UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2023
OR

☐ **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: 001-38098

APPIAN CORPORATION
(Exact Name of Registrant as Specified in its Charter)

Delaware	**54-1956084**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
7950 Jones Branch Drive **McLean, VA**	**22102**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (703) 442-8844

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

Title of each class	Trading symbol	Name of each exchange on which registered
Class A Common Stock	APPN	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 (§ 232.405 of this chapter) 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, a 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	☒	Accelerated filer	☐
Non-accelerated filer	☐	Small 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 13(a) 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 ☒

As of October 30, 2023, there were 41,730,705 shares of the registrant's Class A common stock and 31,497,396 shares of the registrant's Class B common stock, each with a par value of $0.0001 per share, outstanding.

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PART I—FINANCIAL INFORMATION

Item 1. FINANCIAL STATEMENTS

APPIAN CORPORATION
CONSOLIDATED BALANCE SHEETS

(in thousands, except par value and share data)

	As of	
	September 30, 2023	December 31, 2022
	(unaudited)	
Assets		
Current assets		
Cash and cash equivalents	$ 130,761	$ 148,132
Short-term investments and marketable securities	38,726	47,863
Accounts receivable, net of allowance of $2,268 and $2,125, respectively	133,548	165,964
Deferred commissions, current	31,107	30,196
Prepaid expenses and other current assets	51,230	28,093
Restricted cash, current	—	2,249
Total current assets	385,372	422,497
Property and equipment, net of accumulated depreciation of $22,972 and $18,864, respectively	42,444	41,855
Goodwill	25,991	26,349
Intangible assets, net of accumulated amortization of $3,618 and $2,715, respectively	4,092	5,251
Right-of-use assets for operating leases	40,501	37,248
Deferred commissions, net of current portion	54,932	55,788
Deferred tax assets	2,688	1,940
Other assets	41,018	3,286
Total assets	$ 597,038	$ 594,214
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 5,956	$ 7,997
Accrued expenses	11,275	12,227
Accrued compensation and related benefits	33,866	40,718
Deferred revenue	194,602	194,768
Debt	65,431	2,740
Operating lease liabilities	11,003	8,681
Other current liabilities	1,119	3,121
Total current liabilities	323,252	270,252
Long-term debt	142,016	115,379
Non-current operating lease liabilities	60,339	57,225
Deferred revenue	3,243	5,556
Deferred tax liabilities	87	102
Total liabilities	528,937	448,514
Stockholders' equity		
Class A common stock—par value $0.0001; 500,000,000 shares authorized and 41,726,634 shares issued and outstanding as of September 30, 2023; 500,000,000 shares authorized and 41,320,091 shares issued and outstanding as of December 31, 2022	4	4
Class B common stock—par value $0.0001; 100,000,000 shares authorized and 31,497,396 shares issued and outstanding as of September 30, 2023; 100,000,000 shares authorized and 31,497,796 shares issued and outstanding as of December 31, 2022	3	3
Additional paid-in capital	588,029	561,390
Accumulated other comprehensive loss	(10,049)	(7,246)
Accumulated deficit	(509,886)	(408,451)
Total stockholders' equity	68,101	145,700
Total liabilities and stockholders' equity	$ 597,038	$ 594,214

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

APPIAN CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited, in thousands, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	**2022**	**2023**	**2022**
Revenue				
Subscriptions	$ 103,803	$ 86,520	$ 296,554	$ 246,908
Professional services	33,291	31,356	103,490	95,297
Total revenue	137,094	117,876	400,044	342,205
Cost of revenue				
Subscriptions	11,265	9,313	32,492	26,065
Professional services	24,804	24,447	76,515	72,011
Total cost of revenue	36,069	33,760	109,007	98,076
Gross profit	101,025	84,116	291,037	244,129
Operating expenses				
Sales and marketing	55,667	54,912	181,338	157,104
Research and development	37,135	37,623	118,502	101,401
General and administrative	23,440	29,357	82,342	90,014
Total operating expenses	116,242	121,892	382,182	348,519
Operating loss	(15,217)	(37,776)	(91,145)	(104,390)
Other non-operating expense				
Other expense (income), net	1,939	5,876	(4,637)	12,815
Interest expense	4,917	89	12,790	222
Total other non-operating expense	6,856	5,965	8,153	13,037
Loss before income taxes	(22,073)	(43,741)	(99,298)	(117,427)
Income tax expense (benefit)	178	255	2,137	(924)
Net loss	$ (22,251)	$ (43,996)	$ (101,435)	$ (116,503)
Net loss per share:				
Basic and diluted	$ (0.30)	$ (0.61)	$ (1.39)	$ (1.61)
Weighted average common shares outstanding:				
Basic and diluted	73,178	72,503	73,032	72,372

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

APPIAN CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(unaudited, in thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	**2022**	**2023**	**2022**
Net loss	$ (22,251)	$ (43,996)	$ (101,435)	$ (116,503)
Comprehensive loss, net of income taxes				
Foreign currency translation adjustments	1,060	308	(2,813)	3,032
Unrealized gains (losses) on available-for-sale securities	9	59	10	(135)
Total other comprehensive loss, net of income taxes	$ (21,182)	$ (43,629)	$ (104,238)	$ (113,606)

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

APPIAN CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(unaudited, in thousands, except share data)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance, December 31, 2022	72,817,887	$ 7	$ 561,390	$ (7,246)	$ (408,451)	$ 145,700
Net loss	—	—	—	—	(36,829)	(36,829)
Issuance of common stock to directors	6,713	—	—	—	—	—
Vesting of restricted stock units	111,296	—	(2,959)	—	—	(2,959)
Exercise of stock options	19,483	—	131	—	—	131
Stock-based compensation expense	—	—	11,056	—	—	11,056
Other comprehensive loss	—	—	—	(700)	—	(700)
Balance, March 31, 2023	72,955,379	7	569,618	(7,946)	(445,280)	116,399
Net loss	—	—	—	—	(42,355)	(42,355)
Issuance of common stock to directors	4,928	—	—	—	—	—
Vesting of restricted stock units	99,836	—	(1,816)	—	—	(1,816)
Exercise of stock options	53,190	—	428	—	—	428
Stock-based compensation expense	—	—	11,148	—	—	11,148
Other comprehensive loss	—	—	—	(3,172)	—	(3,172)
Balance, June 30, 2023	73,113,333	7	579,378	(11,118)	(487,635)	80,632
Net loss	—	—	—	—	(22,251)	(22,251)
Issuance of common stock to directors	3,936	—	—	—	—	—
Vesting of restricted stock units	92,722	—	(2,465)	—	—	(2,465)
Exercise of stock options	14,039	—	105	—	—	105
Stock-based compensation expense	—	—	11,011	—	—	11,011
Other comprehensive income	—	—	—	1,069	—	1,069
Balance, September 30, 2023	73,224,030	$ 7	$ 588,029	$ (10,049)	$ (509,886)	$ 68,101

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance, December 31, 2021	71,462,094	$ 7	$ 497,128	$ (5,687)	$ (257,531)	$ 233,917
Net loss	—	—	—	—	(23,154)	(23,154)
Issuance of common stock to directors	2,395	—	—	—	—	—
Vesting of restricted stock units	47,038	—	—	—	—	—
Exercise of stock options	815,833	—	24,404	—	—	24,404
Stock-based compensation expense	—	—	6,943	—	—	6,943
Other comprehensive income	—	—	—	646	—	646
Balance, March 31, 2022	72,327,360	7	528,475	(5,041)	(280,685)	242,756
Net loss	—	—	—	—	(49,354)	(49,354)
Issuance of common stock to directors	2,565	—	—	—	—	—
Vesting of restricted stock units	52,634	—	—	—	—	—
Exercise of stock options	61,955	—	626	—	—	626
Stock-based compensation expense	—	—	9,148	—	—	9,148
Other comprehensive income	—	—	—	1,884	—	1,884
Balance, June 30, 2022	72,444,514	7	538,249	(3,157)	(330,039)	205,060
Net loss	—	—	—	—	(43,996)	(43,996)
Issuance of common stock to directors	4,613	—	—	—	—	—
Vesting of restricted stock units	67,164	—	—	—	—	—
Exercise of stock options	24,604	—	175	—	—	175
Stock-based compensation expense	—	—	11,336	—	—	11,336
Other comprehensive income	—	—	—	367	—	367
Balance, September 30, 2022	72,540,895	$ 7	$ 549,760	$ (2,790)	$ (374,035)	$ 172,942

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

APPIAN CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited, in thousands)

	Nine Months Ended September 30,	
	2023	2022
Cash flows from operating activities		
Net loss	$ (101,435)	$ (116,503)
Adjustments to reconcile net loss to net cash used by operating activities		
Stock-based compensation	33,215	27,427
Depreciation expense and amortization of intangible assets	7,046	5,332
Bad debt expense	690	561
Amortization of debt issuance costs	342	—
Deferred income taxes	(808)	(1,549)
Changes in assets and liabilities		
Accounts receivable	30,665	(9,114)
Prepaid expenses and other assets	(61,555)	(6,723)
Deferred commissions	(56)	(5,715)
Accounts payable and accrued expenses	(657)	(3,654)
Accrued compensation and related benefits	(6,671)	1,634
Other current and non-current liabilities	(2,026)	(383)
Deferred revenue	(3,186)	15,414
Operating lease assets and liabilities	2,238	(685)
Net cash used by operating activities	(102,198)	(93,958)
Cash flows from investing activities		
Purchases of investments	(53,443)	(31,214)
Proceeds from investments	62,590	57,417
Purchases of property and equipment	(8,278)	(5,861)
Net cash provided by investing activities	869	20,342
Cash flows from financing activities		
Proceeds from borrowings	92,000	—
Debt repayments	(2,625)	—
Payments for debt issuance costs	(411)	—
Payments for employee taxes related to the net share settlement of equity awards	(7,240)	—
Proceeds from exercise of common stock options	664	25,205
Net cash provided by financing activities	82,388	25,205
Effect of foreign exchange rate changes on cash, cash equivalents, and restricted cash	(679)	(1,694)
Net decrease in cash, cash equivalents, and restricted cash	(19,620)	(50,105)
Cash, cash equivalents, and restricted cash at beginning of period	150,381	103,960
Cash, cash equivalents, and restricted cash at end of period	$ 130,761	$ 53,855
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 11,960	$ 243
Cash paid for income taxes	$ 2,944	$ 749
Supplemental disclosure of non-cash investing and financing activities		
Accrued capital expenditures	$ 27	$ 317

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

APPIAN CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

1. Organization and Description of Business

Appian Corporation (together with its subsidiaries, “Appian,” the “Company,” “we,” or “our”) is a software company that automates business processes. The Appian AI Process Platform includes everything you need to design, automate, and optimize even the most complex processes, from start to finish. The world's most innovative organizations trust Appian to improve their workflows, unify data, and optimize operations—resulting in better growth and superior customer experiences.

We are headquartered in McLean, Virginia and operate both in the U.S. and internationally, including Australia, Canada, France, Germany, India, Italy, Japan, Mexico, the Netherlands, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

2. Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements and footnotes have been prepared in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”) as contained in the Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) for interim financial reporting. In the opinion of management, the interim financial information includes all adjustments of a normal recurring nature necessary for a fair presentation of the results of operations, financial position, changes in stockholders’ equity, and cash flows. The results of operations for the current period are not necessarily indicative of the results for the full year or the results for any future periods. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related footnotes included in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the Securities and Exchange Commission (the “SEC”) on February 16, 2023.

Use of Estimates

The preparation of our condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect the amounts reported in these condensed consolidated financial statements and accompanying notes. Although we believe the estimates we use are reasonable, due to the inherent uncertainty involved in making these estimates, actual results reported in future periods could differ from those estimates.

Significant estimates embedded in the condensed consolidated financial statements include, but are not limited to, revenue recognition, income taxes and the related valuation allowance established against deferred tax assets, the amortization of deferred commissions, the amortization period of the cost to obtain the judgment preservation insurance (see Note 12), and stock-based compensation.

Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of Appian and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Revenue Recognition

Refer to Note 3 for a detailed discussion on specific revenue recognition principles related to our major revenue streams.

Cost of Revenue

Subscriptions

Cost of subscriptions revenue consists primarily of fees paid to our third-party managed hosting providers and other third-party service providers, personnel costs such as payroll and benefits for our technology operations and customer support teams, amortization of developed technology, and allocated facility costs and overhead.

Professional Services

Cost of professional services revenue includes all direct and indirect costs to deliver our professional services and training, including employee compensation for our global professional services and training personnel, third-party contractor costs, allocated facility costs and overhead, and the costs of billable expenses such as travel and lodging.

Concentration of Credit and Customer Risk

Our financial instruments exposed to concentration of credit and customer risk consist primarily of cash, cash equivalents, accounts receivable, and our short- and long-term investments. Deposits held with banks may exceed the amount of insurance provided on such deposits; however, we believe the financial institutions holding our cash deposits are financially sound and, accordingly, minimal credit risk exists with respect to these balances.

With regard to our customers, credit evaluation and account monitoring procedures are used to minimize the risk of loss. Revenue generated from government agencies represented 21.1% and 20.6% of our revenue for the three and nine months ended September 30, 2023, respectively, of which the top three U.S. federal government agencies generated 4.6% and 4.3% of our revenue for the three and nine months ended September 30, 2023, respectively. Additionally, 35.3% and 35.6% of our revenue during the three and nine months ended September 30, 2023, respectively, was generated from international customers. Revenue generated from government agencies represented 21.2% and 19.2% of our revenue for the three and nine months ended September 30, 2022, respectively, of which the top three U.S. federal government agencies generated 5.5% and 4.8% of our revenue for the three and nine months ended September 30, 2022, respectively. Additionally, 31.3% and 33.2% of our revenue during the three and nine months ended September 30, 2022, respectively, was generated from international customers. No single end-customer accounted for more than 10% of our total revenue in the three and nine months ended September 30, 2023 or 2022.

Cash, Cash Equivalents, and Restricted Cash

We consider all highly liquid investments with an original or remaining maturity of three months or less at the date of purchase, as well as overnight repurchase agreements, to be cash equivalents. Restricted cash consists of cash designated to settle an escrow liability stemming from a holdback agreement enacted pursuant to our acquisition of Lana Labs GmbH. We paid 25% of the balance on September 28, 2022 and the remaining 75% of the balance on August 11, 2023.

The following table presents a reconciliation of cash, cash equivalents, and restricted cash as presented in the consolidated statements of cash flows (in thousands):

	As of			
	September 30, 2023	December 31, 2022	September 30, 2022	December 31, 2021
Cash and cash equivalents	$ 130,761	$ 148,132	$ 51,802	$ 100,796
Restricted cash, current	—	2,249	2,053	791
Restricted cash, net of current portion	—	—	—	2,373
Total cash, cash equivalents, and restricted cash	$ 130,761	$ 150,381	$ 53,855	$ 103,960

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are stated at realizable value, net of an allowance for doubtful accounts. The allowance for doubtful accounts is based on our assessment of the collectability of accounts and incorporates an estimation of expected lifetime credit losses on our receivables. We regularly review the composition of the accounts receivable aging, historical bad debts, changes in payment patterns, customer creditworthiness, and current economic trends. If the financial condition of our customers were to deteriorate, resulting in their inability to make required payments, additional provisions for doubtful accounts would be required and would increase bad debt expense. The allowance for doubtful accounts totaled $2.3 million and $2.1 million as of September 30, 2023 and December 31, 2022, respectively.

Deferred Commissions

We capitalize costs of obtaining a contract with a customer, which consists of sales commissions paid to our sales team, that are incremental costs to obtaining customer contracts. These costs are recorded as deferred commissions in the consolidated balance sheets. Costs to obtain a contract for a new customer or upsell an existing customer are amortized over an estimated economic life of five years as sales commissions on initial sales are not commensurate with sales commissions on contract renewals. Commissions paid relating to contract renewals are deferred and amortized over the related renewal period. We determine the estimated economic life based on both qualitative and quantitative factors such as expected renewals, product life cycles, contractual terms, and customer attrition. We periodically review the carrying amount of deferred contract acquisition costs to determine whether events or changes in circumstances have occurred that could impact the estimated economic life. We also capitalize the incremental payroll taxes associated with commission expenses paid to our direct sales team. Costs to obtain a contract for professional services arrangements are expensed as incurred as the contractual period of our professional services arrangements are one year or less.

Amortization associated with deferred commissions is recorded to sales and marketing expense in our consolidated statements of operations. Total commission expense was $11.3 million and $33.5 million for the three and nine months ended September 30, 2023, respectively. Total commission expense was $9.5 million and $26.5 million for the three and nine months ended September 30, 2022, respectively.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Significant additions or improvements extending the useful life of an asset are capitalized, while repairs and maintenance costs which do not significantly improve the related assets or extend their useful lives are charged to expense as incurred.

The following table outlines the useful lives of our major asset categories:

	Useful Life (in years)
Computer software	3
Computer hardware	3
Equipment	5
Office furniture and fixtures	10
Leasehold improvements	(a)

[(a)] Leasehold improvements have an estimated useful life of the shorter of the useful life of the assets or the lease term.

Severance Costs

During the first and second quarter of 2023, we incurred severance costs related to involuntary reductions in our workforce designed to right-size our employee base and improve operations. No such similar actions occurred during the three months ended September 30, 2023. Severance costs in the first and second quarter totaled $6.3 million. The majority of the costs incurred will be paid to the impacted employees by December 31, 2023.

Recent Accounting Pronouncements
Adopted

We did not adopt any new accounting guidance in 2023 that had a material impact on our condensed consolidated financial statements or disclosures.

Not Yet Adopted

There is no pending accounting guidance that we expect to have a material impact on our condensed consolidated financial statements or disclosures.

3. Revenue

Revenue Recognition

The following table summarizes revenue recorded during the three and nine months ended September 30, 2023 and 2022 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	**2022**	**2023**	**2022**
Cloud subscriptions	$ 77,247	$ 60,621	$ 221,381	$ 171,083
Term license subscriptions	20,026	19,773	56,176	58,543
Maintenance and support	6,530	6,126	18,997	17,282
Total subscriptions	103,803	86,520	296,554	246,908
Professional services	33,291	31,356	103,490	95,297
Total revenue	$ 137,094	$ 117,876	$ 400,044	$ 342,205

Performance Obligations and Timing of Revenue Recognition

We primarily sell products and services that fall into the categories discussed below. Each category contains one or more performance obligations that are either (1) capable of being distinct (i.e., the customer can benefit from the product or service on its own or together with readily available resources, including those purchased separately from us) and distinct within the context of the contract (i.e., separately identified from other promises in the contract) or (2) a series of distinct products or services that are substantially the same and have the same pattern of transfer to the customer. Our term license subscriptions are delivered at a point in time while our cloud subscriptions, maintenance and support, and professional services are delivered over time.

Subscriptions Revenue

Subscriptions revenue is primarily related to (1) cloud subscriptions bundled with maintenance and support and hosting services and (2) term license subscriptions bundled with maintenance and support. We generally charge subscription fees on a per-user basis or through non-user based single application licenses. We bill customers and collect payment for subscriptions to our platform in advance on an annual, quarterly, or monthly basis. In certain instances, our customers have paid their entire contract up front.

Cloud Subscriptions

We generate cloud-based subscriptions revenue primarily from the sales of subscriptions to access our cloud offering, together with related support services to our customers. We perform all required maintenance and support for our cloud offering. Revenue is recognized on a ratable basis over the contract term beginning on the date the service is made available to the customer. Our cloud-based subscription contracts generally have a term of one to three years in length. We bill customers and collect payment for subscriptions to our platform in advance, and they are non-cancellable.

Term License Subscriptions

Our term license subscription revenue is derived from customers with on-premises installations of our platform. The majority of our contracts are one year in length. Although term license subscriptions are sold with maintenance and support, the software is fully functional at the beginning of the subscription and is considered a distinct performance obligation. If a cloud-based subscription includes the right for the customer to take possession of the license, the revenue is treated as a term license. Revenue from term license subscriptions is recognized when control of the software license has transferred to the customer, which is the later of delivery or commencement of the contract term.

Maintenance and Support

Maintenance and support subscriptions include both technical support and when-and-if-available software upgrades, which are treated as a single performance obligation as they are considered a series of distinct services that are substantially the same and have the same duration and measure of progress. Revenue from maintenance and support is recognized ratably over the contract period, which is the period over which the customer has continuous access to maintenance and support.

Professional Services Revenue

Our professional services revenue is comprised of fees for consulting services, including application development and deployment assistance as well as training services related to our platform. Our professional services are considered distinct performance obligations when sold standalone or with other products.

Consulting Services

We sell consulting services to assist customers in planning and executing the deployment of our software. Customers are not required to use consulting services to fully benefit from the software. Consulting services are regularly sold on a standalone basis and either (1) under a fixed-fee arrangement or (2) on a time and materials basis. Consulting services contracts are considered separate performance obligations because they do not integrate with each other or with other products and services to deliver a combined output to the customer, do not modify or customize (or are not modified or customized by) each other or other products and services, and do not affect the customer's ability to use the other consulting offerings or other products and services. Revenue under consulting contracts is recognized over time as services are delivered. For time and materials-based consulting contracts, we have elected the practical expedient of recognizing revenue upon invoicing since the invoiced amount corresponds directly to the value of our service to date.

Training Services

We sell various training services to our customers. Training services are sold in the form of prepaid training credits that are redeemed based on a fixed rate per course. Training revenue is recognized when the associated training services are delivered.

Significant Judgments and Estimates

Determining the Transaction Price

The transaction price is the total amount of consideration we expect to receive in exchange for the service offerings in a contract and may include both fixed and variable components. Variable consideration is included in the transaction price to the extent it is probable a significant reversal will not occur. The amount of variable consideration excluded from the transaction price for the three and nine months ended September 30, 2023 and 2022 was insignificant. Our estimates of variable consideration are also subject to subsequent true-up adjustments and may result in changes to transaction prices; however, such true-up adjustments are not expected to be material.

Allocating the Transaction Price Based on Standalone Selling Prices ("SSP")

We allocate the transaction price to each performance obligation in a contract based on its relative SSP. The SSP is the observable price at which we sell the product or service separately. In the absence of observable pricing, we estimate SSP using the residual approach. We establish SSP as follows:

1. Cloud subscriptions - Given the highly variable selling price of our cloud subscriptions, we establish the SSP of our cloud subscriptions using a residual approach after first determining the SSP of consulting and training services. We have concluded the residual approach to estimating the SSP of our cloud subscriptions is an appropriate allocation of the transaction price.

2. Term license subscriptions - Given the highly variable selling price of our term license subscriptions, we have established the SSP of term license subscriptions using a residual approach after first determining the SSP of maintenance and support. Maintenance and support is sold on a standalone basis in conjunction with renewals of our legacy perpetual software licenses and within a narrow range of the net license fee. Because an economic relationship exists between the license and maintenance and support, we have concluded the residual approach to estimating the SSP of term license subscriptions is an appropriate allocation of the transaction price.

3. Maintenance and support - We establish the SSP of maintenance and support as a percentage of the stated net subscription fee based on observable pricing of maintenance and support renewals from our legacy perpetual software licenses.

4. Consulting and training services - The SSP of consulting and training services is established based on the observable pricing of standalone sales within each geographic region where the services are sold.

Contract Balances

Timing may differ between the satisfaction of performance obligations and the invoicing and collection of amounts related to our contracts with customers. Contract assets primarily relate to unbilled amounts for contracts with customers for which the amount of revenue recognized exceeds the amount billed to the customer. Contract assets are transferred to accounts receivable when the right to invoice becomes unconditional. As of September 30, 2023 and December 31, 2022, contract assets of $12.1 million and $14.3 million, respectively, are included in the Prepaid expenses and other current assets and Other assets line items in our consolidated balance sheets.

Contract liabilities consist of deferred revenue and include payments received in advance of the satisfaction of performance obligations. Deferred revenue is then recognized as the revenue recognition criteria are met. Deferred revenue that will be recognized during the succeeding 12-month period is recorded as current, and the remaining deferred revenue is recorded as non-current. For the nine months ended September 30, 2023, we recognized $177.9 million of revenue that was included in the deferred revenue balance as of December 31, 2022.

Transaction Price Allocated to the Remaining Performance Obligations

As of September 30, 2023, we had an aggregate transaction price of $391.9 million allocated to unsatisfied performance obligations. We expect to recognize $262.4 million of this balance as revenue over the next 12 months with the remaining amount recognized thereafter.

4. Leases

As of September 30, 2023, our lease portfolio consists entirely of operating leases, most of which are for corporate offices. Our operating leases have remaining lease terms with various expiration dates through 2031, and some leases include options to extend the term for up to an additional 10 years.

Lease Costs

Expense for operating leases is recognized on a straight-line basis over the lease term as an operating expense. We have lease agreements which require payments for lease and non-lease components (i.e., common area maintenance) that are accounted for as a single lease component. Variable lease payment amounts that cannot be determined at the commencement of the lease such as maintenance costs, utilities, and service charges, are not included in right-of-use (“ROU”) assets or lease liabilities but rather are expensed as incurred and recorded as variable lease expense. We often receive customary incentives from our landlords such as tenant improvement allowances (“TIAs”) and rent abatement periods, which effectively reduce total lease payments owed for the leases.

The following table sets forth the components of lease expense for the three and nine months ended September 30, 2023 and 2022 (in thousands, exclusive of sublease income):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Operating lease cost	$ 2,359	$ 1,708	$ 6,650	$ 4,968
Short-term lease cost	350	170	1,138	334
Variable lease cost	1,311	952	3,296	2,878
Total	$ 4,020	$ 2,830	$ 11,084	$ 8,180

Sublease income totaled $0.3 million and $1.0 million for the three and nine months ended September 30, 2023, respectively.

Supplemental Lease Information

Supplemental balance sheet information related to operating leases as of September 30, 2023 and December 31, 2022 is presented in the following table (in thousands, except for lease term and discount rate):

	September 30, 2023	December 31, 2022
Right-of-use assets for operating leases	$ 40,501	$ 37,248
Operating lease liabilities, current	$ 11,003	$ 8,681
Operating lease liabilities, net of current portion	60,339	57,225
Total operating lease liabilities	$ 71,342	$ 65,906
Weighted average remaining lease term (in years)	7.7	8.4
Weighted average discount rate	9.4 %	9.4 %

Supplemental cash flow and expense information related to operating leases for the three and nine months ended September 30, 2023 and 2022 is shown below (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Operating cash outflows for operating leases	$ 2,223	$ 2,099	$ 6,374	$ 6,258
Amortization of operating lease right-of-use assets	693	364	1,936	995
Interest expense on operating lease liabilities	1,667	1,332	4,714	3,957

For the three and nine months ended September 30, 2023, TIA reimbursements totaled $1.0 million and $2.6 million, respectively. There were no TIA reimbursements for the three months ended September 30, 2022, while TIA reimbursements totaled $2.0 million for the nine months ended September 30, 2022.

A summary of our future minimum lease commitments under non-cancellable operating leases as of September 30, 2023 is shown below (in thousands):

	Operating Leases
2023 (excluding the nine months ended September 30, 2023)	$ 3,223
2024	13,269
2025	12,924
2026	13,245
2027	13,501
Thereafter	47,285
Total lease payments	103,447
Less: imputed interest	(32,105)
Total	$ 71,342

5. Goodwill and Intangible Assets

The following table details the changes in goodwill during the nine months ended September 30, 2023 and fiscal year ended December 31, 2022 (in thousands):

	Carrying Amount
Balance as of December 31, 2021	$ 27,795
Foreign currency translation adjustments	(1,446)
Balance as of December 31, 2022	26,349
Foreign currency translation adjustments	(358)
Balance as of September 30, 2023	$ 25,991

Intangible assets, net consisted of the following as of September 30, 2023 and December 31, 2022 (in thousands):

	As of	
	September 30, 2023	December 31, 2022
Developed technology	$ 6,799	$ 6,893
Customer relationships - Process mining and RPA	911	1,073
Intangible assets, gross	7,710	7,966
Less: accumulated amortization	(3,618)	(2,715)
Intangible assets, net	$ 4,092	$ 5,251

Intangible amortization expense was $0.4 million and $1.1 million for the three and nine months ended September 30, 2023, respectively. Intangible amortization expense was $0.4 million and $1.1 million for the three and nine months ended September 30, 2022, respectively. As of September 30, 2023, the weighted average remaining amortization periods for developed technology, process mining customer relationships, and RPA customer relationships were approximately 2.7 years, 7.9 years, and 6.3 years, respectively.

The following table shows the projected annual amortization expense related to amortizable intangible assets as of September 30, 2023 (in thousands):

	Projected Amortization
2023 (excluding the nine months ended September 30, 2023)	$ 363
2024	1,451
2025	1,154
2026	743
2027	91
Thereafter	290
Total projected amortization expense	$ 4,092

6. Property and Equipment, net

Property and equipment, net consisted of the following as of September 30, 2023 and December 31, 2022 (in thousands):

	As of	
	September 30, 2023	December 31, 2022
Leasehold improvements	$ 51,190	$ 45,959
Office furniture and fixtures	3,804	3,476
Computer hardware	9,410	9,689
Computer software	820	1,353
Equipment	192	242
Property and equipment, gross	65,416	60,719
Less: accumulated depreciation	(22,972)	(18,864)
Property and equipment, net	$ 42,444	$ 41,855

Depreciation expense totaled $2.0 million and $5.9 million for the three and nine months ended September 30, 2023, respectively. Depreciation expense totaled $1.4 million and $4.2 million for the three and nine months ended September 30, 2022, respectively. We had no disposals or retirements during the three months ended September 30, 2023 and disposed of $1.4 million worth of fully depreciated property and equipment during the nine months ended September 30, 2023. There were no disposals or retirements during the three and nine months ended September 30, 2022.

7. Accrued Expenses

Accrued expenses consisted of the following as of September 30, 2023 and December 31, 2022 (in thousands):

	As of	
	September 30, 2023	December 31, 2022
Hosting costs	$ 3,344	$ 2,802
Legal costs	246	475
Marketing and tradeshow expenses	1,133	1,000
Third party license fees	957	1,223
Contract labor costs	953	1,465
Reimbursable employee expenses	848	1,004
Audit and tax expenses	949	911
Capital expenditures	27	744
Other accrued expenses	2,818	2,603
Total	$ 11,275	$ 12,227

8. Debt

Senior Secured Credit Facilities Credit Agreement

We have a Senior Secured Credit Facilities Credit Agreement (the “Credit Agreement”) which provides for a five-year term loan facility in an aggregate principal amount of $150.0 million and, in addition, up to $75.0 million for a revolving credit facility, including a letter of credit sub-facility in the aggregate availability amount of $15.0 million and a swingline sub-facility in the aggregate availability amount of $10.0 million (as a sublimit of the revolving loan facility). The Credit Agreement matures on November 3, 2027. We will use the proceeds from the $150.0 million term loan and access to the revolving credit facility to fund the continued growth of our business and support our working capital requirements.

Under the agreement, we may elect whether amounts drawn bear interest on the outstanding principal amount at a rate per annum equal to either (a) the higher of the Prime rate or the Federal Funds Effective (“Base Rate”) rate plus 0.50% or (b) the forward-looking term rate based on the secured overnight financing rate (“Term SOFR”). An additional interest rate margin is added to the elected interest rates. During the first three years of the Credit Agreement, the additional interest rate margin ranges from 1.50% to 2.50% in the case of Base Rate advances or from 2.50% to 3.50% in the case of Term SOFR advances, depending on our debt to recurring revenue leverage ratio (as defined in the Credit Agreement). During the final two years of the Credit Agreement, the interest rate margin ranges from 0.5% to 2.5% in the case of Base Rate advances and from 1.5% to 3.5% in the case of Term SOFR advances, depending on our debt to consolidated adjusted EBITDA leverage ratio (as defined in the Credit Agreement).

In addition, the Credit Agreement contains other customary representations, warranties, and covenants, including covenants by us limiting additional indebtedness, guaranties, liens, fundamental changes, mergers and consolidations, dispositions of assets, investments, paying dividends on capital stock or redeeming, repurchasing, or retiring capital stock, prepaying certain junior indebtedness and preferred stock, certain corporate changes, and transactions with affiliates. The Credit Agreement also provides for customary events of default, including but not limited to, non-payment, breaches or defaults in the performance of covenants, insolvency, bankruptcy, and the occurrence of a material adverse effect on us.

The following table summarizes outstanding debt balances (in thousands):

	As of	
	September 30, 2023	December 31, 2022
Borrowings under revolving credit facility expiring November 3, 2027	$ 62,000	$ —
Secured term loan facility	146,750	119,375
Less: Debt issuance costs	(1,303)	(1,256)
Total debt, net of debt issuance costs	$ 207,447	$ 118,119
Debt, current	$ 65,431	$ 2,740
Long-term debt	142,016	115,379
Total debt	$ 207,447	$ 118,119

We were in compliance with all covenants contained in the Credit Agreement. We believe, based on our current financial forecasts and trends, that we will remain compliant with all covenants for the foreseeable future. As of September 30, 2023, we had $62.0 million outstanding under our $75.0 million revolving credit facility, and we had outstanding letters of credit totaling $11.9 million in connection with securing our leased office space.

9. Income Taxes

The provision for income taxes is based upon the estimated annual effective tax rates for the year applied to the current period income before tax plus the tax effect of any significant or unusual items, discrete events, or changes in tax law. Our operating subsidiaries are exposed to statutory effective tax rates ranging from zero to approximately 35%. Fluctuations in the distribution of pre-tax income among our operating subsidiaries can lead to fluctuations of the effective tax rate in the condensed consolidated financial statements. For the three and nine months ended September 30, 2023, the actual effective tax rates were (0.8)% and (2.2)%, respectively. For the three and nine months ended September 30, 2022, the actual effective tax rates were (0.6)% and 0.8%, respectively. The tax benefit recognized in the nine months ended September 30, 2022 was primarily driven by a discrete benefit of $1.1 million related to the release of a valuation allowance for Lana Labs GmbH as a result of post-acquisition tax planning and the merger of our German subsidiaries.

As of September 30, 2023, our net unrecognized tax benefits totaled $4.5 million, which if recognized would result in no net effect on the effective tax rate due to a valuation allowance. The amount of reasonably possible unrecognized tax benefits that could decrease over the next 12 months due to the expiration of certain statutes of limitations or settlements of tax audits is not material to our condensed consolidated financial statements.

We file income tax returns in the U.S. federal jurisdiction and in various state and foreign jurisdictions. Due to our net operating loss carryforwards, the tax years 2016 through 2022 remain open to examination by the major taxing jurisdictions to which we are subject. There are no open examinations that would have a meaningful impact on our condensed consolidated financial statements.

10. Stock-Based Compensation

We account for stock-based compensation expense related to stock-based awards based on the estimated fair value of the award on the grant date. We calculate the fair value of stock options containing only a service condition using the Black-Scholes option pricing model. The fair value of restricted stock units (“RSUs”) is based on the closing market price of our common stock on the Nasdaq Global Market on the date of grant. For service-based awards such as RSUs, stock-based compensation expense is recognized on a straight-line basis over the requisite service period.

In June 2022, our Board of Directors granted to our Chief Executive Officer ("CEO") a stock option award that is eligible to vest based on the achievement of various stock price appreciation targets. This 2022 CEO option grant is our only stock-based award that vests based on the achievement of market conditions.

For awards with market-based conditions, compensation expense is measured using a Monte Carlo simulation and expense is recognized using the accelerated attribution method over the derived service period based on the expected market performance as of the grant date. We account for forfeitures of our stock-based awards as they occur rather than estimating expected forfeitures. As of September 30, 2023, the total compensation cost related to unvested stock options not yet recognized, which relates exclusively to the 2022 CEO option grant, was $12.2 million and will be recognized over a weighted average period of 2.4 years. Total unrecognized compensation cost related to unvested RSUs was approximately $45.9 million, which will be recognized over a weighted average period of 1.4 years.

The following table summarizes the components of our stock-based compensation expense for the three and nine months ended September 30, 2023 and 2022 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Cost of revenue				
Subscriptions	$ 211	$ 284	$ 713	$ 712
Professional services	1,535	1,401	4,598	3,788
Operating expenses				
Sales and marketing	3,245	2,667	8,462	6,721
Research and development	2,930	3,454	9,466	8,831
General and administrative	3,090	3,530	9,976	7,375
Total stock-based compensation expense	$ 11,011	$ 11,336	$ 33,215	$ 27,427

11. Basic and Diluted Loss per Share

Basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding during the reporting period. Diluted loss per share is computed similar to basic, except the weighted average number of common shares outstanding is increased to include additional outstanding shares from the assumed exercise of stock options and vesting of RSUs, if dilutive. The dilutive effect, if any, of convertible shares is calculated using the treasury stock method. As we reported net losses for all periods presented, all outstanding shares would be considered antidilutive if they were to be assumed as vested or exercised.

The following outstanding securities, prior to the use of the treasury stock method, have been excluded from the computation of diluted weighted-average shares outstanding for the respective periods below:

	Three and Nine Months Ended September 30,	
	2023	2022
Stock options	2,611,247	2,733,884
Non-vested restricted stock units	1,133,039	1,419,174

12. Commitments, Contingencies, and Other Matters

Minimum Purchase Commitments

We have a non-cancellable cloud hosting arrangement with Amazon Web Services (“AWS”) that contains provisions for minimum purchase commitments. Specifically, purchase commitments under the agreement total $131.0 million over five years. The agreement, which started July 2021 and is now in its third year as of September 30, 2023, contains minimum spending requirements of $25.0 million in the second year and $28.0 million in each of the third, fourth, and fifth years. Spending under this agreement for the three and nine months ended September 30, 2023 totaled $9.3 million and $27.8 million, respectively. Spending under this agreement for the three and nine months ended September 30, 2022 totaled $9.0 million and $24.8 million, respectively. The timing of payments under the agreement may vary. However, we expect to meet our minimum purchase commitments for the remainder of the contract term.

Exclusive of the AWS contract, we have other non-cancellable agreements for subscription software products that contain provisions stipulating minimum purchase commitments. However, the annual purchase commitments under these contracts are, individually and in the aggregate, immaterial to our condensed consolidated financial statements.

Pegasystems Litigation

On May 29, 2020, we filed a civil complaint against Pegasystems, Inc. (“Pegasystems”) and Youyong Zou, a Virginia resident, in the Circuit Court for Fairfax County, Virginia. *Appian Corp v. Pegasystems Inc. & Youyong Zou, No. 2020-07216 (Fairfax Cty. Ct.).* On May 10, 2022, we announced the jury awarded us $2.036 billion in damages for misappropriation of our trade secrets and $1 in damages for violating the Virginia Computer Crimes Act. Pegasystems filed several post-trial motions seeking relief in the form of reducing the damages award or setting aside the jury’s verdict and either granting a new trial or entering judgment in Pegasystems’ favor. All of these motions were denied, and final judgment was entered by the Court on September 15, 2022. The final judgment reaffirmed the $2.036 billion in damages and also ordered Pegasystems to pay Appian $23.6 million in attorney's fees associated with the case as well as statutory post-judgment interest on the judgment at an annual rate of 6%, or approximately $122.0 million per year.

Defendant Youyong Zou has satisfied the judgment of $5,000 (plus interest) against him in lieu of appealing that judgment. On September 15, 2022, Pegasystems filed a notice of appeal, and on February 6, 2023, Pegasystems filed its opening brief with the Court of Appeals of Virginia. On March 29, 2023, we filed our response brief. Pegasystems filed a reply brief on May 3, 2023. The timeline of the case is solely within the control of the Court of Appeals until it rules. Pegasystems is not required to pay us the judgment, attorney’s fees, or post-judgment interest until all appeals are exhausted. We cannot predict the outcome of any appeals or the exact time it will take to resolve them. Consistent with other judgments, there is no guarantee we will be able to collect all or any portion of the judgment. Consequently, we will not record the award in our consolidated financial statements until all contingencies are resolved and we collect on the judgment.

Judgment Preservation Insurance

On September 1, 2023, we entered into a Judgment Preservation Insurance (“JPI”) policy in connection with our $2.036 billion judgment against Pegasystems. The total cost of the policy was $57.3 million comprised of the premium, a one-time broker fee, and Virginia lines tax, and provides up to $500.0 million of coverage.

Total cost of the policy was capitalized and will be amortized on a straight-line basis over the estimated length of the appeals process. As of September 30, 2023, we estimate the length of the appeals process solely for amortization purposes to be approximately three years. Amortization expense associated with judgment preservation insurance premium is recorded to general and administrative expenses in our consolidated statements of operations. Judgment preservation insurance amortization expense was $1.5 million for the three and nine months ended September 30, 2023. As of September 30, 2023, $18.1 million is classified as ‘Prepaid expenses and other current assets’ and $37.7 million is classified as 'Other assets’ on our consolidated balance sheet.

Other Legal Matters

From time to time, we are subject to legal, regulatory, and other proceedings and claims that arise in the ordinary course of business. Other than as disclosed elsewhere in this Quarterly Report, we are not presently a party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition, or cash flows. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

13. Segment and Geographic Information

We operate one operating and reportable segment, representing our consolidated business that helps organizations build applications and workflows rapidly with our low-code platform to maximize their resources and improve business results. Our reportable segment determination is based on our management and internal reporting structure, the nature of the subscriptions and services we offer, and the financial information that is evaluated regularly by our chief operation decision maker.

The following table summarizes revenue by geography for the three and nine months ended September 30, 2023 and 2022 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Domestic	$ 88,743	$ 81,004	$ 257,442	$ 228,610
International	48,351	36,872	142,602	113,595
Total	$ 137,094	$ 117,876	$ 400,044	$ 342,205

With respect to geographic information, revenue is attributed to respective geographies based on the contracting address of the customer. Substantially all of our long-lived assets were held in the United States as of September 30, 2023 and December 31, 2022.

14. Investments and Fair Value Measurements

Fair Value Measurements

U.S. GAAP establishes a three-tier fair value hierarchy to classify and disclose all assets and liabilities measured at fair value on a recurring basis, as well as assets and liabilities measured at fair value on a non-recurring basis, in periods subsequent to their initial measurement. The hierarchy requires us to use observable inputs when available and to minimize the use of unobservable inputs when determining fair value. The three tiers are defined as follows:

- **Level 1** - Observable inputs based on unadjusted quoted prices in active markets for identical assets or liabilities;
- **Level 2** - Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- **Level 3** - Unobservable inputs for which there is little or no market data and which require us to develop our own estimates and assumptions reflecting those that a market participant would use.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs. There were no instruments measured at fair value on a recurring basis using significant unobservable inputs as of September 30, 2023 and December 31, 2022.

The valuation techniques that may be used to measure fair value are as follows:

- **Market approach** - Uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities;
- **Income approach** - Uses valuation techniques to convert future amounts to a single present amount based on current market expectations about those future amounts; and
- **Cost approach** - Based on the amount that currently would be required to replace the service capacity of an asset (i.e., replacement cost).

The carrying amounts of our cash, cash equivalents, restricted cash, accounts receivable, accounts payable, and accrued expenses approximate fair value as of September 30, 2023 and December 31, 2022 because of the relatively short duration of these instruments. Additionally, the carrying value of our debt associated with the term loan facility approximates fair value because the interest rates are variable and reset on relatively short durations to the then market rates.

Investments

Our investment portfolio consists largely of debt investments classified as available-for-sale. Changes in the fair value of available-for-sale securities, excluding other-than-temporary impairments, are recorded in Other comprehensive income (loss). The components of our investments as of September 30, 2023 are as follows (in thousands):

	As of September 30, 2023					
	Fair Value Measurement				Balance Sheet Classification	
	Fair Value Level	Cost Basis	Unrealized Gains (Losses)	Market Value	Cash and Cash Equivalents	Short-term Investments and Marketable Securities
Money market fund	Level 1	$ 21,034	$ —	$ 21,034	$ 21,034	$ —
U.S. Treasury bonds	Level 1	17,002	(10)	16,992	—	16,992
Commercial paper	Level 2	12,042	—	12,042	—	12,042
Agency bonds	Level 2	9,694	(2)	9,692	—	9,692
Total investments		$ 59,772	$ (12)	$ 59,760	$ 21,034	$ 38,726

At December 31, 2022, our investments consisted of the following (in thousands):

	As of December 31, 2022					
	Fair Value Measurement				Balance Sheet Classification	
	Fair Value Level	Cost Basis	Unrealized Gains (Losses)	Market Value	Cash and Cash Equivalents	Short-term Investments and Marketable Securities
Money market fund	Level 1	$ 39,469	$ —	$ 39,469	$ 39,469	$ —
U.S. Treasury bonds	Level 1	9,396	(13)	9,383	—	9,383
Commercial paper	Level 2	26,704	—	26,704	—	26,704
Corporate bonds	Level 2	9,353	(12)	9,341	—	9,341
Agency bonds	Level 2	2,432	3	2,435	—	2,435
Total investments		$ 87,354	$ (22)	$ 87,332	$ 39,469	$ 47,863

There were no Level 3 assets held at any point during the three and nine months ended September 30, 2023 and 2022. Additionally, there were no transfers between Levels 1 and 2 during the nine months ended September 30, 2023 and 2022. Interest income on our investments totaled $2.4 million and $7.1 million for the three and nine months ended September 30, 2023, respectively. Interest income on our investments totaled $0.2 million and $0.5 million for the three and nine months ended September 30, 2022, respectively.

The amortized cost basis and fair value of debt securities as of September 30, 2023, by contractual maturity, are as follows (in thousands):

	As of September 30, 2023	
	Cost Basis	Fair Value
Due in one year or less	$ 59,772	$ 59,760
Total investments	$ 59,772	$ 59,760

Actual maturities may differ from the contractual maturities in the table above because borrowers have the right to call or prepay certain obligations.

Item 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with (1) our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and (2) the audited consolidated financial statements and the related notes and management’s discussion and analysis of financial condition and results of operations for the year ended December 31, 2022 included in our Annual Report on Form 10-K, filed with the Securities and Exchange Commission, or SEC, on February 16, 2023.

This Quarterly Report on Form 10-Q contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements are often identified by the use of words such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “project,” “will,” “would,” or the negative or plural of these words or similar expressions or variations, including statements regarding our future financial and operating performance, anticipated expansion of the usage of partners to perform professional services, the increase of our subscriptions revenue as a percentage of total revenue, the fluctuation of gross margin on a quarterly basis, our future capital requirements, and our ability to meet our financial covenants under our Credit Agreement. Such forward-looking statements are subject to a number of risks, uncertainties, assumptions, and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified herein and those discussed in the section titled “Risk Factors,” set forth in Part I, Item 1A of our Annual Report on Form 10-K filed with the SEC on February 16, 2023 and in our other filings with the SEC. Forward-looking statements should not be relied on as predictions of future events. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

Appian is a software company that automates business processes. The Appian AI Process Platform includes everything you need to design, automate, and optimize even the most complex processes, from start to finish. The world's most innovative organizations trust Appian to improve their workflows, unify data, and optimize operations—resulting in better growth and superior customer experiences.

We have generated the majority of our revenue from sales of subscriptions, which include (1) cloud subscriptions bundled with maintenance and support and hosting services and (2) term license subscriptions bundled with maintenance and support. Our subscription contracts are priced based primarily on the number of users who access and utilize the applications built on our platform or, alternatively, non-user based single application licenses. Our subscription contract terms generally vary from one to three years with most providing for payment in advance on an annual, quarterly, or monthly basis. Due to the variability of our billing terms and the episodic nature of our customers purchasing additional subscriptions, we do not believe changes in our deferred revenue in a given period are directly correlated with our revenue growth.

We have invested in our Customer Success organization to help ensure customers are able to build and deploy applications on our platform. We have several strategic partnerships, including with KPMG, Accenture, PwC, EY, Infosys, Wipro, and Deloitte, which allow them to refer customers to us in order to purchase subscriptions. Our partners then provide professional services directly to the customers using our platform. We intend to continue our focus on adding new customers with our strategic partners. In addition, over time we expect our professional services revenue as a percentage of total revenue to decline as we increasingly rely on strategic partners to help our customers deploy our software. We believe our investment in professional services, including strategic partners building their practices around Appian, will drive increased adoption of our platform.

Our customers primarily include financial services, government, life sciences, insurance, manufacturing, energy, healthcare, telecommunications, and transportation organizations. Generally, our sales team targets its efforts to organizations with over 2,000 employees and $2 billion in annual revenue. Revenue from government agencies represented 21.1% and 20.6% of our total revenue for the three and nine months ended September 30, 2023, respectively, as compared to 21.2% and 19.2% of our total revenue for the three and nine months ended September 30, 2022, respectively. No single end-customer accounted for more than 10% of our total revenue in the three and nine months ended September 30, 2023 or 2022.

We offer our platform globally. Our platform supports multiple languages to facilitate collaboration and address challenges in multinational organizations. In the three and nine months ended September 30, 2023, 35.3% and 35.6%, respectively, of our total revenue was generated from customers outside of the United States as compared to 31.3% and 33.2% in the three and nine months ended September 30, 2022, respectively. As of September 30, 2023, we operated in 16 countries. We believe we have a significant opportunity to continue to grow our international footprint, and we are investing in new geographies, including through investment in direct and indirect sales channels, professional services, and customer support and implementation partners.

Our business model focuses on maximizing the lifetime value of customer relationships, which is a function of the duration of a customer's deployment of our platform as well as the price and number of subscriptions of our platform that a customer purchases. We incur significant customer acquisition costs, including expenses associated with hiring new sales representatives, who can take anywhere from six months to a year to become productive given the length of our sales cycle, and marketing costs which, with the exception of certain types of sales commissions, are expensed as incurred.

Key Factors Affecting Our Performance

The following are several key factors that affect our performance:

- **Market Adoption of Our Platform -** Our ability to grow our customer base and drive market adoption of our platform is affected by the pace at which organizations digitally transform. We expect our revenue growth will be primarily driven by the pace of adoption and penetration of our platform. We offer a leading custom software platform and intend to continue to invest to expand our customer base. The degree to which prospective customers recognize the need for our platform, and subsequently allocate budget dollars to purchase our software, will drive our ability to acquire new customers and increase sales to existing customers, which, in turn, will affect our future financial performance.

- **Growth of Our Customer Base -** We believe we have a substantial opportunity to grow our customer base. We define a customer as an entity with an active subscription or maintenance and support contract or a legacy perpetual license as of the specified measurement date. Furthermore, we define a new customer as an entity that has entered into its first active subscription or maintenance and support contract within one calendar year of the specified measurement date while existing customers are defined as entities that have maintained an active subscription or maintenance and support contract for at least one calendar year from the specified measurement date. Legacy customers from entities acquired in business combinations are not counted as new customers until they enter into a new active subscription or maintenance and support contract with us subsequent to the completion of the business combination. Additionally, to the extent we contract with one or more entities under common control, we count those entities as separate customers.

  We have aggressively invested, and intend to continue to invest, in our sales team in order to drive sales to new customers. We continue to make investments to enhance the expertise of our sales and marketing organization within our key industry verticals of financial services, government, and life sciences. In addition, we have established relationships with strategic partners who work with organizations undergoing digital transformations. Our ability to continue to grow our customer base is dependent, in part, upon our ability to differentiate ourselves within the increasingly competitive markets in which we participate.

- **Further Penetration of Existing Customers -** Our sales team seeks to generate additional revenue from existing customers by adding new users to our platform. Many of our customers begin by building a single application and then grow to build dozens of applications on our platform. Generally, the development of new applications on our platform results in the expansion of our user base within an organization and a corresponding increase in revenue. As a result of this "land and expand" strategy, we have generated significant additional revenue from our customer base. Our ability to increase sales to existing customers will depend on a number of factors, including the size of our sales and professional services teams, customers' level of satisfaction with our platform and professional services, pricing, economic conditions, and our customers' overall spending levels. We have also re-focused some of our professional services personnel to become customer success managers. Their role is to ensure customers realize value from our platform and to support strategic partners and the "land and expand" strategy versus delivering billable hours.

- **Mix of Subscriptions and Professional Services Revenue -** We believe our professional services have driven customer success and facilitated the adoption of our platform by customers. During the initial period of deployment by a customer, we generally provide a greater amount of support in building applications and training than later in the deployment, with a typical engagement lasting from two to six months. At the same time, many of our customers have historically purchased subscriptions only for a limited set of their total potential end users. As a result of these factors, the proportion of total revenue for a customer associated with professional services is relatively high during the initial deployment period. Over time, as the need for professional services associated with user deployments decreases and the number of end users increases, we expect subscriptions revenue as a percentage of total revenue to increase. In addition, we continue to grow our base of strategic partners to provide broader customer coverage and solution delivery capabilities. These partners perform professional services with respect to any new service contracts they originate. As the usage of partners expands, we expect the proportion of our total revenue from subscriptions to increase over time relative to professional services. For the nine months ended September 30, 2023 and 2022, 74.1% and 72.2% of our revenue, respectively, was derived from sales of subscriptions while the remaining 25.9% and 27.8%, respectively, was derived from the sale of professional services.

- **Investments in Growth -** We have made, and plan to continue to make, investments for long-term growth, including investing in our platform and infrastructure to continuously maximize their power and speed, meet the evolving needs of our customers, and take advantage of our market opportunity. In addition, we may pursue strategic acquisitions that enhance our product offerings. We also intend to continue to invest in sales and marketing as we further expand our sales teams, increase our marketing activities, and grow our international operations.

Key Metrics

We monitor the following metrics to help us measure and evaluate the effectiveness of our operations. All dollar amounts are presented in thousands.

Cloud Subscription Revenue

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2023	2022	% Change	2023	2022	% Change
Cloud subscription revenue	$ 77,247	$ 60,621	27.4 %	$ 221,381	$ 171,083	29.4 %

Cloud subscription revenue includes cloud subscriptions bundled with maintenance and support and hosting services. Our cloud subscription revenue for any customer is primarily determined by the number of users who access and utilize the applications built on our platform or by the number of application licenses purchased, as well as the price paid. We believe increasing cloud subscription revenue is an indicator of the demand for our platform, the pace at which the market for our solutions is growing, the productivity of our sales team and strategic relationships in growing our customer base, and our ability to further penetrate our existing customer base.

Cloud Subscription Revenue Retention Rate

	As of September 30,	
	2023	**2022**
Cloud subscription revenue retention rate	117 %	115 %

A key factor to our success is the renewal and expansion of subscription agreements with our existing customers. We calculate this metric over a set of customers who have been with us for at least one full year. To calculate our cloud subscription revenue retention rate for a particular trailing 12-month period, we first establish the recurring cloud subscription revenue for the previous trailing 12-month period. This effectively represents recurring dollars we should expect in the current trailing 12-month period from the cohort of customers from the previous trailing 12-month period without any expansion or contraction. We subsequently measure the recurring cloud subscription revenue in the current trailing 12-month period from the cohort of customers from the previous trailing 12-month period. Cloud subscription revenue retention rate is then calculated by dividing the aggregate recurring cloud subscription revenue in the current trailing 12-month period by the previous trailing 12-month period. This calculation includes the combined impact on our revenue from customer non-renewals, pricing changes, and growth in the number of users on our platform. Our cloud subscription revenue retention rate can fluctuate from period to period due to large customer contracts in any given period.

Key Components of Results of Operations

We generate revenue primarily through sales of subscriptions to our platform as well as professional services. We generally sell our software on a per-user basis or through non-user based single application licenses. We generally bill customers and collect payment for subscriptions to our platform in advance on an annual, quarterly, or monthly basis. In certain instances, we have had customers pay their entire contract value up front.

Revenue

Our revenue is comprised of the following:

Subscriptions

Subscriptions revenue is primarily derived from cloud subscriptions bundled with maintenance and support and hosting services and on-premises term license subscriptions bundled with maintenance and support. Our maintenance and support agreements provide customers with the right to unspecified software upgrades, maintenance releases and patches released during the term of the maintenance and support agreement on a when-and-if-available basis, and rights to technical support. On-premises term license subscriptions are offered when the customer prefers to self-manage the deployment of our platform within their own infrastructure. When our platform is delivered as a cloud subscription, we manage operational needs in third-party hosted data centers.

Professional Services

Our professional services revenue is comprised of fees for consulting services, including application development, deployment assistance, and training related to our platform. Over time, we expect professional services revenue as a percentage of total revenue to decrease as the usage of our partner network expands.

Cost of Revenue

Subscriptions

Cost of subscriptions revenue consists primarily of fees paid to our third-party managed hosting providers and other third-party service providers, personnel costs, including payroll and benefits for our technology operations and customer support teams, amortization of developed technology, and allocated overhead costs. We expect cost of revenue to continue to increase in absolute dollars for the foreseeable future as our customer base grows.

Professional Services

Cost of professional services revenue includes all direct and indirect costs to deliver our professional services and training, including employee compensation for our global professional services and training personnel, third-party contractor costs, allocated overhead costs, and the costs of billable expenses such as travel and lodging. The unpredictability of the timing of providing services related to significant professional services agreements sold on a standalone basis may cause significant fluctuations in our cost of professional services which, in turn, may impact our quarterly financial results.

Gross Profit and Gross Margin

Gross profit and gross margin (defined as gross profit as a percentage of total revenue), have been, and will continue to be, affected by various factors, including the mix of cloud subscriptions and on-premises term license subscriptions, the mix of total subscriptions revenue and professional services revenue, subscription pricing, the costs associated with third-party hosting providers, and the extent to which we expand our professional services to support future growth. Our gross margin may fluctuate from period to period based on the above factors.

Subscriptions Gross Margin

Subscriptions gross margin is primarily affected by the growth in our subscriptions revenue as compared to the growth in, and timing of, costs to support such revenue. We expect to continue to invest in customer support and cloud operations to support growth in our business, and the timing of those investments is expected to cause subscriptions gross margin to fluctuate on a quarterly basis.

Professional Services Gross Margin

Professional services gross margin is affected by the growth in our professional services revenue as compared to the growth in, and timing of, the cost of our Customer Success organization as we continue to invest in the growth of our business, as well as by consultant utilization rates. Professional services gross margin is also impacted by the amount of services performed by subcontractors and partners as opposed to internal resources. In 2023, we expect professional services gross margin to be consistent with 2022; however, the margin remains subject to fluctuation based on the factors discussed above.

Operating Expenses

Operating expenses consist of sales and marketing, research and development, and general and administrative expenses. Personnel-related costs such as salaries, bonuses, commissions, payroll tax payments, and stock-based compensation expense are the most significant components of each of these expense categories. Other components of each operating expense category include professional fees for third-party services such as contract labor, legal, software development resources, and consulting. In addition, operating expenses include allocated overhead costs, which are primarily comprised of facility costs, travel and entertainment expenditures, certain human resources costs (referral bonuses, training costs, and employee relations spending), office-related expenditures, and certain information technology costs (infrastructure, software, and cloud computing services).

In general, our operating expenses are expected to continue to increase in absolute dollars as we invest resources in growing our various teams although at a more measured rate than prior years.

Sales and Marketing Expense

Sales and marketing expense primarily includes personnel costs, including salaries, bonuses, commissions, stock-based compensation, and other personnel costs related to sales teams. Additional major expenses in this category include travel and entertainment, marketing activities and promotional events, subcontracting fees, and allocated overhead costs.

In order to continue to grow our business, geographical footprint, and brand awareness, we expect to continue investing resources in sales and marketing by increasing the number of sales and account management teams. Additionally, we expect certain classes of expense such as travel and entertainment and in-person marketing events to increase relative to recent years. As a result, we expect sales and marketing expense to increase in absolute dollars as we continue to invest to acquire new customers and further expand usage of our platform within our existing customer base.

Research and Development Expense

Research and development expense consists primarily of personnel costs for our employees who develop and enhance our platform, including salaries, bonuses, stock-based compensation, and other personnel costs. Also included are non-personnel costs such as subcontracting, consulting and professional fees to third party development resources, and allocated overhead costs.

Our research and development efforts are focused on enhancing the capabilities, speed, and power of our software platform. In 2022, we opened a new product development center in India. Although we expect research and development expense to continue to increase in absolute dollars as such costs are critical to maintain and improve the quality of applications and our competitive position, we believe our new product development center will result in cost savings over time.

General and Administrative Expense

General and administrative expense consists primarily of personnel costs, including salaries, bonuses, stock-based compensation, and other personnel costs for our administrative, legal, information technology, human resources, finance, and accounting teams as well as our senior executives. Additional expenses included in this category are non-personnel costs such as travel-related expenses, contracting and professional fees for such services as audits, taxation, and legal, insurance and other corporate expenses, including allocated overhead costs, and bad debt expenses. In 2023, we expect our general and administrative expense to decrease in absolute dollars largely due to an anticipated decline in legal costs, partially offset by amortization expense associated with the judgment preservation insurance (see Note 12 to the Condensed Consolidated Financial Statements for further discussion).

Other Non-Operating (Income) Expense

Other (Income) Expense, Net

Other (income) expense, net consists primarily of gains and losses related to changes in foreign currency exchange rates, interest income on our cash and cash equivalents and investments, and other sources of income or expense not related to our core business operations.

Interest Expense

Interest expense consists primarily of interest on our debt, amortization of deferred financing fees, unused credit facility fees, and commitment fees on our letters of credit.

Results of Operations

The following table sets forth our consolidated statements of operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenue				
Subscriptions	$ 103,803	$ 86,520	$ 296,554	$ 246,908
Professional services	33,291	31,356	103,490	95,297
Total revenue	137,094	117,876	400,044	342,205
Cost of revenue				
Subscriptions[(1)]	11,265	9,313	32,492	26,065
Professional services[(1)]	24,804	24,447	76,515	72,011
Total cost of revenue	36,069	33,760	109,007	98,076
Gross profit	101,025	84,116	291,037	244,129
Operating expenses				
Sales and marketing[(1)]	55,667	54,912	181,338	157,104
Research and development[(1)]	37,135	37,623	118,502	101,401
General and administrative[(1)]	23,440	29,357	82,342	90,014
Total operating expenses	116,242	121,892	382,182	348,519
Operating loss	(15,217)	(37,776)	(91,145)	(104,390)
Other non-operating expense				
Other expense (income), net	1,939	5,876	(4,637)	12,815
Interest expense	4,917	89	12,790	222
Total other non-operating expense	6,856	5,965	8,153	13,037
Loss before income taxes	(22,073)	(43,741)	(99,298)	(117,427)
Income tax expense (benefit)	178	255	2,137	(924)
Net loss	$ (22,251)	$ (43,996)	$ (101,435)	$ (116,503)

[(1)] Stock-based compensation as a component of these line items is as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Cost of revenue				
Subscriptions	$ 211	$ 284	$ 713	$ 712
Professional services	1,535	1,401	4,598	3,788
Operating expenses				
Sales and marketing	3,245	2,667	8,462	6,721
Research and development	2,930	3,454	9,466	8,831
General and administrative	3,090	3,530	9,976	7,375
Total stock-based compensation expense	$ 11,011	$ 11,336	$ 33,215	$ 27,427

The following table sets forth our consolidated statements of operations data expressed as a percentage of total revenue:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenue				
Subscriptions	75.7 %	73.4 %	74.1 %	72.2 %
Professional services	24.3	26.6	25.9	27.8
Total revenue	100.0	100.0	100.0	100.0
Cost of revenue				
Subscriptions	8.2	7.9	8.1	7.6
Professional services	18.1	20.7	19.1	21.0
Total cost of revenue	26.3	28.6	27.2	28.7
Gross profit	73.7	71.4	72.8	71.3
Operating expenses				
Sales and marketing	40.6	46.6	45.3	45.9
Research and development	27.1	31.9	29.6	29.6
General and administrative	17.1	24.9	20.6	26.3
Total operating expenses*	84.8	103.4	95.5	101.8
Operating loss	(11.1)	(32.0)	(22.8)	(30.5)
Other non-operating expense				
Other expense (income), net	1.4	5.0	(1.2)	3.7
Interest expense	3.6	0.1	3.2	0.1
Total other non-operating expense	5.0	5.1	2.0	3.8
Loss before income taxes	(16.1)	(37.1)	(24.8)	(34.3)
Income tax expense (benefit)	0.1	0.2	0.5	(0.3)
Net loss	(16.2)%	(37.3)%	(25.4)%	(34.0)%

* Totals may not foot due to rounding.

Comparison of the Three Months Ended September 30, 2023 and 2022

Revenue

	Three Months Ended September 30,		$ Change	% Change
	2023	2022		
	(dollars in thousands)			
Revenue				
Subscriptions	$ 103,803	$ 86,520	$ 17,283	20.0 %
Professional services	33,291	31,356	$ 1,935	6.2 %
Total revenue	$ 137,094	$ 117,876	$ 19,218	16.3 %

Total revenue increased $19.2 million, or 16.3%, in the three months ended September 30, 2023 compared to the same period in 2022 due to an increase in our subscriptions revenue of $17.3 million and an increase in our professional services revenue of $1.9 million. The increase in subscriptions revenue was driven by a $16.6 million increase in cloud subscription revenue, a $0.4 million increase in maintenance and support revenue, and a $0.3

million increase in on-premises subscription revenue. With respect to new versus existing customers, there was a $6.8 million increase in subscriptions revenue stemming from sales of subscriptions to new customers, while the remaining $10.5 million of the increase was attributable to expanded deployments, price increases on renewals, and corresponding sales of additional subscriptions to existing customers. The increase in professional services revenue was due primarily to a $6.5 million increase in sales to new customers, which was partially offset by a $4.6 million decrease in revenue from existing customers.

Cost of Revenue

	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	$ Change	% Change
	(dollars in thousands)			
Cost of revenue				
Subscriptions	$ 11,265	$ 9,313	$ 1,952	21.0 %
Professional services	24,804	24,447	357	1.5 %
Total cost of revenue	$ 36,069	$ 33,760	$ 2,309	6.8 %
Subscriptions gross margin	89.1 %	89.2 %		
Professional services gross margin	25.5 %	22.0 %		
Total gross margin	73.7 %	71.4 %		

Cost of revenue increased $2.3 million, or 6.8%, in the three months ended September 30, 2023 compared to the same period in 2022, primarily due to a $1.7 million increase in hosting costs and a $1.5 million increase in professional services and product support personnel costs. These increases were partially offset by a $0.5 million decrease in contractor costs and a $0.3 million decline in billable expenses. Hosting costs increased as sales of our cloud offering increased in the three months ended September 30, 2023. Personnel costs increased due to an increase in professional services and product support personnel headcount of 7.8% from September 30, 2022 to September 30, 2023 in addition to increased wages and fringe benefits and a $0.1 million increase in stock-based compensation expense. Contractor costs decreased as a result of a decline in the usage of subcontractors. Billable expenses decreased primarily as a result of lower travel and entertainment expenses stemming from fewer in-person engagements.

Subscriptions gross margin was 89.1% for the three months ended September 30, 2023, consistent with a margin of 89.2% in the same period in 2022 due primarily to increased hosting costs as sales of our cloud offering increased. The increase in hosting costs was partially offset by an increase in subscriptions revenue during the three months ended September 30, 2023 as compared to the three months ended September 30, 2022. Professional services gross margin increased to 25.5% for the three months ended September 30, 2023 compared to 22.0% in the same period in 2022 due largely to an increase in professional services revenue in the comparable periods coupled with a lower rate of professional services expense growth. Gross margin increased to 73.7% for the three months ended September 30, 2023 compared to 71.4% for the three months ended September 30, 2022, driven largely by the higher gross profit margin from professional services.

Sales and Marketing Expense

	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	$ Change	% Change
	(dollars in thousands)			
Sales and marketing	$ 55,667	$ 54,912	$ 755	1.4 %
% of revenue	40.6 %	46.6 %		

Sales and marketing expense increased $0.8 million, or 1.4%, in the three months ended September 30, 2023 compared to the same period in 2022, primarily due to a $4.9 million increase in sales and marketing personnel costs. This increase was partially offset by a $3.4 million decrease in overhead costs and a $0.8 million decrease in marketing costs. Although sales and marketing personnel headcount fell 0.9% year over year, personnel costs increased due to increased wages and fringe benefits relative to the prior year, a $1.8 million increase in commissions expense due to increased sales, and a $0.6 million increase in stock-based compensation expense. Overhead costs decreased primarily due to the absence of non-recurring expenditures for an internal sales and marketing event that occurred in the third quarter of the prior year and a decrease in certain allocated costs (primarily IT spending). Marketing costs decreased primarily due to a decrease in advertising expense stemming from a decrease in the number of advertising campaigns launched in the three months ended September 30, 2023 relative to the three months ended September 30, 2022.

Research and Development Expense

	Three Months Ended September 30,		$ Change	% Change
	2023	2022		
	(dollars in thousands)			
Research and development	$ 37,135	$ 37,623	$ (488)	(1.3)%
% of revenue	27.1 %	31.9 %		

Research and development expense decreased $0.5 million, or 1.3%, in the three months ended September 30, 2023 compared to the same period in 2022, primarily due to a $0.4 million decrease in professional fees. Professional fees decreased due to a decline in consulting fees stemming from a lower usage of external resources to assist in our platform development efforts relative to the prior year.

General and Administrative Expense

	Three Months Ended September 30,		$ Change	% Change
	2023	2022		
	(dollars in thousands)			
General and administrative expense	$ 23,440	$ 29,357	$ (5,917)	(20.2)%
% of revenue	17.1 %	24.9 %		

General and administrative expense decreased $5.9 million, or 20.2%, in the three months ended September 30, 2023 compared to the same period in 2022 primarily due to a $7.2 million decrease in professional fees and a $0.4 million decrease in general and administrative personnel costs. These decreases were partially offset by a $1.7 million increase in overhead costs. Professional fees decreased due to a $7.6 million decline in legal fees incurred relative to the three months ended September 30, 2022. Personnel costs decreased due to a decrease in general and administrative personnel headcount of 4.3% from September 30, 2022 to September 30, 2023 and a $0.4 million decrease in stock-based compensation expense. Overhead costs increased primarily due to amortization expense related to our judgment preservation insurance policy.

Other Non-Operating Expense, Net

	Three Months Ended September 30,			
	2023	2022	$ Change	% Change
	(dollars in thousands)			
Other expense, net	$ 1,939	$ 5,876	$ (3,937)	(67.0)%
% of revenue	1.4 %	5.0 %		

*** Indicates a percentage that is not meaningful.

Other expense, net was $1.9 million in the three months ended September 30, 2023 compared to other expense, net of $5.9 million in the three months ended September 30, 2022. This change was primarily due to $4.3 million in foreign exchange losses in the three months ended September 30, 2023 as compared to $6.1 million in foreign exchange losses in the three months ended September 30, 2022. In addition, there was a $2.1 million increase in interest income in the three months ended September 30, 2023 relative to the prior year stemming from increased investments.

Interest Expense

	Three Months Ended September 30,			
	2023	2022	$ Change	% Change
	(dollars in thousands)			
Interest expense	$ 4,917	$ 89	$ 4,828	***
% of revenue	3.6 %	0.1 %		

*** Indicates a percentage that is not meaningful.

Interest expense increased $4.8 million in the three months ended September 30, 2023 as compared to the corresponding period in 2022 primarily due to interest expense incurred on the new credit facility borrowings that we entered into during the fourth quarter of 2022.

Comparison of the Nine Months Ended September 30, 2023 and 2022

Revenue

	Nine Months Ended September 30,			
	2023	2022	$ Change	% Change
	(dollars in thousands)			
Revenue				
Subscriptions	$ 296,554	$ 246,908	$ 49,646	20.1 %
Professional services	103,490	95,297	8,193	8.6 %
Total revenue	$ 400,044	$ 342,205	$ 57,839	16.9 %

Total revenue increased $57.8 million, or 16.9%, in the nine months ended September 30, 2023 compared to the same period in 2022 due to an increase in our subscriptions revenue of $49.6 million and an increase in our professional services revenue of $8.2 million. The increase in subscriptions revenue was driven by a $50.3 million increase in cloud subscription revenue and a $1.7 million increase in maintenance and support revenue, both of which were partially offset by a $2.4 million decrease in on-premises subscription revenue. With respect to new versus existing customers, there was a $17.1 million increase in subscriptions revenue stemming from sales of subscriptions to new customers along with a $32.6 million increase attributable to expanded deployments, price increases on renewals, and corresponding sales of additional subscriptions to existing customers. The increase in professional services revenue was due primarily to a $16.7 million increase in sales to new customers, which was partially offset by an $8.5 million decrease in revenue from existing customers.

Cost of Revenue

	Nine Months Ended September 30,			
	2023	**2022**	**$ Change**	**% Change**
	(dollars in thousands)			
Cost of revenue				
Subscriptions	$ 32,492	$ 26,065	$ 6,427	24.7 %
Professional services	76,515	72,011	4,504	6.3 %
Total cost of revenue	$ 109,007	$ 98,076	$ 10,931	11.1 %
Subscriptions gross margin	89.0 %	89.4 %		
Professional services gross margin	26.1 %	24.4 %		
Total gross margin	72.8 %	71.3 %		

Cost of revenue increased $10.9 million, or 11.1%, in the nine months ended September 30, 2023 compared to the same period in 2022, primarily due to a $6.2 million increase in professional services and product support personnel costs and a $4.8 million increase in hosting costs. Personnel costs increased due to an increase in professional services and product support personnel headcount of 7.8% from September 30, 2022 to September 30, 2023 in addition to increased wages and fringe benefits and a $0.8 million increase in stock-based compensation expense. Hosting costs increased as sales of our cloud offering increased in the nine months ended September 30, 2023.

Subscriptions gross margin decreased to 89.0% for the nine months ended September 30, 2023 as compared to 89.4% for the nine months ended September 30, 2022 as an increase in subscriptions revenue was offset by an increase in hosting costs. Professional services gross margin increased to 26.1% for the nine months ended September 30, 2023 compared to 24.4% in the same period in 2022 due largely to the aforementioned increase in professional services revenue, which was partially offset by higher personnel costs. Gross margin rose to 72.8% for the nine months ended September 30, 2023 compared to 71.3% for the nine months ended September 30, 2022 driven largely by the higher gross margin from professional services.

Sales and Marketing Expense

	Nine Months Ended September 30,			
	2023	**2022**	**$ Change**	**% Change**
	(dollars in thousands)			
Sales and marketing	$ 181,338	$ 157,104	$ 24,234	15.4 %
% of revenue	45.3 %	45.9 %		

Sales and marketing expense increased $24.2 million, or 15.4%, in the nine months ended September 30, 2023 compared to the same period in 2022, primarily due to a $27.7 million increase in sales and marketing personnel costs which was partially offset by a $3.3 million decrease in marketing costs. Although sales and marketing personnel headcount fell 0.9% year over year, personnel costs increased due to increased wages and fringe benefits relative to the prior year, a $7.1 million increase in commissions expense due to increased sales, a $5.2 million increase in severance costs, and a $1.7 million increase in stock-based compensation expense. Marketing costs decreased primarily due to a decrease in advertising expense stemming from a decrease in the number of advertising campaigns launched in the nine months ended September 30, 2023 relative to the nine months ended September 30, 2022, which was partially offset by an increase in the cost of marketing events.

Research and Development Expense

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	$ Change	% Change
	(dollars in thousands)			
Research and development	$ 118,502	$ 101,401	$ 17,101	16.9 %
% of revenue	29.6 %	29.6 %		

Research and development expense increased $17.1 million, or 16.9%, in the nine months ended September 30, 2023 compared to the same period in 2022, primarily due to a $17.8 million increase in research and development personnel costs. This increase was partially offset by a $0.5 million decrease in professional fees. Personnel costs increased due to an increase in research and development personnel headcount of 9.1% from September 30, 2022 to September 30, 2023 in addition to increased wages and fringe benefits coupled with a $0.6 million increase in stock-based compensation expense and a $1.2 million increase in severance costs. Professional fees decreased due to a decrease in consulting fees stemming from a lower usage of external resources to assist in our platform development efforts relative to the prior year.

General and Administrative Expense

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	$ Change	% Change
	(dollars in thousands)			
General and administrative expense	$ 82,342	$ 90,014	$ (7,672)	(8.5)%
% of revenue	20.6 %	26.3 %		

General and administrative expense decreased $7.7 million, or 8.5%, in the nine months ended September 30, 2023 compared to the same period in 2022 primarily due to a $21.0 million decrease in professional fees. This decrease was partially offset by a $9.6 million increase in general and administrative personnel costs and a $3.7 million increase in allocated overhead costs. Professional fees decreased due to a $23.7 million decline in legal fees incurred relative to the nine months ended September 30, 2022, which was partially offset by a $1.8 million increase in consulting fees. Although general and administrative personnel headcount fell 4.3% year over year, personnel costs increased due to increased wages and fringe benefits relative to the prior year and a $2.6 million increase in stock-based compensation expense. Overhead costs increased primarily due to an increase in lease expense resulting from an expansion of our corporate headquarters, and amortization expense related to our judgment preservation insurance policy.

Other Non-Operating (Income) Expense, Net

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	$ Change	% Change
	(dollars in thousands)			
Other (income) expense, net	$ (4,637)	$ 12,815	$ (17,452)	***
% of revenue	(1.2)%	3.7 %		

*** Indicates a percentage that is not meaningful.

Other income, net was $4.6 million in the nine months ended September 30, 2023 compared to other expense, net of $12.8 million in the nine months ended September 30, 2022. This change was primarily due to $2.4 million in foreign exchange losses in the nine months ended September 30, 2023 as compared to $14.5 million in foreign exchange losses in the nine months ended September 30, 2022. In addition, there was a $6.6 million increase in interest income in the nine months ended September 30, 2023 relative to the prior year stemming from increased investments.

Interest Expense

	Nine Months Ended September 30,			
	2023	2022	$ Change	% Change
	(dollars in thousands)			
Interest expense	$ 12,790	$ 222	$ 12,568	***
% of revenue	3.2 %	0.1 %		

*** Indicates a percentage that is not meaningful.

Interest expense increased $12.8 million in the nine months ended September 30, 2023 as compared to the corresponding period in 2022 primarily due to interest expense incurred on the new credit facility borrowings that we entered into during the fourth quarter of 2022.

Non-GAAP Financial Measures

To supplement our condensed consolidated financial statements, which are prepared and presented in accordance with GAAP, we provide investors with certain non-GAAP financial performance measures. We use these non-GAAP financial performance measures for financial and operational decision-making and as a means to evaluate period-to-period comparisons. Management believes these non-GAAP financial measures provide meaningful supplemental information regarding our performance by excluding certain expenses that may not be indicative of our recurring core business operating results. We believe both management and investors benefit from referring to these non-GAAP financial measures in assessing our performance and when planning, forecasting, and analyzing future periods. These non-GAAP financial measures also facilitate management's internal comparisons to historical performance as well as comparisons to competitors' operating results. We believe these non-GAAP financial measures are useful to investors both because (1) they allow for greater transparency with respect to measures used by management in its financial and operational decision-making and (2) they are used by institutional investors and the analyst community to help them analyze the health of our business.

Our non-GAAP financial performance measures include non-GAAP net loss, non-GAAP net loss per share, and non-GAAP operating loss. These non-GAAP financial performance measures exclude the effect of stock-based compensation expense, certain litigation-related expenses consisting of legal and other professional fees associated with the Pegasystems cases (net of insurance reimbursements), amortization of the judgment preservation insurance ("JPI") policy and severance costs related to involuntary reductions in our workforce. While some of these items may be recurring in nature and should not be disregarded in the evaluation of our earnings performance, it is useful to exclude such items when analyzing current results and trends compared to other periods as these items can vary significantly from period to period depending on specific underlying transactions or events that may occur. Therefore, while we may incur or recognize these types of expenses in the future, we believe removing these items for purposes of calculating the non-GAAP financial measures provides investors with a more focused presentation of our ongoing operating performance.

We also discuss adjusted EBITDA, a non-GAAP financial performance measure we believe offers a useful view of the overall operation of our business. We define adjusted EBITDA as net loss before (1) other non-operating (income) expenses, net, (2) interest expense, (3) income tax expense (benefit), (4) depreciation expense and amortization of intangible assets, (5) stock-based compensation expense, (6) litigation expenses (net of insurance reimbursements) directly associated with the Pegasystems cases, (7) JPI amortization, and (8) severance costs. The most directly comparable GAAP financial measure to adjusted EBITDA is net loss. Users should consider the limitations of using adjusted EBITDA, including the fact this measure does not provide a complete measure of our operating performance. Adjusted EBITDA is not intended to purport to be an alternative to net loss as a measure of operating performance or to cash flows from operating activities as a measure of liquidity.

The presentation of these non-GAAP financial measures is not intended to be considered in isolation from, as a substitute for, or superior to the financial information prepared and presented in accordance with GAAP, and our non-GAAP measures may be different from non-GAAP measures used by other companies.

The following tables reconcile our non-GAAP measures to their nearest comparable GAAP measures (in thousands, except per share data):

	GAAP Measure	Stock-Based Compensation	Litigation Expenses	JPI Amortization	Severance Costs	Non-GAAP Measure
Three Months Ended September 30, 2023						
Subscriptions cost of revenue	$ 11,265	$ (211)	$ —	$ —	$ —	$ 11,054
Professional services cost of revenue	24,804	(1,535)	—	—	—	23,269
Total cost of revenue	36,069	(1,746)	—	—	—	34,323
Total operating expense	116,242	(9,265)	4,961	(1,485)	—	110,453
Operating loss	(15,217)	11,011	(4,961)	1,485	—	(7,682)
Income tax expense	178	88	—	—	—	266
Net loss	(22,251)	11,099	(4,961)	1,485	—	(14,628)
Net loss per share, basic and diluted	$ (0.30)	$ 0.15	$ (0.07)	$ 0.02	$ —	$ (0.20)
Nine Months Ended September 30, 2023						
Subscriptions cost of revenue	$ 32,492	$ (713)	$ —	$ —	$ (30)	$ 31,749
Professional services cost of revenue	76,515	(4,598)	—	—	(158)	71,759
Total cost of revenue	109,007	(5,311)	—	—	(188)	103,508
Total operating expense	382,182	(27,904)	2,772	(1,485)	(6,111)	349,454
Operating loss	(91,145)	33,215	(2,772)	1,485	6,299	(52,918)
Income tax expense	2,137	731	—	—	139	3,007
Net loss	(101,435)	33,946	(2,772)	1,485	6,438	(62,338)
Net loss per share, basic and diluted	$ (1.39)	$ 0.46	$ (0.04)	$ 0.02	$ 0.09	$ (0.86)

	GAAP Measure	Stock-Based Compensation	Litigation Expenses	Non-GAAP Measure
Three Months Ended September 30, 2022				
Subscriptions cost of revenue	$ 9,313	$ (284)	$ —	$ 9,029
Professional services cost of revenue	24,447	(1,401)	—	23,046
Total cost of revenue	33,760	(1,685)	—	32,075
Total operating expense	121,892	(9,651)	(1,810)	110,431
Operating loss	(37,776)	11,336	1,810	(24,630)
Net loss	(43,996)	11,336	1,810	(30,850)
Net loss per share, basic and diluted	$ (0.61)	$ 0.16	$ 0.02	$ (0.43)
Nine Months Ended September 30, 2022				
Subscriptions cost of revenue	$ 26,065	$ (712)	$ —	$ 25,353
Professional services cost of revenue	72,011	(3,788)	—	68,223
Total cost of revenue	98,076	(4,500)	—	93,576
Total operating expense	348,519	(22,927)	(20,432)	305,160
Operating loss	(104,390)	27,427	20,432	(56,531)
Net loss	(116,503)	27,427	20,432	(68,644)
Net loss per share, basic and diluted	$ (1.61)	$ 0.38	$ 0.28	$ (0.95)

The following table reconciles GAAP net loss to adjusted EBITDA for the three and nine months ended September 30, 2023 and 2022 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
GAAP net loss	$ (22,251)	$ (43,996)	$ (101,435)	$ (116,503)
Other expense (income), net	1,939	5,876	(4,637)	12,815
Interest expense	4,917	89	12,790	222
Income tax expense (benefit)	178	255	2,137	(924)
Depreciation and amortization of intangibles	2,340	1,759	7,046	5,332
Stock-based compensation expense	11,011	11,336	33,215	27,427
Litigation expenses	(4,961)	1,810	(2,772)	20,432
JPI amortization	1,485	—	1,485	—
Severance costs	—	—	6,299	—
Adjusted EBITDA	$ (5,342)	$ (22,871)	$ (45,872)	$ (51,199)

Liquidity and Capital Resources

The following table presents selected financial information and statistics pertaining to liquidity and capital resources as of September 30, 2023 and December 31, 2022:

	As of	
	September 30, 2023	December 31, 2022
Cash and cash equivalents	$ 130,761	$ 148,132
Short-term investments and marketable securities	38,726	47,863
Property and equipment, net	42,444	41,855
Working capital*	62,120	149,996

* Defined as current assets net of current liabilities, excluding the current portion of restricted cash.

We believe our existing cash and cash equivalents and short-term investments and marketable securities, together with any positive cash flows from operations and available borrowings under our line of credit, will be sufficient to support working capital and capital expenditure requirements for at least the next twelve months.

We have in the past, and may in the future enter into, investments in or acquisitions of complementary businesses, products, or technologies, which could also require us to seek additional equity financing, incur indebtedness, or use cash resources. We have no present binding agreements or commitments to enter into any such acquisitions. If we are unable to raise additional capital when desired, our business, operating results, and financial condition could be adversely affected.

Sources of Funds

We have historically financed our operations in large part with equity financing arrangements. Through September 30, 2023, we have completed four public offerings and received net proceeds of $344.8 million. Outside of equity offerings, we have financed our operations through sales of subscriptions and professional services.

To further help strengthen our financial position and support our growth initiatives, in November 2022 we entered into a Senior Secured Credit Facilities Credit Agreement, or the Credit Agreement, which provides for a five-year term loan facility in an aggregate principal amount of $150.0 million and, in addition, up to $75.0 million for a revolving credit facility, including a letter of credit sub-facility in the aggregate availability amount of $15.0 million and a swingline sub-facility in the aggregate availability amount of $10.0 million (as a sublimit of the revolving loan facility).

The Credit Agreement matures on November 3, 2027. We will use the proceeds from the $150.0 million term loan to fund the continued growth of our business and support our working capital requirements. We were in compliance with all covenants as of September 30, 2023. We believe, based on our current financial forecasts and trends, that we will remain compliant with all covenants for the foreseeable future. As of September 30, 2023, we had used borrowing capacity of $62.0 million under our $75.0 million revolving credit facility, and we had outstanding letters of credit totaling $11.9 million in connection with securing our leased office space.

We expect future sources of funds to consist primarily of cash generated from sales of subscriptions and the related professional services. We may also elect to raise additional sources of funding through entering into new debt financing arrangements or conducting additional public offerings. Our future capital requirements will depend on many factors, including our growth rate, the timing and extent of spending to support research and development efforts, the expansion of sales and marketing activities, particularly internationally, the introduction of new and enhanced products and functions as well as platform enhancements and professional services offerings, and the level of market acceptance of our product.

Uses of Funds

Our current principal uses of cash are funding operations and other working capital requirements. Historically, we have also utilized cash to pay for the acquisition of businesses that were complementary to ours, and we may pursue similar opportunities in the future. Over the past several years, revenue has increased significantly from year to year and, as a result, cash flows from customer collections have also grown. However, as we continue to invest in growing our business, operating expenses have also increased. Outside of cash used in operations, other uses of cash in 2023 to date have included capital expenditures related to the expansion of our headquarters, repayments of existing debt, and purchases of investments. In addition, on September 1, 2023, we entered into a Judgment Preservation Insurance ("JPI") policy in connection with our $2.036 billion judgment against Pegasystems (see Note 12 to the condensed consolidated financial statements for additional details). The total cost of the policy was $57.3 million, which we paid with operating cash on hand.

Furthermore, we have a non-cancellable cloud hosting arrangement with Amazon Web Services that contains provisions for minimum purchase commitments. Specifically, purchase commitments under the agreement total $131.0 million over five years. The agreement, which started in July 2021 and is now in its third year as of September 30, 2023, contains minimum spending requirements of $25.0 million in the second year and $28.0 million in each of the third, fourth, and fifth years. The timing of payments under the agreement may vary, and the total amount of payments may exceed the minimum depending on the volume of services utilized. Spending under this agreement for the three and nine months ended September 30, 2023, totaled $9.3 million and $27.8 million, respectively. Spending under this agreement for the three and nine months ended September 30, 2022 totaled $9.0 million and $24.8 million, respectively. We expect to meet our minimum purchase commitments for the remainder of the contract term.

Historical Cash Flows

	Nine Months Ended September 30,			
	2023	2022	$ Change	% Change
	(dollars in thousands)			
Beginning cash, cash equivalents, and restricted cash	$ 150,381	$ 103,960	$ 46,421	44.7 %
Operating activities:				
Net loss	(101,435)	(116,503)	15,068	(12.9)
Stock-based compensation and other non-cash adjustments	40,485	31,771	8,714	27.4
Changes in working capital	(41,248)	(9,226)	(32,022)	***
Net cash used by operating activities	(102,198)	(93,958)	(8,240)	8.8
Investing activities:				
Net cash provided by investing activities	869	20,342	(19,473)	(95.7)
Financing activities:				
Net cash provided by financing activities	82,388	25,205	57,183	***
Effect of exchange rates	(679)	(1,694)	1,015	(59.9)
Net change	(19,620)	(50,105)	30,485	(60.8)
Ending cash, cash equivalents, and restricted cash	$ 130,761	$ 53,855	$ 76,906	***

*** Indicates a percentage that is not meaningful.

Operating Activities

Net cash used by operating activities was $102.2 million for the nine months ended September 30, 2023 as compared to $94.0 million used by operating activities for the nine months ended September 30, 2022. The increase in net cash used by operating activities was due to the $57.3 million payment for our JPI policy. This increase was mostly offset by a decline in legal fees and stronger collections from accounts receivable across the nine months ended September 30, 2023 as compared to the nine months ended September 30, 2022.

Investing Activities

Net cash provided by investing activities was $0.9 million for the nine months ended September 30, 2023 as compared to $20.3 million in net cash provided by investing activities for the nine months ended September 30, 2022. This change was primarily driven by a $22.2 million increase in purchases of investments and a $2.4 million increase in capital expenditures, both of which were partially offset by a $5.2 million increase in proceeds from the sale of investments.

Financing Activities

Net cash provided by financing activities was $82.4 million for the nine months ended September 30, 2023 as compared to $25.2 million of net cash provided by financing activities for the nine months ended September 30, 2022. The increase in net cash provided by financing activities was primarily due to a $92.0 million increase in proceeds from borrowings during the nine months ended September 30, 2023. This increase was partially offset by a $24.5 million decrease in proceeds received from the exercise of stock options, a $7.2 million increase in payments for employee tax withholdings associated with the net settlement of stock awards, and a $2.6 million increase in debt repayments.

Critical Accounting Estimates

There have been no material changes in our critical accounting policies from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on February 16, 2023. We are not aware of any specific events or circumstances that would require us to update our estimates, assumptions, and judgments.

Recent Accounting Pronouncements

See Note 2 to the unaudited condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for a discussion of recent accounting pronouncements.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign currency exchange rates.

Interest Rate Risk

We had total cash, cash equivalents, and restricted cash of $130.8 million as of September 30, 2023, which consisted of a money market fund, cash in readily available checking accounts, and overnight repurchase investments. These instruments, which are not dependent on interest rate fluctuations that may cause principal amounts to fluctuate, are held for reinvestment and working capital purchases.

In addition, as of September 30, 2023, we held $38.7 million of fixed income securities such as U.S. Treasuries, commercial paper, corporate bonds, and agency bonds. These securities are subject to market risk due to fluctuations in interest rates, which may affect our interest income and the fair value of our investments. We classify investments as available-for-sale, including those with stated maturities beyond twelve months. As such, no gains or losses due to changes in interest rates are recognized in our condensed consolidated statements of operations unless such securities are sold prior to maturity or due to expected credit losses. A hypothetical 100 basis point change in interest rates would not have had a material effect on the fair market value of our investment portfolio as of September 30, 2023. To date, fluctuations in interest income have also not been significant. Our investments are made for the purpose of preserving capital, fulfilling liquidity needs, and maximizing total return. We do not enter into investments for trading or speculative purposes.

As of September 30, 2023, our outstanding principal debt balance is $207.4 million, which carries interest as defined in our Credit Agreement. Refer to Note 8 of the condensed consolidated financial statements in this Quarterly Report on Form 10-Q for additional details. We assessed our exposure to changes in interest rates by analyzing sensitivity to our operating results, assuming various changes in market interest rates. A hypothetical increase of one percentage point in the interest rate as of September 30, 2023 would increase our interest expense by approximately $2.1 million annually.

Inflation Risk

We are exposed to market risks related to inflation in personnel costs, third-party service providers, subcontracting costs, professional fees, and general overhead expenses. During 2022 and continuing into 2023, inflation increased to rates beyond recent history, and as a result we experienced rising costs. If these inflationary pressures continue or increase in severity, we may not be able to fully offset such higher costs through price increases and productivity initiatives. While we do not believe inflation has had a material impact on our results of operations to date, a continued high rate of inflation in the future may have an adverse effect on our ability to maintain operating costs and adversely affect our gross profit margin.

Foreign Currency Exchange Risk

Our reporting currency is the U.S. dollar. Due to our international operations, we have foreign currency risks related to revenue and operating expenses denominated in currencies other than the U.S. dollar, primarily the Australian dollar, Swiss franc, British pound, and Euro. Our international sales contracts are primarily denominated in the local currency of the customer making the purchase. In addition, a portion of operating expenses are incurred outside the United States and are denominated in foreign currencies. Increases in the relative value of the U.S. dollar to other currencies will negatively affect revenue and net operating results as expressed in U.S. dollars. Based on a sensitivity analysis, a 10% change in the foreign currency exchange rates for the nine months ended September 30, 2023 would have impacted our total revenue by approximately 3% and operating loss by approximately 2%. This calculation assumes all currencies change in the same direction and proportion relative to the U.S. dollar.

We have experienced and will continue to experience fluctuations in net loss as a result of transaction gains or losses related to remeasuring certain current asset and current liability balances denominated in currencies other than the functional currency of the entities in which they are recorded. We have not engaged in the hedging of foreign currency transactions to date, although we may choose to do so in the future.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act that are designed to ensure information required to be disclosed by a company in the reports it files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure information required to be disclosed by a company in the reports it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of September 30, 2023. Based on the evaluation of our disclosure controls and procedures as of September 30, 2023, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, believes our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level. However, our management does not expect our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance the objectives of the control system are met. Further, the design of a control system must reflect the fact there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision making can be faulty, and breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

PART II—OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

Refer to Note 12 – Commitments and Contingencies of the Notes to Condensed Consolidated Financial Statements (Part I, Item 1 of this Form 10-Q) for information regarding legal proceedings in which we are involved.

Other Matters

From time to time, we are subject to legal, regulatory, and other proceedings and claims that arise in the ordinary course of business. Other than as disclosed elsewhere in this Quarterly Report on Form 10-Q, we are not presently a party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition, or cash flows. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

Item 1A. RISK FACTORS

Our business is subject to risks and events that, if they occur, could adversely affect our financial condition and results of operations and the trading price of our securities. In addition to the other information set forth in this Quarterly Report on Form 10-Q, investors should carefully consider the factors described in "Part I, Item 1A. Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on February 16, 2023. There have been no material changes from the risk factors described in that report.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

a. Recent Sales of Unregistered Equity Securities

Not applicable.

b. Use of Proceeds

Not applicable.

c. Issuer Purchases of Equity Securities

	Total number of shares purchased[1]	Average price paid per share	Total number of shares purchased as part of publicly announced plan	Maximum number of shares that may yet be purchased under the plan[2]
July 1 to July 31, 2023	4,664	$ 47.26	4,664	889,964
August 1 to August 31, 2023	4,449	$ 48.34	4,449	885,515
September 1 to September 30, 2023	4,127	$ 49.99	4,127	881,388
Total	13,240	$ 48.47	13,240	881,388

[1] Shares purchased represent shares purchased on the open market pursuant to the Appian Corporation Employee Stock Purchase Plan ("ESPP"), which was approved by the Company's stockholders on June 11, 2021. The ESPP provides employees with an opportunity to purchase the Company's common stock through payroll deductions at 85% of the stock's fair market value. The Company satisfies its ESPP obligation by purchasing the additional 15% of the stock's fair value on the open market. Shares purchased under the ESPP are deposited into the participants' accounts.

[2] Because the number of shares that may be purchased under the ESPP depends on each employee's voluntary election to participate and contribution elections and on the fair market value of our Class A Common Stock at various future dates, the actual number of shares that may be purchased under the plan cannot be determined in advance. We have filed a registration statement on S-8 that covers 1,000,000 shares.

Item 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Item 5. OTHER INFORMATION

None.

Item 6. EXHIBITS

Exhibit No.	Description	Reference
3.1	Amended and Restated Certificate of Incorporation of Appian Corporation.	Previously filed as Exhibit 3.2 to Amendment No.3 to the Company's Registration Statement on Form S-1 (File No. 333-217510), filed with the Securities and Exchange Commission on May 12, 2017, and incorporated herein by reference.
3.2	Amended and Restated Bylaws of Appian Corporation.	Previously filed as Exhibit 3.4 to Amendment No.2 to the Company's Registration Statement on Form S-1 (File No. 333-217510), filed with the Securities and Exchange Commission on May 10, 2017, and incorporated herein by reference.
4.1	Form of Class A common stock certificate of Appian Corporation.	Previously filed as Exhibit 4.1 to Amendment No.3 to the Registrant's Registration Statement on Form S-1 (File No.333-217510), filed with the Securities and Exchange Commission on May 12, 2017, and incorporated herein by reference.
10.1	Judgment Preservation Insurance Policy and Form of Excess Judgment Preservation Insurance Policy dated as of September 1, 2023, between Appian Corporation and the insurers named therein.^	Filed herewith.
10.2	Addendum No. 2 to Software Enterprise OEM License Agreement, dated as of August 31, 2023, by and between Appian Corporation and Kx Systems, Inc.	Filed herewith.
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Attached.
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Attached.
32.1*	Certifications of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Attached.
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.	Attached.
101.SCH	XBRL Taxonomy Extension Schema Document	Attached.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	Attached.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	Attached.

101.LAB	XBRL Taxonomy Extension Label Linkbase Document	Attached.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	Attached.
104	Cover page formatted as Inline XBRL and contained in Exhibit 101	Attached.

* The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent the company specifically incorporates it by reference.
^ Portions of this exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.

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.

APPIAN CORPORATION

November 2, 2023	By:	/s/ Matthew Calkins	/s/ Mark Matheos
		Name: Matthew Calkins	Name: Mark Matheos
		Title: Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	Title: Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

[***] **Exhibit 10.1**

Certain identified information has been excluded from the exhibit because it both (i) is not material and (ii) is the type that the company treats as private or confidential.

[***]

[***]

Judgment Preservation Insurance Policy [***]

DECLARATIONS
[***]

[***]

[***]

Item 1. Named Insured: Appian Corporation

Mailing Address: 7950 Jones Branch Drive, Tysons, VA 22102

Email Addresses: [***]

Item 2.	**Insurers**	[***]
Item 3.	**Policy Terms and Conditions**	The scope and terms of the coverage provided under this **Policy** is provided in detail in the **Terms and Conditions**.
Item 4.	**Policy Period**	From [***], but expiration of the **Policy** shall not affect the coverage provided therein (i.e., a notice of **Claim** will be deemed served upon the **Insurers** on the **Inception Date**).
Item 5.	**Limit of Liability**	[***]
Item 6.	**Premium**	[***]
Item 7.	**Brokerage Commission**	None. The **Premium** is net of commission.
Item 8.	**Notices**	[***]
Item 9.	**Retention**	$1,536,860,045.

Item 10.	**Broker of Record**	Aon Risk Services Northeast, Inc. [***]
Item 11.	**Endorsements**	A. [***]
Item 12.	**Exhibits**	A. [***]

These **Declarations**, the **Policy Terms and Conditions**, and any **Endorsements**, **Exhibits**, and **Appendices** attached hereto shall constitute the insurance policy (the “**Policy**”).

By: __

Date: __

Authorized Representative on behalf of [**}

TERMS AND CONDITIONS
(the "**Policy Terms and Conditions**")

In consideration of, and subject to, the payment of the **Premium** and in reliance on all statements made by the **Insured** [***], and subject to the terms, conditions, and exclusions of this **Policy**, the **Insurers** and the **Insured** agree as follows:

1. INSURING AGREEMENT

1.1 Subject to the terms and conditions of the **Policy**, the **Insurers** shall pay the **Insured** any **Insured Loss** resulting from a **Final Judgment** up to the **Limit of Liability**.

1.2 [***].

2. DEFINITIONS AND INTERPRETATION

2.1 DEFINITIONS

[***]	[***].
Business Day	Any day other than Saturday, Sunday, or a public or bank holiday observed in the State of New York.
Claim	The **Insured's** claim for coverage under this **Policy** for an **Insured Loss.**
Designated Loss Payee	A person or entity as may be designated by the **Insured** in accordance with the provisions of Clause 10.3 of the **Policy**.
[***]	[***].
Final Judgment	A final, non-appealable judgment in the **Underlying Lawsuit** after the exhaustion of all remand proceedings and/or appeals to which there is a non-frivolous basis to reduce or mitigate an **Insured Loss**, or after leave to appeal has been refused. For the avoidance of doubt, it is expressly acknowledged that this **Policy** does not cover settlements, stipulations, defaults, or a failure to appeal, prosecute, and/or defend the **Underlying Lawsuit**.
Inception Date	As provided in Item 4 of the **Declarations**.
Insured	Appian Corporation.
Insured Loss	The amount by which the **Final Judgment** results in the **Insured** being awarded less than $2,036,860,045 in total recovery inclusive of damages, pre- and post-judgment interest, costs, and attorneys' fees. For the avoidance of doubt, this **Policy** does not cover any legal costs or expenses incurred by the **Insured** in connection with the investigation, settlement, defense, prosecution, or appeal of the **Underlying Lawsuit**.

[***]	[***]
Legal Counsel	Patterson Belknap Webb & Tyler LLP and McGuireWoods LLP.
[***]	[***]
Policy	This **Judgment Preservation Insurance Policy**, including the **Terms and Conditions**, including the **Declarations**, **Exhibits**, **Endorsements,** and **Appendices** attached hereto.
Policy Period	The period stated in Item 4 of the **Declaration,** both dates inclusive, but expiration of the **Policy Period** shall not affect coverage for the **Claim** (i.e., a notice of Claim will be deemed served and accepted by the **Insurers** on the **Inception Date**).
[***]	[***].
[***]	[***].
[***]	[***].
Retention	The amount identified in Item 9 of the **Declarations**.
Underlying Lawsuit	*Appian Corp. v. Pegasystems, Inc.*, Case No. 2020-7216 (Circuit Court for Fairfax County), on appeal to the Court of Appeals of Virginia, and any subsequent appeal, review, or remand of the same.
Underwriting Representative	[***]

2.2 The **Declarations** are a summary of the coverage provided by the **Policy Terms and Conditions** attached. If there is any inconsistency between the **Declarations** and the **Policy Terms and Conditions**, the terms of the **Policy Terms and Conditions** shall control.

2.3 [***].

2.4 [***]

2.5 [***].

3. **[***]**

3.1 [***]

3.2 [***].

3.3 [***]**.**

3.4 [***].

3.5 [***].

4. [***]

4.1 [***]**.**

4.2 [***].

4.3 [***].

5. [***]

5.1 [***]:

- **(a)** [***];
- **(b)** [***]; and
- **(c)** [***].

5.2 [***]:

- **(a)** [***]**;**
- **(b)** [***];
- **(c)** [***];
- **(d)** [***];
- **(e)** [***];
- **(f)** [***];
- **(g)** [***];
- **(h)** [***]; and
- **(i)** [***].

5.3 [***]**.**

5.4 [***].

5.5 [***].

5.6 [***].

6. LIMIT OF LIABILITY AND RETENTION

6.1 The **Insured** acknowledges that the **Policy** only provides coverage for **Insured Loss** in excess of the **Retention.**

6.2 The **Limit of Liability** is the aggregate limit of the **Insurers'** liability for all payments made by the **Insurers** in connection with this **Policy** for all **Insured Loss**.

6.3 [***].

7. [***]

7.1 [***]:

- **(a)** [***]; or

(b) [***].

7.2 [***].

8. CLAIMS

8.1 [***]**.**

8.2 [***].

8.3 [***]:

(a) [***]; or

(b) [***].

8.4 [***].

8.5 In respect of any **Insured Loss**, the **Insurers** shall pay the **Insured** an amount equal to the relevant **Insured Loss** covered by this **Policy** within thirty (30) **Business Days** of the sooner of (i) making any determination [***] that the claimed **Insured Loss** in whole or in part is covered by the **Policy** or (ii) being found liable to pay such **Insured Loss** by an arbitration tribunal of competent jurisdiction.

8.6 [***].

9. OTHER INSURANCE

9.1 This **Policy** is primary coverage for an **Insured Loss.**

10. [***] LOSS PAYEE COVERAGE/ASSIGNMENT

10.1 [***].

10.2 Provided there is no increase in liability of the **Insurers**, this **Policy** and the **Insured**'s rights, interests, and benefits in, to, and under the proceeds of this **Policy** may be freely assigned by the **Insured** to (1) an affiliate of the **Insured** or (2) a subsequent purchaser (whether through a merger, acquisition, reorganization or otherwise) of either (a) the **Insured** or (b) all or substantially all of the assets of the **Insured** [***].

10.3 This Policy may also be assigned as collateral to a **Designated Loss Payee** [***].

10.4 [***].

11. AMENDMENT AND WAIVER

11.1 No term of this **Policy** may be amended or waived without a prior written endorsement signed by the **Insurers** and the **Insured**.

12. COUNTERPARTS

12.1 This **Policy** may be executed (including digital signatures) in any number of counterparts. Each of the executed counterparts, when exchanged and delivered, shall be deemed to be an original but, taken together, shall constitute one agreement. This **Policy** shall not come into effect until it has been executed by the **Insurers** and the **Insured**.

13. INVALIDITY

13.1 If any provision of this **Policy** is or becomes invalid, illegal or unenforceable in any respect, the validity, legality or enforceability of any other provision shall not be affected or impaired in any way.

14. ENTIRE AGREEMENT

14.1 This **Policy** constitutes the entire agreement between the **Insurers** and the **Insured** concerning the subject matter of this **Policy** and supersedes any and all other agreements, oral or written, between the **Insurers** and the **Insured** relating to the subject matter of this **Policy**. Nothing in this

Clause shall exclude or limit any liability or any right which any party may have in respect of any statements made fraudulently or dishonestly prior to the date of this **Policy.**

15. CONFIDENTIALITY

15.1 [***].

15.2 [***].

16. SANCTION LIMITATION

16.1 The **Insurers** shall not be deemed to provide cover and the **Insurers** shall not be liable to pay any **Insured Loss** or provide any benefit hereunder to the extent that the provision of such cover, payment of such claim or provision of such benefit would expose the **Insurers** to any sanction, prohibition or restriction under United Nations resolutions or the trade or economic sanctions, laws or regulations of the European Union, United Kingdom or United States of America.

17. ARBITRATION AND CHOICE OF LAW

17.1 [***].

17.2 The **Insurers** and **Insured** agree that:

(a) All disputes arising out of or relating to this **Policy** shall be resolved confidentially by an arbitration in New York, NY conducted pursuant to the JAMS ADR Commercial Arbitration Rules and Procedures then in effect.

(b) The **Insured** and the **Insurers** each agree to submit to personal jurisdiction in New York City in connection with the arbitration and that the City of New York, State of New York, shall be the forum of any arbitration proceeding. Judgment may be entered upon the arbitration award in any court of competent jurisdiction.

(c) [***]

(d) [***];

(e) [***];

(f) [***]; and

(g) [***].

Endorsement 1

TERRORISM ENDORSEMENT TERRORISM RISK INSURANCE ACT
CONFIRMATION OF ACCEPTANCE OF CERTIFIED ACTS OF TERRORISM

THIS NOTICE DOES NOT FORM A PART OF THE POLICY, GRANT ANY COVERAGE OR CHANGE THE TERMS AND CONDITIONS OF ANY COVERAGE UNDER THE POLICY.

As used herein, 1) “we” means the insurer listed on the Declarations or the Certificate of Insurance, as applicable; and 2) “you” means the first person or entity named on the Declarations or the Certificate of Insurance, as applicable.

You are hereby notified that under the Terrorism Risk Insurance Act, as extended and reauthorized (“Act”), you have a right to purchase insurance coverage of losses arising out of acts of terrorism, as defined in Section 102(1) of the Act, subject to all applicable Policy provisions. The Terrorism Risk Insurance Act established a federal program within the Department of the Treasury, under which the federal government shares, with the insurance industry, the risk of loss from future terrorist attacks.

This Notice is designed to alert you to coverage restrictions and to certain terrorism provisions in the Policy. If there is any conflict between this Notice and the Policy (including its endorsements), the provisions of the Policy (including its endorsements) apply.

CHANGE IN THE DEFINITION OF A CERTIFIED ACT OF TERRORISM

The Act applies when the Secretary of the Treasury certifies that an event meets the definition of an act of terrorism. Originally, the Act provided that to be certified, an act of terrorism must cause losses of at least five million dollars and must have been committed by an individual or individuals acting on behalf of any foreign person or foreign interest to coerce the government or population of the United States. However, the 2007 re-authorization of the Act removed the requirement that the act of terrorism must be committed by or on behalf of a foreign interest, and now certified acts of terrorism may encompass, for example, a terrorist act committed against the United States government by a United States citizen, when the act is determined by the federal government to be “a certified act of terrorism.”

In accordance with the Act, we are required to offer you the ability to purchase coverage for losses resulting from an act of terrorism that is certified under the federal program. The other provisions of this Policy, including nuclear, war or military action exclusions, will still apply to such an act.

DISCLOSURE OF FEDERAL PARTICIPATION IN PAYMENT OF TERRORISM LOSSES

The Department of the Treasury will pay a share of terrorism losses insured under the federal program. In 2015, the federal share equals 85% of that portion of the amount of such insured losses that exceeds the applicable insurer retention and shall decrease by 1 percentage point per calendar year until equal to 80%.

LIMITATION ON PAYMENT OF TERRORISM LOSSES

If aggregate insured losses attributable to terrorist acts certified under the Terrorism Risk Insurance Act exceed $100 billion in a calendar year (January 1 through December 31), the Treasury shall not make any payment for any portion of the amount of such losses that exceeds $100 billion.

Further, this coverage is subject to a limit on our liability pursuant to the federal law where, if aggregate insured losses attributable to terrorist acts certified under the Act exceed $100 billion in a calendar year (January 1 through December 31) and we have met our insurer deductible under the Act, we shall not be liable for the payment of any portion of the amount of such losses that exceeds $100 billion. In such case, insured losses up to that amount are subject to pro rata allocation in accordance with procedures established by the Secretary of the Treasury.

CONFIRMATION OF ACCEPTANCE OF COVERAGE

In accordance with the Act, we offered you coverage for losses resulting from an act of terrorism that is certified under the federal program. This notice confirms that you have chosen to accept our offer of

[***]

coverage for certified acts of terrorism. The Policy’s other provisions, including nuclear, war or military action exclusions, will still apply to such an act. The premium charge for terrorism coverage, if any, is shown separately on the Declarations or the Certificate of Insurance, as applicable.

Endorsement 2

Master Policy Number: [***] **Effective Date:** [***]

Insured: Appian Corporation

OFAC COMPLIANCE NOTICE

Payment of any **Insured Loss** under this **Policy** shall only be made in full compliance with all United States of America economic or trade sanction laws or regulations, including, but not limited to, sanctions, laws and regulations administered and enforced by the U.S. Treasury Department's Office of Foreign Assets Control ("**OFAC**").

EXHIBIT A
[***]

Appendix 1
[***]

[***]

Exhibit B

[***]

[***]

Exhibit C
[***]

EXHIBIT D
[***]

FORM OF EXCESS JUDGMENT PRESERVATION INSURANCE POLICY

EXCESS JUDGMENT PRESERVATION INSURANCE POLICY

[***]

DECLARATIONS

ITEM 1: NAMED INSURED:

Appian Corporation

ADDRESS:

7950 Jones Branch Drive
Tysons, VA 22102

EMAIL ADDRESS:

[***]

ITEM 2: POLICY PERIOD: From: [***], 2023 (the "**Inception Date**")

To: [***], but expiration of the Policy shall not affect the coverage provided therein (i.e., a notice of **Claim** will be deemed served upon the **Insurers** on the **Inception Date**).

ITEM 3: LIMIT OF LIABILITY: [***]
ITEM 4: EXCESS OF TOTAL UNDERLYING LIMITS OF: [***]

ITEM 5: PRIMARY POLICY: See Schedule A

ITEM 6: PREMIUM: [***]

ITEM 7: CONTACT INFORMATION OF INSURER(S) FOR ALL NOTICES UNDER THIS POLICY: See Schedule B
ITEM 8: INSURER PARTICIPATION: See Schedule C

The INSURER(S) hereby causes this policy to be signed on the Declarations page by a duly authorized representative of the INSURER(S).

[***]

By: ____________________________

Date: __________________________

Authorized Representative on behalf of

EXCESS JUDGMENT PRESERVATION INSURANCE POLICY

THIS POLICY PROVIDES COVERAGE IN ACCORDANCE WITH ITS TERMS AND CONDITIONS SOLELY WITH RESPECT TO **INSURED LOSS** RESULTING FROM A **FINAL JUDGMENT.** IT DOES NOT PROVIDE FOR A DUTY TO DEFEND BY THE **INSURERS** AND DOES NOT COVER LITIGATION COSTS OR SETTLEMENTS. PLEASE READ THE ENTIRE POLICY CAREFULLY.

All bolded terms in this Policy shall have the meanings set forth in Section II below, or if such term is not defined in Section II, then as set forth in the **Primary Policy**.

In consideration of the payment of the premium, the **Insurers** specified in Schedule C of this Policy ("**Insurer(s)**") and the **Insureds** agree as follows:

I. INSURING AGREEMENT

This Policy provides excess coverage for **Insured Loss** after exhaustion of the **Underlying Limit**. Except as otherwise provided in this Policy, coverage under this Policy shall follow form to, and apply in conformance with, the provisions of the **Primary Policy**. [REDACTED ***].

II. DEFINITIONS

Whether used in the singular or plural, the following terms shall have the meanings specified below:

A. **"Claim"** shall have the same meaning specified for such term in the **Primary Policy**.
B. **"Insured Loss"** shall have the same meaning as specified in the **Primary Policy.**
C. **"Insureds"** means the entity(ies) specified in Item 1 of the Declarations.

D. **"Primary Policy"** is the policy identified in Item 5 of the Declarations, attached hereto as Schedule A.
E. **"Underlying Insurance"** means the **Primary Policy**.

F. **"Underlying Lawsuit"** shall have the same meaning as specified in the **Primary Policy.**
G. **"Underlying Limit"** means $[***], consisting of the **Underlying Insurance.**

III. LIMIT OF LIABILITY

The Limit of Liability specified in Item 3 of the Declarations, subject to the Insurer Participation specified in Item 8 of the Declarations, is the maximum aggregate amount that the **Insurers** shall pay under this Policy for all **Insured Loss**.

IV. CLAIM PARTICIPATION

[***]

V. ARBITRATION AND CHOICE OF LAW

The construction, validity and performance of this Policy, and the resolution of any disputes which may arise under or in connection with this Policy, shall be determined as set forth in Clause 17 of the **Primary Policy,** including as to service of process, which shall be made to the **Insurers** at their respective address as set forth in Item 7 of the Declarations.

VI. MAINTENANCE OF UNDERLYING INSURANCE

All **Underlying Insurance** shall be maintained in full effect in accordance with the terms and conditions set forth in the **Primary Policy**. Failure to maintain any **Underlying Insurance** in accordance with such terms shall: (i) result in the **Insureds** becoming self-insured for that portion of the limit of liability of any such **Underlying Insurance**; and (ii) not relieve the **Insurers** of any obligation under this Policy.

VII. CHANGES

Subject to the **Primary Policy**, this Policy shall not be changed or assigned in any manner except by written agreement of the **Insurers**.

[***]

SCHEDULE A – PRIMARY POLICY

[***]

SCHEDULE B - CONTACT INFORMATION OF INSURER(S) FOR ALL NOTICES UNDER THIS POLICY

A. CLAIMS Via e-mail to:

B. ALL OTHER NOTICES MAY BE DIRECTED VIA E-MAIL TO THE APPLICABLE UNDERWRITER(S) OF THE INSURER(S):

[***]

SCHEDULE C – INSURER PARTICIPATION

Insurers	Quota Share Layer Amount	Quota Share Percentage	Policy No.
A. B. C.	A. $____ part of $[***] excess of $[***] B. $____ part of $[***] excess of $[***] C. $____ part of $[***] excess of $[***]		

Addendum No. 2 to
Enterprise Kdb+ Software OEM License Agreement

This Addendum No. 2 to Enterprise Kdb+ Software OEM License Agreement ("Addendum No. 1") is entered into as of 20 August 2019 by and between Kx Systems, Inc., 45 Broadway, Floor 20, New York, NY 10006 ("Kx") and Appian Corporation, 1875 Explorer Street, 4th Floor, Reston, Virginia 20190 ("Appian").

Effective Date: 31 August 2023

1. SCOPE OF ADDENDUM NO.2

Kx and Appian previously entered into the Enterprise Kdb+ Software OEM License Agreement, effective June 15, 2016 ("License Agreement"), which grants Appian the right to install the Kdb and Kdb+ software (the "Licensed Software") on the hard disk or other permanent storage media of Appian Computers and Customer Computers for purposes of Appian Employees and Contractors developing and testing Appian Applications, as amended by Addendum No.1 dated 28 August 2019 and as further amended by an Order Form dated 31 August 2022 (the "2022 Order Form").

2. DEFINITIONS

The terms defined in this Addendum No. 2 shall have the meanings stated. Otherwise, all capitalized terms used herein shall have the meanings stated in the License Agreement.

3. DISCONTINUANCE OF MAINTENANCE SERVICES

3.1. <u>Fees:</u>

3.1.1. In consideration for the grant of the option to exercise the source code license set out below, from the Effective Date of this Addendum No.2, the Fees set out in the 2022 Order Form shall increase to, and be replaced by, the amounts set out in the table below (and the first paragraph of the section 'Fees' in the 2022 Order Form shall be deleted):

Date payable	Fees (USD)
Effective Date	***
1st Jan 2024	***
1st Jan 2025	***
1st Jan 2026	***
1st Jan 2027	***
1st Jan 2028	***
1st Jan 2029	***
1st Jan 2030	***

3.1.2. All Fees payable hereunder shall be paid by Appian within 30 days of receipt of invoice.

3.1.3. If Kx elects to (either itself or via an appointed subcontractor) discontinue Maintenance Services for the Licensed Software on 31 December 2030 or 31 December of any year thereafter, and Appian elects to continue such

Maintenance Services and to license the source code of the Licensed Software pursuant to clauses 3.2 and 3.3 below, then the Fees set out in the table at clause 3.1.1 above shall be reduced to $*** per annum commencing from the date Kx discontinues the Maintenance Services until termination of the License Agreement. If Kx elects to continue to provide the Maintenance Services under the terms of the License Agreement after 31 December 2030, Appian shall continue to pay fees in the amount of $*** per year, to be invoiced and payable on January 1 of each year for which Kx provides Maintenance Services.

3.1.4. For the purposes of clarity, Kx may only discontinue Maintenance Services effective on the 31st of December of any calendar year beginning in 2030, using the procedure set forth in clause 3.2 below.

3.2. **Discontinuance of Maintenance Services**: If Kx elects to (either itself or via an appointed subcontractor) discontinue Maintenance Services for the Licensed Software on 31 December 2030, or December 31 of any year thereafter, it shall provide Appian with at least *** days' prior written notice. Upon receipt of such notice, Appian shall have *** days to notify Kx that it intends not to maintain the Licensed Software using the Source Code License set forth in clause 3.3 below. If Appian does not wish to continue to provide such Maintenance Services then, subject to clause 3.7 below, the License Agreement shall automatically terminate and the provisions of clause 13.5 of the License Agreement shall apply. If Appian wishes to itself provide Maintenance Services for the Licensed Software, then it shall so notify Kx within the *** day notice period referred to above and the provisions of clause 3.3 below shall apply and clause 6 of the License Agreement shall be deleted (and for the avoidance of doubt, there shall be no further obligation to maintain, provide support for or otherwise update such Licensed Software or Documentation).

3.2.1. For the purposes of this clause 3.2, Kx's notice shall be provided by (a) e-mailing ***; and (b) e-mailing the email address to whom the last license key for the Licensed Software was sent; and (c) by courier to Appian's headquarters as listed on www.appian.com, or to the headquarters of a successor of Appian under clause 3.8.

3.2.2. Appian's failure to provide notice within the period set forth above shall not result in the forfeiture of its right to obtain the license provided in clause 3.3, provided that (i) Kx shall at all times have at least *** days to deliver the source code to Appian for Appian's use under clause 3.3; (ii) such right shall continue only for a period of *** from the date of Kx's original notice and (iii) Appian continues to pay the fees due hereunder. Only an affirmative notice by Appian that it does not intend to use the license provided under clause 3.3 shall result in the forfeit of its right to such license. Notwithstanding the foregoing, nothing in this clause 3.2.2 shall modify Kx's rights to terminate under the License Agreement.

3.3. **Source Code License:** Within *** days of receiving notice of Appian's intention to continue to provide Maintenance Services, and subject to Appian's continued payment of the Fees set out herein and compliance with the terms of the License Agreement, Kx will provide to Appian a non-exclusive and non-transferable license to use, copy and modify the source code of the then current Update of the Licensed Software (under clause 6.1 of the License Agreement) together with its related Documentation (a complete, reproducible copy of which shall be deposited with Appian) solely for the following purposes and subject to the following restrictions:

3.3.1. the license to use, copy and modify the Licensed Software and Documentation shall be solely to the extent necessary to provide the Maintenance Services to Customers of the Appian Applications to enable them to use the Appian Applications in accordance with the terms of the License Agreement. For clarity, the license in this clause 3.3.1 will include the ability for Appian to issue License Keys for the Licensed Software to a Customer who is entitled to use the Appian Applications in accordance with the terms of the License Agreement;

3.3.2. Appian shall keep the Licensed Software and Documentation strictly confidential and secret at all times and shall not disclose the Licensed Software or Documentation to any person or third party, including any Customer, except as permitted in clause 11.2 of the License Agreement;

3.3.3. Appian will not remove, delete, alter, or obscure, and will reproduce in any copies of the Licensed Software and Documentation any copyright, trademark, patent, or other proprietary markings or rights notices provided on or with the Licensed Software or Documentation;

3.3.4. Appian shall hold the Licensed Software and Documentation in a safe and secure environment; and

3.3.5. Appian shall notify Kx without undue delay upon becoming aware of any security incident or breach of confidentiality which could affect the security or confidentiality of the Licensed Software or Documentation.

The source code license set out above shall be added as a new clause 4.4A to the License Agreement.

3.4 **Destruction of the Licensed Software:** Appian shall immediately destroy the source code of Licensed Software upon termination of the License Agreement or upon ceasing to provide Maintenance Services for such Licensed Software, whichever the sooner.

3.5 **Intellectual Property Ownership:** Notwithstanding the licenses granted in clause 3.3 of this Addendum No.2, the Licensed Software (including the source code) shall remain at all times the intellectual property of Kx and subject to the remaining provisions of the License Agreement that do not conflict with the terms hereof with respect to the subject matter of this Addendum No.2.

3.6 **Termination:** The following provisions shall apply in addition to the termination rights set out in clause 13 of the License Agreement:

3.6.1 The 2022 Order Form shall terminate automatically on 31 December 2030.

3.6.2 If Appian at any time ceases to provide the Maintenance Services in respect of the Licensed Software, then, subject to clause
3.7 below, the License Agreement shall automatically terminate and the provisions of clause 13.5 of the License Agreement shall apply.

3.7 **Discontinuance of Maintenance Services for only one of either Kdb or Kdb+:** Where Kx discontinues Maintenance Services for only one of Kdb or Kdb+:

3.7.1 Upon Appian either (i) choosing not to itself perform the Maintenance Services in respect of that Licensed Software pursuant to clause 3.2 or (ii) ceasing to supply such Maintenance Services pursuant to clause 3.6.2, the License Agreement shall automatically terminate with respect to the discontinued Licensed Software only (and the provisions of clause 6 of the License Agreement shall cease to apply to such discontinued Licensed Software and clause 13.5 of the License Agreement shall apply only to such Licensed Software) but the License Agreement shall continue to apply (as amended by this Addendum No.2) and Fees shall continue to be payable as set out herein for such time as either party continues to provide Maintenance Services for either Kdb or Kdb+;

3.7.2 The right to the source code license in clause 3.3 shall apply only to the Licensed Software for which Kx ceases to provide the Maintenance Services;

3.7.3 The Fees set out in the table at clause 3.1.1 above shall be reduced to $*** per annum from the date such Maintenance Services are discontinued until termination of the License Agreement (or until Kx ceases to provide Maintenance Services for both Kdb and Kdb+, in which event the Fees shall be as set out in clause 3.1.3 above).

3.8 **Assignment:** Clause 14.6 of the License Agreement (Assignment and Successors) shall be replaced with the following: "The OEM Agreement shall be binding and enure to the benefit of the Parties and their respective permitted successors and assigns. Subject to the next sentence, Appian will not assign, transfer or novate any of its rights nor delegate any of its obligations under the OEM Agreement to any third party without Kx's express written consent. Appian may assign the OEM Agreement to any of its Affiliates for the purposes of internal reorganisation or to a successor of its business in the event of a reorganization or merger or the sale of its business or all or substantially all of its assets to a third party upon written notice to Kx conditioned upon such successor business not being a competitor of Kx (determined by Kx in its reasonable discretion). Kx may assign, transfer or novate all or any its rights and obligations under the OEM Agreement to any of its Affiliates for the purposes of internal reorganization or to any company to which Kx transfers all or a substantial part of its assets or business provided that the assignee, transferee or novatee undertakes to Appian to be bound by and perform Kx's obligations under the OEM Agreement. Any attempted assignment without required approvals will be null and void and of no legal effect.

4. CONFLICTING TERMS; ENTIRE AGREEMENT

Except as amended by this Addendum No. 2, the License Agreement and any prior addenda to the License Agreement and the 2022 Order Form remain in full force and effect and are hereby affirmed. In the event of any inconsistency or conflict between the terms of this Addendum No. 2 and the terms of the License Agreement or prior addenda or the 2022 Order Form, this Addendum No. 2 shall govern. The License Agreement, any prior addenda, the 2022 Order Form and this Addendum No. 2 set forth the entire agreement between the parties with respect to their subject matter.

Kx Systems, Inc. **Appian Corporation**

By: /s/ Ryan Preston By: /s/ Matt Calkins

Name: Ryan Preston Name: Matt Calkins
Title: Director Title: CEO

Date: 8/31/2023 Date:

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew Calkins, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended September 30, 2023 of Appian Corporation (the "registrant");

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(s) 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(s) 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.

Date: November 2, 2023	/s/ Matthew Calkins
	Matthew Calkins
	Chief Executive Officer
	(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark Matheos, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended September 30, 2023 of Appian Corporation (the “registrant”);

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(s) 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(s) 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.

Date: November 2, 2023

/s/ Mark Matheos
Mark Matheos
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATIONS OF
PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, (the “Exchange Act”) and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), Matthew Calkins, Chief Executive Officer of Appian Corporation (the “Company”), and Mark Matheos, Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company’s Quarterly Report on Form 10-Q for the period ended September 30, 2023, to which this Certification is attached as Exhibit 32.1 (the “Periodic Report”), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

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

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of the 2nd day of November, 2023.

/s/ Matthew Calkins	/s/ Mark Matheos
Matthew Calkins	Mark Matheos
Chief Executive Officer	Chief Financial Officer
(Principal Executive Officer)	(Principal Financial Officer)

- This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.