimated number of shares to be issued based on performance as of the current reporting period. Awarded units are presented net of performance adjustments.

Stock Options

Stock option activity was as follows:

Units in thousands	Options	Weighted-Average Exercise Price	Performance Options[1]	Weighted-Average Exercise Price
Outstanding at December 31, 2023	35	$ 330.25	16	$ 87.74
Cancelled	(35)	$ 330.25	(16)	$ 87.74
Outstanding at June 30, 2024	—	$ —	—	$ —

(1) In connection with the GRAIL acquisition, we issued replacement performance stock options to GRAIL employees in 2021. In connection with the GRAIL Spin-Off, all outstanding performance stock options were assumed by GRAIL.

Liability-Classified Awards

Prior to the GRAIL Spin-Off, we granted cash-based equity incentive awards to GRAIL employees, which were accounted for as liability-classified awards. In connection with the Spin-Off, these awards were assumed by GRAIL.

Cash-based equity incentive award activity was as follows:

In millions	
Outstanding at December 31, 2023	$ 292
Granted	67
Vested and paid in cash	(54)
Cancelled	(13)
Change in fair value	(9)
Derecognition for GRAIL Spin-Off[1]	(283)
Outstanding at June 30, 2024	$ —

(1) The estimated liability immediately prior to the Spin-Off, recorded in accrued liabilities, was $ 53 million, which was disposed of as part of GRAIL's net assets. See note 2. GRAIL Spin-Off for additional details.

We recognized share-based compensation expense on these cash-based equity incentive awards of $ 23 million and $ 52 million in Q2 2024 and YTD 2024, respectively, and $ 25 million and $ 46 million in Q2 2023 and YTD 2023, respectively.

In connection with the acquisition of GRAIL, we assumed a performance-based award for which vesting was based on GRAIL's future revenues and had an aggregate potential value of up to $ 78 million. Prior to the GRAIL Spin-Off, it was not probable that the performance conditions associated with the award would be achieved and, therefore, no share-based compensation expense was recognized in the condensed consolidated statements of operations. In connection with the GRAIL Spin-Off, this award was assumed by GRAIL. For a period of 2.5 years following the Spin-Off, we are obligated to indemnify GRAIL for cash payments that become earned and payable related to this award. The indemnification is accounted for in accordance with ASC 460. As of June 30, 2024, we recognized a non-contingent liability of $ 1 million for this indemnification, with a corresponding charge to additional paid-in capital.

Employee Stock Purchase Plan

The price at which common stock is purchased under the Employee Stock Purchase Plan (ESPP) is equal to 85 % of the fair market value of the common stock on the first day of the offering period or purchase date, whichever is lower. During YTD 2024, approximately 0.3 million shares were issued under the ESPP. As of June 30, 2024, there were approximately 12.6 million shares available for issuance under the ESPP, which reflects an upward adjustment of approximately 0.5 million shares pursuant to the terms of the ESPP to account for the GRAIL Spin-Off.

The assumptions used and the resulting estimate of weighted-average fair value per share for stock purchased under the ESPP during YTD 2024 were as follows:

Risk-free interest rate		4.66 % - 5.54 %
Expected volatility		45 % - 49 %
Expected term		0.5 - 1.1 year
Expected dividends		0 %
Weighted-average grant-date fair value per share	$	44.95

Share Repurchases

We did no t repurchase any shares during YTD 2024. As of June 30, 2024, authorizations to repurchase approximately $ 15 million of our common stock remained available under the $ 750 million share repurchase program authorized by our Board of Directors on February 5, 2020. The repurchases may be completed under a 10b5-1 plan or at management's discretion.

Share-Based Compensation

Share-based compensation expense, which includes expense for both equity and liability-classified awards, reported in our condensed consolidated statements of operations was as follows:

In millions	Q2 2024	Q2 2023	YTD 2024	YTD 2023
Cost of product revenue	**$ 7**	$ 8	**$ 13**	$ 15
Cost of service and other revenue	**1**	6	**4**	12
Research and development	**43**	43	**82**	79
Selling, general and administrative	**59**	48	**109**	93
Share-based compensation expense, before taxes	**110**	105	**208**	199
Related income tax benefits	**(26)**	(24)	**(48)**	(45)
Share-based compensation expense, net of taxes	**$ 84**	$ 81	**$ 160**	$ 154

As of June 30, 2024, approximately $ 735 million of total unrecognized compensation cost related to restricted stock, including RSU and PSU, and ESPP shares issued to date was expected to be recognized over a weighted-average period of approximately 2.7 years.

7. SUPPLEMENTAL BALANCE SHEET DETAILS

Accounts Receivable

In millions	June 30, 2024	December 31, 2023
Trade accounts receivable, gross	**$ 651**	$ 741
Allowance for credit losses	**(10)**	(7)
Total accounts receivable, net	**$ 641**	$ 734

Inventory

In millions	June 30, 2024	December 31, 2023
Raw materials	**$ 232**	$ 276
Work in process	**416**	402
Finished goods	**35**	30
Inventory, gross	**683**	708
Inventory reserve	**(122)**	(121)
Total inventory, net	**$ 561**	$ 587

Accrued Liabilities

In millions	June 30, 2024	December 31, 2023
Legal contingencies[1]	**$ 481**	$ 484
Contract liabilities, current portion	**238**	252
Accrued compensation expenses	**197**	223
Accrued taxes payable	**177**	79
Operating lease liabilities, current portion	**71**	86
Liability-classified equity incentive awards	**—**	55
Other, including warranties[2]	**101**	146
Total accrued liabilities	**$ 1,265**	$ 1,325

(1) See note 8. Legal Proceedings for additional details.

(2) See table below for changes in the reserve for product warranties.

Changes in the reserve for product warranties were as follows:

In millions	Q2 2024	Q2 2023	YTD 2024	YTD 2023
Balance at beginning of period	**$ 20**	$ 19	**$ 21**	$ 18
Additions charged to cost of product revenue	**10**	11	**22**	20
Repairs and replacements	**(13)**	(10)	**(26)**	(18)
Balance at end of period	**$ 17**	$ 20	**$ 17**	$ 20

We generally provide a one-year warranty on instruments. Additionally, we provide a warranty on consumables through the expiration date, which generally ranges from six to twelve months after the manufacture date. At the time revenue is recognized, an accrual is established for estimated warranty expenses based on historical experience as well as anticipated product performance. We periodically review the warranty reserve for adequacy and adjust the warranty accrual, if necessary, based on actual experience and estimated costs to be incurred. Warranty expense is recorded as a component of cost of product revenue.

Restructuring

In Q2 2023, we implemented a cost reduction initiative that included workforce reductions, the consolidation of certain facilities and other actions to reduce expenses, all as part of a plan to realign operating expenses while maintaining focus on our innovation roadmap and sustainable long-term growth. In YTD 2024, we recorded restructuring charges primarily consisting of asset impairment charges related to our leased facilities.

A summary of the pre-tax restructuring charges are as follows:

In millions	Q2 2024	Q2 2023	YTD 2024	YTD 2023	Cumulative charges recorded since inception
Employee separation costs	**$ 3**	$ 25	**$ 7**	$ 25	**$ 55**
Asset impairment charges[1]	**—**	7	**32**	7	**132**
Other costs	**1**	1	**1**	1	**5**
Total restructuring charges[2]	**$ 4**	$ 33	**$ 40**	$ 33	**$ 192**

(1) For YTD 2024, charges primarily relate to impairment of right-of-use assets and leasehold improvements for our Foster City campus. Cumulative charges recorded since inception also include impairment of right-of-use assets and leasehold improvements for our i3 campus.

(2) For Q2 2024, $ 4 million was recorded in SG&A expense. For YTD 2024, $ 39 million was recorded in SG&A and $ 1 million in R&D expense. For Q2 2023 and YTD 2023, $ 18 million was recorded in SG&A expense, $ 12 million in R&D expense, and remainder in cost of revenue.

We recorded right-of-use asset impairments of $ 18 million in Q1 2024 related to our campus in Foster City, California and another property in San Diego, California. The impairments, which were recognized in selling, general and administrative expense, were determined by comparing the fair values of the impacted right-of-use assets to the carrying values of the assets as of the impairment measurement date. The fair values of the right-of-use assets were estimated using the discounted future cash flows method, which includes estimates and assumptions for future sublease rental rates that reflect current sublease market conditions, as well as discount rates. The estimates and assumptions used in our assessments represent Level 3 measurements because they are supported by little or no market activity and reflect our own assumptions in measuring fair value. We also recorded $ 14 million of leasehold improvement impairments related to our Foster City campus in Q1 2024, recognized in selling, general and administrative expense. We continue to evaluate our options with respect to the rest of our campus in Foster City, California and the other property in San Diego, California. As of June 30, 2024, we had remaining assets, consisting primarily of right-of-use assets and leasehold improvements, related to our Foster City campus and the other property in San Diego, California of approximately $ 139 million.

A summary of the restructuring liability is as follows:

In millions	Employee Separation Costs[1]	Other Costs	Total
Amount recorded in accrued liabilities as of December 31, 2023	$ 17	$ 1	$ 18
Additional expense recorded	7	1	8
Cash payments	(19)	(2)	(21)
Adjustments to accrual	(2)	—	(2)
Amount recorded in accrued liabilities as of June 30, 2024	$ 3	$ —	$ 3

(1) It is expected that substantially all of the employee separation related restructuring charges will be paid by the end of Q3 2024.

Impairment of Goodwill and Intangible Assets

Goodwill is reviewed for impairment annually, during the second quarter of our fiscal year, or more frequently if an event occurs indicating the potential for impairment. In May 2024, we performed our annual goodwill impairment test for our two reporting units: Core Illumina and GRAIL. We performed a quantitative test for both reporting units. GRAIL's carrying value exceeded its fair value, estimated as $ 580 million, and we recorded a goodwill impairment of $ 1,466 million in Q2 2024. There was no impairment for Core Illumina, as its fair value exceeded its carrying value.

To determine the fair value of GRAIL as of May 2024, we utilized enterprise value estimates of GRAIL, as estimated by investment bankers for purposes of determining pricing for the Spin-Off. Estimates and assumptions used to derive the investment bankers' enterprise value estimates included estimated revenues for a two year period based on assumed growth rates and implied revenue multiples for comparable companies. These estimates and assumptions represent a Level 3 measurement as they are supported by little or no market activity and reflect our own assumptions in measuring fair value. An increase in estimated enterprise values for GRAIL of 100% would still have resulted in a full impairment of goodwill. In prior periods, we used a combination of both an income (discounted cash flows) and market approach to determine the fair value of GRAIL. The income approach utilized projected cash flows for GRAIL based on a long-range plan which contemplated FDA approval and estimated cash flows for a 15 year period. Based on this approach, in Q3 2023, we estimated the fair value of GRAIL to be $ 3.6 billion, using a selected discount rate of 24.0 %, and recorded a goodwill impairment of $ 712 million. An increase of 50 to 100 basis points to the discount rate used in our assessment at that time would have resulted in additional goodwill impairment of $ 200 million to $ 350 million. Using this same approach in Q4 2023 suggested no further decrement in fair value. Initial analyst coverage of GRAIL from December 2023 into the spring of 2024 suggested that GRAIL could be valued between $ 3 billion and $ 4 billion. By May 2024, prior to the consummation of the GRAIL Spin-Off, additional information about GRAIL had become available in GRAIL's amended Form 10 filings and a publicly available management presentation, which included updated disclosure about GRAIL's business and anticipated near term financial trends. Prior to the consummation of the GRAIL Spin-Off, the amount of GRAIL's Disposal Funding, $ 974 million, was also disclosed. Analyst and banker valuation estimates then began to estimate fair values between $ 400 million and $ 770 million, consistent with the impairment recorded in Q2 2024.

To determine the fair value of Core Illumina, we used a combination of both an income and market approach consistent with prior periods. The income approach utilized estimated discounted cash flows for the reporting unit, while the market approach utilized comparable company information. Estimates and assumptions used in the income approach included projected cash flows and a discount rate and represent a Level 3 measurement because they are supported by little or no market activity and reflect our own assumptions in measuring fair value.

We also evaluated GRAIL's in-process research and development (IPR&D) asset for potential impairment, in May 2024, as part of our annual test. We further concluded the when-issued trading activity for GRAIL's common stock, in June 2024, to be an additional triggering event that required an additional impairment test be performed. The carrying value of the IPR&D asset exceeded its estimated fair value and we recorded an impairment of $ 420 million in Q2 2024. The fair value of GRAIL's IPR&D was determined using an income approach, specifically a discounted cash flow model. Estimates and assumptions used in the income approach, which represent a Level 3 measurement, included projected cash flows and a discount rate of 46.5 %. The discount rate was derived from reconciling GRAIL's long-range plan, which contemplated FDA approval and estimated cash flows for a 15 year period, to observed market values of GRAIL based on the when-issued trading activity. An increase of 300 basis points to the discount rate used in our assessment would have resulted in additional impairment of $ 20 million. There is substantial risk inherent in forecasting revenues and spend associated with research and development, including assumptions around the timing and level of resources and investment to be made, which were made more challenging in light of the Spin-Off and related Disposal Funding.

We performed a recoverability test for GRAIL's definite-lived intangible assets, which include developed technology and trade name, noting no impairment. No impairment was noted for Core Illumina definite-lived intangible assets.

Goodwill

Changes to goodwill during YTD 2024 were as follows:

In millions	
Balance as of December 31, 2023 [1]	$ 2,545
Impairment	(1,466)
Balance as of June 30, 2024	$ 1,079

[1] The balance as of December 31, 2023 includes accumulated impairment of $ 4,626 million related to our GRAIL reporting unit.

Intangible Assets

The following is a summary of our identifiable intangible assets:

	June 30, 2024			December 31, 2023			
In millions	Gross Carrying Amount	Accumulated Amortization	Intangible Assets, Net	Gross Carrying Amount	Accumulated Amortization	Impairment	Intangible Assets, Net
Developed technologies	**$ 424**	**$ (289)**	**$ 135**	$ 2,807	$ (585)	$ —	$ 2,222
Licensed technologies	**274**	**(147)**	**127**	274	(133)	—	141
Trade name	**3**	**(3)**	**—**	43	(14)	—	29
Customer relationships	**14**	**(13)**	**1**	14	(13)	—	1
License agreements	**20**	**(13)**	**7**	14	(13)	—	1
Database	**12**	**(4)**	**8**	12	(3)	—	9
Total finite-lived intangible assets, net	**747**	**(469)**	**278**	3,164	(761)	—	2,403
In-process research and development (IPR&D)	**—**	**—**	**—**	705	—	(115)	590
Total intangible assets, net	**$ 747**	**$ (469)**	**$ 278**	$ 3,869	$ (761)	$ (115)	$ 2,993

The significant decrease in developed technologies, trade name, and IPR&D reflect the GRAIL intangible assets disposed of in connection with the Spin-Off. See note 2. GRAIL Spin-Off for more information. Additionally, in Q1 2024, we placed into service (reflected in developed technologies) the IPR&D asset we acquired in Q2 2021.

Amortization expense for Q2 2024 and YTD 2024 was $ 47 million and $ 97 million, respectively, and $ 49 million and $ 99 million in Q2 2023 and YTD 2023, respectively. The estimated future annual amortization of finite-lived intangible assets is shown in the following table. Actual amortization expense to be reported in future periods could differ from these estimates as a result of acquisitions, divestitures, and asset impairments, among other factors.

In millions	Estimated Annual Amortization
2024 (remainder of year)	$ 31
2025	62
2026	50
2027	48
2028	45
Thereafter	42
Total	$ 278

Derivative Financial Instruments

We are exposed to foreign exchange rate risks in the normal course of business and use derivative financial instruments to partially offset this exposure. We do not use derivative financial instruments for speculative or trading purposes. Foreign exchange contracts are carried at fair value in other current assets, other assets, accrued liabilities, or other long-term liabilities, as appropriate, on the condensed consolidated balance sheets.

We use foreign exchange forward contracts to manage foreign currency risks related to monetary assets and liabilities denominated in currencies other than the U.S. dollar. These derivative financial instruments have terms of one month or less and are not designated as hedging instruments. Changes in fair value of these derivatives are recognized in other (expense) income, net, along with the re-measurement gain or loss on the foreign currency denominated assets or liabilities. As of June 30, 2024, we had foreign exchange forward contracts in place to hedge exposures in the euro, Japanese yen, Australian dollar, Canadian dollar, Singapore dollar, Chinese Yuan Renminbi, and British pound. As of June 30, 2024 and December 31, 2023, the total notional amounts of outstanding forward contracts in place for these foreign currency purchases were $ 902 million and $ 926 million, respectively. In June 2024, we entered into new forward contracts for a total notional amount of € 432 million to hedge the foreign currency exposure for the fine imposed by the European Commission in July 2023.

We also use foreign currency forward contracts to hedge portions of our foreign currency exposure associated with forecasted revenue transactions. These derivative financial instruments have terms up to 24 months and are designated as cash flow hedges. Changes in fair value of our cash flow hedges are recorded as a component of accumulated other comprehensive income (loss) and are reclassified to revenue in the same period the underlying hedged transactions are recorded. We regularly review the effectiveness of our cash flow hedges and consider them to be ineffective if it becomes probable that the forecasted transactions will not occur in the identified period. Changes in fair value of the ineffective portions of our cash flow hedges, if any, are recognized in other (expense) income, net. As of June 30, 2024, we had foreign currency forward contracts in place to hedge exposures associated with forecasted revenue transactions denominated in the euro, Japanese yen, Australian dollar, Canadian dollar, and Chinese Yuan Renminbi. As of June 30, 2024 and December 31, 2023, the total notional amounts of outstanding cash flow hedge contracts in place for these foreign currency purchases were $ 630 million and $ 628 million, respectively. We reclassified $ 4 million and $ 7 million to revenue in Q2 2024 and YTD 2024, respectively, and $ 2 million and $ 3 million to revenue in Q2 2023 and YTD 2023, respectively. As of June 30, 2024, the fair value of foreign currency forward contracts was $ 17 million, recorded in total assets. As of December 31, 2023, the fair value of foreign currency forward contracts recorded in total assets and total liabilities was $ 5 million and $ 9 million, respectively. The estimated gains reported in accumulated other comprehensive income (loss) that are expected to be reclassified into earnings within the next 12 months are $ 15 million as of June 30, 2024.

8. LEGAL PROCEEDINGS

We are involved in various lawsuits and claims arising in the ordinary course of business, including actions with respect to intellectual property, employment, and contractual matters. In connection with these matters, we assess, on a regular basis, the probability and range of possible loss based on the developments in these matters. A liability is recorded in the condensed consolidated financial statements if it is believed to be probable that a loss has been incurred and the amount of the loss can be reasonably estimated. Because litigation is inherently unpredictable and unfavorable resolutions could occur, assessing contingencies is highly subjective and requires judgments about future events. We regularly review outstanding legal matters to determine the adequacy of the liabilities accrued and related disclosures in consideration of many factors, which include, but are not limited to, past history, scientific and other evidence, and the specifics and status of each matter. We may change our estimates if our assessment of the various factors changes and the amount of ultimate loss may differ from our estimates, resulting in a material effect on our business, financial condition, results of operations, and/or cash flows.

Acquisition of GRAIL

Our acquisition of GRAIL remains subject to ongoing legal and regulatory proceedings in the United States and in the European Union.

On March 30, 2021, the U.S. Federal Trade Commission (the FTC) filed an administrative complaint and a motion for a preliminary injunction in the United States District Court for the District of Columbia. In both actions, the FTC alleged that our acquisition of GRAIL would violate Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18. After

a full briefing and oral argument, on March 31, 2023, the FTC issued an opinion and order (the FTC Order) requiring Illumina to divest GRAIL. On April 5, 2023, Illumina filed a petition for review of the FTC Order in the U.S. Court of Appeals for the Fifth Circuit. After a full briefing and oral argument, on December 15, 2023, the Fifth Circuit issued its opinion and order, in which the Court ruled that the Commission applied the incorrect standard in assessing Illumina's open offer contract, and on that basis vacated the FTC Order and remanded the case to the Commission for reconsideration of the effects of the open offer contract under the proper standard as described in the Fifth Circuit's decision, and in all other respects upheld the Commission's decision. On July 30, 2024, in light of our spin-off of GRAIL, the parties filed a Joint Motion To Dismiss the FTC's administrative complaint.

On April 19, 2021, the European Commission sought and subsequently accepted a request for a referral of the GRAIL acquisition for European Union merger review, submitted by a Member State of the European Union (France), and joined by several other EEA Member States (Belgium, Greece, Iceland, the Netherlands and Norway), under Article 22(1) of Council Regulation (EC) No 139/2004 (the EU Merger Regulation). The European Commission had never solicited referrals to take jurisdiction over an acquisition of a U.S. company that had no revenue in Europe. On April 28, 2021, we filed an action in the General Court of the European Union (the EU General Court) asking for annulment of the European Commission's assertion of jurisdiction to review the acquisition under Article 22 of the EU Merger Regulation, as the acquisition does not meet the jurisdictional criteria under the EU Merger Regulation or under the national merger control laws of any Member State of the European Union. On July 13, 2022, the EU General Court reached a decision in favor of the European Commission, holding that the European Commission has jurisdiction under the EU Merger Regulation to review the acquisition. On September 22, 2022, we filed an appeal in the Court of Justice of the European Union (the EU Court of Justice) asking for annulment of the EU General Court's judgment. On December 12, 2023, the EU Court of Justice held a hearing on the appeal. On March 21, 2024, the Advocate General assigned to this case recommended, in a non-binding Opinion, that the EU Court of Justice annul the General Court's judgment and the European Commission's decisions accepting the referral of the GRAIL acquisition for EU merger review. The EU Court of Justice is scheduled to issue its judgment in early September 2024.

On October 29, 2021, the European Commission adopted an order imposing interim measures (the Initial Interim Measures Order). As the Initial Interim Measures Order was set to expire on November 3, 2022, the European Commission adopted a new order imposing interim measures (the New Interim Measures Order) on October 28, 2022. On December 1, 2021, we filed an action with the EU General Court asking for annulment of the Initial Interim Measures Order. The hearing of that application has been stayed pending our appeal of the judgment of the EU General Court regarding the European Commission's assertion of jurisdiction. On January 10, 2023, we filed an action with the EU General Court asking for annulment of the New Interim Measures Order. On January 20, 2023, the European Commission requested that these proceedings be stayed pending our appeal on jurisdiction. We submitted a filing indicating that we had no objections to the European Commission's request, and the EU General Court stayed the proceedings on February 21, 2023.

On September 6, 2022, the European Commission announced that it had completed its Phase II review of the acquisition of GRAIL and adopted a final decision (the Prohibition Decision), which found that, in its view, our acquisition of GRAIL was incompatible with the internal market in Europe because it results in a significant impediment to effective competition. On November 17, 2022, we filed an action with the EU General Court asking for annulment of the Prohibition Decision. The European Commission lodged its defense on April 20, 2023, and this was served on Illumina on May 23, 2023. Illumina filed its reply on August 31, 2023, and the Commission filed its rejoinder on December 22, 2023, which was served on Illumina on January 8, 2024. GRAIL has been granted leave to intervene.

On October 12, 2023, the European Commission adopted a decision requiring us to (among other things) divest GRAIL (the EC Divestment Decision), and replacing the interim measures set forth in the New Interim Measures Order with substantially equivalent transitional measures. This part of the decision ceased to apply with the completion of the Spin-Off on June 24, 2024. On December 22, 2023, we filed an action with the EU General Court seeking an annulment of the EC Divestment Decision.

On July 12, 2023, the European Commission adopted a final decision finding that we breached the EU Merger Regulation by, in its view, acquiring the possibility to exert decisive influence over GRAIL and exerting such influence during the pendency of the European Commission's review (the Article 14(2)(b) Decision). The European Commission therefore imposed a fine pursuant to Article 14(2)(b) of the EU Merger Regulation of approximately € 432 million, representing the maximum fine of 10 % of our consolidated annual revenues for fiscal year 2022. We

provided guarantees in October 2023 to satisfy the obligation in lieu of cash payment while we appeal the European Commission's jurisdictional decision and fine decision. The fine is accruing interest at a rate of 5.5 % per annum, beginning in October 2023, while it is outstanding. As of June 30, 2024, we accrued $ 481 million, including related accrued interest and foreign currency fluctuations, included in accrued liabilities. We appealed the Article 14(2) (b) Decision on September 26, 2023. The European Commission lodged its defense on February 2, 2024. On March 7, 2024, the Court granted permission to the Council of the European Union to intervene in the case and submit its views as a non-party. Illumina filed its reply on April 30, 2024, and its observations on the Council of the European Union statement in intervention on May 17, 2024.

On December 17, 2023, we announced that we would divest GRAIL. On April 12, 2024, the European Commission issued a decision approving our divestment plan, which was submitted to the EC pursuant to the EC Divestment Decision. On June 24, 2024, we completed the separation (the Spin-Off) of GRAIL into a separate, independent publicly traded company through the distribution of approximately 85.5 % of the outstanding GRAIL common stock to Illumina stockholders on a pro rata basis. There can be no guarantee how the completion of the Spin-Off will affect the ultimate outcome of any of these pending regulatory proceedings.

SEC Inquiry Letter

In July 2023, we were informed that the staff of the SEC was conducting an investigation relating to Illumina and was requesting documents and communications primarily related to Illumina's acquisition of GRAIL and certain statements and disclosures concerning GRAIL, its products and its acquisition, and related to the conduct and compensation of certain members of Illumina and GRAIL management, among other things. Illumina is cooperating with the SEC in this investigation.

Shareholder Derivative Complaints

On October 17, 2023, a stockholder derivative and class action complaint captioned *Icahn Partners LP, et al. v. deSouza, et al.* , purportedly brought on behalf of Illumina and public holders of Illumina's common stock, was filed in the Delaware Court of Chancery against certain current and former directors (including our former Chief Executive Officer). We are named as a nominal defendant in the complaint. The lawsuit alleges the named directors breached their fiduciary duties by knowingly causing Illumina to unlawfully close the GRAIL acquisition, concealing material facts related to the GRAIL acquisition and making inadequate disclosures. Before the filing of the complaint, the purported stockholders did not make a demand that our Board of Directors pursue the claims asserted therein. The complaint seeks damages, costs and expenses, including attorney fees, the certification and consolidation of a putative class, the issuance of amended disclosures, the removal of conflicted directors and declaratory and other equitable relief. Since the lawsuit is brought in part on behalf of Illumina as a nominal defendant, the alleged damages were allegedly suffered by us.

On November 1, 2023, the defendants filed a motion to dismiss the complaint, which has not yet been briefed. On the same day, Illumina—joined by the director defendants—moved to strike portions of the complaint that contain improperly included confidential and privileged information. On January 16, 2024, the Court granted the motion to strike. On December 5, 2023, the plaintiffs moved to expedite the proceedings with respect to their direct claims. The director defendants opposed that motion and Illumina joined their opposition. On January 19, 2024, the Court denied plaintiffs' motion to expedite. On January 23, 2024, the plaintiffs filed a motion for reargument of the Court's January 16 opinion, which the Court denied on February 19, 2024. On February 29, 2024, the plaintiffs filed an application to the trial court to certify the orders granting the motion to strike and denying the motion for reargument for interlocutory appeal. The Court refused the application on March 20, 2024. On March 14, 2024, the plaintiffs filed an application for interlocutory appeal with the Supreme Court of Delaware, which the Court denied on April 11, 2024.

On February 26, 2024, a stockholder derivative complaint captioned *City of Omaha Police and Firefighters Retirement System v. deSouza, et al.,* purportedly brought on behalf of Illumina, was filed in the Delaware Court of Chancery against certain current and former directors. On April 16, 2024, a stockholder derivative complaint captioned *City of Roseville General Employees Retirement System, et al. v. deSouza, et al.,* purportedly brought on behalf of Illumina, was filed in the Delaware Court of Chancery against certain current and former directors and officers. We are named as a nominal defendant in the complaints. The lawsuits allege the named directors and officers breached their fiduciary duties by knowingly causing Illumina to unlawfully close the GRAIL acquisition. The stockholders previously made requests to inspect certain books and records under Delaware law, and they purport

to base their complaint in part on documents obtained from Illumina in response to those requests. Before the filing of the complaint, the purported stockholders did not make a demand that our Board of Directors pursue the claim asserted therein. The complaints seek damages, costs and expenses, including attorney fees and other equitable relief. Since the lawsuits are brought in part on behalf of Illumina as a nominal defendant, the alleged damages were allegedly suffered by us.

On March 26, 2024, the defendants filed a motion to dismiss the complaint in the lawsuit filed by City of Omaha Police and Firefighters Retirement System. The motion has not yet been briefed. On May 16, 2024, the defendants filed a motion to dismiss the complaint in the lawsuit filed by City of Roseville General Employees Retirement System, et al. The motion has not yet been briefed.

In light of the fact that these lawsuits are in an early stage, we cannot predict the ultimate outcome of the suits. We deny the allegations in the complaints and intend to vigorously defend the litigations.

On February 21, 2024, a stockholder derivative complaint captioned *Elaine Wang, et al. v. deSouza, et al.,* purportedly brought on behalf of the Company was filed in the United States District Court for the District of Delaware (District of Delaware) against certain current and former directors. The Company is named as a nominal defendant in the complaint. The lawsuit alleges that the named directors breached their fiduciary duties by knowingly causing the Company to unlawfully close the GRAIL acquisition. Before the filing of the complaint, the purported stockholder did not make a demand that our Board of Directors pursue the asserted claims therein. The complaint seeks, among other things, restitution to the Company for the alleged damages caused by the named defendants. Since the lawsuit was brought in part on behalf of Illumina as a nominal defendant, the alleged damages were allegedly suffered by us.

On March 8, 2024, a stockholder derivative complaint captioned *Michael Warner, et al. v. deSouza, et al.,* purportedly brought on behalf of Illumina was also filed in the United States District Court for the Southern District of California against certain current and former directors. We are named as a nominal defendant in the complaint. The lawsuit alleges that the named directors breached their fiduciary duties by knowingly causing us to unlawfully close the GRAIL acquisition. Before the filing of the complaint, the purported stockholder did not make a demand that our Board of Directors pursue the asserted claims therein. The complaint seeks, among other things, restitution to Illumina for the alleged damages caused by the named defendants. Since the lawsuit was brought in part on behalf of Illumina as a nominal defendant, the alleged damages were allegedly suffered by us. On March 28, 2024, the parties submitted a Joint Motion to Transfer the lawsuit to the District of Delaware, which the Court granted on March 29, 2024, and the Court transferred the lawsuit to the District of Delaware on the same day.

Elaine Wang, et al. v. deSouza, et al. and *Michael Warner, et al. v. deSouza, et al.* were voluntarily dismissed on April 29, 2024, and May 1, 2024, respectively. On May 1, 2024, Michael Warner sent a litigation demand to our Board of Directors requesting that a civil action for monetary damages be brought by the Board of Directors on behalf of Illumina against officers and directors involved with the GRAIL acquisition. On July 30, 2024, the Board unanimously determined that it was in the best interest of the Company and its shareholders to defer a final decision on the demand given, among other things, the pending stockholder lawsuits described herein and the similarity of issues raised in the demand and those lawsuits. Our Board will monitor the stockholder lawsuits and revisit the demand as warranted as the lawsuits progress. On June 3, 2024, Elaine Wang made requests to inspect certain books and records under Delaware law.

Securities Class Actions

Federal Securities Class Actions. On November 11, 2023, the first of three securities class action complaints was filed against Illumina and certain of its current and former executive officers in the United States District Court for the Southern District of California. The first-filed case is captioned *Kangas v. Illumina, Inc. et al*., the second-filed case is captioned *Roy v. Illumina, Inc. et al.,* and the third-filed case is captioned *Louisiana Sheriffs' Pension & Relief Fund v. Illumina, Inc. et al.* (collectively, the Actions). The complaints generally allege, among other things, that defendants made materially false and misleading statements and omitted material facts relating to Illumina's acquisition of Grail. The complaints seek unspecified damages, interest, fees, and costs. On January 9, 2024, four movants filed motions to consolidate the Actions and to appoint a lead plaintiff (Lead Plaintiff Motions). On April 11, 2024, the Court issued an order consolidating the Actions into a single action (captioned in re Illumina, Inc. Securities Litigation No. 23-cv-2082-LL-MMP), and appointed Universal-Investment-Gesellschaft mbH, UI BVK Kapitalverwaltungsgesellschaft mbH, and ACATIS Investment Kapitalverwaltungsgesellschaft mbH as lead plaintiffs

(the Lead Plaintiffs). On June 21, 2024, the Lead Plaintiffs filed their consolidated amended complaint. The complaint alleges that Illumina and GRAIL and certain of their current and former directors and officers violated Sections 10(b) and 20(a) of the Securities Exchange Act and SEC Rule 10b-5 in connection with Illumina's acquisition of GRAIL. On August 5, 2024, the court issued an amended scheduling order, under which the Lead Plaintiffs will file a second amended consolidated complaint on September 13, 2024. Illumina's response is due November 12, 2024.

State Securities Class Actions. On February 2, 2024, the first of two additional securities class actions was filed against Illumina, certain of its officers and directors, and several other individuals and entities in the Superior Court of the State of California, County of San Mateo, captioned *Loren Scott Mar v. Illumina, et al.* and *Scott Zerzanek v. Illumina, Inc. et al.* . Both complaints generally allege, among other things, that defendants made materially false and misleading statements and omitted material facts in the November 2020 and February 2021 registration statements and prospectus relating to Illumina's acquisition of Grail. The complaints seek unspecified damages, interest, fees, and costs. On March 29, 2024, the parties to the actions filed a Joint Stipulation to Consolidate the actions and to appoint co-lead counsel for plaintiffs, which the Court granted on April 5, 2024. The plaintiffs' consolidated complaint is due August 12, 2024, and Illumina's response is due October 11, 2024.

In light of the fact that the lawsuits are in an early stage, we cannot predict the ultimate outcome of the suits. We deny the allegations in the complaints and intend to vigorously defend the litigation.

DOJ Civil Investigative Demand

On January 18, 2024, we received a civil investigative demand (CID) from the U.S. Department of Justice, requiring production of certain documents and information in the course of a False Claims Act investigation to determine whether there is or has been a violation of 31 U.S.C. § 3729. The False Claims Act investigation concerns allegations that the Company caused the submission of false claims to Medicare and other federal government programs because it misrepresented its compliance with cybersecurity requirements to the Food and Drug Administration and other federal agencies that purchase its devices. The Company is preparing its response and cooperating with the government.

Books and Records Action

On February 14, 2024, a stockholder filed a complaint in the Delaware Court of Chancery captioned Pavers and Road Builders Benefit Funds v. Illumina, Inc. seeking to inspect certain books and records related to the GRAIL transaction, including certain materials and minutes from meetings of our Board of Directors, which have been withheld because the Company contends they are non-responsive to the request or subject to the attorney-client privilege. Illumina previously provided documents to the stockholder in response to a demand made by letter under Delaware law, but the stockholder seeks additional and unredacted materials through this action. On March 11, 2024, Illumina filed an answer to the complaint, denying that the stockholder was entitled to inspection. We deny that the stockholder is entitled to review the documents and intend to vigorously defend the litigation. The trial took place on June 7, 2024. On July 16, 2024, the Court issued a decision requiring the Company to produce certain additional documents to plaintiff. On July 26, 2024, the stockholder filed a motion seeking in camera review of certain documents that the Company maintains are not subject to the Court's July 16, 2024 order to produce documents. The Company's response to the motion is due August 9, 2024.

9. INCOME TAXES

Our effective tax rate may vary from the U.S. federal statutory tax rate due to the change in the mix of earnings in tax jurisdictions with different statutory rates, benefits related to tax credits, and the tax impact of non-deductible expenses and other permanent differences between income before income taxes and taxable income.

Our effective tax rates for Q2 2024 and YTD 2024 were (0.6)% and (1.4)%, respectively, compared to (163.8)% and (38.5)% in Q2 2023 and YTD 2023, respectively. The variance from the U.S. federal statutory tax rate of 21% in Q2 2024 and YTD 2024 was primarily attributable to the $ 308 million income tax expense impact from the impairment of goodwill, which is nondeductible for tax purposes, the $ 99 million and $ 116 million income tax expense impact of GRAIL pre-acquisition net operating losses on global intangible low-taxed income (GILTI), the utilization of U.S. foreign tax credits, and the Pillar Two global minimum top-up tax, respectively, and the $ 41 million and $ 63 million income tax expense impact of research and development expense capitalization for tax purposes, respectively. This

was partially offset by the mix of earnings in jurisdictions with lower statutory tax rates than the U.S. federal statutory tax rate, such as in Singapore.

Historically we calculated the provision/(benefit) for income taxes for interim periods utilizing an estimated annual effective tax rate applied to the income/(loss) for the reporting period, except in Q1 2024 and Q2 2023 when a year-to-date effective tax rate method was utilized. In accordance with the authoritative guidance for accounting for income taxes in interim periods, we determined the estimated annual effective tax rate method would provide a more reliable estimate of the provision for income taxes for Q2 2024 and YTD 2024 since minor changes in the estimated income/(loss) before income taxes would not result in significant changes in the estimated annual effective tax rate.

As of June 30, 2024 and December 31, 2023, prepaid income taxes, included within prepaid expenses and other current assets on the condensed consolidated balance sheets, were $ 24 million and $ 75 million, respectively.

10. SEGMENT INFORMATION

We have two reportable segments, Core Illumina and GRAIL. We completed the Spin-Off of GRAIL on June 24, 2024. Refer to note 2. GRAIL Spin-Off for additional details. We report segment information based on the management approach, which designates the internal reporting used by the Chief Operating Decision Maker (CODM) for making decisions and assessing performance as the source of our reportable segments. The CODM allocates resources and assesses the performance of each operating segment using information about its revenue and income (loss) from operations. Our CODM does not evaluate our operating segments using discrete asset information. We do not allocate expenses between segments. Core Illumina sells products and provides services to GRAIL, and vice versa, in accordance with contractual agreements between the entities.

Core Illumina: Core Illumina's products and services serve customers in the research, clinical and applied markets, and enable the adoption of a variety of genomic solutions. Core Illumina includes all of our operations, excluding the results of GRAIL.

GRAIL: GRAIL is a healthcare company focused on early detection of multiple cancers.

In millions	Q2 2024	Q2 2023	YTD 2024	YTD 2023
Revenue:				
Core Illumina	**$ 1,092**	$ 1,159	**$ 2,148**	$ 2,235
GRAIL	**29**	22	**55**	42
Eliminations	**(9)**	(5)	**(15)**	(14)
Consolidated revenue	**$ 1,112**	$ 1,176	**$ 2,188**	$ 2,263
Income (loss) from operations:				
Core Illumina	**$ 442**	$ 115	**$ 558**	$ 257
GRAIL	**(2,078)**	(204)	**(2,305)**	(408)
Eliminations	**(1)**	1	**(2)**	(1)
Consolidated loss from operations	**$ (1,637)**	$ (88)	**$ (1,749)**	$ (152)

Total other expense, net primarily relates to Core Illumina, and we do not allocate income taxes to our segments.

11. SUBSEQUENT EVENT

On July 9, 2024, we acquired Fluent BioSciences for an $ 85 million upfront cash payment and contingent consideration that could become payable upon the achievement of certain defined milestones.

MANAGEMENT'S DISCUSSION & ANALYSIS

Our Management's Discussion and Analysis (MD&A) will help readers understand our results of operations, financial condition, and cash flow. It is provided in addition to the accompanying condensed consolidated financial statements and notes. This MD&A is organized as follows:

- *Management's Overview and Outlook*. High level discussion of our operating results and significant known trends that affect our business.
- *Results of Operations*. Detailed discussion of our revenues and expenses.
- *Liquidity and Capital Resources.* Discussion of key aspects of our condensed consolidated statements of cash flows, changes in our financial position, and our financial commitments.
- *Critical Accounting Policies and Estimates*. Discussion of significant changes since our most recent Annual Report on Form 10-K that we believe are important to understanding the assumptions and judgments underlying our condensed consolidated financial statements.
- *Recent Accounting Pronouncements*. Summary of recent accounting pronouncements applicable to our condensed consolidated financial statements.
- *Quantitative and Qualitative Disclosure About Market Risk.* Discussion of our financial instruments' exposure to market risk.

Our discussion of our results of operations, financial condition, and cash flow for Q2 2023 and YTD 2023 can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" within our filing of Form 10-Q for the fiscal quarter ended July 2, 2023.

This MD&A discussion contains forward-looking statements that involve risks and uncertainties. See Consideration Regarding Forward-Looking Statements preceding the Condensed Consolidated Financial Statements section of this report for additional factors relating to such statements. This MD&A should be read in conjunction with our condensed consolidated financial statements and accompanying notes included in this report and our Annual Report on Form 10-K for the fiscal year ended December 31, 2023. Operating results are not necessarily indicative of results that may occur in future periods.

MANAGEMENT'S OVERVIEW AND OUTLOOK

This overview and outlook provide a high-level discussion of our operating results and significant known trends that affect our business. We believe that an understanding of these trends is important to understanding our financial results for the periods being reported herein as well as our future financial performance. This summary is not intended to be exhaustive, nor is it intended to be a substitute for the detailed discussion and analysis provided elsewhere in this report.

About Illumina

Our focus on innovation has established us as a global leader in DNA sequencing and array-based technologies, serving customers in the research, clinical and applied markets. Our products are used for applications in the life sciences, oncology, reproductive health, agriculture and other emerging segments. Our customers include leading genomic research centers, academic institutions, government laboratories, and hospitals, as well as pharmaceutical, biotechnology, commercial molecular diagnostic laboratories, and consumer genomics companies. Our comprehensive line of products addresses the scale of experimentation and breadth of functional analysis to advance disease research, drug development, and the development of molecular tests. This portfolio of leading-edge sequencing and array-based solutions addresses a range of genomic complexity and throughput, enabling researchers and clinical practitioners to select the best solution for their scientific challenge.

On June 24, 2024, we completed the Spin-Off of GRAIL into a new public company through the distribution of approximately 85.5% of the outstanding shares of common stock of GRAIL to Illumina stockholders on a pro rata basis. We retained approximately 14.5% of the shares of GRAIL common stock immediately following the Spin-Off. The disposition of GRAIL did not meet the criteria to be reported as a discontinued operation and accordingly, GRAIL's assets, liabilities, results of operations and cash flows have not been reclassified. In connection with the Spin-Off, Illumina's stockholders received one share of GRAIL common stock for every six shares of Illumina common stock held on the Record Date. Refer to note 2. GRAIL Spin-Off for further details.

We have two reportable segments, Core Illumina and GRAIL. Core Illumina relates to our core operations, excluding the results of GRAIL. See note 10. Segment Information for additional details.

Our financial results have been, and will continue to be, impacted by several significant trends, which are described below. While these trends are important to understanding and evaluating our financial results, this discussion should be read in conjunction with our condensed consolidated financial statements and the notes thereto within the Condensed Consolidated Financial Statements section of this report, and the other transactions, events, and trends discussed in Risk Factors within the Other Key Information section of this report.

Financial Overview

Since 2023, macroeconomic factors such as inflation, exchange rate fluctuations and concerns about an economic downturn, competitive challenges in our China region, and the sanctions imposed on Russia as a result of the armed conflict between Russia and Ukraine have impacted both Illumina directly and our customers' behavior. For example, some customers experienced supply chain pressures that delayed their lab expansions and others are managing inventory and capital more conservatively. We expect these factors to continue to have an impact on our sales and results of operations in 2024, the size and duration of which is significantly uncertain.

Financial highlights for YTD 2024 included the following:

- Revenue decreased 3% in YTD 2024 to $2,188 million compared to $2,263 million in YTD 2023 primarily due to a decrease in sequencing instruments revenue, driven by fewer shipments of our high-throughput and mid-throughout instruments, partially offset by an increase in service and other revenue.

- Gross profit as a percentage of revenue (gross margin) was 63.5% in YTD 2024 compared to 61.3% in YTD 2023. The increase in gross margin was driven primarily by a more favorable mix of sequencing consumables and execution of our operational excellence priorities that delivered cost savings, including freight, and improved productivity. This was partially offset by certain strategic partnership revenue that is lower margin and increased warranty and field service costs. Our gross margin depends on many factors, including: market conditions that may impact our pricing; sales mix changes among consumables, instruments, services, and development and licensing revenue; product mix changes between established products and new products; excess and obsolete inventories; royalties; our cost structure for manufacturing operations relative to volume; freight costs; and product support obligations.

- Loss from operations was $1,749 million in YTD 2024 compared to $152 million in YTD 2023. The increase in loss from operations was due to an increase in operating expense of $1,599 million, which included goodwill and intangible impairment charges of $1,889 million, partially offset by a favorable impact of $283 million related to our contingent consideration liability for the GRAIL CVRs. We continue to focus on our cost reduction initiatives to accelerate progress toward higher margins and create flexibility for further investment in high-growth areas.

- Our effective tax rate was (1.4)% in YTD 2024 compared to (38.5)% in YTD 2023. The variance from the U.S. federal statutory tax rate of 21% was primarily because of the income tax expense impact of the impairment of goodwill, which is nondeductible for tax purposes, the income tax expense impact of research and development expense capitalization for tax purposes, and the income tax expense impact of GRAIL pre-acquisition net operating losses on GILTI, the utilization of U.S. foreign tax credits, and the Pillar Two global minimum top-up tax. This was partially offset by the mix of earnings in jurisdictions with lower statutory tax rates than the U.S. federal statutory tax rate, such as in Singapore.

- We ended Q2 2024 with cash, cash equivalents, and short-term investments totaling $994 million, of which approximately $444 million was held by our foreign subsidiaries.

RESULTS OF OPERATIONS

To enhance comparability, the following table sets forth unaudited condensed consolidated statement of operations data for the specified reporting periods, stated as a percentage of total revenue.[1]

	Q2 2024	Q2 2023	YTD 2024	YTD 2023
Revenue:				
Product revenue	**83.4 %**	85.1 %	**82.4 %**	85.0 %
Service and other revenue	**16.6**	14.9	**17.6**	15.0
Total revenue	**100.0**	100.0	**100.0**	100.0
Cost of revenue:				
Cost of product revenue	**22.6**	25.9	**23.0**	26.1
Cost of service and other revenue	**8.5**	7.7	**9.2**	8.4
Amortization of acquired intangible assets	**4.1**	4.2	**4.3**	4.2
Total cost of revenue	**35.2**	37.8	**36.5**	38.7
Gross profit	**64.8**	62.2	**63.5**	61.3
Operating expense:				
Research and development	**29.2**	30.4	**30.2**	30.9
Selling, general and administrative	**13.2**	39.3	**26.9**	37.1
Goodwill and intangible impairment	**169.6**	—	**86.3**	—
Total operating expense	**212.0**	69.7	**143.4**	68.0
Loss from operations	**(147.2)**	(7.5)	**(79.9)**	(6.7)
Other income (expense):				
Interest income	**1.2**	1.4	**1.1**	1.5
Interest expense	**(1.8)**	(1.6)	**(1.8)**	(1.7)
Other (expense) income, net	**(29.9)**	0.1	**(14.7)**	(0.5)
Total other expense, net	**(30.5)**	(0.1)	**(15.4)**	(0.7)
Loss before income taxes	**(177.7)**	(7.6)	**(95.3)**	(7.4)
Provision for income taxes	**1.1**	12.3	**1.3**	2.8
Net loss	**(178.8)%**	(19.9)%	**(96.6)%**	(10.2)%

[1] Percentages may not recalculate due to rounding.

Revenue

Dollars in millions	Q2 2024	Q2 2023	Change	% Change	YTD 2024	YTD 2023	Change	% Change
Core Illumina:								
Consumables	**$ 815**	$ 809	$ 6	1 %	**$ 1,584**	$ 1,579	$ 5	— %
Instruments	**120**	197	(77)	(39)	**234**	357	(123)	(34)
Total product revenue	**935**	1,006	(71)	(7)	**1,818**	1,936	(118)	(6)
Service and other revenue	**157**	153	4	3	**330**	299	31	10
Total Core Illumina revenue	**1,092**	1,159	(67)	(6)	**2,148**	2,235	(87)	(4)
GRAIL:								
Service and other revenue	**29**	22	7	32	**55**	42	13	31
Eliminations	**(9)**	(5)	(4)	80	**(15)**	(14)	(1)	7
Total consolidated revenue	**$ 1,112**	$ 1,176	$ (64)	(5) %	**$ 2,188**	$ 2,263	$ (75)	(3) %

Core Illumina consumables revenue remained relatively flat in Q2 2024 and YTD 2024. Core Illumina instruments revenue decreased in Q2 2024 and YTD 2024 primarily due to a decrease in sequencing instruments revenue of $77 million and $121 million, respectively, driven by fewer shipments of our high-throughput instruments, given we entered 2024 with a lower backlog of NovaSeq X instruments, as compared to 2023, given significant pre-orders following the launch, and fewer shipments of our mid-throughput instruments, primarily as capital and cash flow constraints continue to impact our customer's purchasing behavior. Core Illumina service and other revenue increased in Q2 2024 and YTD 2024 primarily due to increased revenue from our strategic partnerships and extended maintenance service contracts, partially offset by decreases in revenues from development and licensing agreements and genotyping services.

GRAIL service and other revenue increased $7 million, or 32%, and $13 million, or 31%, in Q2 2024 and YTD 2024, respectively, primarily due to sales of Galleri.

Gross Margin

Dollars in millions	Q2 2024	Q2 2023	Change	% Change	YTD 2024	YTD 2023	Change	% Change
Gross profit (loss):								
Core Illumina	**$ 743**	$ 760	$ (17)	(2) %	**$ 1,436**	$ 1,446	$ (10)	(1) %
GRAIL	**(16)**	(24)	8	(33)	**(38)**	(50)	12	(24)
Eliminations	**(6)**	(4)	(2)	50	**(10)**	(10)	—	—
Consolidated gross profit	**$ 721**	$ 732	$ (11)	(2) %	**$ 1,388**	$ 1,386	$ 2	— %
Gross margin:								
Core Illumina	**68.0 %**	65.5 %			**66.9 %**	64.7 %		
GRAIL	*	*			*	*		
Consolidated gross margin	**64.8 %**	62.2 %			**63.5 %**	61.3 %		

* Not meaningful.

The increase in Core Illumina gross margin in Q2 2024 and YTD 2024 was driven primarily by a more favorable mix of sequencing consumables and execution of our operational excellence priorities that delivered cost savings, including freight, and improved productivity. The increase in YTD 2024 was partially offset by certain strategic partnership revenue that is lower margin and increased warranty and field service costs.

GRAIL gross loss in Q2 2024 and Q2 2023 and YTD 2024 and YTD 2023 was primarily due to amortization of intangible assets of $31 million and $33 million and $65 million and $67 million, respectively.

Operating Expense

Dollars in millions	Q2 2024	Q2 2023	Change	% Change	YTD 2024	YTD 2023	Change	% Change
Research and development:								
Core Illumina	**$ 241**	$ 274	$ (33)	(12)%	**$ 479**	$ 532	$ (53)	(10)%
GRAIL	**88**	89	(1)	(1)	**189**	175	14	8
Eliminations	**(4)**	(5)	1	(20)	**(8)**	(8)	—	—
Consolidated research and development	**325**	358	(33)	(9)	**660**	699	(39)	(6)
Selling, general and administrative:								
Core Illumina	**60**	371	(311)	(84)	**396**	656	(260)	(40)
GRAIL	**88**	91	(3)	(3)	**192**	184	8	4
Eliminations	**(1)**	—	(1)	100	**—**	(1)	1	100
Consolidated selling, general and administrative	**147**	462	(315)	(68)	**588**	839	(251)	(30)
Goodwill and intangible impairment:								
Core Illumina	**—**	—	—	—	**3**	—	3	100
GRAIL	**1,886**	—	1,886	100	**1,886**	—	1,886	100
Consolidated goodwill and intangible impairment	**1,886**	—	1,886	100	**1,889**	—	1,889	100
Total consolidated operating expense	**$ 2,358**	$ 820	$ 1,538	188 %	**$ 3,137**	$ 1,538	$ 1,599	104 %

Core Illumina R&D expense decreased by $33 million, or 12%, in Q2 2024 and by $53 million, or 10%, in YTD 2024 primarily due to decreases in headcount and employee related compensation costs and lab supply costs, as we continue to focus on our cost reduction initiatives. The decrease is also due to a decrease in restructuring charges.

GRAIL R&D expense slightly decreased by $1 million, or 1%, in Q2 2024 primarily due to a decrease in employee related compensation costs, offset by increases in professional services and facilities related costs. GRAIL R&D expense increased by $14 million, or 8%, in YTD 2024 primarily due to increases in lab and consumables spend, employee related compensation costs, professional services and facilities related costs.

Core Illumina SG&A expense decreased by $311 million, or 84%, in Q2 2024 primarily due to a gain recognized on our contingent consideration liability related to the GRAIL CVRs of $271 million in Q2 2024 compared to a loss of $29 million in Q2 2023, a decrease in proxy contest charges of $25 million, a decrease in restructuring charges of $14 million, a decrease in legal contingency accruals and settlements of $12 million, and a decrease in headcount and employee related compensation costs. The decrease was partially offset by an increase in GRAIL-related transaction expenses, which included $37 million of expenses incurred in Q2 2024 directly related to the Spin-Off, and accrued interest recognized on the fine imposed by the European Commission of $7 million, which began accruing interest in October 2023. Core Illumina SG&A expense decreased by $260 million, or 40%, in YTD 2024 primarily due to a gain recognized on our contingent consideration liability related to the GRAIL CVRs of $255 million in YTD 2024 compared to a loss of $28 million in YTD 2023, a decrease in proxy contest charges of $31 million, a decrease of $15 million related to legal contingency accruals and settlements, a decrease in facility related costs, as we continue to exit certain of our facilities, and a decrease in headcount and employee related compensation costs. The decrease was partially offset by an increase in GRAIL-related transaction expenses, which included $52 million of expenses incurred in YTD 2024 directly related to the Spin-Off, an increase in restructuring

charges of $21 million, primarily related to asset impairment charges, and accrued interest recognized on the fine imposed by the European Commission of $14 million.

GRAIL SG&A expense decreased by $3 million, or 3%, in Q2 2024 primarily due to a decrease in employee related compensation costs. GRAIL SG&A expense increased by $8 million, or 4%, in YTD 2024 primarily due to an increase in headcount and employee related compensation costs, partially offset by a decrease in marketing spend.

GRAIL goodwill and intangible impairment for Q2 2024 and YTD 2024 consisted of goodwill impairment of $1,466 million and IPR&D intangible asset impairment of $420 million as a result of performing impairment tests in Q2 2024. See note 7. Supplemental Balance Sheet Details for additional details. Core Illumina goodwill and intangible impairment for YTD 2024 consisted of an IPR&D intangible asset impairment recorded in Q1 2024.

Other Income (Expense)

Dollars in millions	Q2 2024	Q2 2023	Change	% Change	YTD 2024	YTD 2023	Change	% Change
Interest income	**$ 13**	$ 17	$ (4)	(24)%	**$ 25**	$ 34	$ (9)	(26)%
Interest expense	**(20)**	(19)	(1)	5	**(39)**	(39)	—	—
Other (expense) income, net	**(332)**	1	(333)	(33,300)	**(323)**	(10)	(313)	3,130
Total other expense, net	**$ (339)**	$ (1)	$ (338)	33,800 %	**$ (337)**	$ (15)	$ (322)	2,147 %

Total other expense, net primarily relates to the Core Illumina segment.

Interest income in Q2 2024 and YTD 2024 consisted primarily of interest on our money market funds, which decreased primarily due to a lower cash balance in Q2 2024 as compared to the prior year. Interest expense consisted primarily of interest on our outstanding term debt. The fluctuation in other (expense) income, net in Q2 2024 and YTD 2024 was primarily driven by an unrealized loss of $328 million on our retained investment in GRAIL subsequent to the Spin-Off. See note 4. Investments and Fair Value Measurements for details. The Q2 2024 and YTD 2024 fluctuations were partially offset by favorable impacts on our Helix contingent value right of $8 million.

Provision for Income Taxes

Dollars in millions	Q2 2024	Q2 2023	Change	% Change	YTD 2024	YTD 2023	Change	% Change
Loss before income taxes	**$ (1,976)**	$ (89)	$ (1,887)	2,120 %	**$ (2,086)**	$ (167)	$ (1,919)	1,149 %
Provision for income taxes	**12**	145	(133)	(92)	**28**	64	(36)	(56)
Net loss	**$ (1,988)**	$ (234)	$ (1,754)	750 %	**$ (2,114)**	$ (231)	$ (1,883)	815 %
Effective tax rate	**(0.6)%**	(163.8)%			**(1.4)%**	(38.5)%		

Our effective tax rate was (0.6)% and (1.4)% in Q2 2024 and YTD 2024, respectively, compared to (163.8)% and (38.5)% in Q2 2023 and YTD 2023, respectively. The variance from the U.S. federal statutory tax rate of 21% for Q2 2024 and YTD 2024 was primarily because of the $308 million income tax expense impact from the impairment of goodwill, which is nondeductible for tax purposes, the $99 million and $116 million income tax expense impact of GRAIL pre-acquisition net operating losses on GILTI, the utilization of U.S. foreign tax credits, and the Pillar Two global minimum top-up tax, respectively, and the $41 million and $63 million income tax expense impact of capitalizing research and development expenses for tax purposes, respectively. The income tax expense in Q2 2024 and YTD 2024 was also favorably impacted by the mix of earnings in jurisdictions with lower statutory tax rates than the U.S. federal statutory tax rate, such as in Singapore.

In Q2 2023 and YTD 2023, the variance from the U.S. federal statutory tax rate of 21% was primarily because of the $112 million and net $64 million income tax expense impact of capitalizing research and development expenses for tax purposes, respectively, and the $69 million and net $25 million income tax expense impact of GRAIL pre-acquisition net operating losses on GILTI and the utilization of U.S. foreign tax credits, respectively. The income tax expense in Q2 2023 and YTD 2023 was also favorably impacted by the mix of earnings in jurisdictions with lower statutory tax rates than the U.S. federal statutory tax rate, such as in Singapore and the United Kingdom.

Historically we calculated the provision/(benefit) for income taxes for interim periods utilizing an estimated annual effective tax rate applied to the income/(loss) for the reporting period, except in Q1 2024 and Q2 2023 when a year-to-date effective tax rate method was utilized. In accordance with the authoritative guidance for accounting for income taxes in interim periods, we determined the estimated annual effective tax rate method would provide a more reasonable estimate of the provision for income taxes for Q2 2024 and YTD 2024 since minor changes in the estimated income/(loss) before income taxes would not result in significant changes in the estimated annual effective tax rate.

Our future effective tax rate may vary from the U.S. federal statutory tax rate due to the mix of earnings in tax jurisdictions with different statutory tax rates and the other factors discussed in the risk factor “We are subject to risks related to taxation in multiple jurisdictions” described in “Risk Factors” within the Business & Market Information section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

LIQUIDITY AND CAPITAL RESOURCES

As of June 30, 2024, we had approximately $920 million in cash and cash equivalents, of which approximately $444 million was held by our foreign subsidiaries. Cash and cash equivalents decreased by $128 million from December 31, 2023 due primarily to the derecognition of GRAIL’s cash and cash equivalents of $968 million in connection with the Spin-Off, which included the required Disposal Funding, (see note 2. GRAIL Spin-Off), offset by the $744 million borrowing, net of issuance costs, on the Delayed Draw Credit Facility in Q2 2024, and other factors described in the “Cash Flow Summary” below. Our primary source of liquidity, other than our holdings of cash, cash equivalents, and investments, has been cash flows from operations and, from time to time, issuances of debt. Our ability to generate cash from operations provides us with the financial flexibility we need to meet operating, investing, and financing needs. Historically, we have liquidated our short-term investments and/or issued debt to finance our business needs as a supplement to cash provided by operating activities. As of June 30, 2024, we had $74 million in short-term investments, comprised of marketable equity securities.

On July 12, 2023, as a result of our decision to proceed with the completion of our acquisition of GRAIL during the pendency of the European Commission’s review, the European Commission imposed a €432 million fine on us, representing the maximum fine of 10% of our consolidated annual revenues for fiscal year 2022. As of June 30, 2024, we accrued $481 million, including related accrued interest and foreign currency fluctuations, included in accrued liabilities. We provided guarantees in October 2023 to satisfy the obligation in lieu of cash payment while we appeal the European Commission’s jurisdictional decision and fine decision. The fine is accruing interest at a rate of 5.5% per annum, beginning in October 2023, while it is outstanding. Refer to note 8. Legal Proceedings for additional details.

On June 17, 2024, we entered into a 364-day Delayed Draw Credit Facility, which provides us with a senior unsecured term loan credit facility in an aggregate principal amount of up to $750 million. On June 20, 2024, we borrowed $750 million on the Delayed Draw Credit Facility. The delayed draw term loan currently bears interest at a variable rate equal to the Term SOFR, plus an applicable rate that varies with the Company’s debt rating and a credit spread adjustment equal to 0.10% per annum. The current borrowing rate under the Delayed Draw Credit Facility is 6.7%. The Delayed Draw Credit Facility matures, and all amounts outstanding thereunder become due and payable in full, on June 19, 2025. We may prepay the delayed draw term loan at any time without premium or penalty (other than customary breakage costs) and we are not permitted to re-borrow once the term loan is repaid.

In December 2022, we issued term notes due 2025 with an aggregate principal amount of $500 million and term notes due 2027 with an aggregate principal amount of $500 million. The 2025 Term Notes, which mature on December 12, 2025, and the 2027 Term Notes, which mature on December 13, 2027, accrue interest at a rate of 5.800% and 5.750% per annum, respectively, payable semi-annually in June and December of each year. We may redeem for cash all or any portion of the 2025 or 2027 Term Notes, at our option, at any time prior to maturity.

In March 2021, we issued term notes due 2031 with an aggregate principal amount of $500 million. The 2031 Term Notes, which mature on March 23, 2031, accrue interest at a rate of 2.550% per annum, payable semi-annually in March and September of each year. We may redeem for cash all or any portion of the 2031 Term Notes, at our option, at any time prior to maturity.

On January 4, 2023, we obtained a new Revolving Credit Facility, which provides us with a $750 million senior unsecured five year revolving credit facility, including a $40 million sublimit for swingline borrowings and a $50 million sublimit for letters of credit. The Revolving Credit Facility matures, and all amounts outstanding thereunder become due and payable in full, on January 4, 2028, subject to two one-year extensions at our option and the consent of the extending lenders and certain other conditions. As of June 30, 2024, there were no borrowings outstanding under the Revolving Credit Facility; however, we may draw upon the facility in the future to manage cash flow or for other corporate purposes, including in connection with the payment of the €432 million European Commission fine. We provided guarantees in October 2023 to satisfy the obligation in lieu of cash payment while we appeal the European Commission's jurisdictional decision and fine decision.

As of June 30, 2024, the fair value of our contingent consideration liability related to our acquisition of GRAIL was $131 million, of which $130 million was included in other long-term liabilities. The contingent value rights issued as part of the acquisition entitle the holders to receive future cash payments on a quarterly basis (Covered Revenue Payments) representing a pro rata portion of certain GRAIL-related revenues (Covered Revenues) each year for a 12-year period. This will reflect a 2.5% payment right to the first $1 billion of revenue each year for 12 years. Revenue above $1 billion each year will be subject to a 9% contingent payment right during this same period. In YTD 2024, we paid $535,000 in aggregate Covered Revenue Payments related to Covered Revenues for Q4 2023 and Q1 2024 of $57 million in aggregate.

We had $3 million (plus recallable distributions of approximately $10 million) and up to $52 million, respectively, remaining in our capital commitments to two venture capital investment funds as of June 30, 2024 that are callable through April 2026 and July 2029, respectively.

Authorizations to repurchase $15 million of our common stock remained available as of June 30, 2024 under the $750 million share repurchase program authorized by our Board of Directors on February 5, 2020. The repurchases may be completed under a 10b5-1 plan or at management's discretion.

We anticipate that our current cash, cash equivalents, and short-term investments, together with cash provided by operating activities and available borrowing capacity under the Revolving Credit Facility, are sufficient to fund our near-term capital and operating needs for at least the next 12 months. Operating needs include the planned costs to operate our business, including amounts required to fund working capital and capital expenditures. Our primary short-term needs for capital, which are subject to change, may include:

- support of commercialization efforts related to our current and future products;
- acquisitions of equipment and other fixed assets for use in our current and future manufacturing and research and development facilities;
- the continued advancement of research and development efforts;
- the payment of the European Commission fine related to our acquisition of GRAIL;
- potential strategic acquisitions and investments;
- repayment of debt obligations;
- repurchases of our outstanding common stock; and
- the evolving needs of our facilities, including costs of leasing and building out facilities.

We expect that our revenue and results of operations, as well as the status of each of our new product development programs, will significantly impact our cash management decisions.

Our future capital requirements and the adequacy of our available funds will depend on many factors, including:

- our ability to successfully commercialize and further develop our technologies and create innovative products in our markets;
- scientific progress in our research and development programs and the magnitude of those programs;
- competing technological and market developments; and
- the need to enter into collaborations with other companies or acquire other companies or technologies to enhance or complement our product and service offerings.

Cash Flow Summary

In millions	YTD 2024	YTD 2023
Net cash provided by operating activities	**$ 157**	$ 115
Net cash used in investing activities	**(89)**	(93)
Net cash used in financing activities	**(191)**	(476)
Effect of exchange rate changes on cash and cash equivalents	**(5)**	(4)
Net decrease in cash and cash equivalents	**$ (128)**	$ (458)

Operating Activities

Net cash provided by operating activities in YTD 2024 consisted of a net loss of $2,114 million, plus net adjustments of $2,215 million and net changes in operating assets and liabilities of $56 million. The primary adjustments to net loss included goodwill and intangible impairment of $1,889 million, net losses on strategic investments of $330 million, depreciation and amortization expense of $213 million, share-based compensation expense of $208 million, and property and equipment and right-of-use asset impairment of $32 million, partially offset by change in fair value of contingent consideration liabilities of $255 million and deferred income taxes of $180 million. Cash flow impact from changes in net operating assets and liabilities were primarily driven by an increase in accrued liabilities and a decrease in accounts receivable, partially offset by decreases in accounts payable and other long-term liabilities.

Investing Activities

Net cash used in investing activities totaled $89 million in YTD 2024. We invested $67 million in capital expenditures, primarily associated with investments in facilities, and purchased strategic investments of $22 million.

Financing Activities

Net cash used in financing activities totaled $191 million in YTD 2024. As a result of the GRAIL Spin-Off, we deconsolidated cash and cash equivalents of $968 million, partially offset by net borrowings on the Delayed Draw Credit Facility of $744 million. We received $36 million in proceeds from the sale of shares under our employee stock purchase plan.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

In preparing our condensed consolidated financial statements, we make estimates, assumptions and judgments that can have a significant impact on our net revenue, operating income (loss) and net income (loss), as well as on the value of certain assets and liabilities on our balance sheet. We believe that the estimates, assumptions and judgments involved in the accounting policies described in “Critical Accounting Policies and Estimates” within the Management’s Discussion & Analysis section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 have the greatest potential impact on our financial statements, so we consider them to be our critical accounting policies and estimates. Though macroeconomic factors such as inflation, exchange rate fluctuations and concerns about an economic downturn present additional uncertainty, we continue to use the best information available to inform our critical accounting estimates. There were no material changes to our critical accounting policies and estimates during YTD 2024, with the exception of income taxes as disclosed in note 1. Organization and Significant Accounting Policies .

RECENT ACCOUNTING PRONOUNCEMENTS

For a summary of recent accounting pronouncements applicable to our condensed consolidated financial statements, see note 1. Organization and Significant Accounting Policies within the Condensed Consolidated Financial Statements section of this report, which is incorporated herein by reference.

QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

There were no substantial changes to our market risks in YTD 2024, when compared to the disclosures in "Quantitative and Qualitative Disclosures about Market Risk" within the Management's Discussion & Analysis section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

OTHER KEY INFORMATION

CONTROLS AND PROCEDURES

We design our internal controls to provide reasonable assurance that (1) our transactions are properly authorized; (2) our assets are safeguarded against unauthorized or improper use; and (3) our transactions are properly recorded and reported in conformity with U.S. generally accepted accounting principles. We also maintain internal controls and procedures to ensure that we comply with applicable laws and our established financial policies.

During the second quarter of 2024, we continued to monitor and evaluate the design and operating effectiveness of key controls. There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) that materially affected or are reasonably likely to materially affect internal control over financial reporting.

Based on management's evaluation (under the supervision and with the participation of our chief executive officer (CEO) and chief financial officer (CFO)), as of the end of the period covered by this report, our CEO and CFO concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)), are effective to provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

LEGAL PROCEEDINGS

See discussion of legal proceedings in note 8. Legal Proceedings in the Condensed Consolidated Financial Statements section of this report, which is incorporated herein by reference.

RISK FACTORS

Our business is subject to various risks, including those described in "Risk Factors" within the Business & Market Information section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, and the "Other Key Information" section of our Quarterly Report on Form 10-Q for the period ended March 31, 2024, which we strongly encourage you to review. In addition to the risk factors disclosed in our Form 10-K, the issues raised in the following risk factors could adversely affect our operating results and stock price:

On June 24, 2024, we completed the separation of GRAIL into a separate, independent publicly traded company. However, our acquisition of GRAIL (the Acquisition) remains subject to ongoing legal and regulatory proceedings in the United States and in the European Union. Litigation, regulation, and other proceedings related to or resulting from the Acquisition have resulted in significant financial penalties, operational restrictions and increased costs, and could result in similar additional future consequences or further result in loss of revenues.

As previously disclosed, the Acquisition has been subject to various legal challenges, including by the FTC and European Commission. As a result, we have been a party to a number of regulatory and administrative proceedings

regarding the Acquisition, including ongoing proceedings regarding the European Commission's assertion of jurisdiction to review the Acquisition under Article 22(1) of Council Regulation (EC) No 139/2004. On October 12, 2023, the European Commission announced that it had adopted the Statement of Objections issued on December 5, 2022, which ordered Illumina to, among other things, divest GRAIL. See note 8. Legal Proceedings within the Consolidated Financial Statements for further details.

As previously disclosed, on October 29, 2021, the European Commission adopted an order imposing interim measures (the Initial Interim Measures Order), which was renewed on October 28, 2022. The interim measures, including the hold separate arrangement, and our obligations pursuant thereto, imposed implementation and administrative processes and additional legal, financial advisory, regulatory and other professional services costs, which were burdensome to implement and administer, and we may pay additional legal costs or be subject to investigations or penalties. Such burdens and additional costs, independently or together with additional burdens, costs and/or liabilities arising from the interim measures, may result in loss of revenue and other adverse effects on our business, financial condition and results of operations. On January 10, 2023, we filed an action with the EU General Court asking for annulment of the New Interim Measures Order. On January 20, 2023, the European Commission requested that these proceedings be stayed pending our appeal on jurisdiction.

On June 24, 2024, we completed the separation (the Spin-Off) of GRAIL into a separate, independent publicly traded company as described in note 2. GRAIL Spin-Off within the Consolidated Financial Statements. We incurred significant costs to complete the Spin-Off, including significant legal, financial advisory, regulatory and other professional services fees and additional expenses, and assumed certain liabilities in connection therewith. The Spin-Off also may result in loss of revenue and other adverse effects on our business, financial condition and results of operations. In addition, we have experienced and might continue to experience negative impacts on our stock price. We cannot predict what other adverse consequences to, among other things, our reputation, our relationships with governmental or regulatory authorities, or our ability to successfully complete future transactions, our ability to attract, retain and motivate customers, key personnel and those with whom we conduct business may result.

On July 12, 2023, the European Commission adopted a final decision finding that we breached the EU Merger Regulation by, in its view, acquiring the possibility to exert decisive influence over GRAIL and exerting such influence during the pendency of the European Commission's review. The European Commission therefore imposed a fine on us pursuant to Article 14(2)(b) of the EU Merger Regulation of approximately €432 million, representing the maximum fine of 10% of our consolidated annual revenues for fiscal year 2022. We provided guarantees in October 2023 to satisfy the obligation in lieu of cash payment while we appeal the European Commission's jurisdictional decision and fine decision. As of June 30, 2024, we accrued $481 million, including related accrued interest and foreign currency fluctuations, included in accrued liabilities. In addition, the European Commission, the FTC and/or other governmental or regulatory authorities may seek to impose other fines, penalties, remedies or restrictions.

Furthermore, we have and may continue to become subject to stockholder inspection demands under Delaware law, investigations initiated by regulators and law firms, and derivative or other similar litigation that can be expensive, divert management attention and human and financial capital to less productive uses and result in potential reputational damage. The GRAIL acquisition and subsequent litigation resulted in (i) the announcement of an investigation by the SEC and others by law firms of possible securities law violations; (ii) stockholder inspection demands seeking to investigate possible breaches of fiduciary duties, corporate wrongdoing or a lack of independence of the members of the Board, including a complaint filed in the Delaware Court of Chancery seeking to inspect books and records captioned *Pavers and Road Builders Benefit Funds v. Illumina, Inc.* ; (iii) the filing of four securities class actions in the United States District Court for the Southern District of California: *Kangas v. Illumina, Inc. et al*., *Roy v. Illumina, Inc. et al.* , *Louisiana Sheriffs' Pension & Relief Fund v. Illumina, Inc. et al.* and *Warner v. deSouza et al*.; (iv) the filing of a securities class action in the United States District Court for the District of Delaware captioned *Wang v. deSouza et al.* ; (v) the filing of two securities class actions in the Superior Court of the State of California, County of San Mateo: *Loren Scott Mar v. Illumina, et al.* and *Scott Zerzanek v. Illumina, Inc. et al.* ; (vi) the filing of a stockholder derivative and class action complaint captioned *Icahn Partners LP, et al. v. deSouza, et al.* ; (vii) the filing of a stockholder derivative complaint captioned *City of Omaha Police and Firefighters Retirement System v. deSouza, et al.* ; and (viii) the filing of a stockholder derivative complaint captioned *City of Roseville General Employees Retirement System, et al. v. deSouza, et al*. See note 8. Legal Proceedings within the Consolidated Financial Statements for further details. In the event that any of the matters described above result in one or more adverse judgments or settlements, we may experience an adverse impact on our financial condition, results of operations or stock price.

The Spin-Off could result in substantial tax liability.

We received a private letter ruling from the Internal Revenue Service (the IRS) and a written opinion of tax counsel substantially to the effect that, for U.S. federal income tax purposes, the Spin-Off and certain related transactions qualified for non-recognition of gain and loss under Sections 355 and 368 of the U.S. Internal Revenue Code of 1986, as amended. If the factual assumptions or representations made in the request for the private letter ruling prove to have been inaccurate or incomplete in any material respect, then we will not be able to rely on the ruling. Furthermore, the IRS does not rule on whether a distribution such as the Spin-Off satisfies certain requirements necessary to obtain tax-free treatment under Section 355 of the Code. The private letter ruling was based on representations by us and GRAIL that those requirements were satisfied, and any inaccuracy in those representations could invalidate the ruling.

Additionally, the opinion of tax counsel relied on, among other things, the continuing validity of the private letter ruling and various assumptions and representations as to factual matters made by GRAIL and us which, if inaccurate or incomplete in any material respect, would jeopardize the conclusions reached by such counsel in its opinion. The opinion is not binding on the IRS or the courts, and there can be no assurance that the IRS or the courts would not challenge the conclusions stated in the opinion or that any such challenge would not prevail. If, notwithstanding the private letter ruling and opinion of tax counsel, the IRS determines that the Spin-Off and certain related transactions did not qualify for tax-free treatment for U.S. federal income tax purposes, the resulting tax liability to the Company and its shareholders could be substantial.

Following the Spin-Off, we remain the obligor on the contingent value rights (the CVRs) we issued in connection with the GRAIL Acquisition.

Following the Spin-Off, we remain the obligor on the CVRs and, accordingly, continue to be required to record in our financial statements the estimated future liabilities associated with the CVRs. Since we no longer own GRAIL, it may be more difficult for us to estimate these future liabilities. We also may have difficulty complying with our obligations in respect of the CVRs if we are unable to obtain timely and accurate information from GRAIL.

The Spin-Off could adversely affect the market value of the CVRs.

The business of GRAIL may be adversely affected by the Spin-Off, which could adversely affect the market value of the CVRs.

In April 2024, the FDA issued the Final Rule relating to Laboratory Development Tests (LDTs). Newly developed LDT products may be subject to regulatory clearance or approval, and could result in adverse impacts to our business, financial condition, or results of operations.

Certain of our in vitro diagnostic products, or IVDs, are currently available through laboratories that are certified under the Clinical Laboratory Improvements Amendments (CLIA) of 1988. These IVD products are commonly called “laboratory developed tests,” or LDTs.

For a number of years, the FDA has exercised its regulatory enforcement discretion to not regulate LDTs as medical devices if created and used within a single laboratory. On April 29, 2024, the FDA released final regulations under 21 CFR Part 809 under the Federal Food, Drug, and Cosmetic Act (FD&C Act) amending the regulations to make explicit that LDTs offered as IVDs are devices under the FD&C Act including when the manufacturer of the IVD is a laboratory (the LDT Rule).

The LDT Rule also provides that the FDA intends to exercise enforcement discretion with regard to premarket review and most quality system requirements for certain categories of IVDs, including currently marketed IVDs offered as LDTs that were first marketed prior to April 29, 2024. The FDA has included additional enforcement discretion policies within the rule for LDTs approved by the New York State’s Clinical Laboratory Evaluation Program (NYS CLEP).

The majority of revenue from products currently offered by our laboratories do not fall within the scope of the LDT Rule. With one exception, the LDTs currently offered as IVDs by our laboratories that fall within the purview of the LDT Rule are approved by NYS CLEP and were first marketed prior to the release of the LDT Rule.

We cannot predict the specifics of how the FDA intends to implement the Final Rule and uncertainties remain as to whether and how newly developed LDT products that are now require regulatory clearance or approval may impact our business, financial condition, or results of operations.

SHARE REPURCHASES AND SALES

Purchases of Equity Securities by the Issuer

None during the quarterly period ended June 30, 2024.

Unregistered Sales of Equity Securities

None during the quarterly period ended June 30, 2024.

ADOPTIONS, MODIFICATIONS OR TERMINATIONS OF TRADING PLANS

During the quarterly period ended June 30, 2024, the following directors and officers adopted , modified or terminated 10b5-1 plans:

- On May 14, 2024 , Charles Dadswell , our General Counsel , modified an existing arrangement intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). The modified arrangement terminates on April 18, 2025 and provides for the sale of up to 8,904 shares.

Other than as disclosed above, during the quarterly period ended June 30, 2024, (i) none of the Company's directors or officers adopted or terminated any "Rule 10b5-1 trading arrangement" or any "non-Rule 10b5-1 trading arrangement," and (ii) the Company did not adopt a "10b5-1 trading arrangement," in each case as such term is defined in Item 408 of Regulation S-K.

OTHER INFORMATION

On August 5, 2024, our Board of Directors approved amendments to the Company's Amended and Restated Bylaws (the Amended and Restated Bylaws), which became effective the same day. The following is a summary of certain provisions of the Amended and Restated Bylaws. Such summary is not intended to be complete and is qualified in its entirety by reference to the full text of the Amended and Restated Bylaws filed as Exhibit 3.1 to this Quarterly Report on Form 10-Q, which is incorporated herein by reference.

The Amended and Restated Bylaws include certain amendments to, among other things:

1. Add a federal forum provision for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933 or any rule or regulation promulgated thereunder;
2. Update certain requirements, mechanics, and disclosures relating to stockholders' meetings;
3. Update and clarify certain procedures and disclosure requirements related to stockholder nominations for director and notice of business to be conducted at a meeting of stockholders; and
4. Align certain indemnification provisions with our certificate of incorporation.

The Amended and Restated Bylaws also incorporate various other updates and technical, clarifying, and conforming changes.

EXHIBITS

		Incorporated by Reference				
Exhibit Number	**Exhibit Description**	**Form**	**File Number**	**Exhibit**	**Filing Date**	**Filed Herewith**
2.1	Separation and Distribution Agreement, dated June 21, 2024, between GRAIL, LLC and Illumina, Inc.*	8-K	001-35406	2.1	June 24, 2024	

3.1	Amended and Restated Bylaws of Illumina, Inc., effective as of August 5, 2024					X
10.1	Tax Matters Agreement, dated June 21, 2024, between GRAIL, LLC and Illumina, Inc.	8-K	001-35406	10.1	June 24, 2024	
10.2	Employee Matters Agreement, dated June 21, 2024, between GRAIL, LLC and Illumina, Inc.	8-K	001-35406	10.2	June 24, 2024	
10.3	Stockholder and Registration Rights Agreement, Dated June 21, 2024, between GRAIL, LLC and Illumina, Inc.	8-K	001-35406	10.3	June 24, 2024	
10.4	Fourth Amendment to the Amended and Restated Supply and Commercialization Agreement, dated June 21, 2024, by and between Illumina, Inc. and GRAIL, LLC*	8-K	001-35406	10.4	June 24, 2024	
10.5	364-Day Delayed Draw Credit Agreement, dated as of June 17, 2024, among the Company, as the borrower, the lenders from time to time party thereto and JPMorgan Chase Bank, N.A., as administrative agent	8-K	001-35406	10.1	June 17, 2024	
10.6+	Retention Agreement by and between Joydeep Goswami and Illumina, Inc. dated as of April 8, 2024					X
10.7+	Separation Agreement and General Release of All Claims by and between Joydeep Goswami and Illumina, Inc. dated as of July 2, 2024					X
31.1	Certification of Jacob Thaysen pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Ankur Dhingra pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1	Certification of Jacob Thaysen pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
32.2	Certification of Ankur Dhingra pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document					X
101.SCH	XBRL Taxonomy Extension Schema					X

101.CAL	XBRL Taxonomy Extension Calculation Linkbase	X
101.LAB	XBRL Taxonomy Extension Label Linkbase	X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase	X
101.DEF	XBRL Taxonomy Extension Definition Linkbase	X
104	Cover Page Interactive Data File - formatted in Inline XBRL and included as Exhibit 101	X

_____

+ Management contract or corporate plan or arrangement

* Portions of this exhibit omitted pursuant to Item 601(b)(2) and Item 601(b)(10) of Regulation S-K, as applicable. The Company agrees to furnish a supplemental and unredacted copy of any omitted schedule to the Securities and Exchange Commission upon its request.

FORM 10-Q CROSS-REFERENCE INDEX

SIGNATURES

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

ILLUMINA, INC.
(registrant)

Date: August 7, 2024

By: /s/ ANKUR DHINGRA
Name: Ankur Dhingra
Title: Chief Financial Officer

BYLAWS

OF

ILLUMINA, INC.

Amended and Restated

as of August 5, 2024

TABLE OF CONTENTS

BYLAWS OF ILLUMINA, INC.

ARTICLE I

CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of the corporation shall be 1209 Orange Street, in the City of Wilmington, County of New Castle, State of Delaware. The name of the registered agent of the corporation at such location is Corporation Trust Company.

1.2 OTHER OFFICES

The board of directors may at any time establish other offices at any place or places where the corporation is qualified to do business.

ARTICLE II

MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the board of directors. The board of directors may, in its sole discretion, determine that the meeting shall not be held at any place but may instead be held by means of remote communication as authorized by Section 211 of the General Corporation Law of the State of Delaware, as amended (the "DGCL"). In the absence of any such designation, stockholders' meetings shall be held at the registered office of the corporation.

2.2 ANNUAL MEETING

The annual meeting of stockholders shall be held each year on a date and at a time designated by the board of directors. In the absence of such designation, the annual meeting of stockholders shall be held on the Second Tuesday of May in each year at 10:00 a.m. Pacific time. However, if such day falls on a legal holiday, then the meeting shall be held at the same time and place on the next succeeding full business day. At the meeting, directors shall be elected and any other business properly brought before the meeting may be transacted.

2.3 SPECIAL MEETING

A special meeting of the stockholders, for any purpose or purposes, unless otherwise required by law, may be called only as set forth in Article XI of the certificate of incorporation and these bylaws.

In order for a stockholder requested special meeting under Article XI of the certificate of incorporation and these bylaws (a "Stockholder Requested Special Meeting") to be called, one or more written requests for a special meeting (each, a "Stockholder Special Meeting Request," and collectively, the "Stockholder Special Meeting Requests") must be signed by the Requisite Special Meeting Percent (as such term is defined in the certificate of incorporation) of record holders (or their duly authorized agent(s)) and must be delivered to the secretary of the corporation. The Stockholder Special Meeting Request(s) shall be delivered to the secretary of the corporation at the principal executive offices of the corporation by registered mail, return receipt requested. To be validly made in accordance with these bylaws, a Stockholder Special Meeting Request must:

(a) set forth a statement of the specific purpose(s) of the meeting and the matters proposed to be acted on at it;

(b) as to each purpose for which the meeting is to be called, set forth (A) a reasonably brief description of such purpose, (B) a reasonably brief description of the specific proposal to be made or business to be conducted at the special meeting in connection with such purpose, (C) the text of any proposal or business to be considered at the special meeting in connection with such purpose (including the text of any resolutions proposed for consideration and if such business includes a proposal to amend these bylaws, the language of the proposed amendment), (D) the reasons for calling a special meeting of the stockholders for such purpose, and (E) a reasonably brief description of any material interest of each requesting party (as defined in the certificate of incorporation) in any proposal or business to be considered at the special meeting in connection with such purpose;

(c) bear the date of signature of each record holder (or duly authorized agent) signing the Stockholder Special Meeting Request;

(d) set forth (A) the name and address, as they appear in the corporation's stock ledger, of each such record holder (or on whose behalf the Stockholder Special Meeting Request is signed) and (B) the class, if applicable, and the number of shares of common stock of the corporation that are owned of record and beneficially by each such stockholder;

(e) include documentary evidence (A) of each such stockholder's record and beneficial ownership of such stock and (B) that the ownership of common stock of the corporation by the requesting party(ies) satisfies the Requisite Special Meeting Percent;

(f) include (A) an acknowledgment of the requesting party(ies) that any disposition by such stockholder(s) after the delivery to the corporation of the Stockholder Special Meeting Request of any shares of common stock of the corporation shall be deemed a revocation of the Stockholder Special Meeting Request with respect to such shares and that such shares will no longer be included in determining whether the Requisite Special Meeting Percent has been satisfied and (B) a commitment by such stockholder(s) to continue to satisfy the Requisite Special Meeting Percent through the date of the Stockholder Requested Special Meeting and to notify the corporation upon any disposition of any shares of the corporation's common stock;

(g) set forth a representation that each record holder or beneficial owner requesting the special meeting, or one or more representatives of each such record holder or beneficial owner, intends to appear in person at the special meeting to present the business bought before the special meeting;

(h) set forth all information relating to each such stockholder that must be disclosed in solicitations of proxies for election of directors in an election contest (even if an election contest is not involved), or is otherwise required, in each case, pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and

(i) contain the information required by the third full paragraph of Section 2.15 of these bylaws, to the extent not already provided as required by this Section 2.3.

Each requesting party is required to supplement and update the information required by the foregoing clauses (a) through (i), as necessary, so that such information shall be true and correct as of the fifth (5th) business day prior to the Stockholder Requested Special Meeting or any adjournment, postponement or rescheduling thereof.

In determining whether a special meeting of the stockholders has been validly requested by stockholders satisfying, in the aggregate, the Requisite Special Meeting Percent, multiple Stockholder Special Meeting Requests delivered to the secretary of the corporation will be considered together only if each such Stockholder Special Meeting Request (x) identifies substantially the same purpose(s) of or business intended to be brought before the special meeting of the stockholders of the corporation and substantially the same reasons for conducting such business at the special meeting, as determined by the board of directors, and (y) has been dated and delivered to the secretary of the corporation within sixty (60) days of the earliest dated Stockholder Special Meeting Request relating to such business.

Any requesting party may revoke its special meeting request at any time by written revocation delivered to the secretary of the corporation at the principal executive offices of the corporation by registered mail, return receipt requested, and if, following such revocation or any time after the delivery of a valid Stockholder Special Meeting Request, there are unrevoked requests from stockholders holding in the aggregate less than the Requisite Special Meeting Percent, the board of directors, in its discretion, may cancel the special meeting. The requesting party(ies) shall certify in writing to the secretary of the corporation on the fifth (5th) business day prior to the Stockholder Requested Special Meeting, or any adjournment, postponement or rescheduling thereof as to whether such stockholder(s) continue to satisfy the Requisite Special Meeting Percent.

Notwithstanding the foregoing, the secretary of the corporation shall not be required to call a Stockholder Requested Special Meeting if:

(x) the stated matter to be brought before the special meeting is not a proper subject for stockholder action under applicable law, the certificate of incorporation or these bylaws;

(y) the board of directors calls an annual or special meeting of the stockholders to be held not later than 60 days after the date on which a valid Stockholder Special Meeting Request has been delivered to the secretary of the corporation (the "Delivery Date") relating to an identical or substantially similar item (a "Similar Item") (as determined by the board of directors) to the item identified in the Stockholder Special Meeting Request(s); or

(z) the Stockholder Special Meeting Request(s) (A) is received by the secretary of the corporation during the period commencing ninety (90) days prior to the first anniversary of the date of the immediately

preceding annual meeting and ending on the date of the next annual meeting; (B) contains a Similar Item to an item that was presented at any meeting of stockholders held within one hundred and twenty (120) days prior to the Delivery Date; (C) relates to an item of business that is not a proper subject for stockholder action under applicable law; (D) was made in a manner that involved a violation of Regulation 14A under the Exchange Act or other applicable law; or (E) does not comply with the provisions of this Section 2.3.

Any special meeting shall be held at such date, time and place, if any, as may be fixed by the board of directors in accordance with these bylaws and the DGCL. In the case of a Stockholder Requested Special Meeting, such meeting shall be held at such date, time and place, if any, as may be fixed by the board of directors, on condition that the date of any Stockholder Requested Special Meeting shall be not more than one hundred and twenty (120) days after the Delivery Date. In fixing a date, time and place, if any, for any Stockholder Requested Special Meeting, the board of directors may consider such factors as it deems relevant within the good faith exercise of business judgment, including, without limitation, the nature of the matters to be considered, the facts and circumstances surrounding any request for meeting and any plan of the board of directors to call an annual meeting or a special meeting. The board of directors may postpone or reschedule any special meeting of the stockholders. Nothing herein shall be construed (i) to give any stockholder a right to fix the date, time, or place, if any, of, or to fix any record date for, any special meeting of the stockholders of the corporation or (ii) as limiting, fixing or affecting the time when a special meeting of the stockholders called by action of the board of directors may be held.

Only such business shall be conducted at a special meeting of the stockholders as shall have been brought before the meeting pursuant to the corporation's notice of meeting. Business transacted at any Stockholder Requested Special Meeting shall be limited to the business stated in the Stockholder Special Meeting Request(s), except that nothing herein shall prohibit the board of directors from submitting matters, whether or not described in the Stockholder Special Meeting Request(s), to the stockholders at any Stockholder Requested Special Meeting. Notwithstanding the provisions of this Section 2.3 of these bylaws, unless otherwise required by law, if the stockholders (or qualified representatives of the stockholders) who submitted Stockholder Special Meeting Requests do not appear at the Stockholder Requested Special Meeting for the presentation of the matters that were specified in the Stockholder Special Meeting Request, the corporation need not present such matters for a vote at such meeting. Nothing herein will limit the power of the board of directors or chairperson appointed for any special meeting in respect of the conduct of any such meeting.

2.4 NOTICE OF STOCKHOLDERS' MEETINGS

All notices of any meetings with stockholders shall be in writing and shall be sent or otherwise given in accordance with Section 2.5 of these bylaws not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting, unless otherwise required by law. The notice shall specify the place, date, and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Business transacted at a special meeting of the stockholders shall be confined to the purpose or purposes of the meeting specified in the notice of meeting (or supplement or amendment thereto) given by or at the direction of the board of directors. Stockholders may not make nominations for directors before a special meeting of the stockholders. The board of directors can postpone or cancel any previously scheduled meeting of stockholders at any time, before or after the notice for such meeting has been sent to the stockholders, and the corporation shall publicly announce any such postponement or cancellation.

2.5 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE

Written notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at his address as it appears on the records of the corporation. An affidavit of the secretary or an assistant secretary or of the transfer agent of the corporation that the notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. If notice is given by electronic transmission, notice shall be given in accordance with and at the times provided in Section 232 of the DGCL or any successor provisions thereto.

2.6 QUORUM

The holders of a majority of the voting power of all stock issued and outstanding and entitled to vote thereat, present in person (including by means of remote communication as provided by the DGCL) or represented by proxy (including, for the avoidance of doubt, abstentions and broker non-votes), shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by applicable law or by the certificate of incorporation. Where a separate vote by class or series is required, a majority of the voting power of all stock issued and outstanding of such class or classes or series present in person or represented by proxy shall constitute a quorum entitled to take action with respect to that vote on that matter. If, however, a quorum is not present or represented at any meeting of the stockholders, then the stockholders entitled to vote thereat, present in person or represented by proxy, or the chairperson of the meeting, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is

present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.7 ADJOURNED MEETING; NOTICE

The chairperson of the meeting shall have the power, right, and authority to adjourn, recess, postpone, or reconvene any meeting of stockholders when appropriate. When a meeting is adjourned to another time or place (including due to a technical failure to convene or continue the meeting by remote communication), unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the date, time and place thereof (and, to the extent applicable, the means of remote communication for the meeting) are announced at the meeting at which the adjournment is taken, displayed during the time scheduled for the meeting on the electronic network used for the virtual meeting, or set forth in the notice of the meeting. At the adjourned meeting the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

2.8 VOTING; PARTICIPATION

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.10 of these bylaws, subject to the provisions of Sections 217 and 218 of the DGCL (relating to voting rights of fiduciaries, pledgors and joint owners of stock and to voting trusts and other voting agreements).

Except as may be otherwise provided in the certificate of incorporation, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

Except as otherwise provided by applicable law, the certificate of incorporation, or these bylaws, if a quorum exists at any meeting of stockholders, stockholders shall have approved any matter (other than the election of directors, which is addressed in Section 3.16 of these bylaws) by the vote of the majority of the votes cast (meaning the number of stocks voted “for” a matter must exceed the number of stocks voted “against” such matter, with abstentions and broker non-votes not counted as votes cast either “for” or “against” such matter). Where a separate vote by a class or series or classes or series is required, a majority of the votes cast on such matter by stockholders of such class or series or classes or series present in person or represented by proxy at the meeting and entitled to vote on such matter are in favor of such matter.

If authorized by the board of directors, and subject to such guidelines and procedures as the board of directors may adopt, stockholders and proxy holders not physically present at a meeting of stockholders may, by means of remote communication, participate in the meeting and be deemed present in person and vote at the meeting, whether such meeting is to be held at a designated place or solely by means of remote communication; provided that (a) the corporation shall implement reasonable measures to verify that each person deemed present and permitted to vote at the meeting by means of remote communication is a stockholder or proxy holder, (b) the corporation shall implement reasonable measures to provide such stockholders and proxy holders a reasonable opportunity to participate in the meeting and to vote on matters submitted to the stockholders, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with such proceedings, and (c) if any stockholder or proxy holder votes or takes other action at the meeting by means of remote communication, a record of such vote or other action shall be maintained by the corporation.

2.9 WAIVER OF NOTICE

Whenever notice is required to be given under any provision of the DGCL or of the certificate of incorporation or these bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice unless so required by the certificate of incorporation or these bylaws.

2.10 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING; GIVING CONSENTS

In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors and which date shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action.

If the board of directors does not so fix a record date:

1. The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.
2. The record date for determining stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the board of directors is necessary, shall be the day on which the first written consent is expressed.
3. The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the board of directors may fix a new record date for the adjourned meeting.

2.11 PROXIES

Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action may authorize another person or persons to act for him by a written proxy, signed by the stockholder and filed with the secretary of the corporation, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. A proxy shall be deemed signed if the stockholder's name is placed on the proxy (whether by manual signature, typewriting, telegraphic transmission or otherwise) by the stockholder or the stockholder's attorney-in-fact. Every proxy is revocable at the pleasure of the stockholder executing it unless the proxy states that it is irrevocable and applicable law makes it irrevocable.The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the DGCL. A stockholder may revoke any proxy that is not irrevocable by attending the meeting and voting in person or by delivering to the secretary of the corporation a revocation of the proxy or a new proxy bearing a later date no later than the time designated in the order of business for so delivering such proxies.Any stockholder directly or indirectly soliciting proxies from other stockholders must use a proxy card color other than white, which shall be reserved for the exclusive use of the board of directors.

2.12 LIST OF STOCKHOLDERS ENTITLED TO VOTE

At least 11 days before every meeting of the stockholders, the officer who has charge of the stock ledger of a corporation shall prepare and make a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least 10 days prior to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation

2.13 NOMINATIONS FOR DIRECTORS

Nominations of persons for election to the board of directors of the corporation may be made only

(i) by the board of directors at any meeting of stockholders and (ii) at an annual meeting of stockholders, by any stockholder of the corporation who is entitled to vote for the election of directors and who has complied with the procedures established by this Section 2.13. For a nomination to be properly brought before an annual meeting by a stockholder, the stockholder intending to make the nomination or bring other business before a meeting of stockholders, as the case may be (the "Proponent") must have given timely and proper notice thereof in writing to the secretary of the corporation, in accordance with, and containing all information and the completed questionnaire provided for in, this Section 2.13. The number of nominees a Proponent may nominate at a meeting (or in the case of a Proponent giving notice on behalf of any Stockholder Associated Person (as defined below), the number of nominees a Proponent may nominate for election at a meeting on behalf of such Stockholder Associated Person) shall not exceed the number of directors to be elected at such meeting.

To be timely, a Proponent's notice must be delivered to or mailed to the secretary of the corporation and received at the principal executive offices of the corporation not later than the close of business on the ninetieth (90th) day, nor earlier than the close of the business day on the one hundred and twentieth (120th) day prior to, the first anniversary of the preceding year's annual meeting of stockholders; provided, however, in the event the date of the annual meeting is advanced more than 30 days prior to such anniversary date or delayed more than 60 days after such anniversary date, then to be timely such notice must be received by the corporation not later than the close of business on the later of the 90th day prior to the date of the meeting or the 10th day following the date Public Disclosure (defined below) of the date of the annual meeting is first made. If, following the expiration of the deadline for a Proponent's notice to be properly delivered to the corporation, the size of the board of directors is increased, a Proponent may propose additional nominees equal to or fewer in

number than the number of newly created directorships resulting from such increase. The Proponent's notice must be delivered to or mailed to the secretary of the corporation and received at the principal executive offices of the corporation not later than the tenth (10th) day following the date Public Disclosure of the increase in board of directors size is first made. In no event shall any adjournment or postponement of an annual meeting of stockholders or announcement thereof commence a new time period or extend any time period for the giving of a Proponent's notice as required by this Section 2.13.

In addition, to be considered timely, a stockholder providing notice of any nomination proposed to be made at a meeting of stockholders shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.13 shall be true and correct as of the record date for determining the stockholders entitled to receive notice of the meeting and as of the date that is ten (10) days prior to the meeting or any adjournment, postponement or rescheduling thereof. Such update or supplement shall be delivered to, and received by, the secretary at the principal executive offices of the corporation not later than five (5) business days after the later of (i) the record date for determining the stockholders entitled to receive notice of the meeting and (ii) the date notice of such record date is first publicly disclosed (in the case of the update and supplement required to be made as of the record date); and not later than the fifth (5th) day prior to the date for the meeting or any adjournment, postponement or rescheduling thereof (in the case of the update and supplement required to be made as of ten (10) days prior to the meeting or any adjournment, postponement or rescheduling thereof).

A Proponent's notice to the secretary shall set forth: (a) as to each person the Proponent proposes to nominate for election as a director at the annual meeting, (i) the name, age, business address, residence address and telephone number of such nominee and the name, business address and residence address of any Nominee Associated Persons (defined below), (ii) the principal occupation or employment of such nominee, (iii) the class and number of shares of stock of the corporation that are owned (beneficially and of record) by or on behalf of such nominee and by or on behalf of any Nominee Associated Person as of the date of the Proponent's notice, (iv) a description of such nominee's qualifications to be a director; (v) a statement as to whether such nominee would be an independent director, and the basis therefor, under the rules and listing standards of the securities exchanges upon which the stock of the corporation is listed or traded, any applicable rules of the SEC or any publicly disclosed standards used by the board of directors (such as Corporate Governance Guidelines) in determining and disclosing independence of the corporation's directors (collectively, the "Applicable Independence Standards") and (vi) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three years, and any other material relationships, between or among the Proponent and any Stockholder Associated Persons, on the one hand, and each nominee and any Nominee Associated Person, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 promulgated under Regulation S-K if the Proponent or any Stockholder Associated Person, were the "registrant" for purposes of such rule and the nominee were a director or executive officer of such registrant, and (vi) otherwise comply with Rule 14a-19 promulgated under the Exchange Act, and (b) as to the Proponent and any Stockholder Associated Person on whose behalf the nomination is being made, (i) the name and address of the Proponent, and any holder of record of the Proponent's shares of stock, as they appear on the corporation's books, and of any Stockholder Associated Person, (ii) the class, series and number of shares of stock of the corporation that are owned directly or indirectly (beneficially and of record) by or on behalf of the Proponent and by or on behalf of any Stockholder Associated Person as of the date of the Proponent's notice, the date such shares were acquired and the investment intent with respect thereto, (iii) the name of each nominee holder of shares of stock of the corporation owned but not held of record by the Proponent or any Stockholder Associated Person, the date the Proponent or Stockholder Associated Person acquired each such share of capital stock of the corporation and the number of such shares of stock of the corporation held by such nominee holder, (iv) a representation and agreement that the Proponent will notify the corporation in writing of the class and number of shares of stock of the corporation that are owned (beneficially and of record) by or on behalf of the Proponent and by or on behalf of any Stockholder Associated Person as of the record date for the meeting, not later than the close of business on the third business day following the later of the record date or the date of Public Disclosure of the record date, (v) a description of all purchases and sales of, or other transactions involving in any way, shares of stock of the corporation by or on behalf of the Proponent and by or on behalf of any Stockholder Associated Person during the 24-month period prior to the date of the Proponent's notice, including the date of the transactions, the class and number of shares and the consideration (without regard to whether such shares were or were not owned by the Proponent or any such person), (vi) a description of any agreement, arrangement or understanding, including any Derivative Instrument (defined below) or any repurchase or similar so-called "stock borrowing" agreement or arrangement, that has been entered into or is in effect as of the date of the Proponent's notice, by or on behalf of the Proponent, any Stockholder Associated Person, any nominee or any Nominee Associated Person, the effect or intent of which agreement, arrangement or understanding is to mitigate loss to, reduce the economic risk (of ownership or otherwise) of any class or series of shares of the corporation to, manage risk or benefit of stock price changes for, or increase or decrease the voting power of, the Proponent, any Stockholder Associated Person, any nominee or any Nominee Associated Person with respect to the corporation's securities, or which provides, directly or indirectly, the opportunity to profit or share in any profit derived from any decrease in the price or value of any class or series of stock of the corporation (any of the foregoing, a "Short Interest") (vii) a representation and agreement that the Proponent will notify the corporation in writing of any such agreement,

arrangement or understanding, including any Derivative Instrument, that has been entered into or is in effect as of the record date for the meeting, not later than the close of business on the third business day following the later of the record date or the date of Public Disclosure of the record date, (viii) a description of any other agreement, arrangement or understanding that has been entered into or is in effect as of the date of the Proponent's notice, between or among the Proponent, any Stockholder Associated Person, any nominee, any Nominee Associated Person or any other person, and that relates to such nomination or such nominee's service as a director of the corporation, including, without limitation, the contemplated benefit therefrom to the Proponent or Stockholder Associated Person, (ix) a representation and agreement that the Proponent will notify the corporation in writing of any agreement, arrangement or understanding of the type described in clause (vii) above that has been entered into or is in effect as of the record date for the meeting, not later than the close of business on the third business day following the later of the record date or the date of Public Disclosure of the record date, (x) any rights to dividends on the shares of the corporation beneficially owned by the Proponent or any Stockholder Associated Person that are separated or separable from the underlying shares of the corporation, (xi) any proportionate interest in shares of the corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which the Proponent or any Stockholder Associated Person is a general partner or, directly or indirectly, beneficially owns an interest in a general partner or such general or limited partnership, (xii) any performance-related fees (other than an asset-based fee) to which the Proponent or any Stockholder Associated Person is entitled based on any increase or decrease in the value of shares of the corporation or Derivative Instruments, if any, including, without limitation, any such interests held by members of immediate family sharing the same household of the Proponent or Stockholder Associated Person, (xiii) any significant equity interests or any Derivative Instruments or Short Interests in any principal competitor of the corporation held by the Proponent or any Stockholder Associated Person, (xiv) any direct or indirect interest of the Proponent or any Stockholder Associated Person in any contract with the corporation, any affiliate (as such term is defined for purposes of the Exchange Act) of the corporation or any principal competitor of the corporation (including, in any such case and without limitation, any employment agreement, collective bargaining agreement or consulting agreement), (xv) all information that would be required to be set forth in a Schedule 13D filed pursuant to Rule 13d-1(a) or an amendment pursuant to Rule 13d-2(a) if such a statement were required to be filed under the Exchange Act and the rules and regulations promulgated thereunder by the Proponent or any Stockholder Associated Person, if any, (xvi) a representation that the Proponent is the holder of record or beneficial owner of shares of stock of the corporation entitled to vote for the election of directors at the annual meeting and intends to appear in person or by proxy at the meeting to nominate any such nominee an acknowledgement that if such stockholder does not appear to present such nomination at the meeting, the corporation need not present such nomination for a vote at such meeting notwithstanding that proxies in respect of such nomination may have been received by the corporation, and (xvii) a representation that the Proponent and any other Stockholder Associated Person that intends to solicit proxies in support of director nominees other than the corporation's nominees will (1) solicit proxies from holders of the outstanding capital stock of the corporation representing at least 67% of the voting power of shares of capital stock entitled to vote on the elections of directors, (2) include a statement to that effect in its proxy statement and/or form of proxy, (3) otherwise comply with Rule 14a-19 promulgated under the Exchange Act and (4) provide the secretary of the corporation, not less than five business days prior to the meeting or any adjournment, postponement or rescheduling thereof, with reasonable documentary evidence (as determined by the secretary of the corporation in good faith) that such Proponent and other Stockholder Associated Persons complied with such representations (the "Section 2.13(b)(x) Representation"), (xviii) any other information relating to each Proponent and Stockholder Associated Person, if any, that would be required to be disclosed in a proxy statement and form of proxy or other filings required to be made in connection with the solicitation of proxies for, as applicable, the proposed business or for the election of directors in a contested election pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder; and (xix) a representation that such stockholder is a holder of record of stock of the corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such nomination..

The Proponent's notice shall also include (i) the written consent of each nominee to be named in any proxy statement and any associated proxy card for the applicable meeting as a nominee and to serve as a director, if elected, and (ii) a completed questionnaire (in the form provided by the secretary of the corporation upon request by the Proponent) signed by such nominee with respect to information of the type required by the corporation's questionnaires for directors and officers of the corporation in connection with the annual meeting of stockholders and various reports to the Securities and Exchange Commission ("SEC"). The questionnaire shall also include a representation and agreement that such nominee (i) is not and will not become a party to (A) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such nominee, if elected as a director of the corporation, will act or vote on any issue or question (a "Voting Commitment") that has not been, or will not be within three business days thereafter, disclosed to the corporation or (B) any Voting Commitment that could limit or interfere with the nominee's ability to comply, if elected as a director of the corporation, with such nominee's fiduciary duties under applicable law, (ii) is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director of the corporation that has not been, or will not be within three business days thereafter, disclosed to the corporation and (iii) in such nominee's individual capacity and on behalf of any person or entity on whose behalf the nomination is being made, would be in

compliance, if elected as a director of the corporation, and will comply, with applicable law and all applicable corporate governance, code of conduct and ethics, conflict of interest, corporate opportunities, confidentiality and stock ownership and trading policies and guidelines of the corporation.

In addition to the material required pursuant to this Section 2.13 or any other provision of these bylaws, the corporation may require any nominee to furnish such other information as may reasonably be required by the corporation to determine the eligibility of such nominee to serve as director of the corporation, including but not limited to information (i) that may reasonably be required by the corporation to determine whether the nominee would be independent under the Applicable Independence Standards, (ii) that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such nominee, or (iii) that may be reasonably required by the corporation to determine the eligibility of such nominee to serve as a director of the corporation.

If a Proponent no longer intends to solicit proxies in accordance with its Section 2.13(b)(x) Representation, such Proponent shall inform the corporation of this change by delivering a notice in writing to the secretary of the corporation no later than two business days after the occurrence of such change and such nomination shall be disregarded, notwithstanding that proxies in respect of such nomination may have been received by the corporation.

No person proposed to be nominated by a stockholder shall be eligible for election as a director of the corporation unless such person is nominated in accordance with the procedures set forth in this Section 2.13. The chairperson of the meeting shall have the power and duty to determine whether the nomination was properly made in accordance with the provisions of this Section 2.13, and if the Proponent intending to nominate a person for election as a director of the corporation at an annual meeting pursuant to this Section 2.13 does not give timely and proper notice thereof in writing to the secretary of the corporation, in accordance with, and containing all information and the completed questionnaire provided for in, this Section 2.13, or fails to comply with the representations required by Section 2.13 (including with respect to Stockholder Associated Persons), or if the Proponent (or a qualified representative of the Proponent) does not appear at the meeting to nominate such person for election as a director of the corporation, then, in any such case, such proposed nomination shall not be made, the chairperson of the meeting shall declare to the meeting that such nomination was not properly made and such nomination shall be disregarded and no vote shall be taken with respect thereto, notwithstanding the fact that proxies in respect of such nomination may have been solicited or obtained.

For purposes of these bylaws:

"Derivative Instrument" means any option, warrant, convertible security, stock appreciation right, swap or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of stock of the corporation or with a value derived in whole or in part from the value of any class or series of shares of stock of the corporation, or any derivative or synthetic arrangement having the characteristics of a long position in any class or series of shares of the corporation, or any contract, derivative, swap or other transaction or series of transactions designed to produce economic benefits and risks that correspond substantially to the ownership of any class or series of shares of the corporation, including without limitation, due to the fact that the value of such contract, derivative, swap or other transaction or series of transactions is determined by reference to the price, value or volatility of any class or series of shares of the corporation, whether or not such instrument or right shall be subject to settlement in the underlying class or series of shares of stock of the corporation or otherwise and without regard to whether such stockholder may have entered into transactions that hedge or mitigate the economic effect of such instrument, contract or right, or any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the corporation, directly or indirectly owned and any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of stock of the corporation.

"Nominee Associated Person" of any nominee for election as a director means (i) any affiliate or associate (as such terms are defined for purposes of the Exchange Act) of the nominee and any other person acting in concert with any of the foregoing, (ii) any beneficial owner of shares of stock of the corporation owned of record or beneficially by such nominee and (iii) any person controlling, controlled by or under common control with such Nominee Associated Person.

"Public Disclosure" means disclosure made in a press release reported by Dow Jones News Service, Associated Press or a comparable national news service or in a document filed by the corporation pursuant to Section 13, 14 or 15(d) of the Exchange Act.

"Stockholder Associated Person" of any stockholder means (i) any affiliate or associate (as such terms are defined for purposes of the Exchange Act) of the stockholder and any other person acting in concert with any of the foregoing, (ii) any beneficial owner of shares of stock of the corporation owned of record or beneficially by such stockholder and (iii) any person controlling, controlled by or under common control with such Stockholder Associated Person.

2.14 PROXY ACCESS FOR DIRECTOR NOMINATIONS

Whenever the board of directors solicits proxies with respect to an annual meeting of stockholders, the corporation shall include in its proxy statement the name, together with the Required Information (defined below), of any Proxy Access Nominee (defined below) identified in a timely notice that satisfies this Section 2.14, delivered by one or more stockholders who at the time the request is delivered satisfy, or are acting on behalf of persons who satisfy, the ownership and other requirements of this Section 2.14 (such stockholder or stockholders, and any person on whose behalf they are acting, the "Eligible Stockholder"), and who expressly elects at the time of providing the notice required by this Section 2.14 (the "Notice of Proxy Access Nomination") to have its nominee included in the corporation's proxy materials pursuant to this Section 2.14.

To be timely, a Notice of Proxy Access Nomination must be delivered to the secretary of the corporation so as to be received at the principal executive offices of the corporation, in the case of an annual meeting, not later than the close of business on the 120th day, nor earlier than the close of business on the 150th day, prior to the anniversary date of the corporation's proxy statement for the immediately preceding annual meeting (the last day on which a Notice of Proxy Access Nomination may be delivered, the "Final Proxy Access Nomination Date"). In the event that the date of the regularly scheduled annual meeting is advanced by more than 30 days or delayed by more than 60 days from such anniversary date, notice by the Eligible Stockholder must be so delivered not earlier than the 150th day prior to such annual meeting and not later than the close of business on the later of (x) the 120th day prior to such annual meeting and (y) the 10th day following the day on which public announcement of the date of such meeting is first made to be timely. In the event that no annual meeting was held in the previous year, or in the case of a special meeting called for the purpose of electing directors, the Notice of Proxy Access Nomination must be so received not later than the close of business on the 10th day following the day on which such notice of the date of the meeting was mailed or public disclosure of the date of the meeting was made, whichever occurs first. In no event shall any adjournment or postponement of a meeting or the public disclosure thereof commence a new time period (or extend any time period) for the giving of a Notice of Proxy Access Nomination as described above.

For purposes of this Section 2.14, "Proxy Access Nominee" shall mean a person properly nominated for director by a stockholder in accordance with this Section 2.14. The "Required Information" that the corporation will include in its proxy statement is (i) the information concerning the Proxy Access Nominee and the Eligible Stockholder that, as determined by the corporation, would be required to be disclosed in a proxy statement or other filings required to be filed pursuant to Regulation 14A (the "Proxy Rules") under the Exchange Act and (ii) if the Eligible Stockholder so elects, a Statement (defined below).

The corporation shall not be required to include a Proxy Access Nominee in its proxy materials for any meeting of stockholders for which (i) the secretary of the corporation receives a notice that the Eligible Stockholder has nominated a person for election to the board of directors pursuant to the notice requirements set forth in Section 2.13 of these bylaws and (ii) the Eligible Stockholder does not expressly elect at the time of providing the notice to have its nominee included in the corporation's proxy materials pursuant to this Section 2.14.

The maximum number of Proxy Access Nominees (the "Permitted Number") that must be included in the corporation's proxy materials pursuant to this Section 2.14 shall not exceed the greater of two directors or 20% of the number of directors currently serving on the board as of the Final Proxy Access Nomination Date, rounded down to the nearest whole number. The following persons shall be considered Proxy Access Nominees for purposes of determining when the maximum number of Proxy Access Nominees provided for in this Section 2.14 has been reached: (1) any Proxy Access Nominee that was submitted by an Eligible Stockholder for inclusion in the corporation's proxy materials pursuant to this Section 2.14 whom the board decides to nominate as a board nominee, (2) any Stockholder nominee whose nomination is subsequently withdrawn and (3) any director who had been a Proxy Access Nominee at any of the preceding three annual meetings and whose reelection at the upcoming annual meeting is being recommended by the board of directors. The Permitted Number shall be reduced by the number of director candidates for which the corporation shall have received one or more valid notices that a stockholder (other than an Eligible Stockholder) intends to nominate director candidates at such annual meeting of stockholders pursuant to Section 2.13; provided, further, that in the event that one or more vacancies for any reason occurs on the board of directors at any time after the Final Proxy Access Nomination Date and before the date of the applicable annual meeting of stockholders and the board of directors resolves to reduce the size of the board of directors in connection therewith, the Permitted Number shall be calculated based on the number of directors in office as so reduced.

In the event that the number of Proxy Access Nominees submitted by Eligible Stockholders pursuant to this Section 2.14 exceeds the Permitted Number, each Eligible Stockholder shall select one Proxy Access Nominee for inclusion in the corporation's proxy materials until the maximum number is reached, going in the order of the amount (largest to smallest) of shares of the corporation's capital stock owned by each Eligible Stockholder as disclosed in the written notice of the nomination submitted to the corporation. If the maximum number is not reached after each Eligible Stockholder has selected one Proxy Access Nominee, this selection process shall continue as many times as necessary, following the same order each time, until the maximum number is reached.

An Eligible Stockholder must have owned 3% or more of the corporation's outstanding capital stock continuously for at least three years (the "Required Shares") as of both the date the written notice of the nomination is delivered to or mailed and received by the corporation in accordance with this Section 2.14, and the record date for determining stockholders entitled to vote at the meeting. For purposes of satisfying the foregoing ownership requirement under this Section 2.14, the shares of common stock owned by one or more stockholders, or by the person or persons who own shares of the corporation's common stock and on whose behalf any stockholder is acting, may be aggregated, provided that the number of stockholders and other persons whose ownership of shares is aggregated for such purpose shall not exceed 20. Two or more funds that are (i) under common management and investment control, (ii) under common management and funded primarily by a single employer or (iii) a "group of investment companies," as such term is defined in Section 12(d)(1)(G)(ii) of the Investment Company Act of 1940 (the "Investment Company Act") (such funds together under each of (i), (ii) or (iii) comprising a "Qualifying Fund") shall be treated as one owner for the purpose of determining the aggregate number of stockholders in this paragraph, and treated as one person for the purpose of determining "ownership" as defined in this Section 2.14; provided that each fund comprising a Qualifying Fund otherwise meets the requirements set forth in this Section 2.14. With respect to any one particular annual meeting, no person may be a member of more than one group of persons constituting an Eligible Stockholder under this Section 2.14.

For purposes of this Section 2.14, an Eligible Stockholder shall be deemed to "own" only those outstanding shares of the corporation's capital stock as to which the stockholder possesses both (i) the full voting and investment rights pertaining to the shares and (ii) the full economic interest in (including the opportunity for profit and risk of loss on) such shares; provided that the number of shares calculated in accordance with clauses (i) and (ii) shall not include any shares (x) sold by such Eligible Stockholder or any of its affiliates in any transaction that has not been settled or closed, (y) borrowed by such Eligible Stockholder or any of its affiliates for any purposes or purchased by such Eligible Stockholder or any of its affiliates pursuant to an agreement to resell or (z) subject to any option, warrant, forward contract, swap, contract of sale, other derivative or similar agreement entered into by such stockholder or any of its affiliates, whether any such instrument or agreement is to be settled with shares or with cash based on the notional amount or value of outstanding shares of the corporation's capital stock, in any such case which instrument or agreement has, or is intended to have, the purpose or effect of (1) reducing in any manner, to any extent or at any time in the future, such stockholder's or affiliates' full right to vote or direct the voting of any such shares, and/or (2) hedging, offsetting or altering to any degree gain or loss arising from the full economic ownership of such shares by such stockholder or affiliate. An Eligible Stockholder shall "own" shares held in the name of a nominee or other intermediary so long as the stockholder retains the right to instruct how the shares are voted with respect to the election of directors and possesses the full economic interest in the shares. A stockholder's ownership of shares shall be deemed to continue during any period in which (i) the person has loaned such shares; provided that the person has the power to recall such loaned shares on no more than five business days' notice; or (ii) the person has delegated any voting power by means of a proxy, power of attorney or other instrument or arrangement that is revocable at any time by the person. Whether outstanding shares of the corporation's capital stock are "owned" for these purposes shall be determined by the board of directors, which determination shall be conclusive and binding on the corporation and its stockholders. For purposes of this Section 2.14, the term "affiliate" shall have the meaning ascribed thereto in the regulations promulgated under the Exchange Act.

The Eligible Stockholder (including each member of a group of persons that is an Eligible Stockholder hereunder) must provide, with its timely notice of nomination, the following information in writing to the secretary (in addition to the information required to be provided by Section 2.13, other than the Section 2.13(b)(x) Representation):

(a) one or more written statements from the record holder of the shares (and from each intermediary through which the shares are or have been held during the requisite three-year holding period) verifying that, as of a date within seven calendar days prior to the date the Notice of Proxy Access Nomination is delivered to or mailed and received by the corporation, the Eligible Stockholder owns, and has owned continuously for the preceding three years, the Required Shares, as well as the Eligible Stockholder's agreement to provide: (i) within five business days after the record date for the meeting, written statements from the record holder and any intermediaries verifying the Eligible Stockholder's continuous ownership of the Required Shares through the record date, and (ii) immediate notice if the Eligible Stockholder ceases to own any of the Required Shares prior to the date of the applicable annual meeting of stockholders;

(b) documentation satisfactory to the corporation demonstrating that a group of funds treated as one stockholder for purposes of this Section 2.14 are under common management and investment control;

(c) the written consent of each Proxy Access Nominee to be named in any proxy statement and any associated proxy card for the applicable meeting as a nominee and to serve as a director, if elected;

(d) a copy of the Schedule 14N that has been filed with the SEC as required by Rule 14a-18 under the Exchange Act;

(e) in the case of a nomination by a group of stockholders that together is an Eligible Stockholder, the designation by all group members of one group member that is authorized to act on behalf of all members of the nominating stockholder group with respect to the nomination and all matters related thereto, including withdrawal of the nomination;

(f) representations that the Eligible Stockholder (including each member of any group of stockholders that together is an Eligible Stockholder hereunder): (i) acquired the Required Shares in the ordinary course of business and not with the intent to change or influence control at the corporation, and does not presently have such intent, (ii) has not nominated and will not nominate for election to the board of directors at the meeting any person other than the Proxy Access Nominee(s) being nominated pursuant to this Section 2.14, (iii) has not engaged and will not engage in, and has not and will not be, a "participant" in another person's "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the meeting other than its Proxy Access Nominee or a board nominee, (iv) will not distribute to any stockholder any form of proxy for the meeting other than the form distributed by the corporation, (v) intends to continue to own the Required Shares through the date of the meeting, (vi) will provide facts, statements and other information in all communications with the corporation and its stockholders that are or will be true and correct in all material respects and do not and will not omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading, (vii) is not and will not become party to (A) any Voting Commitment that has not been disclosed to the corporation or (B) any Voting Commitment that could limit or interfere with such Proxy Access Nominee's ability to comply, if elected as a director of the corporation, with such person's fiduciary duties under applicable law, (viii) is not and will not become a party to any compensatory, payment or other financial agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director that has not been disclosed to the corporation; and

(g) an undertaking that the Eligible Stockholder agrees to (i) assume all liability stemming from any legal or regulatory violation arising out of the Eligible Stockholder's communications with the corporation's stockholders or out of the information that the Eligible Stockholder provided to the corporation, (ii) indemnify and hold harmless the corporation and each of its directors, officers and employees individually against any liability, loss or damages in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the corporation or any of its directors, officers or employees arising out of any nomination submitted by the Eligible Stockholder pursuant to this Section 2.14, (iii) file with the SEC all soliciting and other materials required under Rule 14a-6 under the Exchange Act and (iv) comply with all other applicable laws, rules, regulations and listing standards with respect to any solicitation in connection with the meeting. The inspector of elections shall not give effect to the Eligible Stockholder's votes with respect to the election of directors if the Eligible Stockholder does not comply with each of the representations in clause (f) above.

The Eligible Stockholder may include with its timely notice of nomination a written statement for inclusion in the corporation's proxy statement for the meeting, not to exceed 500 words, in support of the Proxy Access Nominee's candidacy (the "Statement"). Notwithstanding anything to the contrary contained in this Section 2.14, the corporation may omit from its proxy materials any information or Statement that it believes would violate any applicable law, rule, regulation or listing standard.

Within the time period specified in this Section 2.14 for providing a Notice of Proxy Access Nomination, a Proxy Access Nominee must deliver to the secretary of the corporation a written representation and agreement that such Proxy Access Nominee: (i) is not and will not become a party to any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such Proxy Access Nominee, if elected as a director, will act or vote on any issue or question that has not been disclosed to the corporation, (ii) is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with his or her candidacy for the board or his or her service or action as a director that has not been disclosed to the corporation and (iii) will comply with applicable law and listing standards, all of the corporation's corporate governance, conflict of interest, confidentiality and stock ownership and trading policies and guidelines, and any other policies and guidelines applicable to directors. At the request of the corporation, the

Proxy Access Nominee must submit all completed and signed questionnaires required of the corporation's directors and officers. The corporation may also require that any Proxy Access Nominee furnish such other information as may reasonably be required by the corporation as necessary to permit the board of directors to determine whether each Proxy Access Nominee (i) is independent under the Applicable Independence Standards, (ii) such Proxy Access Nominee has any direct or indirect relationship with the corporation other than those relationships that the board of directors or a committee of the board deems to be permitted under the corporation's policies and procedures, including its conflict of interest policies and (iii) such Proxy Access Nominee is or has been subject to (A) any event specified in Item 401(f) of Regulation S-K under the Securities Act of 1933 (the "Securities Act") or (B) any order of the type specified in Rule 506(d) of Regulation D under the Securities Act. If the board of directors determines that the Proxy Access Nominee is not independent under the Applicable Independence Standards, the Proxy Access Nominee will not be eligible for inclusion in the corporation's proxy materials. The corporation may also require any Proxy Access Nominee to furnish such other information as may reasonably be required by the corporation that the corporation reasonably believes could be material to a reasonable stockholder's understanding of (i) the independence, or lack thereof, of such Proxy Access Nominee and (ii) the qualifications or eligibility of such Proxy Access Nominee to serve as a director of the corporation.

In the event that any information or communications provided by the Eligible Stockholder or Proxy Access Nominee to the corporation or its stockholders ceases to be true and correct in any respect or omits a fact necessary to make the statements made, in light of the circumstances under which they were made, not misleading, each Eligible Stockholder or Proxy Access Nominee, as the case may be, shall promptly notify the secretary of any such inaccuracy or omission in such previously provided information and of the information that is required to make such information or communication true and correct.

The corporation shall not be required to include, pursuant to this Section 2.14, a Proxy Access Nominee in its proxy materials (or, if the corporation's proxy statement has already been filed, to allow the nomination of a Proxy Access Nominee, notwithstanding that proxies in respect of such vote may have been received by the corporation):

(a) for any meeting for which the secretary receives a notice that the Eligible Stockholder or any other stockholder has nominated a Proxy Access Nominee for election to the board of directors pursuant to the requirements of Section 2.13 and does not expressly elect at the time of providing the notice to have its nominee included in the corporation's proxy materials pursuant to this Section 2.14;

(b) if the Eligible Stockholder who has nominated such Proxy Access Nominee has nominated for election to the board of directors at the annual meeting any person pursuant to Section 2.13, or has or is currently engaged in, or has been or is a "participant" in another person's "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act, in support of the election of any individual as a director at the meeting other than its Proxy Access Nominee(s) or a board nominee;

(c) if the Proxy Access Nominee is or becomes a party to any compensatory, payment or other financial agreement, arrangement or understanding with any person or entity other than the corporation, or is receiving or will receive any such compensation or other payment from any person or entity other than the corporation, in each case in connection with service as a director of the corporation, and such agreement, arrangement or understanding has not been disclosed to the corporation;

(d) if the Proxy Access Nominee is or becomes a party to any commitment or assurance to, any person or entity as to how such Proxy Access Nominee, if elected as a director, will act or vote on any issue or question, and such commitment or assurance has not been disclosed to the corporation;

(e) who is not independent under the Applicable Independence Standards, as determined by the board of directors;

(f) whose election as a member of the board of directors would cause the corporation to be in violation of these bylaws, the corporation's certificate of incorporation, the listing standards of the principal exchange upon which the corporation's capital stock is traded, or any applicable state or federal law, rule or regulation;

(g) who is or has been, within the past three years, an officer or director of a competitor, as defined in Section 8 of the Clayton Antitrust Act of 1914;

(h) whose then-current or within the preceding ten (10) years' business or personal interests place such Proxy Access Nominee in a conflict of interest with the corporation or any of its subsidiaries that would cause such Proxy Access Nominee to violate any fiduciary duties of directors established pursuant to the DGCL, including but not limited to, the duty of loyalty and duty of care, as determined by the board of directors;

(i) who is a named subject of a pending criminal proceeding (excluding traffic violations and other minor offenses) or has been convicted in such a criminal proceeding within the past ten (10) years;

(j) who is subject to any order of the type specified in Rule 506(d) of Regulation D promulgated under the Securities Act;

(k) if such Proxy Access Nominee or the applicable Eligible Stockholder shall have provided information to the corporation in respect to such nomination that was untrue in any material respect or omitted to state a material fact necessary in order to make the statement made, in light of the circumstances under which they were made, not misleading, as determined by the board of directors; or

(l) if the Eligible Stockholder or applicable Proxy Access Nominee otherwise contravenes any of the agreements or representations made by such Eligible Stockholder or Proxy Access Nominee or fails to comply with its obligations pursuant to Section 2.13 or this Section 2.14.

Notwithstanding anything to the contrary set forth herein, the board of directors or the person presiding at the meeting shall declare a nomination by an Eligible Stockholder to be invalid, and such nomination shall be disregarded notwithstanding that proxies in respect of such vote may have been received by the corporation, if (a) the Proxy Access Nominee(s) and/or the applicable Eligible Stockholder shall have breached its or their obligations, agreements, representations, undertakings and/or obligations under Section 2.13 or this Section 2.14, as determined by the board of directors or the person presiding at the meeting, or (b) the Eligible Stockholder (or a qualified representative thereof) does not appear at the meeting to present any nomination pursuant to this Section 2.14.

The Eligible Stockholder (including any person who owns shares that constitute part of the Eligible Stockholder's ownership for purposes of satisfying this Section 2.14) shall file with the SEC any solicitation or other communication with the corporation's stockholders relating to the meeting at which the Proxy Access Nominee will be nominated, regardless of whether any such filing is required under the Proxy Rules or whether any exemption from filing is available for such solicitation or other communication under the Proxy Rules.

The board of directors (and any other person or body authorized by the board of directors) shall have exclusive power and authority to interpret this Section 2.14 and to make any and all determinations necessary or advisable to apply this Section 2.14 to any persons, facts or circumstances, including the power to determine (a) whether a person or group of persons qualifies as an Eligible Stockholder; (b) whether outstanding shares of the corporation's capital stock are "owned" for purposes of meeting the ownership requirements of this Section 2.14; (c) whether a notice complies with the requirements of this Section 2.14; (d) whether a person satisfies the qualifications and requirements to be a Proxy Access Nominee; (e) whether inclusion of the Required Information in the corporation's proxy statement is consistent with all applicable laws, rules, regulations and listing standards; and (f) whether any and all requirements of Section 2.13 and this Section 2.14 have been satisfied. Any such interpretation or determination adopted in good faith by the board of directors (or any other person or body authorized by the board of directors) shall be conclusive and binding on all persons, including the corporation and all record or beneficial owners of stock of the corporation.

2.15 CONDUCT OF AND BUSINESS AT MEETINGS OF STOCKHOLDERS

Except to the extent inconsistent with such rules, guidelines, and procedures as adopted by the board of directors, the chairperson of any meeting of stockholders shall have the right and authority to prescribe such rules, guidelines, and procedures and to do all such acts as, in the judgment of such chair, are appropriate for the proper conduct of the meeting. Such rules, guidelines, and procedures, whether adopted by the board of directors or prescribed by the chairperson of the meeting, may include, without limitation, the following: (a) the establishment of an agenda or order of business for the meeting, (b) rules and procedures for maintaining order at the meeting and the safety of those present, (c) limitations on attendance at or participation in the meeting to stockholders of record of the corporation, their duly authorized and constituted proxies or such other persons as the chairperson of the meeting shall permit, (d) restrictions on entry to the meeting after the time fixed for the commencement thereof, and (e) limitations on the time allotted to questions or comments by participants. The chairperson of any meeting shall determine all matters relating to the conduct of the meeting, including, without limitation, determining whether any nomination or other item of business has been properly brought before the meeting in accordance with these bylaws, and if the chairperson of the meeting should so determine and declare that any nomination or other item of business has not been properly brought before the meeting, then such nomination shall be disregarded and such business shall not be transacted at such meeting.

At any meeting of stockholders, only such business shall be transacted as shall have been properly brought before the meeting. To be properly brought before a meeting of stockholders, business must be (a) specified in the notice of meeting (or any supplement or amendment thereto) given by or at the direction of the board of directors, (b) otherwise properly brought before the meeting by or at the direction of the board of directors or (c) in the case of an annual meeting of stockholders, properly brought before the meeting by a stockholder who is entitled to vote and who has complied with the

procedures established by this Section 2.15. For business to be properly brought before an annual meeting by a stockholder (other than the nomination of a person for election as a director, which is governed by Section 2.13 of these bylaws), the Proponent (defined in Section 2.13) must have given timely and proper notice thereof in writing to the secretary of the corporation, in accordance with, and containing all information provided for, in this Section 2.15, and such business must be a proper matter for stockholder action under the DGCL.

To be timely, a Proponent's notice must be delivered to or mailed to the secretary of the corporation and received at the principal executive offices of the corporation prior to the close of business not less than ninety (90) nor more than one hundred and twenty (120) days prior to the first anniversary of the preceding year's annual meeting of stockholders; provided, however, in the event the date of the annual meeting is advanced more than 30 days prior to such anniversary date or delayed more than 60 days after such anniversary date, then to be timely such notice must be received by the corporation not later than the close of business on the later of the 90th day prior to the date of the meeting or the 10th day following the date of Public Disclosure (defined in Section 2.13) of the date of the annual meeting. In no event shall any adjournment or postponement of an annual meeting of stockholders or announcement thereof commence a new time period or extend any time period for the giving of a Proponent's notice as required by this Section 2.15.

A Proponent's notice to the secretary shall set forth: (a) as to each matter the Proponent proposes to bring before the annual meeting, a description of the business desired to be brought before the annual meeting, the reasons for transacting such business at the meeting and the text of any resolutions to be proposed, and whether the Proponent has communicated with any other stockholder or beneficial owner of shares of stock of the corporation regarding such business and (b) as to the Proponent and any Stockholder Associated Person (defined in Section 2.13) on whose behalf the proposal is being made, (i) the name and address of the Proponent, and any holder of record of the Proponent's shares of stock, as they appear on the corporation's books, and of any Stockholder Associated Person, (ii) the class and number of shares of stock of the corporation that are owned (beneficially and of record) by or on behalf of the Proponent and by or on behalf of any Stockholder Associated Person as of the date of the Proponent's notice, the date such shares were acquired and the investment intent with respect thereto, (iii) a representation and agreement that the Proponent will notify the corporation in writing of the class and number of shares of stock of the corporation that are owned (beneficially and of record) by or on behalf of the Proponent and by or on behalf of any Stockholder Associated Person as of the record date for the meeting, not later than the close of business on the third business day following the later of the record date or the date of Public Disclosure of the record date, (iv) a description of all purchases and sales of, or other transactions involving in any way, shares of stock of the corporation by or on behalf of the Proponent and by or on behalf of any Stockholder Associated Person during the 24-month period prior to the date of the Proponent's notice, including the date of the transactions, the class and number of shares and the consideration (without regard to whether such shares involved were or were not owned by the Proponent or any such person), (v) a description of any agreement, arrangement or understanding, including any Derivative Instrument or Short Instrument (both defined in Section 2.13), that has been entered into or is in effect as of the date of the Proponent's notice, by or on behalf of the Proponent or any Stockholder Associated Person (vi) a representation and agreement that the Proponent will notify the corporation in writing of any such agreement, arrangement or understanding, including any Derivative Instrument, that has been entered into or is in effect as of the record date for the meeting, not later than the close of business on the third business day following the later of the record date or the date of Public Disclosure of the record date, (vii) any material interest of the Proponent or any Stockholder Associated Person in such business, (viii) a description of any other agreement, arrangement or understanding that has been entered into or is in effect as of the date of the Proponent's notice, between or among the Proponent, any Stockholder Associated Person or any other person, and that relates to such business, including, without limitation, the contemplated benefit therefrom to the Proponent or Stockholder Associated Person (ix) a representation and agreement that the Proponent will notify the corporation in writing of any agreement, arrangement or understanding of the type described in clause (viii) above that has been entered into or is in effect as of the record date for the meeting, not later than the close of business on the third business day following the later of the record date or the date of Public Disclosure of the record date, (x) any rights to dividends on the shares of the corporation beneficially owned by the Proponent or any Stockholder Associated Person that are separated or separable from the underlying shares of the corporation, (xi) any proportionate interest in shares of the corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which the Proponent or any Stockholder Associated Person is a general partner or, directly or indirectly, beneficially owns an interest in a general partner or such general or limited partnership, (xii) any performance-related fees (other than an asset-based fee) to which the Proponent or any Stockholder Associated Person is entitled based on any increase or decrease in the value of shares of the corporation or Derivative Instruments, if any, including, without limitation, any such interests held by members of immediate family sharing the same household of the Proponent or Stockholder Associated Person, (xiii) any significant equity interests or any Derivative Instruments or Short Interests in any principal competitor of the corporation held by the Proponent or any Stockholder Associated Person, (xiii) any direct or indirect interest of the Proponent or any Stockholder Associated Person in any contract with the corporation, any affiliate (as such term is defined for purposes of the Exchange Act) of the corporation or any principal competitor of the corporation (including, in any such case and without limitation, any employment agreement, collective bargaining agreement or consulting agreement), (xiv) all information that would be required to be set forth in a Schedule 13D filed pursuant to Rule 13d-1(a) or an amendment

pursuant to Rule 13d-2(a) if such a statement were required to be filed under the Exchange Act and the rules and regulations promulgated thereunder by the Proponent or any Stockholder Associated Person, if any, (xv) a representation that the Proponent is the holder of record or beneficial owner of shares of stock of the corporation entitled to vote for the election of directors at the annual meeting and intends to appear in person or by proxy at the meeting to propose such business and an acknowledgement that if such stockholder does not appear to present such business at the meeting, the corporation need not present such business for a vote at such meeting notwithstanding that proxies in respect of such business may have been received by the corporation, (xvii) a representation as to whether the Proponent intends to deliver a proxy statement and/or form of proxy to stockholders and/or otherwise to solicit proxies from stockholders in support of such proposal, and (xvii) any other information relating to each Proponent and Stockholder Associated Person, if any, that would be required to be disclosed in a proxy statement and form of proxy or other filings required to be made in connection with the solicitation of proxies for, as applicable, the proposed business or for the election of directors in a contested election pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder; and (xviii) a representation that such stockholder is a holder of record of stock of the corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business.

No business proposed by a stockholder shall be transacted at an annual meeting of stockholders except in accordance with the procedures set forth in this Section 2.15. If the Proponent intending to propose

business at an annual meeting pursuant to this Section 2.15 does not give timely and proper notice thereof in writing to the secretary of the corporation, in accordance with, and containing all information provided for in, this Section 2.15, or if the Proponent (or a qualified representative of the Proponent) does not appear at the meeting to present the proposed business, then, in any such case, such business shall not be transacted, notwithstanding the fact that proxies in respect of such business may have been solicited or obtained. The chairperson of the meeting shall, if the facts warrant, determine that the business was not properly brought before the meeting in accordance with the provisions of this Section 2.15, and, if the chairperson should so determine, he or she shall declare to the meeting that such business was not properly brought before the meeting and shall not be transacted.

The requirements of this Section 2.15 shall apply to any business to be brought before an annual meeting of stockholders by a stockholder (other than the nomination by a stockholder of a person for election as a director, which is governed by Section 2.13 of these bylaws) without regard to whether such business also is intended to be included in the corporation's proxy statement pursuant to Rule 14a-8 of the Exchange Act or whether such business is presented to stockholders by means of a proxy solicitation by any person other than by or on behalf of the board of directors.

ARTICLE III

DIRECTORS

3.1 POWERS

Subject to the provisions of the DGCL and any limitations in the certificate of incorporation or these bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the board of directors.

3.2 NUMBER OF DIRECTORS; ELECTION; AND TERM OF OFFICE OF DIRECTORS

The board of directors shall consist of such number of directors determined from time to time by resolution of the board of directors. The number of directors may be changed by resolution of the board of directors, by an amendment to this bylaw, duly adopted by the board of directors or by the stockholders, or by a duly adopted amendment to the certificate of incorporation. The term of each director so elected shall be set forth in the certificate of incorporation.

No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

Each director, including a director elected to fill a vacancy, shall hold office until such director's term expires and until such director's successor shall be elected and qualified or until such director's earlier death, resignation, retirement, disqualification or removal.

3.3 QUALIFICATION OF DIRECTORS

Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws, wherein other qualifications for directors may be prescribed.

3.4 RESIGNATION AND VACANCIES

Any director may resign at any time upon written notice to the corporation.

Unless otherwise provided in the certificate of incorporation or these bylaws:

(a) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director. So long as directors are divided into classes, such directors or director shall have the authority to appoint any newly appointed director to serve as a member of a particular class of directors.

(b) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected. Directors appointed to fill a vacancy of such class or classes or series will be appointed to serve, so long as the directors are divided into classes, in the same class of directors as the director he or she is being appointed to replace.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of the stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the DGCL.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole board (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten (10) percent of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 223 of the DGCL as far as applicable.

3.5 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

The board of directors of the corporation may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 FIRST MEETINGS

The first meeting of each newly elected board of directors shall be held at such time and place as shall be fixed by the vote of the stockholders at the annual meeting and no notice of such meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present. In the event of the failure of the stockholders to fix the time or place of such first meeting of the newly elected board of directors, or in the event such meeting is not held at the time and place so fixed by the stockholders, the meeting may be held at such time and place as shall be specified in a notice given as hereinafter provided for special meetings of the board of directors, or as shall be specified in a written waiver signed by all of the directors.

3.7 REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board.

3.8 SPECIAL MEETINGS; NOTICE

Special meetings of the board may be called by the chairperson of the board, or the chief executive officer, on three days' notice to each director if provided either by mail or overnight courier, or on 24 hours' notice if provided either personally, by telephone, or email; special meetings shall be called by the chief executive officer or secretary in like manner and on like notice on the written request of two directors unless the board consists of only one director, in which case special

meetings shall be called by the chief executive officer or secretary in like manner and on like notice on the written request of the sole director.

3.9 QUORUM

At all meetings of the board of directors, a majority of the authorized number of directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by applicable law or by the certificate of incorporation. If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

3.10 WAIVER OF NOTICE

Whenever notice is required to be given under any provision of applicable law or of the certificate of incorporation or these bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the directors, or members of a committee of directors, need be specified in any written waiver of notice unless so required by the certificate of incorporation or these bylaws.

3.11 ADJOURNED MEETING; NOTICE

If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

3.12 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the board of directors, or of any committee thereof, may be taken without a meeting if all members of the board or committee, as the case may be, consent thereto in writing and the writing or writings are filed with the minutes of proceedings of the board or committee.

3.13 FEES AND COMPENSATION OF DIRECTORS

Unless otherwise restricted by the certificate of incorporation or these bylaws, the board of directors shall have the authority to fix the compensation of directors.

3.14 APPROVAL OF LOANS TO OFFICERS

The corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiary, including any officer or employee who is a director of the corporation or its subsidiary, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the board of directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing contained in this Section 3.14 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

3.15 REMOVAL OF DIRECTORS

Unless otherwise restricted by applicable law, by the certificate of incorporation or by these bylaws, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

3.16 MAJORITY VOTING

Each director shall be elected by the vote of the majority of the votes cast (meaning the number of shares voted "for" a nominee must exceed the number of shares voted "against" such nominee, with abstentions and broker non-votes not counted as votes cast either "for" or "against" such director's election) at any meeting for the election of directors at which a quorum is present; provided that in a contested election (meaning that the number of persons properly nominated to serve as directors exceeds the number of directors to be elected), the directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy at such meeting and entitled to vote on the election of directors. In the event

the corporation receives proxies for disqualified or withdrawn nominees for the board of directors, any votes for such qualified or withdrawn nominees in the proxies will be treated as abstentions.

ARTICLE IV

COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The board of directors may, by resolution passed by a majority of the whole board, designate one or more committees, with each committee to consist of one or more of the directors of the corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he, she, or they constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors or in the bylaws of the corporation, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) amend the certificate of incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors as provided in Section 152(b) of the DGCL, fix any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the corporation), (ii) adopt an agreement of merger or consolidation under Sections 251 or 252 of the DGCL, (iii) recommend to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, (iv) recommend to the stockholders a dissolution of the corporation or a revocation of a dissolution, or (v) amend the bylaws of the corporation; and, unless the board resolution establishing the committee, the bylaws or the certificate of incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the DGCL.

4.2 COMMITTEE MINUTES

Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

4.3 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Article III, Sections 3.5, 3.7, 3.8, 3.9, 3.10, 3.11, and 3.12 of these bylaws, with such changes in the context of those bylaws as are necessary to substitute the committee and its members (including its chairperson) for the board of directors and its members (including its chairperson); provided, however, that the time of regular meetings of committees may also be called by resolution of the board of directors and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

ARTICLE V

OFFICERS

5.1 OFFICERS

The officers of the corporation shall be a chief executive officer, a president, one or more vice presidents, a secretary, and a treasurer. The corporation may also have, at the discretion of the board of directors, a chairperson of the board, one or more assistant vice presidents, assistant secretaries, assistant treasurers, and any such other officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws. Any number of offices may be held by the same person.

5.2 ELECTION OF OFFICERS

The officers of the corporation, except such officers as may be appointed in accordance with the provisions of Sections 5.3 or 5.5 of these bylaws, shall be chosen by the board of directors, subject to the rights, if any, of an officer under any contract of employment.

5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or empower the chief executive officer to appoint, such other officers and agents as the business of the corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the board of directors at any regular or special meeting of the board or, except in the case of an officer chosen by the board of directors, by any officer upon whom such power of removal may be conferred by the board of directors.

Any officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES

Any vacancy occurring in any office of the corporation shall be filled by the board of directors.

5.6 CHAIRPERSON OF THE BOARD

The chairperson of the board, if such an officer be elected, shall, if present, preside at meetings of the board of directors and exercise and perform such other powers and duties as may from time to time be assigned to him by the board of directors or as may be prescribed by these bylaws. If there is no chief executive officer or president, then the chairperson of the board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these bylaws.

5.7 CHIEF EXECUTIVE OFFICER

Subject to such supervisory powers, if any, as may be given by the board of directors to the chairperson of the board, if there be such an officer, the chief executive officer shall, subject to the control of the board of directors, shall be responsible for corporate policy and strategy and general supervision, direction, and control of the business. He or she shall preside at all meetings of the stockholders and, in the absence or nonexistence of a chairperson of the board, at all meetings of the board of directors. He or she shall have the general powers and duties of management usually vested in the office of chief executive officer of a corporation and shall have such other powers and duties as may be prescribed by the board of directors or these bylaws.

5.8 PRESIDENT

The president shall be the chief operating officer of the corporation, with general responsibility for the management and control of the operations of the corporation. The president shall, when requested, counsel with and advise the other officers of the corporation and shall perform such other duties as such officer may agree with the chief executive officer or as the board of directors may from time to time determine.

5.9 VICE PRESIDENT

Each vice president shall have such powers and perform such duties as may be assigned to him or her from time to time by the chairperson of the board, the chief executive officer, or the president.

5.10 SECRETARY

The secretary shall keep or cause to be kept, at the principal executive offices of the corporation or such other place as the board of directors may direct, a book of minutes of all meetings and actions of directors, committees of directors, and stockholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings, and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive offices of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the board of directors, a share register, or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the board of directors required to be given by applicable law or by these bylaws. He or she shall keep the seal of the corporation, if one be

adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the board of directors or by these bylaws.

5.11 TREASURER

The treasurer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The treasurer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the board of directors. He or she shall disburse the funds of the corporation as may be ordered by the board of directors, shall render to the chief executive officer and directors, whenever they request it, an account of all of his transactions as treasurer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

5.12 ASSISTANT SECRETARY

The assistant secretary, or, if there is more than one, the assistant secretaries in the order determined by the stockholders or board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors or the stockholders may from time to time prescribe.

5.13 ASSISTANT TREASURER

The assistant treasurer, or, if there is more than one, the assistant treasurers, in the order determined by the stockholders or board of directors (or if there be no such determination, then in the order of their election), shall, in the absence of the treasurer or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the treasurer and shall perform such other duties and have such other powers as the board of directors or the stockholders may from time to time prescribe.

5.14 AUTHORITY AND DUTIES OF OFFICERS

In addition to the foregoing authority and duties, all officers of the corporation shall respectively have such authority and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors or the stockholders.

ARTICLE VI

INDEMNITY

6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS

The corporation shall, to the maximum extent and in the manner permitted by the DGCL, indemnify each of its directors and officers against expenses (including attorneys' fees), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the corporation. For purposes of this Section 6.1, a "director" or "officer" of the corporation includes any person (i) who is or was a director or officer of the corporation, (ii) who is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.2 INDEMNIFICATION OF OTHERS

The corporation shall have the power, to the extent and in the manner permitted by the DGCL, to indemnify each of its employees and agents (other than directors and officers) against expenses (including attorneys' fees), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the corporation. For purposes of this Section 6.2, an "employee" or "agent" of the corporation (other than a director or officer) includes any person (i) who is or was an employee or agent of the corporation, (ii) who is or was serving at the request of the corporation as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was an employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.3 INSURANCE

The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, in accordance with Section 145(g) of the DGCL whether or not the corporation would have the power to indemnify him against such liability under the provisions of the DGCL.

6.4 ADVANCEMENT

The right to indemnification conferred in the certificate of incorporation and these bylaws shall include the right to be paid by the corporation the expenses incurred in defending any proceeding for which such right to indemnification is applicable in advance of its final disposition (an "Advancement of Expenses"); provided, however, that an Advancement of Expenses incurred by or on behalf of an indemnitee shall be made only upon delivery to the corporation of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses under this Section 6.4 or otherwise.

6.5 AMENDMENT OR REPEAL

Neither any amendment nor repeal of the foregoing provisions of this Article VI, nor the adoption of any provision of these bylaws inconsistent with this Article VI, shall eliminate or reduce the effect of this Article VI, in respect of any matter occurring, or any action or proceeding accruing or arising, or that, but for this Article VI, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

ARTICLE VII

RECORDS AND REPORTS

7.1 MAINTENANCE AND INSPECTION OF RECORDS

The corporation shall, either at its principal executive offices or at such place or places as designated by the board of directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal place of business.

The officer who has charge of the stock ledger of a corporation shall prepare and make, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

7.2 INSPECTION BY DIRECTORS

Any director shall have the right to examine the corporation's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his position as a director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court of Chancery may summarily order the corporation to permit the director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court of Chancery may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court of Chancery may deem just and proper.

7.3 ANNUAL STATEMENT TO STOCKHOLDERS

The board of directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the corporation.

7.4 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The chairperson of the board, the chief executive officer, the president, any vice president, the treasurer, the secretary or assistant secretary of this corporation, or any other person authorized by the board of directors or the chief executive officer or the president or a vice president, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

ARTICLE VIII

GENERAL MATTERS

8.1 CHECKS

From time to time, the board of directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.2 EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS

The board of directors, except as otherwise provided in these bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.3 STOCK CERTIFICATES; PARTLY PAID SHARES

The shares of a corporation shall be represented by certificates, provided that the board of directors of the corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Notwithstanding the adoption of such a resolution by the board of directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the corporation by the chairperson or vice-chairperson of the board of directors, or the chief executive officer, president, or vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of such corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, upon the books and records of the corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

8.4 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.5 LOST CERTIFICATES

Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or his legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

8.6 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term “person” includes both a corporation and a natural person.

8.7 DIVIDENDS

The directors of the corporation, subject to any restrictions contained in the certificate of incorporation, may declare and pay dividends upon the shares of its capital stock pursuant to the DGCL. Dividends may be paid in cash, in property, or in shares of the corporation’s capital stock.

The directors of the corporation may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the corporation, and meeting contingencies.

8.8 FISCAL YEAR

The fiscal year of the corporation shall be fixed by resolution of the board of directors and may be changed by the board of directors.

8.9 SEAL

The seal of the corporation shall be such as from time to time may be approved by the board of directors.

8.10 TRANSFER OF STOCK

Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate, and record the transaction in its books.

8.11 STOCK TRANSFER AGREEMENTS

The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

8.12 REGISTERED STOCKHOLDERS

The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner, shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

8.13 SEVERABILITY

If any provision of these bylaws (or any portion, including words or phrases, thereof) or the application of any provision (or any portion, including words or phrases, thereof) to any person or circumstance shall be held invalid, illegal or unenforceable in any respect under applicable law by a court of competent jurisdiction, such invalidity, illegality or unenforceability shall not affect any other provisions hereof (or the remaining portion thereof) or the application of such provision to any other persons or circumstances, which unaffected provisions (or portions thereof) shall remain valid, legal and enforceable to the fullest extent permitted by law.

ARTICLE IX

AMENDMENTS

The original or other bylaws of the corporation may be adopted, amended or repealed by the stockholders entitled to vote; provided, however, that the corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

ARTICLE X

DISSOLUTION

If it should be deemed advisable in the judgment of the board of directors of the corporation that the corporation should be dissolved, the board, after the adoption of a resolution to that effect by a majority of the whole board at any meeting called for that purpose, shall cause notice to be mailed to each stockholder entitled to vote thereon of the adoption of the resolution and of a meeting of stockholders to take action upon the resolution.

At the meeting, a vote shall be taken for and against the proposed dissolution. If a majority of the outstanding stock of the corporation entitled to vote thereon votes for the proposed dissolution, then a certificate stating that the dissolution has been authorized in accordance with the provisions of Section 275 of the DGCL and setting forth the names and residences of the directors and officers shall be executed, acknowledged, and filed, and shall become effective in accordance with Section 103 of the DGCL. Upon such certificate's becoming effective in accordance with Section 103 of the DGCL, the corporation shall be dissolved.

Whenever all the stockholders entitled to vote on a dissolution consent in writing, either in person or by duly authorized attorney, to a dissolution, no meeting of directors or stockholders shall be necessary. The consent shall be filed and shall become effective in accordance with Section 103 of the DGCL. Upon such consent's becoming effective in accordance with Section 103 of the DGCL, the corporation shall be dissolved. If the consent is signed by an attorney, then the original power of attorney or a photocopy thereof shall be attached to and filed with the consent. The consent filed with the Secretary of State shall have attached to it the affidavit of the secretary or some other officer of the corporation stating that the consent has been signed by or on behalf of all the stockholders entitled to vote on a dissolution; in addition, there shall be attached to the consent a certification by the secretary or some other officer of the corporation setting forth the names and residences of the directors and officers of the corporation.

ARTICLE XI

CUSTODIAN

11.1 APPOINTMENT OF A CUSTODIAN IN CERTAIN CASES

The Court of Chancery, upon application of any stockholder, may appoint one or more persons to be custodians and, if the corporation is insolvent, to be receivers, of and for the corporation when:

a. at any meeting held for the election of directors, the stockholders are so divided that they have failed to elect successors to directors whose terms have expired or would have expired upon qualification of their successors; or

b. the business of the corporation is suffering or is threatened with irreparable injury because the directors are so divided respecting the management of the affairs of the corporation that the required vote for action by the board of directors cannot be obtained and the stockholders are unable to terminate this division; or

c. the corporation has abandoned its business and has failed within a reasonable time to take steps to dissolve, liquidate or distribute its assets.

11.2 DUTIES OF CUSTODIAN

The custodian shall have all the powers and title of a receiver appointed under Section 291 of the DGCL, but the authority of the custodian shall be to continue the business of the corporation and not to liquidate its affairs and distribute its assets, except when the Court of Chancery otherwise orders and except in cases arising under Sections 226(a)(3) or 352(a)(2) of the DGCL.

ARTICLE XII

EXCLUSIVE FORUM FOR ADJUDICATION OF DISPUTES

12.1 FORUM FOR ADJUDICATION OF DISPUTES

Unless the board of directors consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court located within the State of Delaware, or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of the corporation; (b) any action asserting a claim for breach of a fiduciary duty owed by any director, officer, employee or agent of the corporation to the corporation or the corporation's stockholders; (c) any action asserting a claim arising pursuant to any provision of the DGCL, the certificate of incorporation or these bylaws (as any such may be amended from time to time); or (d) any action asserting a claim governed by the internal affairs doctrine, in each case subject to said court having personal jurisdiction over the indispensable parties named as defendants therein.

Unless the board of directors of the corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall, to the fullest extent permitted by law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933 or any rule or regulation promulgated thereunder (in each case, as amended).

To the fullest extent permitted by law, any person or entity purchasing or otherwise acquiring or holding any interest in any security of the corporation shall be deemed to have notice of and consented to the provisions of this Section 12.1.

RETENTION AGREEMENT

This RETENTION AGREEMENT (the "Agreement") is entered into by and between Illumina, Inc. (the "Company") and Joydeep Goswami ("Executive") effective on the date of Executive signature of execution, for the purpose of providing Executive with certain retention amounts subject to the terms and conditions set forth below.

A. Executive's service to the Company as Chief Financial Officer shall terminate effective April 15, 2024 and Executive shall become an employee-advisor to the Company.

B. The Company wishes for Executive to remain an employee-advisor to the Company, and Executive has agreed to serve as an employee-advisor, for the period April 15, 2024 through June 30, 2024 (the "Retention Period").

C. Effective July 1, 2024, Executive's employment with the Company will end.

THEREFORE, in consideration of the promises and mutual agreements hereinafter set forth, it is agreed by and between the undersigned as follows:

1. Duties During the Retention Period. During the Retention Period, Executive shall be required to perform the following duties: act as an advisor to Illumina and Finance leadership regarding (a) the preparation of the FY24 01 close, (b) the preparation of the April 2024 Board and Committee meetings, (c) the preparation for, and participation in, the earnings call on May 2, 2024, and (d) the preparation of the 10-Q schedule to be filed on May 3, 2024. Notwithstanding the foregoing, Executive shall not be required to work full-time during the Retention Period.

2. Retention Payment.

a. Except as provided herein, so long as Executive remains employed by the Company during the Retention Period and completes the items as listed in paragraph "1.", Executive shall be entitled to receive $360,000. The Retention Payment will be paid made in a lump sum payment within thirty days after the date of termination (the "Retention Payment"). The Retention Payment, if earned, is in addition to Executive's normal salary and benefits which will continued to be paid during Executive's employment.

b. If the Company terminates Executive without Cause (as defined in Executive's Change in Control Severance Agreement), Executive shall receive full payment of the Retention Payment.

c. If Executive's employment with the Company terminates for any other reason, Executive shall receive Retention Payment earned through Executive's termination date.

3. Release Agreement.

By signing below Executive hereby releases, waives, acquits and forever discharges, to the fullest extent permitted by law, the Company and its respective affiliates, officers, directors, managers, members, partners, employees, agents and other representatives (together, collectively, "Representatives," and each, individually, a "Representative") (together, collectively, the "Released Parties," and each, individually, a "Released Party") from all claims, charges, complaints, actions, causes of action, damages, agreements, judgments, debts, dues, suits and liability of any kind or nature whatsoever, whether known or unknown, whether suspected or not, whether arising by virtue of contract or intentional or unintentional tort, or by virtue of any federal, state or local statute, ordinance, law, regulation, order or decree, or otherwise, including, without limitation, all claims, if any, arising directly or indirectly out of or in any way connected with Executive's employment or any other relationship Executive has with the Company or with any of the other Released Parties, and whether at law or in equity, which Executive ever had, now has, or may have against any Released Party by reason of any matter, cause or thing whatsoever that have arisen, or may have arisen, or that have been or could have been asserted in any court or forum by Executive as of the date of

this Agreement, whether directly, representatively, derivatively, individually or in any other capacity, from the beginning of time to and including this day, resulting or arising from, or relating to or in connection with, the Company. For the sake of clarity, this general release shall not apply to claims arising after the date of this Agreement and this release of claims excludes any release of claims under the Age Discrimination in Employment Act and any claims that may not be released in this manner (including, without limitation, workers' compensation and state unemployment claims) and does not release any claims Executive might have to receive an award for information provided to the Securities and Exchange Commission or any claims Executive has with respect to the Retention Payment or with respect to severance payments that may be paid following the termination of Executive's employment with the Company.

Waiver.

In granting the release herein, Executive acknowledges and understands that this Agreement includes a release of all claims known or unknown, and that the laws of some jurisdictions afford rights and benefits upon releasing parties with respect to the release of unknown claims, including, without limitation, Section 1542 of the California Civil Code, which provides as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

In giving this release, which includes claims that may be unknown to Executive at present, Executive acknowledges that Executive (A) has read and understands Section 1542 of the California Civil Code, (B) has had an opportunity to discuss with Executive's own counsel such provision and any similar provisions of the applicable laws of any other jurisdiction (or has elected not to consult with counsel) and (C) expressly waives and relinquishes all rights and benefits under Section 1542 of the California Civil Code and any law of any jurisdiction of similar effect with respect to the release of any unknown or unsuspected claims Executive has, had or may have against the Released Parties.

4. No Separate Accounting. The Retention Payment will be paid out of the Company's general assets. No amounts will be set aside in a trust or separate account.

5. Applicable Law. The provisions of this Agreement shall be construed and interpreted according to the laws of the State of California without regard to conflict of law principles.

6. Severability; Entire Agreement; Amendment. If any provision of this Agreement is held to be invalid, the remaining provisions shall remain in full force and effect. The Company and Executive acknowledge and agree that this Agreement constitutes the entire agreement between the Company and Executive with respect to the subject matter hereof. This Agreement may not be modified, altered, or changed except by a written agreement signed by the Company and Executive.

7. Withholding. The Retention Payment are subject to reduction in order to comply with applicable federal, state, and local tax withholding requirements and shall be reflected on Executive's Form W-2 for the year in which such payment, if any, are made.

8. No Guarantee of Employment. This Agreement is not an employment policy or contract. It does not give Executive the right to remain an employee of the Company, nor does it interfere with Company's right to discharge Executive. It also does not require Executive to remain an employee nor interfere with Executive's right to terminate employment at any time.

9. Section 409A Compliance. It is intended that this Agreement and the payment due pursuant to this Agreement are exempt from Section 409A of the Internal Revenue Code. Each provision of this Agreement shall be interpreted in a manner consistent with this intent. Nevertheless, the Company cannot, and does not, guarantee any particular tax effect or treatment of the amounts due under this Agreement. Except for the Company's responsibility to withhold applicable income and employment taxes from compensation paid or provided to Executive, the Company will not be responsible for the payment of any applicable taxes on compensation paid or provided to Executive.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement effective as of the day and year first above written.

Dated: April 8, 2024

By: /s/ Joydeep Goswami

Joydeep Goswami, Executive

Dated: April 8, 2024

By: /s/ Patricia Leckman

Patricia Leckman, Chief People Officer

Illumina, Inc.

SEPARATION AGREEMENT AND GENERAL RELEASE OF ALL CLAIMS

This Separation Agreement and General Release of All Claims ("Agreement") is made by and between Illumina, Inc. ("Illumina" or "the Company") and Joydeep Goswami ("Employee"), collectively ("the Parties"), with respect to the following facts:

A. Employee is employed by Company as its Chief Financial Officer and Chief Strategy and Development Officer.

B. Employee's employment will end effective July 1, 2024 ("Separation Date").

C. The Company wishes to assist Employee in Employee's transition to other employment and has offered to provide Employee with a severance payment and benefits as described below.

D. Employee will receive all compensation, wages, commissions, equity awards, bonuses, and expense reimbursements earned and owed to Employee by the Company as of Employee's Separation Date upon the Separation Date.

THEREFORE, in consideration of the promises and mutual agreements hereinafter set forth, it is agreed by and between the undersigned as follows:

1. Severance Benefits.

1.1 Severance. The Company agrees to pay Employee a Severance Payment equivalent to fifty-two (52) weeks of Employee's normal wages, in the gross amount of $620,000 less all appropriate federal and state tax withholdings, an amount to which Employee is not otherwise entitled absent his execution and non-revocation of this Agreement ("Severance Payment"). Employee acknowledges and agrees that this Severance Payment constitutes adequate legal consideration for the promises and representations made by Employee in this Agreement. Subject to the provisions below, the Severance Payment will be made in a lump sum payment within thirty days after all of the following: (1) the Effective Date of this Agreement (as described in paragraph 8.4 below); (2) after signing this Agreement, Employee has returned the Agreement to Illumina at hsotomayor@illumina.com by the deadline described in paragraph 10 below; and (3) Employee has timely returned to Illumina all company property in Employee's possession, custody, or control (according to paragraph 11).

1.2 The Company agrees to pay the cost of premiums for continued medical, prescription drug, dental and vision insurance coverage through the provisions of the Consolidated Omnibus Budget Reconciliation Act ("COBRA"), for an additional period of twelve (12) months following the termination of Employee's benefits. Employee acknowledges and agrees that Employee is not entitled to this COBRA benefit, and will receive this benefit solely by virtue of Employee's execution and non-revocation of this Agreement. These sums will be paid directly to Illumina's carrier. Employee agrees to complete all required elections to continue coverage under COBRA. Thereafter, Employee may elect to continue such benefits at Employee's own expense under the provisions of COBRA. The Company will not pay for out-of-pocket medical expenses should the Employee fail to timely and properly elect continuation of coverage through COBRA.

1.3 The Company agrees to pay the cost of Employee's executive physical exam once for the period of twelve (12) months following the Separation Date.

2. General Release. In exchange for the consideration provided in paragraph 1 of this Agreement, Employee agrees to the following:

2.1. Employee unconditionally, irrevocably, and absolutely releases and discharges the Company, and any parent and subsidiary corporations, divisions, and other affiliated entities of the Company, past and present, as well as the Company's employees, officers, directors, agents, attorneys, successors, and assigns of the Company (collectively, "Released Parties"), from all claims related in any way to the transactions or occurrences between them to date to the fullest extent

permitted by law including, but not limited to, Employee's employment with the Company, the termination of Employee's employment, and all other losses, liabilities, claims, demands, and causes of action, known or unknown, suspected or unsuspected, arising directly or indirectly out of, or in any way connected with, Employee's employment with or termination from the Company. This release is intended to have the broadest possible application and includes, but is not limited to, any claims under any state law, tort, contract, common law, constitutional or other statutory claims; any claim for unpaid wages, commissions, bonuses or other employment benefits, including claims for unvested stock options or incentive/bonus compensation (including claims for unvested Equity Awards and/or benefits under the Variable Compensation Plans); any claims for penalties, damages, or awards of any kind, including without limitation liquidated damages and statutory penalties; as well as any alleged violations of any federal, state, or local laws that may govern Employee's employment, including, without limitation, the California Labor Code or the federal Fair Labor Standards Act; Title VII of the Civil Rights Act of 1964; the Family and Medical Leave Act; the California Family Rights Act; the Worker Adjustment and Retraining Notification Act (including any similar state statute); the Sarbanes-Oxley Act of 2002; the California Fair Employment and Housing Act; the Americans with Disabilities Act; the Age Discrimination in Employment Act of 1967, as amended; all claims for attorneys' fees, costs, and expenses; and any other action, whether cognizable in law or in equity, based upon any conduct up to and including the date of Employee's signature on this Agreement. However, this release shall not apply to claims for workers' compensation benefits, unemployment insurance benefits, or any other claims that cannot lawfully be waived, nor to Employee's rights to indemnification, and advancement of legal fees as may be required, as a former officer of the Company, Employee's right to enforce the terms of this Agreement, Employee's rights as a shareholder of the Company and Employee's rights to any employee benefits accrued for Employee and as to which he has a right following his separation from employment.

2.2. Employee acknowledges that Employee may discover facts or law different from, or in addition to, the facts or law that Employee knows or believes to be true with respect to the claims released in this Agreement and agrees, nonetheless, that this Agreement and the release contained in it shall be and remain effective in all respects notwithstanding such different or additional facts or the discovery of them.

2.3. Employee declares and represents that Employee intends this Agreement to be final and complete and not subject to any claim of mistake. Employee executes this release with the full knowledge that this release covers all possible claims against the Released Parties, to the fullest extent permitted by law.

2.4. Nothing in this Agreement prohibits Employee from filing a claim or charge with a federal, state, or local agency relating to Employee's employment with the Company, or participating in government investigations or actions. However, Employee expressly waives Employee's right to recover any type of personal relief from the Company, including monetary damages or reinstatement, in any administrative action or proceeding, whether state or federal, and whether brought by Employee or on Employee's behalf by an administrative agency, related in any way to the matters released herein. Nothing in this paragraph is intended to prevent or discourage the Employee from communicating with or providing information to any state or federal governmental agency, nor is it intended to impede Employee's rights to recover any rewards or other payments as may be provided for under applicable law.

2.5. Employee declares and represents that as of the Effective Date of this Agreement, Employee is not aware of any violations of any applicable rules, regulations and/or laws by Company or any employee of Company; or that if he is aware of or is concerned about any such violations, Employee has reported those to the Company.

3. California Civil Code Section 1542 Waiver . Employee expressly acknowledges and agrees that all rights under section 1542 of the California Civil Code are expressly waived. That section provides:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE

RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

Employee understands that Employee is a “creditor” within the meaning of section 1542.

4. Representation Concerning Filing of Legal Actions . Employee represents that, as of the date of this Agreement, Employee has not filed any lawsuits, complaints, petitions, claims, or other accusatory pleadings against the Company or any of the other Released Parties in any court or arbitral forum. Employee further agrees that, to the fullest extent permitted by law, Employee will not prosecute in any court or arbitral forum, whether state or federal, any claim or demand of any type related to the matters released above, it being the intention of the parties that with the execution of this release, the Released Parties will be absolutely, unconditionally, and forever discharged of and from all obligations to or on behalf of Employee related in any way to the matters discharged herein. Nothing in this Agreement shall prevent Employee from complying with a lawfully issued subpoena, filing an administrative charge with a state or federal governmental agency, or from communicating with or providing information to a state or federal governmental agency.

5. Non-Disclosure. After the Separation Date, Employee will continue to be bound by Employee’s Proprietary Information and Invention Agreement (“PIIA”).

5.1. Notwithstanding anything contained herein, or any other confidentiality obligation to which Employee may be or may have been subject to as a result of Employee’s employment with the Company, including Employee’s PIIA, nothing shall prohibit Employee from communicating with government authorities regarding possible legal violations as provided by law.

5.2. Employee is advised that pursuant to the Defend Trade Secrets Act, an individual shall not be held criminally or civilly liable under any federal or trade secret law for the disclosure of a trade secret that (A) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. However, Employee understands that in the event the disclosure of Company’s trade secrets is not done in good faith pursuant to the above, Employee will be subject to damages, including punitive damages and attorneys’ fees.

6. No Admissions. By entering into this Agreement, the Released Parties make no admission that they have engaged, or are now engaging, in any unlawful conduct. The parties understand and acknowledge that this Agreement is not an admission of liability and shall not be used or construed as such in any legal or administrative proceeding.

7. Agreement to Cooperate . Employee agrees that Employee will, in good faith and with reasonable diligence, assist in, facilitate, and cooperate with the Company and provide information as to matters which Employee was personally involved, or has information on, while Employee was an employee of the Company and which become the subject of an action, investigation, proceeding, litigation, or otherwise. Employee agrees to be available, upon reasonable notice, to be interviewed, give sworn testimony and statements, declarations, trial testimony, and other such disclosures. Nothing herein is intended or should be construed as requiring anything other than Employee’s cooperation in providing truthful and accurate information. Company will reimburse Employee’s reasonable expenses, related to such cooperation based upon Employee’s submission of receipts.

8. Older Workers’ Benefit Protection Act. This Agreement is intended to satisfy the requirements of the Older Workers’ Benefit Protection Act, 29 U.S.C. sec. 626(f). The following general provisions, along with the other provisions of this Agreement, are agreed to for this purpose:

8.1. Employee acknowledges and agrees that Employee has read and understands the terms of this Agreement.

8.2. Employee is advised that Employee should consult with an attorney before signing this Agreement, and Employee acknowledges that Employee has obtained and considered any legal advice Employee deems necessary, such that Employee is entering into this Agreement freely, knowingly, and voluntarily.

8.3. Employee acknowledges that Employee has been given at least twenty-one calendar days in which to consider whether or not to enter into this Agreement ("Consideration Period"). Employee understands that, at Employee's option, Employee may elect not to use the full Consideration Period. If Employee signs and returns this Agreement prior to the expiration of the Consideration Period, Employee acknowledges that Employee has done so freely, knowingly, and voluntarily.

8.4. This Agreement shall not become effective or enforceable until the eighth day after Employee signs this Agreement. In other words, Employee may revoke Employee's acceptance of this Agreement within seven days after the date Employee signs it ("Revocation Period"). Employee's revocation must be in writing and received by Herman Sotomayor of Illumina no later than the conclusion of the Revocation Period in order to be effective. If Employee does not revoke Employee's acceptance within the Revocation Period, Employee's acceptance of this Agreement shall become binding and enforceable on the eighth day ("Effective Date").

8.5. This Agreement does not waive or release any rights or claims that Employee may have under the Age Discrimination in Employment Act that arise after the execution of this Agreement.

9. Severability. In the event any provision of this Agreement shall be found unenforceable by a court of competent jurisdiction, the provision shall be deemed modified to the extent necessary to allow enforceability of the provision as so limited, it being intended that the Released Parties shall receive the benefits contemplated herein to the fullest extent permitted by law. If a deemed modification is not satisfactory in the judgment of such court, the unenforceable provision shall be deemed deleted, and the validity and enforceability of the remaining provisions shall not be affected thereby.

10. Deadline For Agreement Execution. This Agreement constitutes an offer to Employee, which must be accepted by Employee and returned to the Company by no later than the conclusion of the Consideration Period described in paragraph 8.3, above, after which date the offer made herein shall lapse and be of no further force or effect.

11. Return of Company Property. Employee understands and agrees that as a condition of receiving the severance benefits described in paragraph 1 of this Agreement, all Company property still in Employee's possession, including any Proprietary Information or Company Documents, if any, must be immediately returned to the Company. By signing this Agreement, Employee represents and warrants that Employee has or will have returned such Company Property no later than Employee's Separation Date, including any Company issued or provided credit cards, computers, vehicles, tangible property and equipment, keys, entry cards, identification badges, telephones, PDAs, and all documents, files, folders, correspondence, memoranda, notes, notebooks, drawings, books, records, plans, forecasts, reports, proposals, agreements, financial information, computer-recorded information, as well as all copies thereof, electronic or otherwise.

12. Applicable Law. The validity, interpretation, and performance of this Agreement shall be construed and interpreted according to the laws of the United States of America and the State of California.

13. Binding on Successors; Full Defense. The parties agree that this Agreement shall be binding on, and inure to, the benefit of Employee or Employee's successors, heirs and/or assigns.

14. Full Defense. This Agreement may be pled as a full and complete defense to, and may be used as a basis for an injunction against, any action, suit, or other proceeding that may be prosecuted, instituted, or attempted by Employee in breach hereof. Employee agrees that in the event an action or proceeding is instituted by the Released Parties in order to enforce the terms or provisions of this Agreement, the Released Parties shall be entitled to an award of reasonable costs and attorneys' fees incurred in connection with

enforcing this Agreement. The terms of this paragraph shall not apply to an action by Employee to challenge the enforceability of Employee's waiver of rights under the Age Discrimination in Employment Act.

15. Good Faith. The parties agree to do all things necessary and to execute all further documents necessary and appropriate to carry out and effectuate the terms and purposes of this Agreement.

16. Entire Agreement; Integration. This Agreement contains the entire agreement between the Company and the Employee on the subjects addressed in this Agreement and replaces any other prior agreements or representations, whether oral or written, between them, provided, however, that any proprietary information agreement executed by Employee remains in full force and effect and is not superseded by this Agreement.

17. Modification; Counterparts. This Agreement may be amended only by a written instrument executed by all parties hereto. This Agreement may be executed in counterparts and shall be binding on all parties when each has signed either an original or copy of this Agreement.

18. Confidentiality. Employee agrees that the terms and conditions of this Agreement, shall remain confidential as between the parties, and Employee shall not disclose them to any other person, including, but not limited to, any current or former Illumina employee. Employee also agrees Employee will not respond to, participate in, or contribute to any public discussion or other publicity concerning, or in any way relating to, execution of this Agreement or the events (including any negotiations) leading to its execution. Without limiting the foregoing, the Employee may disclose the monetary aspects of this Agreement to Employee's spouse, attorneys or financial advisors provided Employee informs them of this confidentiality provision and they agree, in writing, to abide by it. Illumina is required by law to disclose terms of the Settlement and will do so as required. It will not otherwise disclose the terms of the Settlement. A violation of this Confidentiality provision shall be a material breach of this Agreement.

19. Non-Disparagement. Neither Employee, nor anyone subject to Employee's direction or control, nor the Company, will, and the Company will advise its Board members and Executive officers not to, make any negative, derogatory or disparaging statements, publications or comments, regarding the other party, including as to Employee's employment with the Company or the business reputation or business practices of the Company and/or the Released Parties, on the one hand, and the Employee, on the other hand, to any person or entity. This section will in no way prevent Employee from testifying truthfully pursuant to an enforceable subpoena or communicating with a governmental agency. Further, nothing in this Agreement is intended to suppress or limit Employee's right to testify in any administrative, legislative or judicial forum about alleged criminal or unlawful conduct or sexual harassment, or to prevent the disclosure of factual information related to unlawful acts in the workplace, such as a civil or administrative action regarding sexual assault, sexual harassment or other forms of sex-based workplace harassment, discrimination or retaliation, to the extent such communications are expressly protected under California law.

20. Section 409(A) of the Internal Revenue Code .

20.1 This Agreement is intended to comply with Section 409A of the Internal Revenue Code of 1986, as amended (the "Code") or an exemption thereunder and shall be construed and administered in accordance with Section 409A of the Code. Any payments under this Agreement that may be excluded from Section 409A of the Code either as separation pay due to an involuntary separation from service or as a short-term deferral shall be excluded from Section 409A of the Code to the maximum extent possible. For purposes of Section 409A of the Code, each installment payment provided under the Plan shall be treated as a separate payment. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Plan comply with Section 409A of the Code and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest, or other expenses that may be incurred by a Participant on account of non-compliance with Section 409A of the Code.

20.2 Notwithstanding anything herein to the contrary, if Employee is a "Specified Employee," for purposes of Section 409A of the Code, on the date on which Employee incurs a Separation from Service, any payment or benefit provided in this Agreement that provides for the "deferral of compensation" within the meaning of Section 409A of the Code shall not be paid or provided or commence to be paid or provided on

any date prior to the first business day after the date that is six months following Employee's "Separation from Service" (the "409A Suspension Period"); provided, however, that a payment or benefit delayed pursuant to the preceding clause shall commence earlier in the event of Employee's death prior to the end of the six-month period. Within 14 calendar days after the end of the 409A Suspension Period, Employee shall be paid a lump sum payment in cash equal to any payments delayed because of the preceding sentence. Thereafter, Employee shall receive any remaining benefits as if there had not been an earlier delay. For purposes of this Agreement, "Separation from Service" shall have the meaning set forth in Section 409A(a)(2)(i)(A) of the Internal Revenue Code and shall be determined in accordance with the default rules under Section 409A. "Specified Employee" shall have the meaning set forth in Section 409A(a)(2)(B)(1) of the Internal Revenue Code, as determined in accordance with the uniform methodology and procedures adopted by the Company and then in effect.

THE PARTIES TO THIS AGREEMENT HAVE READ THE FOREGOING AGREEMENT AND FULLY UNDERSTAND EACH AND EVERY PROVISION CONTAINED HEREIN. WHEREFORE, THE PARTIES HAVE EXECUTED THIS AGREEMENT ON THE DATES SHOWN BELOW.

Dated: July 1, 2024 By: /s/ Joydeep Goswami

Joydeep Goswami, Employee

Dated: July 2, 2024 By: /s/ Herman Sotomayor

Herman Sotomayor, Sr. Director, HR

Illumina, Inc.

Exhibit 31.1

CERTIFICATION OF JACOB THAYSEN PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jacob Thaysen, certify that:

1 I have reviewed this Quarterly Report on Form 10-Q of Illumina, Inc.;

2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: August 7, 2024

By: /s/ JACOB THAYSEN

Name: Jacob Thaysen

Title: Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF ANKUR DHINGRA PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Ankur Dhingra, certify that:

1 I have reviewed this Quarterly Report on Form 10-Q of Illumina, Inc.;

2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: August 7, 2024

By: /s/ ANKUR DHINGRA

Name: Ankur Dhingra

Title: Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF JACOB THAYSEN PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Illumina, Inc. (the "Company") on Form 10-Q for the quarter ended June 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jacob Thaysen, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: August 7, 2024

By:	/s/ JACOB THAYSEN
Name:	Jacob Thaysen
Title:	Chief Executive Officer

This certification accompanying the Report is not deemed filed with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of such Section, and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before, on or after the date of the Report), irrespective of any general incorporation language contained in such filing.

Exhibit 32.2

CERTIFICATION OF ANKUR DHINGRA PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Illumina, Inc. (the "Company") on Form 10-Q for the quarter ended June 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Ankur Dhingra, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: August 7, 2024

By:	/s/ ANKUR DHINGRA
Name:	Ankur Dhingra
Title:	Chief Financial Officer

This certification accompanying the Report is not deemed filed with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of such Section, and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before, on or after the date of the Report), irrespective of any general incorporation language contained in such filing.