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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2022

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 001-40838

Clearwater Analytics Holdings, Inc.
(Exact name of Registrant as specified in its Charter)

Delaware	**87-1043711**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
777 W. Main Street Suite 900 Boise, ID	**83702**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (208) 433-1200

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A common stock, par value $0.001 per share	CWAN	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

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, 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	☐	Smaller reporting company	☐
		Emerging growth company	☒

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

The aggregate market value of the registrant's common stock, $0.001 par value per share, held by non-affiliates of the registrant on June 30, 2022, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $692,919,109 (based on the closing sales price of the registrant's common stock on that date). Shares of the registrant's common stock held by each officer and director have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares of Registrant's Common Stock outstanding as of February 24, 2023 was:

62,212,132 shares of Class A common stock.

1,439,251 shares of Class B common stock.

47,377,587 shares of Class C common stock.

130,083,755 shares of Class D common stock.

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GLOSSARY

As used in this Annual Report on Form 10-K, the terms identified below have the meanings specified below unless otherwise noted or the context indicates otherwise:

- "Company," "we," "us," "our," "Clearwater" and similar references refer, (1) following the consummation of the Transactions, to Clearwater Analytics Holdings, Inc., and, unless otherwise stated, all of its direct and indirect subsidiaries, including CWAN Holdings, and (2) prior to the completion of the Transactions, to CWAN Holdings and, unless otherwise stated, all of its direct and indirect subsidiaries.
- "Acquisition" refers to the acquisition of JUMP by Clearwater Analytics France SAS.
- "Acquisition Date" refers to November 30, 2022.
- "Blocker Entities" refers to entities that, prior to the consummation of the Transactions, were affiliated with certain of the Continuing Equity Owners, each of which was a direct or indirect owner of LLC Interests in CWAN Holdings prior to the Transactions and is taxable as a corporation for U.S. federal income tax purposes.
- "Blocker Shareholders" refers to entities affiliated with certain of the Continuing Equity Owners, each of which was an owner of one or more of the Blocker Entities prior to the Transactions, which exchanged their interests in the Blocker Entities for shares of our Class A common stock, in the case of Other Continuing Equity Owners, and for shares of our Class D common stock, in the case of the Principal Equity Owners, in connection with the consummation of the Transactions.
- "Borrower" refers to Clearwater Analytics, LLC as borrower under the New Credit Agreement.
- "Continuing Equity Owners" refers collectively to direct or indirect holders of LLC Interests and/or our Class B common stock, Class C common stock and/or Class D common stock immediately following consummation of the Transactions, including the Principal Equity Owners and certain of our directors and officers and their respective Permitted Transferees who may exchange at each of the irrespective options, in whole or in part from time to time, their LLC Interests (along with an equal number of shares of Class B common stock or Class C common stock, as the case may be (and such shares shall be immediately canceled)) for newly issued shares of our Class A common stock or our Class D common stock, as the case may be, and additionally holders of shares of our Class D common stock may convert such shares at any time for newly issued shares of our Class A common stock, on a one-for-one basis (in which case their shares of our Class D common stock will be canceled on a one-for-one basis upon any such issuance).
- "CWAN Holdings" refers to CWAN Holdings, LLC.
- "Exchange Act" refers to the Securities Exchange Act of 1934, as amended.
- "IPO" refers to our initial public offering, which closed in September 2021.
- "JUMP" refers to JUMP Technology SAS and its consolidated subsidiary JUMP Consulting Luxembourg S.a.r.l.
- "JOBS Act" means the Jumpstart Our Business Startups Act of 2012, as amended.
- "LLC Agreement" refers to CWAN Holdings' Third Amended and Restated Limited Liability Company Agreement.
- "LLC Interests" refers to the common units of CWAN Holdings, including those that we purchased with a portion of the net proceeds from the IPO.
- "New Credit Agreement" refers to a new credit agreement which Clearwater Analytics, LLC entered into with JPMorgan Chase Bank, N.A. in connection with the closing of the IPO.
- "NPS" refers to our net promoter score, which can range from a low of negative 100 to a high of positive 100, that we use to gauge customer satisfaction. NPS benchmarks can vary significantly by industry, but a score greater than zero represents a company having more promoters than detractors. Our methodology of calculating NPS reflects responses from customers who purchase investment accounting and reporting, performance measurement, compliance monitoring and risk analytic solutions from us and choose to respond to the survey question. In particular, it reflects responses given in the fourth quarter of 2022 and reflects a sample size of 116 responses over that period. NPS gives no weight to customers who decline to answer the survey question.
- "NYSE" refers to the New York Stock Exchange.
- "Other Continuing Equity Owners" refers to Continuing Equity Owners who are not also Principal Equity Owners.
- "Permira" refers to Permira Advisers LLC, one of our largest owners through holdings by its affiliates.

- “Permitted Transferee” refers to, subject to the provisions of the LLC Agreement, (a) with respect to any Principal Equity Owner, any of such Principal Equity Owner’s affiliates and (b) with respect to any Other Continuing Equity Owner, any such Other Continuing Equity Owner’s affiliates or, in the case of individuals, members of their immediate family.
- “Previous Credit Agreement” refers to the Fifth Amendment to the Credit Agreement which Clearwater Analytics, LLC entered into with Ares Capital Corporation and Golub Capital LLC in October 2020. The outstanding borrowings under the Fifth Amendment to Credit Agreement were repaid in full in September 2021 in connection with the closing of the IPO.
- “Principal Equity Owners” refers to Welsh Carson, Warburg Pincus, Permira and their respective affiliates and Permitted Transferees.
- “SaaS” refers to Software-as-a-Service.
- “SEC” refers to the Securities and Exchange Commission.
- “Securities Act” refers to the Securities Act of 1933, as amended.
- “Tax Receivable Agreement” or “TRA” refers to the Tax Receivable Agreement, dated as of September 28, 2021, by and among Clearwater Analytics Holdings, Inc., CWAN Holdings and the other parties thereto.
- “TRA Bonus Agreement” refers to the Tax Receivable Agreement Bonus Letters, each dated as of September 28, 2021, by and among Clearwater Analytics Holdings, Inc. and certain of our executive officers.
- “Transactions” refers to the organizational transactions described under “Transactions” in Note 1 to our audited consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.
- “Up-C” refers to the Company’s umbrella partnership-C-corporation organizational structure. See Note 1 “Organization and Description of Business” to our audited consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.
- “Warburg Pincus” refers to Warburg Pincus LLC, one of our largest owners through holdings by its affiliates.
- “Welsh Carson” refers to Welsh, Carson, Anderson & Stowe, one of our largest owners through holdings by its affiliates.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND SUMMARY RISK FACTORS

This Annual Report on Form 10-K contains “forward-looking” statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on our management’s beliefs and assumptions and on information currently available to our management. The forward-looking statements are contained principally in the section captioned “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Forward-looking statements include information concerning our possible or assumed future results of operations, business strategies, technology developments, financing and investment plans, dividend policy, competitive position, industry and regulatory environment, potential growth opportunities and the effects of competition. Forward looking statements include statements that are not historical facts and can be identified by terms such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “will,” “would” or similar expressions and the negatives of those terms. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

Important factors that could cause actual results, performance or achievements to differ materially from our expectations include, but are not limited to, the following:

- we operate in a highly competitive industry, with many companies competing for business from insurance companies, asset managers, corporations and government entities on the basis of a number of factors, including the quality and breadth of solutions and services provided, ability to innovate, reputation and the prices of services, and this competition could hurt our financial performance;
- we are dependent on fees based on the value of the assets on our platform for the vast majority of our revenues, and to the extent market volatility, a downturn in economic conditions or other factors cause negative trends or fluctuations in the value of the assets on our platform, our fee-based revenue and earnings may decline;
- because some of our sales efforts are targeted at large financial institutions, corporations and government entities, we face prolonged sales cycles, substantial upfront sales costs and less predictability in completing some of our sales. If our sales cycle lengthens, or if our upfront sales investments do not result in sufficient revenue, our results of operations may be harmed;
- we have experienced considerable revenue growth over the past several years, which may be difficult to sustain, and we depend on attracting and retaining top talent to continue growing and operating our business, and if we are unable to hire, integrate, develop, motivate and retain our personnel, we may not be able to maintain or manage our growth, which could have a material adverse effect on our business, financial condition or results of operations;
- if our investment accounting and reporting solutions, regulatory reporting solutions or risk management or performance analytics solutions fail to perform properly due to undetected errors or similar problems, our business, financial condition, reputation or results of operations could be materially adversely affected;
- our business relies heavily on computer equipment, cloud-based services, electronic delivery systems, networks and telecommunications systems and infrastructure, the Internet and the information technology systems of third parties. Any failures or disruptions in any of the foregoing could result in reduced revenues, increased costs and the loss of clients and could harm our business, financial condition, reputation and results of operations;
- our failure to successfully integrate acquisitions, including the JUMP acquisition, could strain our resources. In addition, there are significant risks associated with growth through acquisitions, which may materially adversely affect our business, financial condition or results of operations.
- if we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed;
- if our trademarks and trade names are not adequately protected, we may not be able to build name recognition in our markets of interest, and our competitive position may be harmed;
- we may need to defend ourselves against third-party claims that we are infringing, misappropriating or otherwise violating others’ intellectual property rights, which could divert management’s attention, cause us to incur significant costs, and prevent us from selling or using the technology to which such rights relate;
- the Principal Equity Owners will continue to have significant influence over us, including control over decisions that require the approval of stockholders, which could limit your ability to influence the outcome of matters submitted to stockholders for a vote;

- we are classified as a “controlled company,” and as a result, we qualify for, and rely on, exemptions from certain corporate governance requirements. You will not have the same protections afforded to stockholders of companies that are subject to such requirements. In addition, the Principal Equity Owners’ interests may conflict with our interests and the interests of other stockholders;
- provisions in our certificate of incorporation and bylaws, may have the effect of delaying or preventing a change of control or changes in our management; and
- other risks described in the section titled "Risk Factors" herein and in periodic reports that we file with the Securities and Exchange Commission, and our reports to shareholders. These filings are available at www.sec.gov and on our website.

Given these risks and uncertainties, you should not place undue reliance on forward-looking statements. Also, forward-looking statements represent our management’s beliefs and assumptions only as of the date of this Annual Report on Form 10-K and should not be relied upon as representing Clearwater expectations or beliefs as of any date subsequent to the time they are made. Clearwater does not undertake to and specifically declines any obligation to update any forward-looking statements that may be made from time to time by or on behalf of Clearwater.

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PART I

Item 1. Business.

Overview

Clearwater brings transparency to the opaque world of investment accounting and analytics with what we believe is the industry's most trusted and innovative single instance, multi-tenant technology platform. Our cloud-native software allows clients to radically simplify their investment accounting operations, enabling them to focus on higher-value business functions such as asset allocation strategy and investment selection. Our platform provides comprehensive accounting, data and advanced analytics as well as highly-configurable reporting for global investment assets daily or on-demand, instead of weekly or monthly. We give our clients confidence that they are making the most informed decisions about investment performance, regulatory compliance and risk.

We provide investment accounting and reporting, performance measurement, compliance monitoring and risk analytics solutions for asset managers, insurance companies and large corporations. Every day, Clearwater's powerful platform aggregates and normalizes data on over $6.4 trillion of global invested assets for over 1,200 clients. We bring modern software to an industry that has long been dominated by difficult-to-use, high cost legacy technologies and processes, which often lack data integrity and traceability, and often require significant manual intervention. The strength of our platform is demonstrated by our approximately 80% win rate for new clients over the prior five years in deals that reached the proposal stage.

The markets we serve are highly complex and changing rapidly. All asset owners and asset managers need timely, accurate and comprehensive information about their investment portfolios in order to effectively make capital allocation decisions, manage risk, measure performance, comply with regulations and communicate to various stakeholders internally and externally. This requires organizations to have a comprehensive, global view of their investment portfolio. A partial view of one asset class or one reporting regime is ineffective: delivering analysis on 95% of the portfolio is inadequate because, more often than not, the opaque final 5% of the portfolio creates disproportionate risk. A single client can invest in over 60 different asset classes, hold assets in over 40 different currencies, be governed by more than 10 accounting regimes and hold positions representing thousands of individual tax lots. These clients often have separate accounting, reporting, performance, compliance and risk management products for each asset class and each country. Furthermore, clients frequently require large teams of people to manually review, compare and enter data, correct errors and build custom reports across multiple disparate systems and spreadsheets. Our platform provides our clients with a single consolidated and transparent view of investment data and analytics.

We believe that client demand for Clearwater's offering continues to grow not only in the United States, but also in financial centers around the world. Prior to 2008, institutions often invested in a narrower range of asset classes for which legacy solutions may have been able to provide adequate accounting, performance measurement, compliance monitoring and risk analytics. Over the past decade, however, clients' needs have grown meaningfully as a result of industry-wide trends such as:

- globalization;
- increased regulatory requirements and complexity;
- higher investment allocations in alternative assets (such as private equity, hedge funds, and derivatives and structured services);
- greater demand for timely risk management and transparency given economic, interest rate and geopolitical volatility, and
- pressure to increase speed and accuracy while reducing cost.

Clients no longer find it sufficient to review investment portfolios on a quarterly, monthly or even weekly basis. Their aged patchworks of on-premises software applications with multiple data warehouses and significant manual intervention expose them to time delays, a lack of data integrity and traceability, and a significant increase in errors, cost and ultimately risk. For many clients, this has become increasingly untenable.

We allow our clients to replace these legacy systems with modern cloud-native software. Our platform helps clients reduce cost, time, errors and risk and allows them to reallocate resources to other value-creating activities. Our software aggregates, reconciles and validates data from more than 2,800 daily data feeds and more than four million securities that have been modeled across multiple currencies, asset classes and countries. This cleansed and validated data runs through our proprietary accounting, performance, compliance and risk solutions to provide clients with powerful analytics and daily or on-demand configurable reporting. We offer multi-asset class, multi-basis, multi-currency accounting and analytics that provide clients with a comprehensive view of their holdings and related performance. This allows our clients to make better, more timely decisions about their investment portfolios.

Clearwater benefits from powerful network effects. With our single instance, multi-tenant architecture, every client, whether new or existing, enriches our global data set by making it more complete and accurate. Our software continually sources, ingests, models, reconciles and validates the terms, conditions and features of every investment security held by all of our clients. This continuous process helps to create a single repository of comprehensive, accurate investment data (often referred to within the industry as a "Golden Copy" of data) that benefits all our clients to the extent they otherwise have rights to the data. Through this continuous process, we are able to identify and adjudicate data discrepancies that otherwise could introduce error and risk into our clients' investment portfolios. We believe that a meaningful competitive advantage of this network effect is that we are increasingly seen as the best and most accurate source of investment accounting data and analytics in the industry.

Our team members are passionate about client success. We strive to be an extension of our clients' own teams by providing responsive, consistent and effective support. Our clients have direct access to a dedicated client service team, a specialized group of experts devoted to ensuring data is as accurate and current as possible and resolving any challenges our clients may encounter utilizing our platform. We take pride in our extremely high client satisfaction rating with a NPS of 60+, in contrast with competitors who typically score much lower. Our gross revenue retention rate has remained approximately 98% over the past sixteen quarters, which we believe is a testament to the strength of our offering, our ability to deliver operational efficiency for our clients and our focus on providing exceptional client service. We are able to deliver this service to our clients by attracting, retaining and engaging an outstanding team.

We have a 100% recurring revenue model, excluding license related revenue from the JUMP acquisition. We charge our clients a fee that is primarily based on the amount of assets they manage on our platform, subject to contracted minimums. A majority of the assets on our platform are high-grade fixed income assets, leading to very low levels of volatility and highly predictable revenue streams. When applicable, we charge additional transaction fees for certain alternative asset classes (e.g., derivatives and other financial instruments). In 2022, we transitioned our contracting structure to a framework we describe as Base+ for all new clients. A Base+ contract framework includes a base fee for a prospective or existing client's book of business plus an incremental fee for increases in assets on the platform. This structure is designed to limit the downside volatility in our asset-based fees. We also began to amend contracts with our existing clients to either modify the structure of such contracts from a pure asset-based fee to this Base+ model or to increase the basis point price. Throughout 2022, 80% of our clients (based on percentage of annual recurring revenue) either modified their contracts to Base+ or agreed to price increases under their existing contracts. The Base+ model includes annual increases in the base fee and enables us to charge additional fees for supplemental services provided for certain alternative asset classes (e.g., LPx) or additional products (e.g. Prism, Performance Plus) should the client choose to utilize those services.

Our Industry

We operate in the investment accounting and analytics market, serving a range of clients that own or manage investment assets. Before the global financial crisis in 2008, the investment community generally invested in a relatively small number of asset classes that could be tracked with legacy software tools and processes. Over the ensuing years, the industry has faced several challenges that have strained and broken this fragmented and often manual approach to investment accounting operations. These new developments have included increasingly globalized holdings, growing regulatory complexities, the increasing prominence of complex alternative assets, and pressure to increase speed and accuracy while reducing cost. In light of these developments, asset owners and asset managers began to require a comprehensive, global view of their investment portfolios. These organizations initially reacted by buying dedicated products for each asset class, country and reporting regime, building proprietary data warehouses for different use cases, and increasing employee headcount in accounting and compliance functions. These practices resulted in investment accounting operations that were slow, expensive, inflexible and inconsistent, very often resulting in inaccurate data and reporting. We believe that our purpose-built single instance, multi-tenant technology platform provides clients with a vastly superior solution to their growing needs.

Increasingly Global Investment Portfolios

Investors today increasingly hold positions in globally diversified assets as they search for yield and diversification. As a result, they require a global platform that delivers a multi-asset class, multi-basis, multi-currency solution across different accounting, reporting and regulatory regimes.

High Regulatory Complexity

Increased regulatory requirements within the financial services and investment industries continue to proliferate in jurisdictions around the world, forcing asset owners and asset managers to adapt and operate under a myriad of ever-changing rules. The spread of these new regulations (e.g., CECL, NAIC, Solvency II, IFRS 9 and 17, and others) has been accompanied by a nearly six-fold increase in global yearly regulatory alerts and SEC enforcement actions, from approximately 10,000 alerts and enforcement actions in 2008 to approximately 64,000 in 2021, according to SEC press releases and annual reports. Investors must be responsive to ensure they remain compliant across this vast range of regulations. Failure to do so could lead to investigations and sanctions. Asset owners and asset managers need a robust and dynamic solution to help them achieve and maintain compliance in this complex and ever-evolving environment.

Growing Importance of Alternative Assets

Investors are increasingly allocating capital to alternative assets and complex financial instruments as part of a search for higher investment returns and returns that are uncorrelated to equity and fixed income markets. According to a Preqin study from November 2020, investors expect to further increase their allocation to alternative assets over the coming years, particularly within private equity and debt. Alternative assets are typically traded less broadly and frequently than traditional investment assets (such as stocks, corporate bonds, treasury securities, currencies, mutual funds and exchange-traded funds) and often have less data readily available about them. This complicates reporting and risk management. Asset owners and asset managers need comprehensive, accurate and timely data regardless of the complexity of their investment holdings.

Rising Demand for Risk Management and Transparency

Investors are seeking the highest quality investment data and portfolio visibility in order to effectively make capital allocation decisions, manage risk and measure performance. Additionally, the rise of environmental, social and governance (ESG) initiatives in investing has increased the need for transparency in portfolio holdings as investors seek to measure compliance with ESG objectives. Asset owners and asset managers need a solution that provides on-demand transparency in order to optimize risk management and provide their stakeholders with the holdings-based visibility that they require.

Pressure to Increase Efficiency

The asset management industry is highly competitive and asset management firms must constantly improve operating efficiency to maintain profitability. Accounting teams at these firms are continually asked to meet growing regulatory and reporting challenges with fewer resources, an ultimately unsolvable problem with legacy products and processes. Additionally, the growing prominence of passive investment strategies (e.g., through the use of Exchange Traded Funds and Index strategies) has compressed fees for active asset managers and led to a greater focus on managing overall organizational costs to maintain profitability and operational efficiency. In order to effectively compete, asset owners and asset managers need modern automated solutions that reduce the need for greater headcount, and ultimately lower costs.

Digital Transformation from Legacy Technologies

Many of the challenges that plague asset owners and asset managers result from their reliance upon legacy software products and outdated manual processes. These products typically require on-premises deployments, feature poor system flexibility and data management capabilities, and result in higher total costs of ownership. Asset owners and asset managers are seeking cloud-based solutions that address the costly, manual and error-prone deficiencies of these legacy technologies.

Our Value Proposition

Clearwater's purpose-built single instance, multi-tenant technology platform helps clients around the world radically simplify their investment accounting and reporting, performance measurement, compliance monitoring and risk analytics. Our solutions provide our clients with a comprehensive view and single source of truth for their investment portfolios and we believe our solutions deliver unmatched levels of speed, flexibility, traceability, repeatability and auditability, all with no manual labor required of our clients. Some key aspects of our value proposition include:

- ***Single Instance, Multi-Tenant Platform:*** Clearwater's platform is purpose-built, 100% in the cloud. The single instance, multi-tenant architecture allows for efficient and continuous upgrades, new features, and updates to adjust for rapidly evolving industry requirements and regulations. Each upgrade and update is made available worldwide.

- ***Comprehensive View of Global Assets:*** For asset owners and asset managers, we provide comprehensive views and powerful analytics regarding their investment data. We offer investment accounting for $6.4 trillion of assets in our clients' portfolios globally as of December 31, 2022, including complex derivatives and alternative investments. Clients benefit from having a "single pane of glass" through which to holistically and accurately view their entire investment portfolios, with the flexibility to respond to unique reporting challenges across different regulatory regimes.

- ***Single Source of Truth for All Accounting, Risk, Compliance and Regulatory Reporting:*** We completely eliminate the need for clients to manually process and reconcile data from different sources and systems. By leveraging machine learning, automation and our direct connections with approximately 1,000 custodians, more than 1,400 managers, more than 400 trading data sources and all of the leading third-party market data providers, our platform automates data aggregation, data reconciliation and data validation of each security in our clients' investment portfolios. This allows us to deliver our clients data from a "Golden Copy" that is accurate, auditable and traceable.

- ***Radical Simplification of Investment Accounting Operations:*** We deliver our clients a single, comprehensive platform that allows them to perform investment accounting, performance measurement, compliance monitoring and risk analytics. By eliminating the need for our clients to aggregate, reconcile and validate security data, we greatly simplify and expedite their operations, allowing them to quickly close their books, comply with regulatory reporting requirements, reduce costs and free their time to focus on managing their portfolios and performing other higher-value functions.

- ***Accurate, Timely and Up-to-date Reporting:*** We offer transparent, and configurable views of our clients' portfolios, accessible anytime from anywhere. Additionally, we are committed to frequent and seamless incorporation of new features and functionalities on our platform to meet the evolving business needs of our clients and the latest regulatory demands. For example, our clients can switch from a GAAP view to a Tax view to a STAT view, all in a matter of seconds.

- ***Powerful Network Effects:*** Every incremental data source from an additional client improves our global data set by making it more complete and accurate for other clients on our platform that are similarly entitled to access such data. Our clients include a number of the leading financial institutions and corporations in the world, and by continually sourcing, ingesting, modeling, reconciling and validating the terms, conditions and features of every investment security held by all of our clients, we create a single repository of comprehensive, accurate investment data that serves to the benefit of other clients. This allows us to identify and adjudicate data discrepancies that otherwise could introduce error and risk into our clients' investment portfolios. Furthermore, our clients' analytical needs help us to continue driving best-in-class innovation with our offering. Our single-instance, multi-tenant platform allows us to take full advantage of these innovations as new Clearwater features and functions targeting any client's needs become immediately available to the entire Clearwater client base. In effect, each client benefits from the breadth of holdings, and the demands and needs of, all other Clearwater clients. We believe that this provides Clearwater with a meaningful competitive advantage because we are increasingly seen as the best and most accurate source of investment accounting data and analytics in the industry.

Our Platform

Our purpose-built single instance, multi-tenant technology platform simplifies our clients' investment accounting and reporting, performance measurement, compliance monitoring and risk analytics infrastructure and workflow. Our software automates data aggregation, data reconciliation and data validation of each security in our clients' investment portfolios. This creates a fully reconciled "Golden Copy" of investment portfolio data, which can be trusted for accurate reporting and analytics. Our clients benefit from having a comprehensive "single pane of glass" view for daily visibility into all investment data and analytics. Our platform often allows clients to eliminate multiple legacy products and systems as well as significant manual labor. Approximately 91% of portfolios are automatically validated, reconciled and processed without further intervention. The remaining 9% of accounts are flagged for further analysis and reconciled by our reconciliation team.

In order to deliver these powerful solutions and benefits, we purpose-built our technology stack to efficiently process millions of daily transactions in a highly scalable and efficient manner. Our platform is built on a single code base and eliminates the need for costly and time-consuming patches and upgrades across multiple, disparate software instances. As new features are developed and deployed, they are made available to all clients. Our system leverages the latest machine learning and artificial intelligence tools to ingest both structured and unstructured data that is transformed into a universal security model that enables network benefits for our clients.

Our clients access the platform through a web-based interface that is highly configurable and provides a set of tools that enable our clients to derive actionable insights on a daily basis. This allows our clients to view their portfolio data from anywhere with an internet connection. Our intuitive, easy-to-use website allows users to view high-level portfolio information and quickly drill into portfolio specifics down to the most granular security level. Our platform also creates automated feeds to other client systems—such as trade order management systems, data warehouses, enterprise resource planning (ERP) systems and others—eliminating the need for clients to manually enter data from Clearwater's solution into other client systems.

Our Solutions

Our solutions are offered through one unified Clearwater platform and are detailed below:

- **Investment Accounting and Reporting:** Our accounting solution was built with the flexibility to offer operational and regulatory accounting, from the simple to the complex, on the same platform. Our solution is comprehensive in its capabilities:
  - Multi-asset class: We have differentiated global asset class coverage including fixed income, equities, bank loans, commercial and residential mortgages, private capital markets (e.g., general and limited partnerships), derivatives and various other alternative assets;
  - Multi-basis: A single client can access 15 accounting bases, such as GAAP, Statutory, Tax and IFRS. Our platform has the flexibility to add new accounting bases as our clients' needs require; and
  - Multi-currency: We support clients with more than 40 local currencies (currency of the country they are domiciled in), 10 functional currencies (currency of the country where their principal business is), and numerous reporting currencies.

Our platform offers flexible configurations and outputs, customized general ledger entries for multiple accounting bases, and regulatory completeness. A suite of standardized reports automates relevant investment-related disclosures such as Fair Value Hierarchy and Level 3 Roll-forward and can be easily configured to provide the detailed accounting information investment accountants and internal stakeholders need. Our daily reconciliation, flexible reporting and general ledger capabilities ensure that period-end close processes are efficient and accurate.

- **Performance Measurement:** Our solution enables investors to compare separate accounts, set custom benchmarks and track the overall performance of their portfolios. Custom performance reports and return calculations are available and designed to meet applicable GIPS calculation standards for investment managers. Users can drill down into the underlying performance return data at the lot level and track performance attribution per portfolio.
- **Compliance Monitoring:** Our users can set custom rules to monitor compliance according to their investment policies and standard applicable regulations. All investment activity is checked against those rules as often as a client requires and tracked at the security level. Compliance can be tracked across multiple policies, and notifications are automatically sent if there is a violation. Any compliance policy changes or resolutions can also be documented and referenced for internal audits.
- **Risk Analytics:** We offer insightful risk analytics to ensure investors have access to their portfolios' exposure every day. Our risk monitoring solution provides access to critical financial and investment portfolio risk information, so users are able to quickly answer pressing risk-related questions, including exposures by issuer, currency, country, duration, credit rating and more. Users can also view benchmark comparisons and analyze other risk factors, including cash flow forecasting, credit events, shock analysis, value at risk (VaR), and historical trends and exposures.

Clearwater Prism

As asset managers and asset owners continue to digitize their operating model and drive towards a data-driven business model, they are faced with a myriad of legacy infrastructure and disparate data sources. Additionally, user demand for more seamless access to their data and deeper transparency, is creating an urgent need for aggregation and reporting that provides a comprehensive view of investment information in a single-pane-of-glass, incorporating third party investment-related information not tied to Clearwater performing accounting-related functions.

Our Clearwater Prism solution is a modular, SaaS-based data and reporting platform for investment data. Built on a cloud-native stack, it enables data ingestion, transformation, and reporting across all asset classes. These capabilities are delivered using a range of product modules namely Prism Reporting and Statements, Prism Connectors, Prism Data Ops and Prism Managed Services.

- **Prism Reporting and Statements** is a web-based client reporting and statement generation module that enables asset managers to create pixel-perfect client books and statements.
- **Prism Connectors** is a set of ready-made adapters to vendor- and proprietary platforms to ingest investment-related information.
- **Prism DataOps** is a data engineering platform that allows self-serve, user-defined data management including maintaining data taxonomy, lineage and transformation of investment-related information.
- **Prism Managed Services** is a modular service that provides clients with professional support services for maintaining and extending their data feeds and reports.

The application of these modules extend into various use cases, including aggregating external data with accounting data generated by the Clearwater platform, enabling the efficient processing of private markets data using the Clearwater LPx and Clearwater LPx Clarity products to provide a deep and unparalleled level of transparency and connectivity with other data sets, such as ESG data.

JUMP

We acquired JUMP in November 2022 in furtherance of our growth strategy of expanding internationally and entering into adjacent markets, offering adjacent functionality for the "Full Investment Lifecycle" and evolving into a multi-product company. JUMP provides us with significant expansion in European markets and increases our capabilities through unit-linked funds functionality to serve European insurers which have assets in unit-linked funds. With JUMP, we have additional capabilities providing a modular front, middle and back office solution to investment managers, private banks, and insurers which we have grouped into the following offerings:

- Portfolio management and order management
- Performance
- Unit-linked funds
- Full trade life cycle

The enhanced capabilities acquired from JUMP are complemented by our add on modules for Alternative Assets, Clearwater Prism, Multi-GAAP and Self-Service. The acquisition expands our offerings globally for our existing clients and we believe it opens a new addressable market for our business.

Our Clients

Clearwater serves a broad universe of institutional clients across multiple end-markets. Today, our largest client end-markets are asset management, insurance and corporate treasury. We are also growing our client base in the public sector with numerous state and local governments. While these end-markets and their clients can be quite different from each other, ultimately all of our clients need timely, accurate and comprehensive information on their investments in order to effectively make capital allocation and portfolio decisions, manage risk, measure performance, comply with regulations and communicate to various stakeholders both internally and externally. Chief Financial Officers, treasurers, controllers and Chief Operating Officers select our platform to deliver a holistic solution consisting of data aggregation, accounting book of record (ABOR), multi-basis reporting, powerful analytical tools and other key features.

As of December 31, 2022, we had over 1,200 clients across 39 countries with over $6.4 trillion of global invested assets on our platform. In addition, as of December 31, 2022, we had 67 clients who contributed at least $1,000,000 in annualized recurring revenue. Our diversified, blue-chip client base of insurance companies, asset managers and large corporations have $3.1 trillion, $1.9 trillion and $1.0 trillion in assets on our platform, respectively, as of December 31, 2022. In addition, SLED (state, local and education) entities, and bank/ community foundations have $0.2 trillion and $0.2 trillion in assets on our platform, respectively as of December 31, 2022. No client accounted for more than 10% of our revenue for the years ended December 31, 2022, 2021 and 2020, and our top 10 clients represented less than 30% of total revenue for each of the years ended December 31, 2022, 2021 and 2020.

Our Go-to-Market Strategy

We seek to deliver exceptional innovation and service to our clients every day. Client success is core to our go-to-market approach and contributes to both our ability to win new clients and retain existing clients.

We have earned an NPS of 60+ in an industry that typically scores much lower. Our high client satisfaction also translates into gross revenue retention rates of approximately 98% over the prior sixteen quarters. From January 1, 2017 to December 31, 2022, client partners and client referrals, taken together, generated approximately one quarter of our closed deals on a total revenue basis.

As we continue to see significant demand for our offerings around the world, we have also grown our sales force to 135 team members globally as of December 31, 2022. We divide this sales force by geography, client end-market and target client size. Our North American sales team includes representatives focused on insurance companies, asset managers, corporations and growth markets. Our international sales team includes representatives focused on insurers and asset managers based in various regions of Europe and APAC. We plan to continue expanding our sales force and adding new target end-markets in the periods ahead.

Our sales force is supported by a global marketing team with 25 team members. We actively grow our sales pipeline through account-based marketing, investment in our digital presence, increased brand awareness and product marketing. We will continue to invest in and build out our global marketing function to drive future pipeline and growth.

Our Growth Strategy

We intend to drive the growth of our business and expand our addressable market through the following strategies:

Deepen Our Relationships With Existing Clients

We believe we achieve our industry-leading NPS of 60+ by giving our clients an exceptional and differentiated solution and experience. We believe we are very effective in solving our clients' challenges in managing investment accounting and reporting, performance measurement, compliance monitoring and risk analytics. Our gross revenue retention rate over the last sixteen quarters has averaged 98%, and our net revenue retention rate reached 106% in the quarter ending December 31, 2022. For a discussion of gross revenue retention rate and net revenue retention rate, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Measures."

We actively seek to strengthen and deepen our client relationships through our client engagement model, which is a set of best practices aimed at increasing client satisfaction, engagement and share of wallet. We conduct quarterly steering committee meetings with key client stakeholders and senior members of Clearwater management and have semi-annual on-site visits to review key client's business needs, market feedback, our product roadmap and improvement opportunities. We believe that our relentless focus on client success and innovation will continue to result in strong client retention and allow us to grow as our clients grow.

Continue Expanding Within Our Core Client End-Markets

Our current core end-markets (asset management, insurance and corporations) remain significantly unpenetrated today. We continue to drive growth and market-share gains within these end-markets, which have to date been primarily served by legacy products and processes. We will continue to displace legacy products and add clients in these end-markets through our direct sales and marketing efforts and by helping our strategic asset manager clients win new clients, which in turn brings more assets onto our platform. With only approximately 4% market penetration for asset managers and approximately 31% for insurance companies in North America today, we believe that we have significant market opportunity for additional growth. Our competitive win rates for new clients remains approximately 80% over the prior five years in deals that reached the proposal stage, which gives us confidence that our approach works well.

Accelerate International Expansion

With new offices, leadership and sales teams now established in Europe and APAC (Asia-Pacific), we are poised to reach more new clients globally moving forward. We have substantial room to grow our international business as during the year ended December 31, 2022, revenues outside North America represented only 8% of our total revenues, despite these markets representing approximately 46% of our total addressable market. We have invested in these geographic markets recognizing that the challenges international clients experience are very similar to those experienced by our North American clients. We believe our solution is highly effective at addressing client needs regardless of geography.

Continue Expanding Within Adjacent Client End-Markets

We believe there is a significant opportunity for growth by continuing to target adjacent end-markets. There is a large opportunity to tailor the regulatory reporting and performance management capabilities of our existing solutions to better serve the needs of a range of additional asset owners, such as state and local governments, pension funds, sovereign wealth funds and a variety of alternative asset managers. We believe our existing solutions are suitable to serve the needs of the clients in these end-markets and the acquisition of JUMP strengthens these capabilities. While we have onboarded our first clients in these end-markets and have built internal teams to service them, we do not currently derive a material amount of revenue from these end-markets.

Innovate and Develop Adjacent Solutions

Clearwater has a long history of innovating and advancing our platform based on client feedback and evolving market needs. We will continue to invest heavily in expanding our functional breadth and depth, improving user experience, increasing automation and strengthening system performance. We intend to utilize emerging technologies including machine learning and robotic process automation to continue driving industry-leading capabilities and performance, keeping the platform at the very forefront of technology. Historically, we have sold our solutions as one unified offering. As clients have continued to find innovative uses for our platform in other business functions, we expect to sell and price those newer modules separately. Examples of our adjacent solutions that we have developed include Clearwater Prism and Clearwater LPx, which we believe help solve the investment reporting needs of our clients. Clearwater LPx is an investment data platform dedicated to streamlining the accounting process for limited partnerships. Clearwater clients leverage the automated solution to enable significant efficiency gains and solve the operational challenges associated with data aggregation, reconciliation, commitment tracking, document storage, accounting, and reporting. Clients are using Clearwater LPx to gain a full picture of all of their limited partnerships and to automate their NAIC reporting.

Pursue Strategic Partnerships and Acquisitions

We may selectively pursue partnerships and acquisitions that complement our solutions, provide us access to new markets or improve our competitive positioning within existing and new markets, or that otherwise accelerate one or more of our growth objectives. We completed the acquisition of JUMP in November 2022, which has expanded our capabilities in investment management and operations with a complete front-to-back end solution and provides significant expansion into European markets. We will continue to consider similar partnerships and acquisitions focused on improving our technology for alternative assets data and our performance and risk management offerings, as well as expansion in Europe, the Middle East and Asia.

Competition

The market for investment accounting and analytics is competitive and highly fragmented. The market is served by large-scale players with broad offerings as well as vendors with only point solutions that target local markets or specific client types, business functions or asset classes. We also face competition from systems developed and serviced internally by our potential clients' IT departments. We believe that there are currently no competitors who offer a cloud-native platform like ours. We further believe that our solution is more comprehensive than our competitors' in terms of asset class coverage and functionality. Our competitors primarily utilize legacy, on-premises systems and often employ large operational teams. While some of our competitors may take components or versions of their offerings into the cloud, their core platforms remain underpinned by legacy technologies, making it virtually impossible to ensure consistency, timeliness and auditability.

In each of our core client end-markets, we compete with a variety of firms depending on client size, type, location, computing environment and functional requirements. Our principal competitors include large providers of investment operations, accounting and analytics systems such as SS&C (with its Advent, Camra, Maximus, and Singularity products), State Street (with its PAM and outsourced service offerings), SAP, BNY Mellon's Eagle product, Simcorp's Dimension, BlackRock's Aladdin, FIS's iWorks and Northern Trust. We occasionally see smaller providers of specialized applications and services. We also compete with outsourcers, as well as the internal processing and IT departments of our prospective clients.

We believe the principal factors that drive competition in our market include:

- Comprehensive accounting and reporting of global assets on a daily basis;
- Ability to provide a "Golden Copy" / single source of data truth in order to ensure data consistency across all business applications;
- Breadth and quality of solutions;
- Technology differentiation, including single instance, multi-tenant architecture;
- Automated data aggregation and reconciliation capabilities;
- Flexible and integrated reporting;
- Daily and on-demand visibility into investment performance;
- Quality of client service;
- Reputation with other leading financial institutions and clients;
- Frequent and complete regulatory updates;
- Simplified IT infrastructure and operating costs;

- Scalability, including handling large changes in assets (e.g., M&A);
- Ease of use and quality of user interface; and
- The price of such offerings and return on investment.

Product Development & Engineering

Our product development and engineering teams are focused on extending our market leadership by innovating on both our existing and new solutions. We believe we must pursue relentless and aggressive innovation to maintain our competitive advantage. To meet these goals, we use multidisciplinary teams of highly trained personnel and leverage their expertise across our solutions. We have invested heavily in our product development and engineering teams to ensure a high degree of product functionality and quality.

Our product and engineering management team focuses on near-term and long-term product strategy, identifying and implementing best practices, continual improvement in engineering throughput and quality, integration strategies across third-party products, and continued process automation.

Approximately 35% of our global employee base is dedicated to product development and engineering. Our personnel are organized into solution-specific teams and are based principally in Boise, Idaho, Seattle, Washington and Noida, India. We expect to continue our significant investment in product engineering and innovation as we extend our competitive strengths moving forward.

Intellectual Property and Proprietary Rights

We rely on a combination of trademark, copyright and trade secret protection laws in the United States and other jurisdictions, as well as confidentiality procedures, technical measures and contractual restrictions, to protect our proprietary technology and our intellectual property. We seek to control access to and distribution of our proprietary information.

We enter into confidentiality agreements and/or license agreements with our employees, consultants, clients and vendors that generally provide that any confidential or proprietary information developed by us or on our behalf be kept confidential. In the normal course of business, we provide our intellectual property to third parties through licensing or restricted use agreements. We have proprietary know-how in our algorithms, business on-boarding functions and software applications. We have in the past and may in the future pursue patents covering our proprietary technology. We also pursue the registration of certain of our trademarks and service marks in the United States. We have registered the mark “Clearwater” with the U.S Patent and Trademark Office. In addition, we have registered numerous Internet domain names related to our business. We have established a system of security measures to protect our computer systems from security breaches and computer viruses, including various technology and process-based methods, such as clustered and multi-level firewalls, intrusion detection mechanisms, vulnerability assessments, content filtering, antivirus software and access control mechanisms. We also use encryption techniques for data transmissions. We control and limit access to confidential and proprietary information on a “need to know” basis.

In October 2022, Clearwater was granted its first patent from the United States Patent Office (Patent No.: US 11,475,078 B2). The invention relates to identifying Application Programming Interface (“API”) endpoints and the information required to use the endpoints in a software environment. By “crawling” the environment, the invention can identify API functions and web services available in the environment. The invention also allows users to search for specific functionality, or the use of certain data or information, to find specific web services, and eliminate the need to manually search through each function in the API to find the “best” function for the situation.

Regulations

As with any company operating in our field, we are subject to a growing number of local, national and international laws and regulations. These laws are often complex, sometimes contradict other laws, and are frequently evolving. Laws may be interpreted and enforced in different ways in various locations around the world, posing a significant challenge to our global business. This ambiguity includes laws and regulations possibly affecting our business, such as those related to data protection. Changes to such laws and regulations could cause us to incur additional costs and change our practices in order to comply.

Data Protection and Privacy

Users of our solutions and services are located in the United States and around the world. As a result, we may collect and store the personal information of individuals who live in many different countries. Accordingly, we may be subject to those countries’ privacy laws and the jurisdiction of such regulators by collecting or storing the personal data of those countries’ residents, even if we have no physical or legal presence there. Our exposure to foreign countries’ privacy and data security laws may impact our ability to collect and use personal information, increase our legal compliance costs and expose us to liability.

We have incurred, and will continue to incur, expenses to comply with privacy and security standards and protocols imposed by law, regulation, industry standards or contractual obligations. Increased domestic or international regulation of data utilization and distribution practices could require us to modify our operations and incur significant additional expense, which could have a material adverse effect on our business, financial condition or results of operations. Although we primarily process institutional financial information, we could face liability related to unauthorized access to, disclosure or theft of the personal information we store and process, and could consequently incur significant costs.

Anti-Corruption and Sanctions

We are subject to anti-corruption, anti-bribery, anti-money laundering and similar laws imposed by governments around the world with jurisdiction over our operations, which may include, among others, the Foreign Corrupt Practices Act (the "FCPA"), the USA PATRIOT Act and other applicable laws in the jurisdictions in which we operate.

Our Human Capital Management and Culture

As of December 31, 2022, we had 1,728 employees, including approximately 609 in product development and engineering, 168 in sales and marketing, 829 in operations and 122 in executive, general administrative and corporate functions. Of these employees, 679 were located in Boise, Idaho, 35 were located in Seattle, Washington, 20 were located in New York, New York, 13 were located in McLean, Washington D.C. metropolitan area, 212 were located remotely within the United States, 157 were located in Edinburgh, United Kingdom, 32 were located in London, United Kingdom, 108 were located in Paris, France (inclusive of JUMP employees), 4 were located in Frankfurt, Germany, 6 were located in Singapore, and 462 were located in Noida, India. None of our U.S. employees are subject to a collective bargaining agreement. Employees in France are represented by local workers' councils and/ or collective bargaining agreements, as required by local laws or customs. We have never experienced a work stoppage and believe our relationship with our employees to be good.

We have a team-oriented culture and encourage candor from our employees, which we believe helps us to succeed and drive operational excellence. We also seek to, and have a history of, promoting from within our organization as well as hiring top talent from outside of our company to expand our capabilities.

We aim to hire individuals who share our passion, commitment and entrepreneurial spirit. We are also committed to diversity and inclusion because we believe that diversity leads to better outcomes for our business and enables us to better meet the needs of our clients. We recognize the importance of diversity in leadership roles within our company.

We encourage our employees to operate by a common set of values, which includes being:

- Infectiously passionate about Clearwater;
- Intensely committed to our clients;
- Devoted to building an outstanding, engaged team;
- Focused on execution and dedicated to getting things done;
- Continuously innovative and improving;
- Dedicated to building truly differentiated offerings; and
- Committed to having values beyond reproach.

We believe that operating with purpose, passion and creativity benefits our clients, stockholders, employees and suppliers, as well as the communities where we operate, and the environment.

ESG

Clearwater is focused on ESG objectives to create long-term value and manage risks, as well as to seek to positively impact our community through both company and employee efforts. Clearwater has recently, with the aid of a well-known consulting firm, completed an ESG materiality assessment and identified the following ESG priorities:

- Environmental: renewable energy, greenhouse gas emissions, climate risk and action, responsible sourcing and procurement;
- Social: diversity, equity and inclusion, community engagement and responsible products and offerings; and
- Governance: data privacy, corporate governance, ethics and anti-corruption and risk management

Clearwater has a number of on-going initiatives and has demonstrated progress in several of these areas, including offering employee benefits that promote responsible transportation, volunteerism and charitable contributions, transitioning to a cloud-based server provider, prioritizing board diversity with a Board of Directors that is 60% comprised of women, racial and ethnic minority and LGBTQ+ directors. Clearwater has also instituted leading information security practices to meet the high security expectations of its client base.

Clearwater is particularly proud of Clearwater Cares, our corporate social responsibility program, through which we have worked with our employees to identify three company-wide priorities: science, technology, engineering and mathematics ("STEM") education, human services and sustainability. For example, in Boise, Idaho, employees volunteered at an Hour of Code event and Clearwater donated funds for classroom tools for robotics and game design. Clearwater has also donated to food drives in Boise, Idaho, Edinburgh, Scotland and Noida, India. We have partnered with the Salma Public School in Uttar Pradesh, India, where employees have participated in interactive learning sessions, sports days and other activities. Employees there also worked with a local non-governmental agency to donate winter essentials to the underprivileged. We offer our employees 16 hours of paid time off to perform volunteer services and have matched employee donations to company identified charities.

Organization

Clearwater Analytics Holdings, Inc. was incorporated as a Delaware corporation on May 18, 2021. We are a holding company and our principal asset is our interest in CWAN Holdings. We completed an underwritten IPO of shares of our Class A common stock on September 23, 2021. Prior to the IPO, all business operations were conducted through Carbon Analytics Holdings, LLC, which changed its name to CWAN Holdings, LLC in connection with the IPO.

Available Information

Our website is located at https://www.clearwateranalytics.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, including their exhibits, proxy and information statements, and amendments to those reports filed or furnished pursuant to Sections 13(a), 14, and 15(d) of the Securities Exchange Act of 1934, as amended, are available through the "Investors" portion of our website free of charge as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information on our website is not part of this Annual Report on Form 10-K or any of our other securities filings unless specifically incorporated herein or therein by reference. In addition, our filings with the SEC may be accessed through the SEC's Interactive Data Electronic Applications system at http://www.sec.gov. All statements made in any of our securities filings, including all forward-looking statements or information, are made as of the date of the document in which the statement is included, and we do not assume or undertake any obligation to update any of those statements or documents unless we are required to do so by law.

Item 1A. Risk Factors.

The Company's business, reputation, results of operations and financial condition, as well as the price of the Company's stock, can be affected by a number of factors, whether currently known or unknown, including those described below. When any one or more of these risks materialize from time to time, the Company's business, reputation, results of operations and financial condition, as well as the price of the Company's stock, can be materially and adversely affected.

Because of the following factors, as well as other factors affecting the Company's results of operations and financial condition, past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods. This discussion of risk factors contains forward-looking statements.

This section should be read in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and accompanying notes in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.

Macroeconomic and Industry Risks

We operate in a highly competitive industry, with many companies competing for business from insurance companies, asset managers, corporations and government entities on the basis of a number of factors, including the quality and breadth of solutions and services provided, ability to innovate, reputation and the prices of services, and this competition could hurt our financial performance and cash flows.

The market for financial services software and services is competitive, rapidly evolving and highly sensitive to new product and service introductions, technological innovations and marketing efforts by industry participants. We and our competitors compete based on a variety of factors, including the range of offerings we provide, brand recognition, business reputation, financial strength, stability and continuity of client and other intermediary relationships, quality of service, and level of fees charged for our solutions and services. The market is also highly fragmented and served by numerous firms that target only local markets or specific client types. We compete with many different types of companies that vary in size and scope, including SS&C (Advent, Camera, Maximus, and Singularity), State Street (PAM), SAP, BNY Mellon (Eagle), Simcorp (Dimension), BlackRock (Aladdin), FIS (iWorks) and Northern Trust, and which are discussed in greater detail under "Business—Competition". In addition, some of our clients, including financial services firms, have developed or may develop the in-house capability to provide the technology, investment reporting and accounting solutions, regulatory reporting solutions and investment risk management and performance analytics solutions and services they have engaged us to perform, obviating the need to hire us.

Some of our current and potential competitors also have significantly greater resources than we do. These resources may allow our competitors to respond more quickly to changes in demand for our solutions and services, and to devote greater resources to developing and promoting their services and to make more attractive offers to potential clients and strategic partners, which could hurt our financial performance. Our competitors may also enter into alliances with each other or other third parties, and through such alliances, acquire increased market share. Increased competition may result in price reductions, reduced gross margins and loss of market share.

Our failure to successfully compete in any of the above-mentioned areas could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We are dependent on fees based on the value of the assets on our platform for the vast majority of our revenues, and to the extent market volatility, a downturn in economic conditions or other factors cause negative trends or fluctuations in the value of the assets on our platform, our fee-based revenue and earnings may decline.

Substantially all of our revenue is derived from fees that are primarily based on the amount of assets on our platform. These fees are stated in basis points, or 1/100th of 1%. Though in substantially all cases we charge a minimum fee regardless of the assets that are loaded onto our platform, our results of operations and financial condition are highly dependent on the value of the assets that our clients maintain on our platform. In particular, we are dependent on the fee-based revenue from our insurance industry clients and asset manager clients, from whom we derived 51% and 34%, respectively, of our total revenue for the year ended December 31, 2022.

Because we provide a majority of our solutions to the financial services industry, we are vulnerable to U.S. and foreign economic conditions and general trends in business and finance, which are affected by many factors beyond our control, including interest rate changes, inflation, exchange rate changes, fiscal and monetary policy and general economic conditions, including those caused by national and international macroeconomic events, including instability caused by the Russian invasion of Ukraine and related sanctions. For example, customers of our asset manager clients are generally free to change asset managers, and can even withdraw the funds they have invested with asset managers to avoid all securities markets-related risks. Because of significant fluctuations in securities prices or investment underperformance driven by an economic downturn, such an investor may choose to transfer assets to investments that are perceived to be more secure and that are not maintained or managed by our asset manager clients, such as bank deposits and Treasury securities, or to mutual funds. These actions by investors are outside of our control and could materially adversely affect the portfolio market value of the assets that our clients have loaded onto our platform, which could in turn materially adversely affect the portfolio-based fees we receive from our clients. Significant changes in investing patterns or large-scale withdrawal of investment funds could have a material adverse effect on our business, financial condition or results of operations.

Demand for our solutions and services could decline for other client-based reasons as well. Consolidation or limited growth in the industries we serve, including the insurance industry, could reduce the number of our clients and potential clients. Political or regulatory events or changes that adversely affect our clients' businesses, rates of growth, costs of operations and regulatory compliance or the numbers of customers they serve, including decreased demand for our clients' products and services or adverse conditions in our clients' markets generally, could decrease demand for our solutions and services and thereby decrease our revenues. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations or cash flows.

Because some of our sales efforts are targeted at large financial institutions, corporations and government entities, we face prolonged sales cycles, substantial upfront sales costs and less predictability in completing some of our sales. If our sales cycle lengthens, or if our upfront sales investments do not result in sufficient revenue, our results of operations may be harmed.

We target a portion of our sales efforts at large financial institutions, corporations and government entities, which presents challenges that are different from those we encounter with smaller clients. Because our large clients are often making an enterprise-wide decision to deploy our solutions, we face longer sales cycles, complex client requirements, substantial upfront sales costs, significant contract negotiations and less predictability in completing some of our sales with these clients. Our sales cycle can often last several months or more with our largest clients, who often undertake an extended evaluation process, but this is variable and difficult to predict. We anticipate that we will experience even longer sales cycles, more complex client needs, higher upfront sales costs and less predictability in completing sales with clients located outside of the United States. If our sales cycle lengthens or our upfront sales investments do not generate sufficient revenue to justify our investments in our sales efforts, our results of operations may be harmed.

Business and Operational Risks

We have experienced considerable revenue growth over the past several years, which may be difficult to sustain, and we depend on attracting and retaining top talent to continue growing and operating our business, and if we are unable to hire, integrate, develop, motivate and retain our personnel, we may not be able to maintain or manage our growth, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our revenues for the year ended December 31, 2022 grew 20% compared to the same period in 2021. Continued future growth could place additional demands on our resources and increase our expenses. Our success depends in large part on our ability to attract high-quality management and employees in sales, development, software engineering, operations and support functions. In addition to hiring new employees, we must continue to focus on retaining our best talent and preserving our culture, values and entrepreneurial environment. Competition for qualified employees is intense in our industry, and the loss of even a few qualified employees, or an inability to attract, retain and motivate additional highly skilled employees required for the ongoing expansion of our business, could harm our results of operations and impair our ability to grow. To attract and retain key personnel, we use various measures, including an equity incentive program for key executive officers and employees. We may need to invest significant amounts of cash and equity for new and existing employees and we may never realize returns on these investments. In addition, these measures may not be enough to attract and retain the personnel we require to operate our business effectively. In 2022, we observed an overall tightening and increased competitiveness in the U.S. labor market. Although we have not experienced any material labor shortage, a prolonged labor shortage or increased employee turnover caused by general macroeconomic or other factors could increase our labor costs and negatively impact our ability to serve our clients. If we are not able to effectively increase and retain our talent, our ability to achieve our strategic objectives will be adversely impacted, and our business, financial condition and results of operations will be harmed.

Sustaining growth will also require us to commit additional sales, management, operational and financial resources and to maintain appropriate operational and financial systems. In addition, continued growth increases the challenges involved in:

- successfully expanding the range of solutions and services offered to our clients;
- developing and improving our internal administrative infrastructure, particularly our financial, operational, compliance, record-keeping, communications and other internal systems; and
- maintaining high levels of satisfaction with our solutions and services among clients.

We may not be able to manage our expanding operations effectively or maintain or accelerate our growth, and any failure to do so could adversely affect our business, financial condition, results of operations and cash flows.

Our clients may seek to negotiate a lower fee percentage or may cease using our services, which could limit the growth of, or decrease, our revenues.

Our revenues are derived from fees we charge our clients based on an agreed upon basis points rate applied against the average daily value of assets on the platform over a given month, subject to contracted minimums. The basis points are typically tiered based on the amount of assets on platform (e.g., a client would be charged a lower basis point rate on incremental assets after exceeding a certain threshold). In general, the price we charge our clients for our solutions is based on a number of factors including the expected amount of assets on the platform, asset mix (e.g., fixed income, structured products, equities, derivatives or private assets), transaction volume, number of data feeds, and other client-specific factors. Our clients may, for a number of reasons, seek to negotiate a lower basis points fee percentage. For example, an increase in the use of index-linked investment products by the customers of our asset manager clients may result in lower fees being paid to our clients, and our clients may in turn seek to negotiate lower basis points fee percentages for our services. Similarly, the total value of assets reported in our insurance clients' regulatory filings may decrease, and as a result, such clients may seek a corresponding reduction in our related fees.

In addition, as competition among our clients increases, they may be required to lower the fees they charge to their customers, which could cause them to seek to decrease our fees accordingly. Any of these factors could result in fluctuation or a decline in our portfolio-based fees, which would have a material adverse effect on our business, financial condition or results of operations.

If our investment accounting and reporting solutions, regulatory reporting solutions or risk management or performance analytics solutions fail to perform properly due to undetected errors or similar problems, our business, financial condition, reputation or results of operations could be materially adversely affected.

Investment accounting and reporting solutions, regulatory reporting solutions and risk management and performance analytics solutions we develop or license may contain undetected errors or defects despite testing. Such errors can exist at any point in the life cycle of our solutions, but there is an increased risk that they will be found after new services, enhancements or data sources are incorporated into our existing solutions or services. We continually introduce new solutions and services and new versions of our solutions and services, including, for example, in response to new or modified regulations or reporting requirements. Despite internal testing and testing by current and potential clients, our current and future solutions and services may contain serious defects or malfunctions. If we detect any errors before release, we might be required to delay the release of the solution or service for an extended period of time while we address the problem. We might not discover errors that affect our new or current solutions, services or enhancements until after they are deployed or after they have, for example, resulted in incorrect reporting on which our clients are dependent, and we may need to provide new enhancements to correct such errors. Errors may occur that could have a material adverse effect on our business, financial condition or results of operations and could result in harm to our reputation, lost sales, delays in commercial release, claims by affected clients, third-party claims, contractual disputes, contract terminations or renegotiations, or unexpected expenses and diversion of management and other resources to remedy errors. In addition, negative public perception and reputational damage caused by such claims would adversely affect our client relationships and our ability to enter into new contracts. Any of these problems could have a material adverse effect on our business, financial condition, reputation or results of operations.

We could face liability or incur costs to remediate operational errors or to address possible client dissatisfaction.

Operational risk generally refers to the risk of loss resulting from our operations, including, but not limited to, improper or unauthorized execution and processing of transactions and financial and market data, deficiencies in our operating systems, faulty aggregation or incorrect reconciliation of data by our solutions and services, miscalculations of cash balances available for investment purposes, business disruptions and inadequacies or breaches in our internal control processes. We operate in diverse markets and are reliant on the ability of our employees, systems, solutions and services to process large volumes of transactions and financial and market data, often within short time frames. In the event of a breakdown or improper operation of our systems, errors in our solutions and services, human error or improper action by employees, we could suffer financial loss or damage to our reputation, including as a result of allegations (and associated claims for contractual or other remedies) by any client that operational errors on our part resulted in financial or other harm to their business.

In addition, there may be circumstances when our clients are dissatisfied with our solutions and services, even in the absence of an operational error. In such circumstances, we may elect to make payments or otherwise incur increased costs or lower revenues in order to maintain a strong client relationship. In any of the forgoing circumstances, our business, financial condition, reputation or results of operations could be materially adversely affected.

Our business relies heavily on computer equipment, cloud-based services, electronic delivery systems, networks and telecommunications systems and infrastructure, the Internet and the information technology systems of third parties. Any failures or disruptions in any of the foregoing could result in reduced revenues, increased costs and the loss of clients and could harm our business, financial condition, reputation, and results of operations.

Our business relies heavily on our computer equipment (including our servers), cloud-based services, electronic delivery systems, networks and telecommunications systems and infrastructure, the Internet and the information technology systems of third party providers, and the foregoing may be vulnerable to disruptions, failures or slowdowns caused by fire, earthquake, extreme weather events, power loss, telecommunications failure, terrorist attacks, wars, Internet failures, computer viruses, system errors and miscalculations and other events beyond our control. Furthermore, we rely on agreements with our suppliers, such as our current data hosting and service provider and financial market data providers, and on our clients' agreements with certain third party data providers, to provide us with access to certain computer equipment, cloud-based services, electronic delivery systems, the Internet, market financial information and information regarding our clients' assets. A future contractual dispute may arise with one of our suppliers or third party data providers that could cause a disruption or deterioration in our solutions and services, and we are unable to predict whether our agreements with our suppliers or our clients' agreements with third party data providers can be obtained or renewed on acceptable terms, or at all. An unanticipated disruption, failure or slowdown affecting our key technologies or facilities may have significant ramifications, such as data loss, data corruption, damaged software code, inaccurate accounting of transactions, inaccurate regulatory reporting or inability to provide certain solutions and services to our clients. We maintain off-site back-up facilities for our electronic information and computer equipment, but these facilities could be subject to the same interruptions that may affect our primary facilities. Any significant termination of data access, or disruptions, failures, slowdowns, data loss or data corruption could have a material adverse effect on our business, financial condition or results of operations and result in the loss of clients.

If sources from which we obtain information limit our access to such information or institute or increase fees for accessing such information, our business could be materially and adversely harmed.

Our data aggregation solutions require certain data that we obtain from thousands of sources, including banks, financial institutions, data providers, custodians and other organizations, some of which are not our current clients or in direct contractual privity with us. Although we have a data feed with each of our clients, our access to much of the data we aggregate, reconcile and offer as part of our solutions is facilitated through and reliant upon agreements between our clients and providers of such data, such as asset managers and custodians, and we often do not have direct contractual relationships with such providers. If the sources from which we obtain information that is important to our solutions and services limit or restrict our ability to access or use such information, we may be unable to obtain similar data from other sources on commercially reasonable terms or at all, or we may be required to attempt to obtain such information by other means, such as end-user permissioned data scraping, that could be more costly and time-consuming, and less effective or efficient.

In order to serve our clients, we must have a reliable method from which to obtain client data. In the past, certain of our clients have requested we obtain this data through a web-based retrieval process, which we refer to as a web-based data feed. We sometimes encounter issues with our web-based data feeds, including as a result of our clients' implementation of new security controls, changes to the layouts of web pages, or the use of software intended to block unauthorized scraping activities. If we are unable to re-institute the web-based data feed, or otherwise obtain the data from our clients through another reliable means, then we may be unable to continue to serve the affected clients. In any event, redesigning our web-based data feeds or being required to obtain data by other reliable means diverts time and resources and may have an adverse effect on our business, financial condition or results of operations.

In the past, a limited number of third parties have either blocked our access to their websites or requested that we cease employing data scraping of their websites to gather information, and we could receive similar, additional requests in the future. Any such limitation or restriction may also preclude us from providing our solutions and services on a timely basis, if at all. In addition, if in the future one or more third parties challenge our right to access information from these or other sources, we may be required to negotiate with such sources for access to their information, which may be more costly, or to discontinue certain of our solutions and services entirely. The legal environment surrounding data scraping and similar means of obtaining access to information contained on third-party websites is evolving, and one or more third parties could assert claims against us seeking damages or to prevent us from accessing information from third-party websites in that manner. In the event sources from which we obtain information begin to charge us fees for accessing such information, or block our access to this information entirely, we may be forced to increase the fees that we charge our clients or discontinue certain solutions and services, which could make our solutions and services less attractive, or our gross margins and other financial results could suffer.

If our reputation is harmed, our business, financial condition or results of operations could be materially adversely affected.

Our reputation, which depends on earning and maintaining the trust and confidence of our clients, is critical to our business. Our reputation is vulnerable to many threats that can be difficult or impossible to control, and costly or impossible to remediate. Regulatory inquiries or investigations, lawsuits initiated by our clients or others, employee misconduct, perceptions of conflicts of interest and rumors, among other developments, could substantially damage our reputation, even if they are baseless or satisfactorily addressed. In addition, any perception that the quality of our solutions and services may not be the same or better than that of other providers can also damage our reputation. Any damage to our reputation could harm our ability to attract and retain clients, which would materially adversely affect our business, financial condition and results of operations.

Early termination of our client contracts could have a material adverse effect on our business, financial condition or results of operations.

Our client contracts are generally terminable upon thirty days' notice by our clients or prior to such time for cause, which may include breach of contract, bankruptcy, insolvency and other reasons. If a significant number of our clients were to terminate their contracts with us and we were unable to obtain a significant number of new clients, our business, financial condition or results of operations could be materially adversely affected.

We could face liability related to unauthorized access to, disclosure or theft of the personal information we store and process, and could consequently incur significant costs.

Although we primarily process institutional financial information, clients may maintain personal information, including personal investment, accounting and financial information, on our platform and we could be subject to liability if we were to inappropriately disclose any such client's personal information, inadvertently or otherwise, or if third parties were able to obtain access to our network, circumvent our security, or otherwise gain access to any user's name, address, portfolio holdings or other personal or financial information that we store or process. Any such event could subject us to claims and liability related to unauthorized access to or use of personal information, including claims by such users and by applicable regulatory authorities, which could cause us to incur significant costs and divert the attention of our management and technical personnel, or cause harm to our reputation, and could therefore have a material adverse effect on our business, financial condition or results of operations.

Our clients are located in the United States and around the world. As a result, we may also collect, process and store the personal information of individuals who live in many different countries. Privacy regulators in some of those countries have publicly stated that foreign entities (including entities based in the United States) may render themselves subject to those countries' privacy laws and the jurisdiction of such regulators by collecting or storing the personal data of those countries' residents, even if such entities have no physical or legal presence there. Consequently, we may be obligated to comply with the privacy and data security laws of certain foreign countries. Our potential exposure to foreign countries' privacy and data security laws may impact our ability to collect and use personal information now and in the future, increase our legal compliance costs and may expose us to significant liability for non-compliance.

We are also subject to various laws and regulations both in the United States, including the California Consumer Privacy Act, and in other countries where we currently operate, including the Data Protection Act 2018 and UK General Data Protection Regulation in the United Kingdom. We have incurred, and will continue to incur, expenses to comply with privacy and security standards and protocols imposed by law, regulation, industry standards or contractual obligations. Increased domestic or international regulation of data collection, processing, transfer and security could require us to modify our operations and incur significant additional expense, which could have a material adverse effect on our business, financial condition or results of operations. Additionally, we are subject to the terms of our privacy policies and privacy-related obligations to third parties. Any failure or perceived failure by us to comply with our privacy policies, our privacy-related obligations to clients or other third parties, or our legal obligations relating to privacy, or any compromise of security that results in the unauthorized access to, disclosure or misuse of personal information may result in governmental or regulatory investigations, enforcement actions, fines, litigation, or negative publicity and could cause clients to lose trust in us, all of which could be costly and have an adverse effect on our business.

If we or our third-party service providers suffer a cybersecurity event, our reputation may be harmed, we may lose clients and we may incur significant liabilities, any of which would harm our business and results of operations.

Cyberattacks, computer malware, viruses, social engineering (including phishing attacks), ransomware attacks and general hacking are becoming more prevalent generally and in our industry, and we may in the future become the target of third parties seeking unauthorized access to our confidential or sensitive information or that of our clients. In addition, third parties may attempt to fraudulently induce employees, contractors or users to disclose information, including usernames and passwords, to gain access to our clients' data, our data or other confidential or sensitive information, and we may be the target of email scams that attempt to acquire personal information or company assets. While we have security measures in place designed to protect our and our clients' confidential and sensitive information and prevent unauthorized access to data, these measures may not be effective to prevent a security breach, including as a result of employee error, theft, misuse or malfeasance, third-party actions, unintentional events, or deliberate attacks by individuals or criminal organizations, any of which may result in someone obtaining unauthorized access to our or our clients' data, including to our trade secrets or other confidential and proprietary business information. Because techniques used to sabotage or obtain unauthorized access to systems change frequently and frequently are not recognized until successfully launched against a target, we may be unable to anticipate all such techniques, or react in a timely manner or implement adequate preventative measures against such techniques. We devote significant financial and personnel resources to implement and maintain security measures; however, as cybersecurity threats develop, evolve and grow more complex over time, it may be necessary to make further investments to protect our data and infrastructure.

We use third parties to provide certain data processing services, including hosting services; however, our ability to monitor our third-party service providers' data security is limited. Because we do not control our third-party service providers, or the processing of data by our third-party service providers, we cannot ensure the measures they take to protect and prevent the loss of our data or our clients' data are sufficient.

A security breach suffered by us or our third-party service providers, an attack causing outages or unavailability of our solutions and services, or any unauthorized, accidental or unlawful access or loss of data, or the perception that any such event has occurred, could result in a disruption to our solutions and services, litigation, an obligation to notify regulators and affected individuals, the triggering of service availability, indemnification and other contractual obligations to our clients, regulatory investigations, government fines and penalties, reputational damage, loss of sales and clients, mitigation and remediation expenses and other significant costs and liabilities. In addition, we may incur significant costs and operational consequences of investigating, remediating, eliminating and putting in place additional tools and devices designed to prevent future actual or perceived security incidents, as well as the costs to comply with any notification or other obligations resulting from any security incidents. We also cannot be certain that our existing insurance coverage will be available in sufficient amounts to cover the potentially significant losses that may result from a security incident or breach, or will continue to be available on acceptable terms or at all, or that the insurer will not deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could adversely affect our business, financial condition and results of operations. Further, our clients and their service providers administer access to data and control the entry of such data on their systems. As a result, a client may suffer a cybersecurity event on its own systems, unrelated to our own systems, and a malicious actor could obtain access to the client's information held on our system. Even if such a breach is unrelated to our own security programs or practices, or if the client failed to adequately protect their system, that breach could result in our incurring significant economic and operational costs in investigating, remediating, eliminating and putting in place additional tools and devices to further protect our clients from their own vulnerabilities, and could also result in reputational harm to us.

The reliability and security of our information technology systems is critical to our operations and the implementation of our growth initiatives. Any cybersecurity event or other material disruption in our information technology systems, or delays or difficulties in implementing or integrating new systems or enhancing current systems, could have an adverse effect on our business, and results of operations.

Disruptions, capacity limitations or interference with our use of the data centers that host our solutions and services could result in delays or outages and harm our business.

We currently partially host and intend to increasingly host our cloud service from third-party data center facilities from several global locations operated by Amazon Web Services ("AWS") or Google Cloud Computing Services. Any damage to, failure of or interference with our cloud service that is hosted by AWS or Google, or by third-party providers we currently utilize or may utilize in the future, whether as a result of our actions, actions by the third-party data centers, actions by other third parties, or acts of God, could result in interruptions in our cloud service and/or the loss of our or our clients' data. While the third-party data centers host the server infrastructure, we manage the cloud services through our internal teams, and we need to support version control, changes in cloud software parameters and the evolution of our products, all in a multi-OS environment. As we utilize third-party data centers, we may move or transfer our data and our clients' data from one region to another. Despite precautions taken during this process, any unsuccessful data transfers may impair the delivery of our solutions. Impairment of, or interruptions in, our cloud services may subject us to claims and litigation, cause our clients to terminate their agreements with us and adversely affect our ability to attract new clients. Our business will also be harmed if our clients and potential clients believe our services are unreliable. Additionally, any limitation of the capacity of our third-party data centers could impede our ability to scale, onboard new clients or expand the usage of existing clients, which could adversely affect our business, financial condition and results of operations.

We do not control, or in some cases have limited control over, the operation of the data center facilities we use to host our solutions and services, and these facilities may be vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunications failures and similar events. They may also be subject to cyberattacks, break-ins, sabotage, intentional criminal acts, acts of vandalism and similar misconduct and to adverse events caused by operator error. Despite precautions taken at these facilities, the occurrence of a natural disaster, an act of terrorism, war or other act of malfeasance, a decision to close the facilities without adequate notice to us, or other unanticipated problems at these facilities could result in lengthy interruptions in our solutions and services and the loss of client data and business, and related claims by our clients against us. We may also incur significant costs for using alternative equipment or facilities or taking other actions in preparation for, or in reaction to, any such events.

We may be unable to adapt to rapidly changing technology, evolving industry standards and regulatory requirements and new product and service introductions, which could result in a loss of market share.

Rapidly changing technology, evolving industry standards and regulatory requirements and new product and service introductions characterize the market for our solutions. Our future success will depend in part upon our ability to enhance our existing offerings, including to localize them to differing local requirements, and to develop and introduce new solutions and services to keep pace with such changes and developments and to meet changing client needs. The process of developing our platform is extremely complex and is expected to become increasingly complex and expensive in the future due to the introduction of new platforms, operating systems and technologies. Our ability to keep up with technology and business and legal and regulatory changes is subject to a number of risks, including that:

- we may find it difficult or costly to update our solutions and services and to develop new solutions and services quickly enough to meet our clients' needs;
- we may find it difficult or costly to make some features of our software work effectively and securely over the Internet or with new or changed external applications;
- we may find it difficult or costly to update our solutions and services to keep pace with business, evolving industry standards, regulatory and other developments in the industries where our clients operate;
- we may find it difficult or costly to advertise and market our solutions and services;
- we may find it difficult or costly to protect our proprietary technology and intellectual property rights;
- our clients may delay purchases in anticipation of new solutions, services or enhancements; and
- we may be exposed to liability for security breaches that allow unauthorized persons to gain access to confidential information stored on our computers or transmitted over our network.

Our failure to enhance our platform and to develop and introduce new solutions and services to promptly address the needs of the insurance industry and financial markets could adversely affect our business, financial condition or results of operations.

Our failure to successfully integrate acquisitions, including the JUMP acquisition, could strain our resources. In addition, there are significant risks associated with growth through acquisitions, which may materially adversely affect our business, financial condition or results of operations.

We expect to grow our business by, among other things, making acquisitions. Acquisitions involve a number of risks. Financing an acquisition could result in dilution from issuing equity securities or a weaker balance sheet from using cash or incurring debt. To the extent we grow our business through acquisitions, any potential and completed acquisitions, including the JUMP acquisition, could present a number of other risks, including:

- incorrect assumptions regarding the future results of acquired operations or assets or expected cost reductions or other synergies expected to be realized as a result of acquiring operations or assets;
- failure to integrate the operations or management of any acquired operations or assets successfully and on a timely and cost effective basis;
- insufficient knowledge of the operations and markets of acquired businesses;
- loss of key personnel;
- diversion of management's attention from existing operations or other priorities;
- increased costs or liabilities as a result of undetected or undisclosed legal, regulatory or financial issues related to acquired operations or assets; and
- inability to secure, on terms we find acceptable, sufficient financing that may be required for any such acquisition or investment.

In addition, if we are unsuccessful in completing acquisitions of other businesses, operations or assets or if such opportunities for expansion do not arise, our business, financial condition or results of operations could be materially adversely affected.

We invest significantly in growth and research and development, and to the extent our research and development investments do not translate into new solutions and services or material enhancements to our current solutions and services, or if we do not use those investments efficiently, our business and results of operations would be harmed.

A key element of our strategy is to invest significantly in our growth and research and development efforts to develop new solutions and services and enhance our existing solutions and services to address additional applications and markets. For the year ended December 31, 2022, our research and development expense was approximately 31% of our revenue. If we do not spend our research and development budget efficiently or effectively on compelling innovation and technologies, our business may be harmed and we may not realize the expected benefits of our strategy. Moreover, research and development projects can be technically challenging and expensive. The nature of these research and development cycles may cause us to experience delays between the time we incur expenses associated with research and development and the time we are able to offer compelling solutions and services and generate revenue, if any, from such investment. Additionally, anticipated client demand for an offering we are developing could decrease after the development cycle has commenced, rendering us unable to recover substantial costs associated with the development of such offering. If we expend a significant amount of resources on research and development and our efforts do not lead to the successful introduction or improvement of solutions and services that are competitive in our current or future markets, it would harm our business and results of operations.

Financial Risks

Our revenue can fluctuate from period to period, which could cause our stock price to fluctuate.

Our revenue may fluctuate from period-to-period in the future due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include the following events, as well as other factors described elsewhere in this Annual Report on Form 10-K:

- a decline or slowdown of the growth in the value of financial market assets, which may reduce the portfolio market value of the assets loaded on our platform from which we derive portfolio-based fees, or reduce demand for our solutions and services generally, and therefore negatively affect our revenues and cash flows;
- unanticipated changes to economic terms in contracts with clients, including renegotiations;
- downward pressure on fees we charge our clients, which would therefore reduce our revenue;
- changes in laws or regulations that could impact our ability to offer solutions and services;

- failure to obtain new clients;
- failure to expand the services offered to existing clients or to apply such services to additional asset portfolios of existing clients;
- cancellation or non-renewal of existing contracts with clients;
- failure to protect our proprietary technology and intellectual property rights;
- unanticipated delays in connection with the implementation of our services in relation to our clients' asset portfolios; or
- reduction in the suite of solutions and services provided to existing clients.

As a result of these and other factors, our results of operations for any quarterly or annual period may differ materially from our results of operations for any prior or future quarterly or annual period and our historical results should not be relied upon as indications of our future performance.

Our results of operations may be harmed if we are required to collect sales or other related taxes for subscriptions to our solutions and services in jurisdictions where we have not historically done so.

States and some local taxing jurisdictions have differing rules and regulations governing sales and use taxes, and these rules and regulations are subject to varying interpretations that may change over time. The application of federal, state, local and international tax laws to services provided electronically is evolving. In particular, the applicability of sales taxes to our solutions and services in various jurisdictions is unclear. We collect and remit U.S. sales tax in a number of jurisdictions. It is possible, however, that we could face sales tax audits and that our liability for these taxes could exceed our estimates as state tax authorities could successfully assert that we are obligated to collect additional tax amounts from our paying clients and remit those taxes to those authorities. We could also be subject to audits in states and international jurisdictions for which we have not accrued tax liabilities. In each case, if states are successful in such audits, we may be liable for substantial amounts of past sales, use or similar taxes, interest and penalties. A successful assertion that we should be collecting additional sales or other taxes on our services in jurisdictions where we have not historically done so and do not accrue for sales taxes could result in substantial tax liabilities for past sales, discourage organizations from subscribing to our products and services, or otherwise harm our business, results of operations and financial condition.

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our financial condition and results of operations.

We are subject to income taxes in the United States and foreign jurisdictions, and our domestic and foreign income tax liabilities will be subject to the allocation of expenses in differing jurisdictions. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- tax effects of equity-based compensation;
- costs related to intercompany restructurings;
- changes in tax laws, regulations or interpretations thereof; or
- lower than anticipated future earnings in jurisdictions where we have lower statutory tax rates and higher than anticipated future earnings in jurisdictions where we have higher statutory tax rates.

In the future, there may be changes to income, sales, use, or other tax laws, statutes, rules, regulations, or ordinances that may impact our business and results of operations. For example, the Inflation Reduction Act was passed into law on August 16, 2022. This legislation made a number of changes to the Internal Revenue Code, including the addition of a 1% excise tax on repurchases of stock by publicly traded corporations. As a result, if our Board of Directors were to approve a share repurchase program, the imposition of this excise tax may increase the cost to us of making repurchases. In addition, we may be subject to audits of our income, sales and other transaction taxes by U.S. federal and state authorities. Outcomes from these audits could have an adverse effect on our results of operations and financial condition.

Our indebtedness could adversely affect our financial flexibility and our competitive position.

As of December 31, 2022, there was $51.6 million of term loans outstanding under the New Credit Agreement. The term loan facility is intended to be used for working capital and other general corporate purposes (including acquisitions permitted under the New Credit Agreement).

A portion of our debt consists of variable-rate debt and fluctuations in interest rates could have a material effect on our business. Prior to 2022, interest rates in the U.S. had generally been at historic lows for several years. In 2022, the United States Federal Reserve raised interest rates several times in an attempt to combat historically high inflation. As a result, we may incur higher interest costs if interest rates continue to increase. There can be no assurance that the United States Federal Reserve will not raise rates in the future, and any such increase in interest costs could have a material adverse impact on our financial condition and cash flows.

Our level of indebtedness increases the risk that we may be unable to generate cash sufficient to pay amounts due in respect of our indebtedness. Our indebtedness could have other important consequences to you and significant effects on our business. For example, it could:

- increase our vulnerability to adverse changes in general economic, industry and competitive conditions;
- require us to dedicate a substantial portion of our cash flow from operations to make payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- restrict us from exploiting business opportunities;
- make it more difficult to satisfy our financial obligations, including payments on our indebtedness;
- place us at a disadvantage compared to our competitors that have less debt; and
- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions, debt service requirements, execution of our business strategy or other general corporate purposes.

The phase-out, replacement or unavailability of LIBOR and/or other interest rate benchmarks could adversely affect our indebtedness.

The interest rates applicable to the New Credit Agreement are based on, and the interest rates applicable to certain debt obligations we may incur in the future may be based on, a fluctuating rate of interest determined by reference to the London Interbank Offered Rate ("LIBOR"). In July 2017, the U.K.'s Financial Conduct Authority, which regulates LIBOR, announced that it intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR. In response to concerns regarding the future of LIBOR, the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee (the "ARRC") to identify alternatives to LIBOR. The ARRC has recommended a benchmark replacement waterfall to assist issuers in continued capital market entry while safeguarding against LIBOR's discontinuation. The initial steps in the ARRC's recommended provision reference variations of the Secured Overnight Financing Rate ("SOFR"), calculated using short-term repurchase agreements backed by Treasury securities. At this time, it is not possible to predict whether SOFR will attain market traction as a LIBOR replacement. Additionally, it is uncertain if LIBOR will cease to exist after June 2023, or whether additional reforms to LIBOR may be enacted, or whether alternative reference rates will gain market acceptance as a replacement for LIBOR. In anticipation of LIBOR's phase-out, the New Credit Agreement is expected to provide for alternative base rates, as well as a transition mechanism for selecting a benchmark replacement rate for LIBOR, with such benchmark replacement rate to be mutually agreed with the administrative agent and subject to the majority lenders not objecting to such benchmark replacement.

There can be no assurance that we will be able to reach any agreement on a replacement benchmark, and there can be no assurance that any agreement we reach will result in effective interest rates at least as favorable to us as our current effective interest rates. The failure to reach an agreement on a replacement benchmark, or the failure to reach an agreement that results in an effective interest rate at least as favorable to us as our current effective interest rates, could result in a significant increase in our debt service obligations, which could adversely affect our financial condition and results of operations. In addition, the overall financing market may be disrupted as a result of the phase-out or replacement of LIBOR, which could have an adverse impact on our ability to refinance, reprice or amend the New Credit Agreement or incur additional indebtedness, on favorable terms or at all.

Our indebtedness may restrict our current and future operations, which could adversely affect our ability to respond to changes in our business and to manage our operations.

The New Credit Agreement contains, and the agreements evidencing or governing any other future indebtedness may contain, financial restrictions on us and our restricted subsidiaries, including restrictions on our or our restricted subsidiaries' ability to, among other things:

- place liens on our or our restricted subsidiaries' assets;
- make investments other than permitted investments;
- incur additional indebtedness;
- prepay or redeem certain indebtedness;
- merge, consolidate or dissolve;
- sell assets;
- engage in transactions with affiliates;
- change the nature of our business;
- change our or our subsidiaries' fiscal year or organizational documents; and
- make restricted payments.

In addition, we are required to maintain compliance with various financial ratios in the New Credit Agreement. A failure by us or our subsidiaries to comply with the covenants or to maintain the required financial ratios contained in the New Credit Agreement could result in an event of default under such indebtedness, which could adversely affect our ability to respond to changes in our business and manage our operations. Additionally, a default by us under the New Credit Agreement or an agreement governing any other future indebtedness may trigger cross-defaults under any other future agreements governing our indebtedness. Upon the occurrence of an event of default or cross-default under any of the present or future agreements governing our indebtedness, the lenders could elect to declare all amounts outstanding to be due and payable and exercise other remedies as set forth in the agreements. If any of our indebtedness is accelerated, there can be no assurance that our assets will be sufficient to repay this indebtedness in full, which could have a material adverse effect on our ability to continue to operate as a going concern.

We may not be able to raise additional capital to execute our current or future business strategies on favorable terms, if at all, or without dilution to our stockholders.

We expect that we may need to raise additional capital to execute our current or future business strategies. However, we do not know what forms of financing, if any, will be available to us. Some financing activities in which we may engage could cause your equity interest in the Company to be diluted, which could cause the value of our Class A common stock to decrease. If financing is not available on acceptable terms, if and when needed, our ability to fund our operations, expand our research and development and sales and marketing functions, develop and enhance our solutions and services, respond to unanticipated events, including unanticipated opportunities, or otherwise respond to competitive pressures would be significantly limited. In any such event, our business, financial condition and results of operations could be materially harmed, and we may be unable to continue our operations.

Goodwill and other intangible assets represent a significant portion of our assets, and any impairment of these assets could negatively impact our results of operations and financial condition.

A significant portion of our assets consists of goodwill and other intangible assets, primarily recorded as the result of the JUMP acquisition. We may subsequently experience unforeseen events that could adversely affect the value of our goodwill or intangible assets. Our goodwill is subject to an impairment test annually and is also tested for impairment whenever facts and circumstances indicate that goodwill is impaired. In the event of an impairment, any excess of the carrying value of these assets over the fair value must be written off in the period of determination. Finite-lived intangible assets are generally amortized over the useful life of such assets. Future determinations of significant impairments of goodwill as a result of an impairment test or accelerated amortization of finite-lived intangible assets could have a negative impact on our results of operations and financial condition.

Legal and Regulatory Risks

We could face liability for certain information we provide, including information based on data we obtain from other parties.

We may be subject to claims for negligence, breach of contract or other claims relating to the information we provide. For example, individuals may take legal action against us if they rely on information we have provided and it contains an error. In addition, we could be subject to claims based upon the content that is accessible from our website through links to other websites. Moreover, we could face liability based on inaccurate information provided to us by others or based on information provided to us by others that have not obtained necessary consents to do so. Defending any such claims could be expensive and time-consuming, and any such claim could materially adversely affect our business, financial condition or results of operations.

We may become subject to liability based on the use of our investment accounting and reporting solutions, regulatory reporting solutions and internal risk management and performance analytics solutions by our clients.

Our solutions and services support the investment, financial and regulatory reporting processes of our clients, many of whom have asset portfolios on our system aggregating to billions of dollars. Our clients similarly rely on our solutions to ensure compliance with complex regulatory requirements. Our client agreements have provisions designed to limit our exposure to potential liability claims brought by our clients or third parties based on the use of our solutions and services. However, these provisions have certain exceptions and could be invalidated by unfavorable judicial decisions or by federal, state, foreign or local laws. For instance, use of our solutions as part of the investment process creates the risk that asset manager clients, or the parties whose assets are managed by our clients, may pursue claims against us for very significant dollar amounts, and in a similar vein, our clients or their regulators may pursue claims or investigations against us in connection with regulatory reporting deficiencies associated with our services. Any such claim, lawsuit, investigation or other proceeding, even if the outcome were to be ultimately favorable to us, would involve a significant commitment of our management, personnel, financial and other resources and could have a negative impact on our reputation. Such proceedings could therefore have a material adverse effect on our business, financial condition or results of operations.

Furthermore, our clients may use our solutions and services together with software, data or products from other companies. As a result, when problems occur, it might be difficult to identify the source of the problem. Even when our solutions and services do not cause these problems, the existence of these errors might cause us to incur significant costs and divert the attention of our management and technical personnel, any of which could materially adversely affect our business, financial condition or results of operations.

Changes to the laws or regulations applicable to us or to our asset manager or insurance industry clients could adversely affect our business, financial condition or results of operations.

We may be adversely affected as a result of new or revised legislation or regulations imposed by the SEC or other U.S. federal or state or foreign governmental regulatory authorities or self-regulatory organizations that supervise the financial markets and insurance industries around the world. In addition, we may be adversely affected by changes in the interpretation or enforcement of existing laws and rules by these governmental authorities and self-regulatory organizations. It is impossible to determine the extent of the impact of any new laws, regulations or initiatives that may be proposed, or whether any current proposals will become law, and it is difficult to predict how any changes or potential changes could affect our business. Changes to laws or regulations could increase our potential liability in connection with the solutions and services that we provide. The introduction of any new laws or regulations could make our ability to comply with applicable laws and regulations more difficult and expensive. Any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

If government regulation of the Internet or other areas of our business changes, or if attitudes toward use of the Internet change, we may need to change the manner in which we conduct our business or incur greater operating expenses.

The adoption, modification or interpretation of laws or regulations relating to the Internet or other areas of our business could adversely affect the manner in which we conduct our business. Such laws and regulations may cover sales practices, taxes, user privacy, data protection, pricing, content, copyrights, distribution, electronic contracts, consumer protection, broadband residential Internet access and the characteristics and quality of services. Moreover, it is not always clear how certain existing laws governing these matters apply to the Internet. If we are required to comply with new regulations or legislation or new interpretations of existing regulations or legislation, we may be required to incur additional expenses or alter our business model, either of which could have a material adverse effect on our business, financial condition or results of operations.

We are substantially dependent on our intellectual property rights, and a failure to protect these rights could adversely affect our business, financial condition or results of operations.

We have made substantial investments in software and other intellectual property on which our business is highly dependent. We rely on trade secret, trademark and copyright laws, confidentiality and nondisclosure agreements and other contractual and technical security measures to protect our proprietary technology. Any loss of our intellectual property rights, or any significant claim of infringement or indemnity for violation of the intellectual property rights of others, could have a material adverse effect on our business, financial condition or results of operations.

Only one of our technologies, solutions or services is covered by an issued patent. We are the owner of three copyright registrations, two registered trademarks in the United States and three international trademarks, and we claim common law rights in other trademarks that are not registered. We cannot guarantee that:

- our intellectual property rights will provide competitive advantages to us;
- our ability to assert our intellectual property rights against potential competitors or to settle current or future disputes will not be limited by our agreements with third parties;
- our intellectual property rights will be enforced in jurisdictions where competition may be intense or where legal protection may be weak;
- any of the trademarks, copyrights, trade secrets or other intellectual property rights that we presently employ in our business will not lapse or be invalidated, circumvented, challenged or abandoned;
- our trademark applications will lead to registered trademarks;
- our patent applications will lead to issued patents; or
- competitors will not design around our intellectual property rights or develop similar technologies or offerings; or that we will be able to successfully assert our intellectual property rights against others.

We are also a party to a number of third-party intellectual property license agreements. Some of these license agreements require us to make one-time payments or ongoing subscription payments. We cannot guarantee that the third-party intellectual property we license will not be licensed to our competitors or others in our industry. In the future, we may need to obtain additional licenses or renew existing license agreements. We are unable to predict whether these license agreements will be obtained or renewed on commercially reasonable terms, or at all. Additionally, we use certain software covered by open source licenses. The terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that the licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to use such software, or that could require us to disclose certain portions of our proprietary source code or re-engineer all or a portion of our solutions and services, any of which could harm our business and result in significant costs.

Third parties may sue us for intellectual property infringement or misappropriation which, if successful, could require us to pay significant damages or make changes to the solutions or services that we offer.

We cannot be certain that our internally developed technology, solutions or services do not and will not infringe the intellectual property rights of others. In addition, we license content, software and other intellectual property rights from third parties and may be subject to claims of infringement if such parties do not possess the necessary intellectual property rights to the products they license to us. We may not have sufficient contractual protection to cover all liability associated with such claims. In addition, we may face additional risk of infringement or misappropriation claims if we hire an employee who possesses third party proprietary information who decides to use such information in connection with our solutions, services or business processes without such third party's authorization. We have in the past been and may in the future be subject to legal proceedings and claims that we have infringed or misappropriated the intellectual property rights of a third party. Claims may involve patent holding companies who have no relevant product revenues and against whom our own proprietary technology may therefore provide little or no deterrence. In addition, third parties may in the future assert intellectual property infringement claims against our clients, which, in certain circumstances, we have agreed to indemnify. Any intellectual property related infringement or misappropriation claims, whether or not meritorious, could result in costly litigation and could divert management resources and attention. Moreover, should we be found liable for infringement or misappropriation, we may be required to enter into licensing agreements, which may not be available on acceptable terms or at all, pay substantial damages or make changes to the solutions and services that we offer. Any of the foregoing could prevent us from competing effectively, result in substantial costs to us, divert management's attention and our resources away from our operations and otherwise harm our reputation.

If our intellectual property and proprietary technology are not adequately protected to prevent use or appropriation by our competitors, our business and competitive position would suffer.

Our future success and competitive position depend in part on our ability to protect our intellectual property rights. The steps we have taken to protect our intellectual property rights may be inadequate to prevent the misappropriation of our proprietary technology. Others may develop or patent similar or superior technologies, solutions or services. Unauthorized copying or other misappropriation of our proprietary technologies could enable third parties to benefit from our intellectual property rights without paying us for doing so, which could harm our business. Policing unauthorized use of proprietary technology is difficult and expensive and our monitoring and policing activities may not be sufficient to identify any misappropriation and protect our proprietary technology. In addition, third parties may knowingly or unknowingly infringe our trademarks and other intellectual property rights, and litigation may be necessary to protect and enforce our intellectual property rights. If litigation is necessary to protect and enforce our intellectual property rights, any such litigation could be very costly and could divert management attention and resources. If we are unable to protect our intellectual property rights or if third parties independently develop or gain access to our or similar technologies, solutions or services, our business, financial condition and results of operations could be materially adversely affected.

Confidentiality and non-compete agreements with employees, consultants and others may not adequately prevent disclosure of trade secrets and other proprietary information or prevent competition.

We have devoted substantial resources to the development of our proprietary technologies, solutions and services. In order to protect our proprietary rights, we enter into confidentiality agreements with our employees, consultants and independent contractors. These agreements may not effectively prevent unauthorized disclosure of confidential information or unauthorized parties from copying aspects of our technologies, investment accounting offerings or obtaining and using information that we regard as proprietary. Moreover, these agreements may not provide an adequate remedy in the event of such unauthorized disclosures of confidential information and our rights under such agreements may not be enforceable. We have non-compete arrangements with certain employees that prevent these persons from competing with us both during and after the terms of their employment agreements. Enforceability of the non-compete agreements is not guaranteed, and such contractual restrictions could be breached without discovery or adequate remedies. In January 2023, the Federal Trade Commission ("FTC") proposed a new rule that would preclude employers from imposing non-compete obligations on their employees and is currently seeking public comment on the proposed rule. While we cannot predict whether or when the FTC's proposed ban on non-compete arrangements will be implemented, or the impact that such ban will have on our operations if implemented, there is now increased uncertainty regarding the long-term enforceability of our non-compete agreements with employees in the U.S. In addition, others may independently discover trade secrets and proprietary information, and in such cases we could not assert any trade secret rights against such parties. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could reduce any competitive advantage we have developed and cause us to lose clients or otherwise harm our business.

International Risks

As a global organization, our business is susceptible to risks associated with our international operations.

In addition to our U.S. operations, we currently maintain international operations in the United Kingdom and India, and have smaller sales-focused research and development-focused presences in France, Germany and Singapore, and have clients located around the globe. Managing a global organization outside of the United States is difficult and time-consuming and introduces risks that we may not face with our operations and sales in the United States. These risks include:

- the burdens of complying with a wide variety of foreign regulations, laws and legal standards, including privacy, data security, tax and employment, some of which may be materially different or more stringent than those of the United States;
- regional data privacy laws that apply to the transmission of personal data across international borders;
- lack of familiarity with, and unexpected changes in, foreign regulatory requirements;
- clients' unfamiliarity with and concerns regarding laws and regulations of the United States that may impact our business operations in their jurisdictions;
- negative, local perception of industries and clients that we may pursue;
- laws and business practices favoring local competitors;
- localization of our solutions and services, including unanticipated costs related to translation into foreign languages and adaptation for local practices and regulatory requirements;
- different pricing environments;
- difficulties in managing and staffing international operations;

- reduced or varied protection for intellectual property rights in some countries;
- compliance with laws and regulations for foreign operations, including the U.S. FCPA, the U.K. Bribery Act, import and export control laws, tariffs, trade barriers, economic sanctions and other regulatory or contractual limitations on our ability to sell our solutions and services in certain foreign markets, and the risks and costs of compliance;
- fluctuations in currency exchange rates;
- potentially adverse tax consequences, including the complexities of foreign value added tax systems, difficulty in interpreting international tax laws and restrictions on the repatriation of earnings;
- increased financial accounting and reporting burdens and complexities; and
- political, social and economic instability abroad, terrorist attacks and security concerns in general, including instability caused by the Russian invasion of Ukraine and related sanctions.

Operating in international markets also requires significant management attention and financial resources. A component of our growth strategy involves the further expansion of our operations and the development of new client relationships in Europe. As we seek to expand internationally, including in Europe, we will need to develop relationships with additional partners and add internal capabilities to effectively manage the operational, financial, legal and regulatory requirements and risks associated with our international operations. The investments we make and additional resources we use to expand our operations, target new international clients, expand our presence globally within our existing clients and manage operational and sales growth in other countries may not produce desired levels of revenue or profitability, which could adversely affect our business and results of operations.

Because our employees are geographically dispersed, we are required to comply with employment-related laws and regulations both in the United States and abroad.

The nature and geographic spread of our business requires that we comply with multiple employment-related legal and regulatory regimes both in the United States and outside the United States. We are subject to the Fair Labor Standards Act, applicable foreign employment standards laws and similar state laws, which govern such matters as time keeping and payroll requirements, minimum wage, overtime, employee and worker classifications, our ability to terminate employees, and other working conditions. While we believe we are currently in compliance with all such regimes, we may be susceptible to various employment claims and proceedings. Any legal proceedings or claims, even if baseless, fully indemnified or insured, could negatively impact our reputation among our employees, clients and the public, and make it more difficult for us to compete effectively or obtain adequate insurance in the future.

If we are unable to effectively manage certain risks and challenges related to our India operations, our business could be harmed.

Our India operations are a key factor to our success. We believe that our significant presence in India provides certain important advantages for our business, such as direct access to a large pool of skilled professionals and assistance in growing our business internationally. However, it also creates certain risks that we must effectively manage. As of December 31, 2022, 454 of our total employees were based in India. Wage costs in India for skilled professionals are currently lower than in the United States for comparably skilled professionals. However, wages in India are increasing at a faster rate than in the United States, which could result in us incurring increased costs for technical professionals and reduced margins. There is intense competition in India for skilled technical professionals, and we expect such competition to increase. As a result, we may be unable to cost-effectively retain our current employee base in India or hire additional new talent. In addition, India has experienced significant inflation, low growth in gross domestic product and shortages of foreign exchange. India also has experienced civil unrest and terrorism and has been involved in conflicts with neighboring countries. The occurrence of any of these circumstances could result in disruptions to our India operations, which, if continued for an extended period of time, could have a material adverse effect on our business. If we are unable to effectively manage any of the foregoing risks related to our India operations, our development efforts could be impaired, our growth could be slowed and our results of operations could be negatively impacted.

Organizational Structure Risks

We are a holding company and our principal asset is our interest in CWAN Holdings and, accordingly, we depend on distributions from CWAN Holdings to pay our taxes and expenses, including payments under the Tax Receivable Agreement and the TRA Bonus Agreements. CWAN Holdings' ability to make such distributions may be subject to various limitations and restrictions.

We are a holding company and have no material assets other than the LLC Interests. As a holding company, we have no independent means of generating revenue or cash flow, and our ability to pay our taxes and operating expenses, including our obligations under the Tax Receivable Agreement and the TRA Bonus Agreements, or declare and pay dividends, if any, in the future, will depend upon the results of operations and cash flows of CWAN Holdings and its consolidated subsidiaries and distributions we receive from CWAN Holdings. Our subsidiaries may not generate sufficient cash flow to distribute funds to us and applicable state law and contractual restrictions may not permit such distributions.

We anticipate that CWAN Holdings will continue to be treated as a partnership for U.S. federal income tax purposes and, as such, generally will not be subject to any entity-level U.S. federal income tax. Instead, taxable income of CWAN Holdings will be allocated to holders of the LLC Interests. Accordingly, we and our subsidiaries will be required to pay income taxes on our allocable share of any net taxable income of CWAN Holdings allocated to us under the terms of the LLC Agreement. Under the terms of the LLC Agreement, CWAN Holdings is required to make tax distributions to the holders of LLC Interests, including us, on a pro rata basis, unless certain exceptions apply. In addition to tax payments, we will incur expenses related to our operations, including obligations to make payments under the Tax Receivable Agreement and the TRA Bonus Agreements. The tax benefits we may realize as a result of our purchase of LLC Interests and any exchanges of LLC Interests and as a result of payments under the TRA Bonus Agreements, and the resulting amounts we are likely to pay out to the Continuing Equity Owners and the Blocker Shareholders pursuant to the Tax Receivable Agreement depend on various factors and are difficult to quantify with any precision; however, we estimate that such payments may be substantial.

We intend to cause CWAN Holdings to make cash distributions to the owners of LLC Interests in amounts sufficient to (1) fund all or part of their tax obligations in respect of taxable income allocated to them and (2) cover our operating expenses, including payments under the Tax Receivable Agreement. However, CWAN Holdings' ability to make such distributions may be subject to various limitations and restrictions, such as restrictions on distributions that would violate either any contract or agreement to which CWAN Holdings or its subsidiaries is then a party, including debt agreements, or any applicable law, or that would have the effect of rendering CWAN Holdings or its subsidiaries insolvent. If we do not have sufficient funds to pay tax or other liabilities or to fund our operations, we may have to borrow funds, which could materially adversely affect our liquidity and financial condition and subject us to various restrictions imposed by any such lenders. To the extent that we are unable to make payments under the Tax Receivable Agreement, such payments generally will be deferred and will accrue interest until paid. Nonpayment for a specified period, however, may constitute a breach of a material obligation under the Tax Receivable Agreement and therefore accelerate payments due under the Tax Receivable Agreement, unless, generally, such nonpayment is due to a lack of sufficient funds. See Note 16 "Income Taxes" in our notes to the accompanying consolidated financial statements.

Conflicts of interest could arise between our shareholders and the Continuing Equity Owners, which may impede business decisions that could benefit our shareholders.

The Continuing Equity Owners, who are the only holders of LLC Interests other than us, have the right to consent to certain amendments to the LLC Agreement, as well as to certain other matters. The Continuing Equity Owners may exercise these consent rights in a manner that conflicts with the interests of our other shareholders. Circumstances may arise in the future when the interests of the Continuing Equity Owners conflict with the interests of our other shareholders, particularly in the context of acquisitions. As we control CWAN Holdings, we have certain obligations to the Continuing Equity Owners as holders of LLC Interests that may conflict with fiduciary duties our officers and directors owe to our shareholders. These conflicts may result in decisions that are not in the best interests of our shareholders.

The Tax Receivable Agreement requires us to make cash payments to the Continuing Equity Owners and the Blocker Shareholders in respect of certain tax benefits to which we may realize, and we expect that the payments we will be required to make will be substantial.

Pursuant to the Tax Receivable Agreement, we are required to make cash payments to the Continuing Equity Owners and the Blocker Shareholders, collectively, equal to 85% (less payments made under the TRA Bonus Agreements) of the tax benefits, if any, that we actually realize, or, in some circumstances, are deemed to realize, as a result of the Tax Attributes. We expect that the payments we will be required to make under the Tax Receivable Agreement will be substantial. Assuming no material changes in relevant tax law and that we earn sufficient taxable income to realize all tax benefits that are subject to the Tax Receivable Agreement, we expect that the tax savings associated with the Transactions or exchanges of LLC Interests as described above would aggregate to approximately $735 million. Under this scenario, we would be required to pay the other parties to the Tax Receivable Agreement and under the TRA Bonus Agreements approximately 85% of such amount, or $625 million. The actual amounts we will be required to pay may materially differ from these hypothetical amounts, because potential future tax savings that we will be deemed to realize, and the Tax Receivable Agreement payments and the TRA Bonus Agreement payments made by us, will be calculated based in part on the market value of our common stock at the time of each redemption or exchange of an LLC Interest for cash or a share of common stock and the prevailing applicable federal tax rate (plus the assumed combined state and local tax rate) applicable to us over the life of the Tax Receivable Agreement and will depend on our generating sufficient taxable income to realize the tax benefits that are subject to the Tax Receivable Agreement. Payments under the Tax Receivable Agreement are not conditioned on our existing owners' continued ownership of us after the IPO. Payments under the Tax Receivable Agreement will be based on the tax reporting positions that we determine with the advice of our tax advisors. Any payments made by us to the Continuing Equity Owners and the Blocker Shareholders under the Tax Receivable Agreement or to the relevant executive officers under the terms of the TRA Bonus Agreements will generally reduce the amount of overall cash flow that might have otherwise been available to us. To the extent that we are unable to make payments under the Tax Receivable Agreement or the TRA Bonus Agreements, such payments generally will be deferred and will accrue interest until paid. Nonpayment of amounts due under the Tax Receivable Agreement (but not the TRA Bonus Agreements) for a specified period, however, may constitute a breach of a material obligation under the Tax Receivable Agreement and therefore accelerate payments due under the Tax Receivable Agreement, unless, generally, such nonpayment is due to a lack of sufficient funds. Furthermore, our future obligation to make payments under the Tax Receivable Agreement and the TRA Bonus Agreements could make us a less attractive target for an acquisition, particularly in the case of an acquirer that cannot use some or all of the tax benefits that may be deemed realized under the Tax Receivable Agreement. The payments under the Tax Receivable Agreement are also not conditioned upon the Continuing Equity Owners or the Blocker Shareholders maintaining a continued ownership interest in CWAN Holdings. The actual amount and timing of any payments under the Tax Receivable Agreement and the TRA Bonus Agreements will vary depending upon a number of factors, including the timing of exchanges by the Continuing Equity Owners and the Blocker Shareholders, the amount and timing of amounts paid under the TRA Bonus Agreements, the amount of gain recognized by the Continuing Equity Owners and the Blocker Shareholders, the amount and timing of the taxable income we generate in the future and the income tax rates then applicable.

Finally, because we are a holding company with no operations of our own, our ability to make payments under the Tax Receivable Agreement is dependent on the ability of our subsidiaries to make distributions to us.

In certain circumstances, CWAN Holdings will be required to make distributions to us and the Continuing Equity Owners and the distributions may be substantial.

CWAN Holdings is treated as a partnership for U.S. federal income tax purposes and, as such, is not subject to U.S. federal income tax. Instead, taxable income is allocated to its members, including us and the Continuing Equity Owners. We intend to cause CWAN Holdings to make tax distributions quarterly to the holders of LLC Interests (including us), in each case on a pro rata basis based on CWAN Holdings' net taxable income, which tax distributions will be based on an assumed tax rate. Thus, CWAN Holdings will be required to make tax distributions that, in the aggregate, will likely exceed the amount of taxes that it would have paid if it were taxed on its net income at the tax rate applicable to a similarly situated corporate taxpayer. Funds used by CWAN Holdings to satisfy its tax distribution obligations will not be available for reinvestment in our business. Moreover, these tax distributions may be substantial, and will likely exceed (as a percentage of CWAN Holdings' income) the overall effective tax rate applicable to a similarly situated corporate taxpayer. As a result, it is possible that we will receive distributions significantly in excess of our tax liabilities and obligations to make payments under the Tax Receivable Agreement. While our board may choose to distribute such cash balances as dividends on our Class A common stock, it will not be required to do so, and may in its sole discretion choose to use such excess cash for any purpose depending upon the facts and circumstances at the time of determination.

The amounts that we may be required to pay to the Continuing Equity Owners and the Blocker Shareholders under the Tax Receivable Agreement and to the relevant executive officers under the TRA Bonus Agreements may be accelerated in certain circumstances and may also significantly exceed the actual tax benefits that we ultimately realize.

The Tax Receivable Agreement provides that if (1) certain mergers, asset sales, other forms of business combination or other changes of control were to occur, (2) we breach any of our material obligations under the Tax Receivable Agreement or (3) at any time, we elect an early termination of the Tax Receivable Agreement, then the Tax Receivable Agreement will terminate and our obligations, or our successor's obligations, to make payments under the Tax Receivable Agreement and the TRA Bonus Agreements would accelerate and become immediately due and payable. The amount due and payable in that circumstance is based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax Receivable Agreement. We may need to incur debt to finance payments under the Tax Receivable Agreement and the TRA Bonus Agreements to the extent our cash resources are insufficient to meet our obligations under the Tax Receivable Agreement and the TRA Bonus Agreements as a result of timing discrepancies or otherwise.

As a result of a change of control, material breach or our election to terminate the Tax Receivable Agreement early, (1) we could be required to make cash payments to the Continuing Equity Owners, the Blocker Shareholders and certain executive officers that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement and the TRA Bonus Agreements and (2) we would be required to make an immediate cash payment equal to the anticipated future tax benefits that are the subject of the Tax Receivable Agreement discounted in accordance with the Tax Receivable Agreement, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the Tax Receivable Agreement could have a substantial negative impact on our liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, other forms of business combination, or other changes of control. We may not be able to finance our obligations under the Tax Receivable Agreement and the TRA Bonus Agreements.

We may not be able to realize all or a portion of the tax benefits that are currently expected to result from the Tax Attributes covered by the Tax Receivable Agreement and from payments made under the Tax Receivable Agreement and the TRA Bonus Agreements.

Our ability to realize the tax benefits that we currently expect to be available as a result of the Tax Attributes, the payments made pursuant to the Tax Receivable Agreement, the payments made under the TRA Bonus Agreements and the interest deductions imputed under the Tax Receivable Agreement all depend on a number of assumptions, including that we earn sufficient taxable income during the period which such Tax Attributes are available and that there are no adverse changes in applicable law or regulations. Additionally, if our actual taxable income were insufficient or there were additional adverse changes in applicable law or regulations, we may be unable to realize all or a portion of the expected tax benefits and our cash flows and shareholders' equity could be negatively affected. See Note 16 "Income Taxes" in our notes to the accompanying consolidated financial statements.

We will not be reimbursed for any payments made to the beneficiaries under the Tax Receivable Agreement or the TRA Bonus Agreements if any purported tax benefits are subsequently disallowed by the U.S. Internal Revenue Service (the "IRS").

If the IRS or a state or local taxing authority challenges the tax basis adjustments and/or deductions that give rise to payments under the Tax Receivable Agreement or the TRA Bonus Agreements and the tax basis adjustments and/or deductions are subsequently disallowed, the recipients of payments under the Tax Receivable Agreement or the TRA Bonus Agreements will not reimburse us for any payments we previously made to them. Any such disallowance would be taken into account in determining future payments under the Tax Receivable Agreement or the TRA Bonus Agreements, as applicable, and may, therefore, reduce the amount of any such future payments. Nevertheless, if the claimed tax benefits from the tax basis adjustments and/or deductions are disallowed, our payments under the Tax Receivable Agreement or the TRA Bonus Agreements could exceed our actual tax savings, and we may not be able to recoup payments under the Tax Receivable Agreement and the TRA Bonus Agreements that were calculated on the assumption that the disallowed tax savings were available.

If we were deemed to be an investment company under the Investment Company Act of 1940, as amended (the "1940 Act"), applicable restrictions could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business, financial condition and results of operations.

Under Sections 3(a)(1)(A) and (C) of the 1940 Act, a company generally will be deemed to be an "investment company" for purposes of the 1940 Act if it (1) is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities or (2) is engaged, or proposes to engage, in the business of investing, reinvesting, owning, holding or trading in securities and it owns or proposes to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of U.S. government securities and cash items) on an unconsolidated basis. We do not believe that we are an "investment company," as such term is defined in either of those sections of the 1940 Act.

As the sole managing member of CWAN Holdings, we control and manage CWAN Holdings. On that basis, we believe that our interest in CWAN Holdings is not an "investment security" under the 1940 Act. Therefore, we have less than 40% of the value of our total assets (exclusive of U.S. government securities and cash items) in "investment securities." However, if we were to lose the right to manage and control CWAN Holdings, interests in CWAN Holdings could be deemed to be "investment securities" under the 1940 Act.

We intend to conduct our operations so that we will not be deemed to be an investment company. However, if we were deemed to be an investment company, restrictions imposed by the 1940 Act, including limitations on our capital structure and our ability to transact with affiliates, could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Our Class A Common Stock

The Principal Equity Owners continue to have significant influence over us, including control over decisions that require the approval of stockholders, which could limit your ability to influence the outcome of matters submitted to stockholders for a vote.

We are currently controlled by the Principal Equity Owners who beneficially own 96.6% of the combined voting power of all of our outstanding common stock as of December 31, 2022. As long as the Principal Equity Owners collectively own or control at least a majority of our outstanding voting power, they will have the ability to exercise substantial control and significant influence over our management and affairs and all corporate actions requiring stockholder approval, irrespective of how our other stockholders may vote, including the election and removal of directors and the size of our board of directors, any amendment of our certificate of incorporation or bylaws, or the approval of any merger or other significant corporate transaction, including a sale of substantially all of our assets. The concentration of voting power limits your ability to influence corporate matters, and as a result, we may take actions that you do not view as beneficial. As a result, the market price of our Class A common stock could be adversely affected.

In addition, the Principal Equity Owners own 68.0% of the economic interest in CWAN Holdings as of December 31, 2022. Because they hold a substantial portion of their ownership interests in our business through CWAN Holdings, these existing holders of LLC Interests may have conflicting interests with holders of our Class A common stock. For example, they may have different tax positions from us which could influence their decisions regarding whether and when to dispose of assets, and whether and when to incur new or refinance existing indebtedness, especially in light of the existence of the Tax Receivable Agreement. In addition, the structuring of future transactions may take into consideration these existing unitholders' tax considerations even where no similar benefit would accrue to us.

Certain of our stockholders will have the right to engage or invest in the same or similar businesses as us.

In the ordinary course of their business activities, the Principal Equity Owners and their respective affiliates may engage in activities where their interests conflict with our interests or those of our stockholders. Our amended and restated certificate of incorporation provides that the Principal Equity Owners or any of their respective officers, directors, agents, stockholders, members, partners, affiliates and subsidiaries will have no duty to refrain from engaging directly or indirectly in the same or similar business activities or lines of business as us or any of our subsidiaries, even if the opportunity is one that we might reasonably have pursued or had the ability or desire to pursue if granted the opportunity to do so. No such person will be liable to us for breach of any fiduciary or other duty, as a director or officer or otherwise, by reason of the fact that such person, acting in good faith, pursues or acquires any such business opportunity, directs any such business opportunity to another person or fails to present any such business opportunity, or information regarding any such business opportunity, to us unless, in the case of any such person who is our director or officer, any such business opportunity is expressly offered to such director or officer solely in his or her capacity as our director or officer.

We are classified as a "controlled company," and as a result, we qualify for, and intend to rely on, exemptions from certain corporate governance requirements. You will not have the same protections afforded to stockholders of companies that are subject to such requirements.

The Principal Equity Owners control a majority of our voting power. As a result, we are a "controlled company" within the meaning of the applicable stock exchange corporate governance standards. Under the rules of NYSE, a company of which more than 50% of the outstanding voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain stock exchange corporate governance requirements, including:

- that a majority of our board of directors consist of independent directors;
- that nominating and corporate governance matters be decided solely by independent directors; and
- that employee and officer compensation matters be decided solely by independent directors

We utilize these exemptions. As a result, we may not have a majority of independent directors, and our nominating and corporate governance and compensation functions may not be decided solely by independent directors. Accordingly, you will not have the same protections afforded to stockholders of companies that are subject to all of the stock exchange corporate governance requirements.

We cannot predict the effect our multiple class structure may have on the trading market for our Class A common stock.

We cannot predict whether our multiple class structure will result in a lower or more volatile market price of our Class A common stock or other adverse consequences. For example, certain index providers have announced restrictions on including companies with multiple class share structures in certain of their indexes. S&P, Dow Jones and FTSE Russell have each announced changes to their eligibility criteria for inclusion of shares of public companies on certain indices, including the S&P 500. These changes exclude companies with multiple classes of shares of common stock or ordinary shares from being added to these indices. Furthermore, other stock indices may take a similar approach to S&P, Dow Jones or FTSE Russell in the future. Exclusion from indices could make our Class A common stock less attractive to investors, and as a result, the market price of our Class A common stock could be adversely affected.

As an emerging growth company within the meaning of the Securities Act of 1933, as amended (the "Securities Act"), we may utilize certain modified disclosure requirements, and we cannot be certain if these reduced requirements will make our Class A common stock less attractive to investors.

We are an emerging growth company, and for as long as we continue to be an emerging growth company, we intend to take advantage of exemptions from various reporting requirements applicable to other public companies but not to "emerging growth companies," including not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute compensation not previously approved. We have in this Annual Report on Form 10-K utilized, and we may in future filings with the SEC continue to utilize, the modified disclosure requirements available to emerging growth companies. As a result, our stockholders may not have access to certain information they may deem important.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can utilize the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to not "opt out" of this exemption from complying with new or revised accounting standards, and therefore, we are permitted to adopt new or revised accounting standards at the time private companies adopt the new or revised accounting standard and are permitted to do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company.

We could remain an emerging growth company until the earliest to occur of (i) the last day of the fiscal year in which we have total annual gross revenues of $1.235 billion or more; (ii) December 31, 2026; (iii) the date on which we have, during the previous three-year period, issued more than $1 billion in non-convertible debt; and (iv) the date on which we are deemed to be a "large accelerated filer" under the rules of the SEC.

Provisions in our certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management.

Our certificate of incorporation and bylaws contain provisions that could depress the trading price of our Class A common stock by discouraging, delaying or preventing a change of control of our Company or changes in our management that the stockholders of our Company may believe advantageous. These include provisions that:

- provide for a multi-class common stock structure in which each share of our Class C common stock and each share of our Class D common stock entitles its holder to ten votes per share on all matters presented to our stockholders generally;
- authorize "blank check" preferred stock that our board of directors could issue to increase the number of outstanding shares to discourage a takeover attempt;
- provide for a classified board of directors with staggered three-year terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- preclude cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;

- limit the ability of stockholders to call a special stockholder meeting;
- prohibit stockholders from acting by written consent from and after the date on which Welsh Carson, Warburg Pincus and Permira and their affiliates, collectively or singly, cease to beneficially own shares of our common stock representing at least 50% of the voting power of our common stock (the "Trigger Event");
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings;
- require that, from and after the Trigger Event, the removal of directors only for cause and only upon the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of common stock of the Company entitled to vote thereon;
- providing that our board of directors is expressly authorized to amend, alter, rescind or repeal our bylaws; and
- provide that, from and after the Trigger Event, requiring the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of our common stock to amend provisions of our certificate of incorporation relating to the management of our business, our board of directors, stockholder action by written consent, calling special meetings of stockholders, competition and corporate opportunities, Section 203 of the Delaware General Corporation Law (the "DGCL"), forum selection and the liability of our directors, or to amend, alter, rescind or repeal our bylaws.

Our certificate of incorporation also provides that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our certificate of incorporation provides that, unless we consent in writing to the selection of an alternate forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the DGCL, our certificate of incorporation or our bylaws; any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or our bylaws; any action asserting a claim against us that is governed by the internal affairs doctrine; or any action asserting an "internal corporate claim" as defined in Section 115 of the DGCL. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees.

Alternatively, if a court finds the choice of forum provision contained in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could materially and adversely affect our business, financial condition and results of operations.

Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. In addition, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our certificate of incorporation provides that, unless we consent in writing to the selection of an alternate forum, the federal district court for the District of Delaware will be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. We note that there is uncertainty as to whether a court would enforce the choice of forum provision with respect to claims under the federal securities laws, and that investors cannot waive compliance with the Securities Act and the rules and regulations thereunder.

We do not intend to pay any cash distributions or dividends on our Class A common stock in the foreseeable future.

We currently do not anticipate paying any cash dividends on our Class A common stock for the foreseeable future. Instead, we anticipate that all of our available funds and earnings in the foreseeable future will be used to repay indebtedness, for working capital, to support our operations and to finance the growth and development of our business. Any future determination relating to dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including restrictions in our and our subsidiaries' current and future debt instruments, our future earnings, capital requirements, financial condition and prospects, and applicable Delaware law, which provides that dividends are only payable out of surplus or current net profits. Holders of our Class B common stock and Class C common stock are not entitled to participate in any dividends declared by our board of directors. Furthermore, because we are a holding company, our ability to pay cash dividends on our Class A common stock depends on our receipt of cash distributions from CWAN Holdings and, through CWAN Holdings, cash distributions and dividends from our other direct and indirect subsidiaries.

Future sales of our Class A common stock, or the perception that such sales may occur, could depress our Class A common stock price.

Sales of a substantial number of shares of our Class A common stock in the public market, or the perception that such sales may occur, could depress the market price of our Class A common stock. Issuing additional shares of our Class A common stock or other equity securities or securities convertible into equity may dilute the economic and voting rights of our existing stockholders or reduce the market price of our Class A common stock or both. Issuing additional shares of our Class B common stock and Class C common stock, as applicable, when issued with corresponding LLC Interests, may also dilute the economic and voting rights of our existing stockholders or reduce the market price of our Class A common stock or both. Additionally, further issuances of our Class D common stock, which is convertible into shares of our Class A common stock, may also dilute the economic and voting rights of our existing stockholders.

Our certificate of incorporation authorizes us to issue up to 1,500,000,000 shares of Class A common stock and we have also reserved certain shares of Class A common stock for issuance upon the exchange of outstanding LLC Interests, together with an equal number of shares of Class B common stock or Class C common stock, as the case may be, and the conversion of outstanding shares of Class D common stock into shares of Class A common stock. Shares of our common stock held by our affiliates will continue to be subject to the volume and other restrictions of Rule 144 under the Securities Act.

The holders of an aggregate of 177,461,343 shares of our Class A common stock (on an as-converted basis) or their transferees are entitled to rights with respect to the registration of their shares under the Securities Act. Following the IPO, we filed a registration statement registering under the Securities Act the shares of Class A common stock reserved for issuance under the 2021 Plan. Sales of our Class A common stock pursuant to these registration rights or this registration statement may make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. These sales also could cause our stock price to fall and make it more difficult for you to sell shares of our Class A common stock.

An aggregate of approximately 33.3 million shares of our Class D common stock that are beneficially owned by affiliates of Warburg Pincus are pledged to secure obligations of affiliates of Warburg Pincus under a loan agreement. In the case of nonpayment at maturity or another event of default (including but not limited to the borrower’s inability to satisfy certain mandatory prepayments which are triggered off the value of such shares), the lender or its assignee may exercise its rights under the applicable loan agreements to foreclose on and sell shares pledged to cover the amount due under the loan. Any transfers or sales of such pledged shares may cause the price of our Class A common stock to decline.

General Risks

We cannot assure you that the price of our Class A common stock will not decline or not be subject to significant volatility.

The market price of our Class A common stock could be subject to significant fluctuations. The price of our Class A common stock may change in response to fluctuations in our results of operations in future periods and also may change in response to other factors, including factors specific to companies in our industry, many of which are beyond our control. As a result, our stock price may experience significant volatility and may not necessarily reflect our performance. Among other factors that could affect our stock price are:

- changes in laws or regulations applicable to our industry or offerings;
- speculation about our business in the press or the investment community;
- price and volume fluctuations in the overall stock market;
- volatility in the market price and trading volume of companies in our industry or companies that investors consider comparable;
- stock price and volume fluctuations attributable to inconsistent trading levels of our shares;
- our ability to protect our intellectual property and other proprietary rights and to operate our business without infringing, misappropriating or otherwise violating the intellectual property and other proprietary rights of others;
- sales of our Class A common stock by us or our significant stockholders, officers and directors, and the expiration of contractual lock-up agreements in connection therewith;
- redemptions and exchanges by certain of the Continuing Equity Owners of their LLC Interests into shares of Class A common stock;
- the development and sustainability of an active trading market for our Class A common stock;

- success of competitive products or services;
- the public's response to press releases or other public announcements by us or others, including our filings with the SEC, announcements relating to litigation or significant changes to our key personnel;
- the effectiveness of our internal controls over financial reporting;
- changes in our capital structure, such as future issuances of debt or equity securities;
- our entry into new markets;
- tax developments in the United States, Europe or other markets;
- strategic actions by us or our competitors, such as acquisitions or restructurings; and
- changes in accounting principles.

Further, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. In addition, the stock prices of many technology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may cause the market price of our Class A common stock to decline.

A credit ratings downgrade or other negative action by a credit rating organization could adversely affect the trading price of the shares of our Class A common stock.

Credit rating agencies continually revise their ratings for companies they follow. The condition of the financial and credit markets and prevailing interest rates have fluctuated in the past and are likely to fluctuate in the future. In addition, developments in our business and operations could lead to a ratings downgrade for us or our subsidiaries. Any such fluctuation in our or our subsidiaries' ratings may impact our ability to access debt markets in the future or increase our cost of future debt, which could have a material adverse effect on our operations and financial condition, which in return may adversely affect the trading price of shares of our Class A common stock.

The price of our Class A common stock could decline if securities analysts do not publish research or if securities analysts or other third parties publish inaccurate or unfavorable research about us.

The trading of our Class A common stock is likely to be influenced by the reports and research that industry or securities analysts publish about us, our business, our market or our competitors. If one or more securities or industry analysts downgrade our Class A common stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. If one or more securities or industry analysts ceases to cover the Company or fails to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We are unable to predict the extent to which the ongoing global COVID-19 pandemic, or other outbreaks, epidemics, pandemics, or public health crises may adversely impact our business operations, financial performance and results of operations.

For the past three years, the COVID-19 pandemic and efforts to control its spread have significantly curtailed the movement of people, goods and services worldwide, including in the regions in which we sell our services and conduct our business operations. The pandemic has resulted in, and may continue to or in the future result in, a global slowdown of economic activity, including travel restrictions, prohibitions of non-essential activities in some cases, disruption and shutdown of businesses and greater uncertainty in global financial markets. Our operations have been affected by a range of external factors related to the COVID-19 pandemic that are not within our control, including the various restrictions imposed by cities, counties, states and countries on our employees, customers, partners and suppliers designed to limit the spread of COVID-19. Although the immediate impacts of the COVID-19 pandemic have been assessed and mitigated, the ultimate extent of the impact of the pandemic, including as a result of possible subsequent outbreaks of COVID-19 or of new variants thereof and measures taken in response thereto, will depend on future developments, which remain highly uncertain and cannot currently be predicted.

Based on employee vaccination rates and public health guidance, most employees have returned to Clearwater's offices, adhering to any government requirements in effect locally. We continue to monitor the situation, including cases within our workforce, and will take action to adjust office attendance policies as circumstances warrant in order to protect the health and safety of employees, contractors, and others who visit our sites. Vaccination requirements or other risk mitigation strategies for site entry and other activities remain in effect in many countries where it is legally permissible to implement such a requirement(s), though discretion to implement such policies has been returned to executive leadership.

Outbreaks, epidemics, pandemics or public health crises may in the future adversely affect, among other things, demand for our services; our operations and sales, marketing efforts; our research and development capabilities; and other important business activities. Outbreaks, epidemics, pandemics, or public health crises may also result in our restriction or suspension of international and/or domestic travel, labor shortages, prohibitions of non-essential activities in some cases, and limit our in-person activities within Clearwater and with customers. Such outbreaks, epidemics, pandemics, or public health crises may also present operational challenges, such as unanticipated disruptions in services provided through our localized physical infrastructure, which can in turn curtail the functioning of critical components of our IT systems, and adversely affect our ability to fulfill orders, provide services, respond to customer requests and maintain our worldwide business operations.

The negative impacts of the global COVID-19 pandemic or other outbreaks, epidemics, pandemics or public health crises on the broader global economy and related impacts on our or our customers' business operations and demand for our products and services will depend on future developments and actions taken in response to such events, which are highly uncertain and cannot be predicted. Additional impacts and risks that we are not currently aware of may arise. We are similarly unable to predict the full extent of the impact of the COVID-19 pandemic or other outbreaks, epidemics, pandemics or public health crises on our customers, partners and suppliers. To the extent the COVID-19 pandemic or other outbreaks, epidemics, pandemics, or public health crises adversely affect our business, results of operations, financial condition, and stock price, they may also have the effect of heightening many of the other risks described in this Part I, Item 1A of this Form 10-K.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

We have implemented disclosure controls and procedures designed to provide reasonable assurance that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple errors or mistakes. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. As a result, because of these inherent limitations in our control system, misstatements or omissions due to error or fraud may occur and may not be detected, which could result in failures to file required reports in a timely manner and filing reports containing incorrect information. Any of these outcomes could result in SEC enforcement actions, monetary fines or other penalties, damage to our reputation, and harm to our financial condition.

Corporate responsibility, specifically related to environmental, social and governance matters, may impose additional costs and expose us to new risks.

Public ESG and sustainability reporting is becoming more broadly expected by investors, shareholders, clients and other third parties. Certain organizations that provide corporate governance and other corporate risk information to investors and shareholders have developed, and others may in the future develop, scores and ratings to evaluate companies and investment funds based upon ESG or "sustainability" metrics. Many investment funds focus on positive ESG business practices and sustainability scores when making investments and may consider a company's ESG or sustainability scores as a reputational or other factor in making an investment decision. In addition, investors, particularly institutional investors, use these scores to benchmark companies against their peers and if a company is perceived as lagging, these investors may engage with such company to improve ESG disclosure or performance and may also make voting decisions, or take other actions, to hold these corporations and their boards of directors accountable. Additionally, credit rating agencies may use these scores, or their own scores and ratings, as a consideration in their evaluation of our credit risk. If our credit rating is downgraded on the basis of ESG or "sustainability" metrics, we may face increased costs of capital. Clients, particularly in Europe, sometimes seek ESG information to satisfy their ESG commitments. We may face reputational damage in the event our corporate responsibility initiatives or objectives, including with respect to diversity and inclusion, do not meet the standards set by our investors, shareholders, lawmakers, listing exchanges, clients, credit rating agencies or other constituencies, or if we are unable to achieve an acceptable ESG or sustainability rating from third-party rating services. A low ESG or sustainability rating by a third-party rating service could also result in the exclusion of our ordinary shares from consideration by certain investors who may elect to invest with our competition instead. Ongoing focus on corporate responsibility matters by investors and other parties as described above may impose additional costs or expose us to new risks.

Our business and operations are subject to risks related to climate change.

The long-term effects of global climate change present both physical risks (such as extreme weather conditions or rising sea levels) and transition risks (such as regulatory or technology changes), which are expected to be widespread and unpredictable. These changes over time could affect, for example, the availability and cost of products, commodities and energy (including utilities), which in turn may impact our ability to procure goods or services required for the operation of our business at the quantities and levels we require. In addition, many of our operations and facilities around the world are in locations that may be impacted by the physical risks of climate change, and we face the risk of losses incurred as a result of physical damage to business interruption caused by such events. We also use gasoline and electricity in our operations, all of which could face increased regulation as a result of climate change or other environmental concerns. Regulations limiting greenhouse gas emissions and energy inputs may also increase in coming years, which may increase our costs associated with compliance. These events and their impacts could otherwise disrupt and adversely affect our operations and could materially adversely affect our financial performance.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters is located in Boise, Idaho and consists of 106,780 square feet under a lease agreement that expires on October 31, 2026. The lease agreement includes two optional 5-year renewal periods. We also lease office space in:

- Paris, France;
- Edinburgh, United Kingdom;
- Seattle, Washington;
- New York, New York;
- Noida, India
- London, United Kingdom;
- McLean; Washington D.C. metropolitan area;
- San Jose, California
- Luxembourg;
- Frankfurt, Germany; and
- Singapore.

We lease all our facilities and do not own any real property. We believe that our office facilities are adequate for our immediate needs and that additional or substitute space is readily available if needed to accommodate the growth of our operations.

Item 3. Legal Proceedings.

From time to time, we are subject to certain legal proceedings and claims that arise in the normal course of business. In the opinion of our management, we are not involved in any litigation or proceedings with third parties that we believe could have a material adverse effect on our results of operations, financial condition, cash flows or business.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our Class A common stock is listed and traded on the NYSE under the trading symbol "CWAN." There is no established public trading market for our Class B common stock, Class C common stock and our Class D common stock.

Holders of Record

As of March 1, 2023, there were 7 holders of record of our Class A common stock. The actual number of stockholders of Class A common stock is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities. As of March 1, 2023, we also had 5 holders of record of our Class B common stock, 3 holders of record of our Class C stock and 8 holders of record of our Class D common stock.

Dividend Policy

We have no current plans to pay dividends on our Class A common stock or Class D common stock. Holders of our Class B common stock and Class C common stock do not have any right to receive dividends, or to receive a distribution upon a liquidation, dissolution, or winding up of Clearwater Analytics Holdings, Inc., with respect to their Class B common stock and Class C common stock. The declaration, amount, and payment of any future dividends on shares of Class A common stock or Class D common stock is at the sole discretion of our board of directors.

Securities Authorized for Issuance Under Equity Compensation Plans

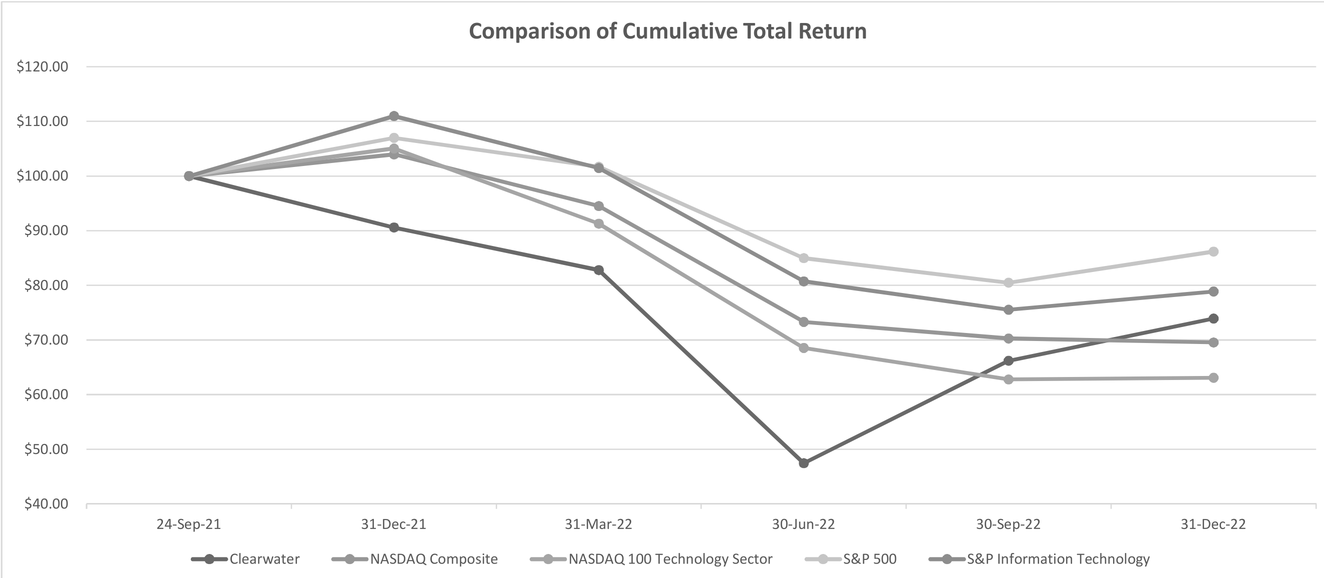
Equity compensation plans' information is incorporated by reference from Part III, Item 12, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters," of this document, and should be considered an integral part of Item 5.

Stock Performance Graph

The following performance graph and related information shall not be deemed to be "soliciting material" or "filed" for purposes of Section 18 of the Exchange Act nor shall such information be incorporated by reference into any filing of Clearwater Analytics Holdings, Inc. under the Exchange Act or the Securities Act, except to the extent we specifically incorporate it by reference in such filing.

In connection with the IPO, the Company issued 34,500,000 shares of Class A common stock at a public offering price of $18.00 per share. The graph set forth below compares the cumulative total return to stockholders on our Class A common stock relative to the cumulative total returns of the Standard & Poor's 500 Index (the S&P 500) and Standard & Poor's Information Technology Sector Index. An investment of $100 is assumed to have been made in our Class A common stock and in each index on September 24, 2021, the date our Class A common stock began trading on the New York Stock Exchange, and its relative performance is tracked through December 31, 2022. The graph uses the closing market price on September 24, 2021 of $25.37 per share as the initial value of our Class A common stock. All values assume reinvestment of dividends.

The comparisons are based on historical data and are not indicative of, nor intended to forecast, the future performance of our Class A common stock.



Unregistered Sales of Equity Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. [Reserved]

Item 7. 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 our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. As discussed in the section titled "Special Note Regarding Forward-Looking Statements," the following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and in the section titled "Special Note Regarding Forward-Looking Statements" and "Risk Factors" include elsewhere in this Annual Report on Form 10-K.

Overview

Clearwater brings transparency to the opaque world of investment accounting and analytics with what we believe is the industry's most trusted and innovative single instance, multi-tenant technology platform. Our cloud-native software allows clients to radically simplify their investment accounting operations, enabling them to focus on higher-value business functions such as asset allocation strategy and investment selection. Our platform provides comprehensive accounting, data and advanced analytics as well as highly-configurable reporting for global investment assets daily or on-demand, instead of weekly or monthly. We give our clients confidence that they are making the most informed decisions about investment performance, regulatory compliance and risk.

We provide investment accounting and reporting, performance measurement, compliance monitoring and risk analytics solutions for asset managers, insurance companies and large corporations. Every day, Clearwater's powerful platform aggregates and normalizes data on over $6.4 trillion of global invested assets for over 1,200 clients. We bring modern software to an industry that has long been dominated by difficult-to-use, high cost legacy technologies and processes, which often lack data integrity and traceability, and often require significant manual intervention. The strength of our platform is demonstrated by our approximately 80% win rate for new clients over the prior four years in deals that reached the proposal stage.

We allow our clients to replace legacy systems with modern cloud-native software. Our platform helps clients reduce cost, time, errors and risk and allows them to reallocate resources to other value-creating activities. Our software aggregates, reconciles and validates data from more than 2,800 daily data feeds and more than four million securities that have been modeled across multiple currencies, asset classes and countries. This cleansed and validated data runs through our proprietary accounting, performance, compliance and risk solutions to provide clients with powerful analytics and daily or on-demand configurable reporting. We offer multi-asset class, multi-basis, multi-currency accounting and analytics that provide clients with a comprehensive view of their holdings and related performance. This allows our clients to make better, more timely decisions about their investment portfolios.

Clearwater benefits from powerful network effects. With our single instance, multi-tenant architecture, every client, whether new or existing, enriches our global data set by making it more complete and accurate. Our software continually sources, ingests, models, reconciles and validates the terms, conditions and features of every investment security held by all of our clients. This continuous process helps to create a single repository of comprehensive, accurate investment data (often referred to within the industry as a "Golden Copy" of data) that benefits all our clients to the extent they otherwise have rights to the data. Through this continuous process, we are able to identify and adjudicate data discrepancies that otherwise could introduce error and risk into our clients' investment portfolios. We believe that a meaningful competitive advantage of this network effect is that we are increasingly seen as the best and most accurate source of investment accounting data and analytics in the industry.

We have a 100% recurring revenue model, excluding license related revenue from the JUMP acquisition. We charge our clients a fee that is primarily based on the amount of assets they manage on our platform, subject to contracted minimums. A majority of the assets on our platform are high-grade fixed income assets, leading to very low levels of volatility and highly predictable revenue streams. In 2022, we transitioned our contracting structure to a framework we describe as Base+ for all new clients. A Base+ contract framework includes a base fee for a prospective or existing client's book of business plus an incremental fee for increases in assets on the platform. This structure is designed to limit the downside volatility in our asset-based fees. We also began to amend contracts with our existing clients to either modify the structure of such contracts from a pure asset-based fee to this Base+ model or to increase the basis point price. Throughout 2022, 80% of our clients (based on percentage of annual recurring revenue) either modified their contracts to Base+ or agreed to price increases under their existing contracts. The Base+ model includes annual increases in the base fee and enable us to charge additional fees for supplemental services provided for certain alternative asset classes (e.g., LPx) or additional products (e.g. Prism, Performance Plus) should the client choose to utilize those services.

Recent Developments

Acquisition of JUMP Technology

On November 30, 2022, the Company completed its acquisition of JUMP Technology, a Paris, France-based provider of investment management software. With the addition of JUMP, Clearwater Analytics positions itself to become a provider of end-to-end solutions to investment management companies globally. JUMP is a leading provider of investment management software in France and several other countries in Europe. Covering the entire investment management value chain, JUMP's solutions can be customized for investment management companies, private banks, family offices, insurers, and institutional investors.

The total purchase consideration for the acquisition of JUMP is €75 million cash. A total of €67.5 million cash was paid as purchase consideration upon completion of the acquisition. The Share Purchase Agreement includes an indemnification holdback which requires the remaining €7.5 million cash to be paid as purchase consideration over the subsequent two years subject to no indemnification claims being submitted. We expensed acquisition-related costs in the amount of $1.7 million in general and administrative expenses in 2022.

Initial Public Offering

On September 28, 2021, the Company completed the IPO, in which it sold 34,500,000 shares of Class A common stock (including shares issued pursuant to the exercise in full of the underwriters' option to purchase additional shares) at a public offering price of $18.00 per share for net proceeds of $582.2 million, after deducting underwriting discounts of $38.8 million (but excluding other offering expenses of $5.3 million). The Company used proceeds from the IPO to (i) purchase 34,500,000 common units of CWAN Holdings, LLC ("LLC interests"); (ii) repay approximately $437.4 million of outstanding borrowings under the Previous Credit Agreement including prepayment premiums and accrued interest; and (iii) pay $5.3 million of expenses related to the IPO; with the remaining proceeds intended to be used for general corporate purposes.

Transactions

In connection with the IPO, the Company completed the following organizational transactions (the "Transactions"):

- the amendment and restatement of the limited liability company agreement of CWAN Holdings to, among other things, appoint Clearwater Analytics Holdings, Inc. as the sole managing member of CWAN Holdings and provide certain exchange and redemption rights to direct or indirect holders of interests in CWAN Holdings and/or our Class B common stock, Class C common stock and/or Class D common stock immediately following consummation of the Transactions, including the Principal Equity Owners, and certain of our directors and officers and their respective permitted transferees (the "Continuing Equity Owners");
- the amendment and restatement of the certificate of incorporation of Clearwater Analytics Holdings, Inc. to create Class A, B, C and D common stock;
- the mergers of Blocker Entities into Clearwater Analytics Holdings, Inc and the issuance of Class A common stock, Class B common stock, Class C common stock, and Class D common stock to Blocker Shareholders and the Continuing Equity Owners. Blocker Entities refers to entities affiliated with certain of the Continuing Equity Owners, each of which was a direct or indirect owner of LLC Interests in CWAN Holdings, LLC prior to the Transactions and was taxable as a corporation for U.S. federal income tax purposes, and Blocker Shareholders refers to entities affiliated with certain of the Continuing Equity Owners, each of which was an owner of one or more of the Blocker Entities prior to the Transactions, which exchanged their interests in the Blocker Entities for shares of our Class A common stock, in the case of Continuing Equity Owners other than the Principal Equity Owners, and for shares of our Class D common stock, in the case of the Principal Equity Owners, in connection with the consummation of the Transactions;
- the issue of 11,151,110 shares of Class B common stock to Continuing Equity Owners other than the Principal Equity Owners and 47,377,587 shares of Class C common stock to the Principal Equity Owners, on a one-to-one basis with the number of common units of CWAN Holdings. Holders of our Class B and Class C common stock, along with the holders of our Class A and Class D common stock have certain voting rights, but holders of our Class B and Class C common stock do not have an economic interest in the Company;
- the issue of 130,083,755 shares of Class D common stock to the Principal Equity Owners, on a one-to-one basis, with the number of common units of CWAN Holdings. Holders of Class D common stock have certain voting rights and are entitled to an economic interest in the Company;
- the execution of the Tax Receivable Agreement, by and among Clearwater Analytics Holdings, Inc., CWAN Holdings, LLC and the other parties thereto (the "Tax Receivable Agreement" or "TRA") (refer to Note 16 "Income Taxes" in the notes to our audited consolidated financial statements of this Annual Report).

New Credit Agreement

In connection with the closing of the IPO, Clearwater Analytics, LLC entered into a new credit agreement with JPMorgan Chase Bank, N.A. that included a $55 million New Term Loan and a $125 million Revolving Facility. The New Term Loan and Revolving Facility will be used for working capital and other general corporate purposes (including acquisitions permitted under the New Credit Agreement).

Previous Credit Agreement

On October 19, 2020, we entered into the Fifth Amendment to the Credit Agreement with Ares Capital Corporation and Golub Capital LLC. The agreement provided for a total term loan of $435 million and revolving line of credit of $30 million. Under the terms of the Fifth Amendment to the Credit Agreement, we were required to maintain certain customary affirmative and negative covenants, including covenants that limited our ability to, among other things, incur indebtedness, merge or consolidate, dispose of assets, make investments, make acquisitions, enter into transactions with affiliates, pay dividends or make distributions. We were also required to maintain compliance with a consolidated net leverage ratio. The line of credit and term note agreements also included customary events of default.

The outstanding borrowings under the Fifth Amendment to the Credit Agreement of $432.7 million were repaid in full in September 2021 in connection with the closing of the IPO. The repayment of the borrowings resulted in a loss on extinguishment of $10.3 million.

Recapitalization

On November 2, 2020, the Company completed a recapitalization transaction on behalf of existing unitholders of CWAN Holdings, LLC. The transaction allowed existing unitholders to sell their units to new investors. In addition, option holders were offered the opportunity to exercise and sell a portion of their vested options, which were accelerated in certain cases (See Note 14, Equity-Based Compensation – Modification of option awards). In total 132,658,542 units transferred ownership. After completion of the recapitalization transaction, entities ultimately controlled by WCAS maintained a majority interest in and control of the Company.

In connection with the transaction, selling unitholders contributed $49.0 million for bonuses paid to employees and related payroll taxes in 2020.

Key Factors Affecting Our Performance

The growth and future success of our business depends on many factors, including those described below.

- *Adding New Clients in Established End Markets:* Our future growth is dependent upon our ability to continue to add new clients, and in 2022 we added over 130 new clients. We are focused on continuing to increase our client base in our established client end-markets of corporations, insurance companies and asset managers, and doing so with increasingly large and sophisticated clients. As we add clients, it takes time to fully onboard their assets to the platform. Our revenue generally increases as assets are added to the platform, while the effort to serve the client is relatively consistent over time. Therefore, we expect revenues and gross margins to increase for a client as the client transitions from the onboarding process to a steady state once assets have been onboarded. In any period, our gross margins may fluctuate based on the relative size and number of clients that we are onboarding at that time.
- *Expanding and Retaining Relationships with Existing Clients:* Our future growth is dependent upon retaining our existing clients and expanding our relationships with these clients through increases in the amount of their assets on our platform. We have enjoyed consistent gross revenue retention rates of approximately 98% over the past sixteen quarters. The consistency in revenue retention creates predictability in our business and enables us to better plan our future investments. Our relationships with our clients expands as these clients add more assets to our platform, with our net revenue retention rates (as defined below under "—Key Operating Measures") between 103% and 107% in 2022. Clients may add assets as a result of acquiring new clients themselves or by acquiring new businesses or simply through organic growth, which produces additional assets that they manage using our platform. We believe that our client service model and technology platform are strong contributing factors in our attractive retention rates. As such, we expect to continue to invest in both our operations and research and development functions to maintain and increase our high levels of client satisfaction, which we believe will lead to strong client retention and expansion.

- *International Expansion:* We believe that the value provided by our platform is equally applicable to asset owners and asset managers outside of North America, and there is a significant opportunity to expand our client base and usage of our platform internationally. Our future growth is dependent upon our ability to successfully enter new international markets and to expand our client base in our current international markets. Our cost to acquire clients in international markets is currently greater than in North America because there is less awareness of the Clearwater brand and our product capabilities, and we have to date invested less in sales and marketing internationally. For these reasons, we expect to invest more in sales and marketing in international markets relative to North America in order to achieve growth in these international markets.
- *Adding New Clients in Adjacent or Nascent End-Markets:* Our strategy is to also add new clients in our more nascent end-markets, which include state and local governments, pension funds and sovereign wealth funds, as well as a variety of alternative asset managers. Traditionally, our existing clients have been among our best resources for referring new clients to us, and we will continue to invest in sales and marketing to build awareness of our brand, engage prospective clients and drive adoption of our platform, particularly as it relates to expanding into new end-markets. As we establish our presence in new end-markets, we expect sales and marketing expenditures will be less efficient than in our established verticals and we will become increasingly more efficient at acquiring clients in new end-markets over time.
- *Expanding Solutions and Broadening Innovation:* Our future growth is dependent upon our continued expansion of our solutions in order to better retain our current clients and to develop new use cases that appeal to new clients. While we believe we will be able to reduce our research and development expenses as a percentage of revenues as we achieve greater scale, our priority is to maintain and grow our technological advantage over our competitors. As we identify opportunities to increase our technological and competitive advantages, we may increase our investments in research and development at rates that are faster than our growth in revenues in order to enhance our long-term growth and profitability.
- *Fluctuations in the Market Value of Assets on the Platform:* We generally bill our clients monthly in arrears based on a basis point rate applied to our clients' assets on our platform, which can be influenced by general economic conditions. While 77% of the assets on our platform were high-grade fixed income securities and structured products as of December 31, 2022 and traditionally subject to lower levels of volatility, the value of our clients' assets on our platform varies on a daily basis due to changes in securities prices, cash flow needs, incremental buying and selling of assets and other strategic priorities of our clients. For these reasons, our revenue is subject to fluctuations based on economic conditions, including market conditions and the changing interest rate environment.

Key Components of Results of Operations

The following discussion describes certain line items in our consolidated statements of operations.

Revenue

We generate revenue from fees derived from providing clients with access to the solutions and services on our SaaS platform. Sales of our offering include a right to use our software in a hosted environment without taking possession of the software. Our contracts are generally cancellable with 30 days' notice without penalty. We invoice clients monthly in arrears based on a percentage of the average daily value of assets within a client's accounts on our platform during that month subject to a base minimum fee. Payment terms may vary by contract but generally include a requirement of payment within 30 days following the month in which services are provided. Fees invoiced in advance of the delivery of the Company's performance obligations are deemed set-up activities and are deferred as a material right and recognized over time, typically 12 months.

Cost of Revenue

Cost of revenue consists of expenses related to delivery of revenue-generating services, including expenses associated with client services, onboarding, reconciliation and agreements related to the purchase of data used in the provision of our services. Salary and benefits for certain personnel associated with supporting these functions, in addition to allocated overhead and depreciation for facilities, are also included in cost of revenue.

Operating Expenses

Research and development expense consists primarily of salary and benefits for our development staff as well as contractors' fees and other costs associated with the enhancement of our offering, ensuring operational stability and performance and development of new offerings.

Sales and marketing expense consists of the costs of personnel involved in the sales and marketing process, sales commissions, advertising and promotional materials, sales facilities expenses, and the cost of trade shows and seminars.

General and administrative expense consists primarily of personnel costs for information technology, finance, administration, human resources and general management, as well as expenses from legal, corporate technology and accounting service providers.

Interest (Income) Expense, Net

Interest expense reflects interest accrued on our outstanding term loans under the New Credit Agreement and Previous Credit Agreement during the course of the applicable period. The accrual of interest varies depending on the timing and amount of borrowings and repayments during the period as well as fluctuations in interest rates. Interest income relates to interest received on our cash and cash equivalents based on interest rates in the course of the applicable period.

Tax Receivable Agreement Expense

In connection with the IPO and related transactions, we entered into a TRA that provides for the payment by us of 85% of certain tax benefits that we realize as a result of increases in our tax basis of CWAN Holdings resulting from redemptions or exchanges of CWAN Holdings units. Tax receivable agreement expense relates to payments we anticipate making under the TRA.

Loss on Debt Extinguishment

Loss on debt extinguishment related to the early repayment of borrowings under the Previous Credit Agreement. The debt was extinguished on September 28, 2021 in connection with the closing of the IPO.

Other (Income) Expense, Net

Other (income) expense, net relates to foreign currency gains and losses.

Provision for Income Taxes

Provision for income taxes consists of income taxes related to federal, state, and foreign jurisdictions where we conduct our business, net of our valuation allowance. Our effective tax rate may increase in the future as our ownership in CWAN Holdings increases via exchanges from historical partners. In addition, our discrete items (e.g. changes in tax rates or laws, equity-based compensation deductions, or mix of income between tax jurisdictions) may not be consistent from year to year and could cause volatility in our effective tax rate.

Key Operating Measures

We consider certain operating measures, such as annualized recurring revenue, gross retention rates and net retention rates, in measuring the performance of our business.

Annualized Recurring Revenue

Annualized recurring revenue is calculated at the end of a period by dividing the recurring revenue in the last month of such period by the number of days in the month and multiplying by 365.

The following table summarizes the Company’s annualized recurring revenue as of the dates presented:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
		(in thousands)		
2022				
Annualized recurring revenue	$ 287,137	$ 290,354	$ 303,560	$ 323,461
2021				
Annualized recurring revenue	$ 232,467	$ 245,033	$ 257,022	$ 277,780
2020				
Annualized recurring revenue	$ 186,251	$ 200,492	$ 214,877	$ 219,901

Because a substantial majority of the assets on our platform are fixed income securities that typically have low levels of volatility with respect to their market value, the growth in annualized recurring revenue is generally not attributable to the fluctuating market value of the assets on our platform. Rather, the growth in annualized recurring revenue is due to an increase in the number of clients using our offering as well as from onboarding more assets of our existing clients onto our platform.

Annualized recurring revenue increased 14% from December 31, 2021 to December 31, 2022 on account of growth in our client base as we brought new clients onto our platform and also added additional assets onto our platform from existing clients. The increase in annualized recurring revenue was partially offset by the decreases in client’s assets on the platform from decreases in fixed income and equity security prices during 2022, which we estimate resulted in a 5% reduction in the growth of annualized recurring revenue.

Revenue Retention Rate

Gross revenue retention rate represents annual contract value (“ACV”) at the beginning of the 12-month period ended on the reporting date less client attrition over the prior 12-month period, divided by ACV at the beginning of the 12-month period, expressed as a percentage. ACV is comprised of annualized recurring revenue plus contracted-not-billed revenue, which represents the estimated annual contracted revenue for new and existing client opportunities prior to revenue recognition. In order to arrive at total ACV, we include contracted-not-billed revenue, as it is contracted revenue that has not been recognized but that we expect to produce recognized revenue in the future. Client attrition occurs when a client provides a contract termination notice. The amount of client attrition is calculated as the reduction in annualized revenue of the client at the time of the notice and is recorded in the month the final billing occurs. In the case of client attrition where contracted-not-billed revenue is still present for a client, both annualized recurring revenue and contracted-not-billed revenue associated with such client are deducted from ACV.

Net revenue retention rate is the percentage of recurring revenue retained from clients on the platform for 12 months and includes changes from the addition, removal or value of assets on our platform, contractual changes that have an impact to annualized recurring revenues and lost revenue from client attrition. We calculate net revenue retention rate as of a period end by starting with the annualized recurring revenue from clients as of the 12 months prior to such period end. We then calculate the annualized recurring revenue from these clients as of the current period end. We then divide the total current period end annualized recurring revenue by the 12-month prior period end annualized recurring revenue to arrive at the net revenue retention rate.

The following table summarizes our retention rates as of the dates presented:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2022				
Gross retention rate	98%	98%	98%	98%
Net retention rate	107%	104%	103%	106%
2021				
Gross retention rate	98%	98%	98%	98%
Net retention rate	110%	109%	111%	111%
2020				
Gross retention rate	98%	98%	98%	98%
Net retention rate	107%	108%	109%	109%

Gross revenue retention rates have remained consistently at approximately 98% since 2019. We believe the extremely consistent and high gross revenue retention rate is a testament to the value proposition that our leading solution offers.

Net revenue retention rate as of December 31, 2022 was 106% which represents growth in clients on our platform of 6% year over year. Net revenue retention rate as of December 31, 2022 decreased compared to net revenue retention rate as of December 31, 2021 primarily due to decreases in the market value of assets which clients maintain on our platform.

Non-GAAP Financial Measures

We also consider certain non-GAAP financial measures that are not prepared in accordance with accounting principles generally accepted in the United States ("GAAP"), such as adjusted EBITDA and adjusted EBITDA Margin, in measuring the performance of our business. The non-GAAP measures are not based on any standardized methodology prescribed by GAAP and are not necessarily comparable to similar measures presented by other companies. However, we believe that this non-GAAP information is useful as an additional means for investors to evaluate our operating performance, when reviewed in conjunction with our GAAP financial statements. These measures should not be considered in isolation or as a substitute for measures prepared in accordance with GAAP, and because these amounts are not determined in accordance with GAAP, they should not be used exclusively in evaluating our business and operations. In addition, undue reliance should not be placed upon non-GAAP or operating information because this information is neither standardized across companies nor subjected to the same control activities and audit procedures that produce our GAAP financial results.

Adjusted EBITDA and Adjusted EBITDA Margin

Adjusted EBITDA and Adjusted EBITDA Margin are supplemental performance measures that our management uses to assess our operating performance. We define Adjusted EBITDA as net loss plus (i) interest (income) expense, net, (ii) loss on debt extinguishment, (iii) depreciation and amortization expense, (iv) equity-based compensation expense and related payroll taxes, (v) equity-based compensation expense related to JUMP acquisition, (vi) recapitalization compensation expenses, (vii) tax receivable agreement expense, and (viii) other expenses. We define Adjusted EBITDA Margin as Adjusted EBITDA (as defined above) divided by revenue.

The following table reconciles net loss to Adjusted EBITDA and includes amounts expressed as a percentage of revenue for the periods indicated.

	Year Ended December 31,					
	2022		2021		2020	
	(in thousands, except percentages)					
Net loss	$ (6,695)	(2%)	$ (8,094)	(3%)	$ (44,230)	(22%)
Adjustments:						
Interest (income) expense, net	(1,137)	0%	25,682	10%	22,854	11%
Loss on debt extinguishment	—	0%	10,303	4%	—	—
Depreciation and amortization	5,139	2%	3,493	1%	2,271	1%
Equity-based compensation expense and related payroll taxes	64,704	21%	36,695	15%	24,602	12%
Equity-based compensation expense related to JUMP acquisition	1,821	1%	—	—	—	—
Recapitalization compensation expenses	—	—	—	—	48,998	24%
Tax receivable agreement expense	11,639	4%	—	—	—	—
Other expenses[(1)]	5,665	2%	4,597	2%	2,555	1%
Adjusted EBITDA	81,136	27%	72,676	29%	57,050	28%
Revenue	$ 303,426	100%	$ 252,022	100%	$ 203,222	100%

(1) Other expenses includes management fees to our investors, income taxes, foreign exchange gains and losses and other expenses that are not reflective of our core operating performance including the costs to set up our Up-C structure and Tax Receivable Agreement, and transaction expenses which include legal, accounting, banking, consulting, diligence, and other expenses related to completed and contemplated acquisitions.

	Year Ended December 31,		
	2022	2021	2020
		(in thousands)	
Up-C structure expenses	$ 158	$ 1,660	$ —
Transaction expenses	1,711	—	—
Amortization of prepaid management fees and reimbursable expenses	2,486	2,367	1,597
Provision for income taxes	1,360	487	902
Miscellaneous	(50)	83	56
Total other expenses	$ 5,665	$ 4,597	$ 2,555

Results of Operations

The following tables set forth our results of operations for the years ended December 31, 2022, 2021 and 2020 (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Revenue	$ 303,426	$ 252,022	$ 203,222
Cost of revenue(1)	87,784	67,864	53,263
Gross profit	215,642	184,158	149,959
Operating expenses:			
Research and development(1)	94,120	72,690	55,262
Sales and marketing(1)	52,638	39,065	22,243
General and administrative(1)	63,767	43,942	43,874
Recapitalization compensation expenses	—	—	48,998
Total operating expenses	210,525	155,697	170,377
Income (loss) from operations	5,117	28,461	(20,418)
Interest (income) expense, net	(1,137)	25,682	22,854
Tax receivable agreement expense	11,639	—	—
Loss on debt extinguishment	—	10,303	—
Other (income) expense, net	(50)	83	56
Loss before income taxes	(5,335)	(7,607)	(43,328)
Provision for income taxes	1,360	487	902
Net loss	(6,695)	(8,094)	(44,230)
Less: Net income attributable to noncontrolling interests	1,272	119	—
Net loss attributable to Clearwater Analytics Holdings, Inc.	$ (7,967)	$ (8,213)	$ —

(1) Amounts include equity-based compensation as follows (in thousands):

Cost of revenue	$ 9,043	$ 4,786	$ 1,669
Operating expenses:			
Research and development	17,950	10,409	4,208
Sales and marketing	12,711	7,059	3,911
General and administrative	25,987	14,441	14,814
Total equity-based compensation expense	$ 65,691	$ 36,695	$ 24,602

The following table sets forth our consolidated statements of operations data expressed as a percentage of revenue for the periods indicated:

	Year Ended December 31,		
	2022	2021	2020
Revenue	100%	100%	100%
Cost of revenue	29%	27%	26%
Gross profit	71%	73%	74%
Operating expenses:			
Research and development	31%	29%	27%
Sales and marketing	17%	16%	11%
General and administrative	21%	17%	22%
Recapitalization compensation expenses	—	—	24%
Total operating expenses	69%	62%	84%
Income (loss) from operations	2%	11%	(10%)
Interest (income) expense, net	0%	10%	11%
Tax receivable agreement expense	4%	—	—
Loss on debt extinguishment	—	4%	—
Other (income) expense, net	—	—	—
Loss before income taxes	(2%)	(3%)	(21%)
Provision for income taxes	0%	0%	0%
Net loss	(2%)	(3%)	(22%)

Comparison of the Years Ended December 31, 2022, 2021 and 2020

Revenue

	Year Ended December 31,		
	2022	2021	2020
	(In thousands, except percentages)		
Revenue	$ 303,426	$ 252,022	$ 203,222
Change over prior year	51,404	48,800	
Percent change over prior year	20%	24%	

Revenue increased $51.4 million, or 20%, 2022 compared to 2021. The increase was on account of growth in our client base as we brought new clients onto our platform, as well as changes to our existing clients' assets on our platform. Average assets on our platform that were billed to new and existing clients increased 15% from 2021 to 2022 while average basis point rate billed to clients increased by 2.6% from 2021 to 2022. Revenue related to JUMP was $2.7 million in 2022.

Revenue increased $48.8 million, or 24%, 2021 compared to 2020. The increase was on account of growth in our client base as we brought new clients onto our platform and also added additional assets onto our platform from existing clients. Average assets on our platform that were billed to new and existing clients increased 20% from 2020 to 2021 while average basis point rate billed to clients increased by 1.8% from 2020 to 2021.

Cost of Revenue

	Year Ended December 31,						
	2022	$ Change	% Change	2021	$ Change	% Change	2020
	(In thousands, except percentages)						
Equity-based compensation	$ 9,043	$ 4,257	89%	$ 4,786	$ 3,117	187%	$ 1,669
All other cost of revenue	78,741	15,663	25%	63,078	11,484	22%	51,594
Total cost of revenue	$ 87,784	$ 19,920	29%	$ 67,864	$ 14,601	27%	$ 53,263
Percent of revenue	29%			27%			26%

Cost of revenue changed as follows (in thousands):

	Change from December 31, 2021 to December 31, 2022	Change from December 31, 2020 to December 31, 2021
Increased payroll and related	$ 10,060	$ 7,346
Increased equity-based compensation	4,257	3,117
Increased depreciation and amortization	1,588	632
Increased data costs	1,169	990
Increased travel and entertainment	1,095	4
Increased technology	711	729
Increased facilities and infrastructure expenses	582	797
Increased outside services and contractors	486	1,002
Other items	(28)	(16)
Total change	$ 19,920	$ 14,601

The increase in cost of revenue in 2022 was primarily due to increased payroll and related costs as a result of headcount growth of additional employees across our client services, onboarding and reconciliation teams to support a larger client base as well as increased equity-based compensation due to increased grant-date fair value of equity awards and higher headcount. Cost of revenue headcount grew at a faster rate than overall revenue growth as we continue to expand and increase our scale to support our expected continued international expansion. International revenue grew to 14% of revenues in 2022, compared to 9% in 2021. In addition, cost of revenue increased from a rise in depreciation and amortization due to the completion of internal IT projects, increased data costs to support a larger client base, increased travel and entertainment costs due to the relaxation of travel restrictions from the COVID-19 pandemic in 2022 compared to 2021, higher utilization of third-party contractors, technology and IT services on operational activities, and increased allocation of facility costs.

The increase in cost of revenue in 2021 was primarily due to increased payroll and related costs as a result of headcount growth of additional employees across our client services, onboarding and reconciliation teams to support a larger client base as well as increased equity-based compensation due to increased grant-date fair value of equity awards and higher headcount. In addition, higher utilization of third-party contractors, technology and IT services on operational activities, increased data costs to support a larger client base, and increased allocations of depreciation and facility costs increased cost of revenue.

Operating Expenses

Research and Development

	Year Ended December 31,						
	2022	$ Change	% Change	2021	$ Change	% Change	2020
	(In thousands, except percentages)						
Equity-based compensation	$ 17,950	$ 7,541	72%	$ 10,409	$ 6,201	147%	$ 4,208
All other research and development	76,170	13,889	22%	62,281	11,227	22%	51,054
Total research and development	$ 94,120	$ 21,430	29%	$ 72,690	$ 17,428	32%	$ 55,262
Percent of revenue	31%			29%			27%

Research and development expense changed as follows (in thousands):

	Change from December 31, 2021 to December 31, 2022	Change from December 31, 2020 to December 31, 2021
Increased payroll and related	$ 9,301	$ 5,085
Increased equity-based compensation	7,541	6,201
Increased technology	4,495	2,187
Increased travel and entertainment costs	694	92
Increased facilities and infrastructure expenses	591	255
(Decreased) increased outside services and contractors	(985)	3,050
(Decreased) increased depreciation and amortization	(44)	576
Other items	(163)	(18)
Total change	$ 21,430	$ 17,428

The increase in research and development expense in 2022 was primarily due to increased payroll and related costs as a result of headcount growth of additional employees to focus on new offerings, as well as increased equity-based compensation due to increased grant-date fair value of equity awards and higher headcount. In addition, research and development expense increased due to increased technology costs from higher utilization of third-party cloud computing and other third-party services, increased travel and entertainment costs due to the relaxation of travel restrictions from the COVID-19 pandemic in 2022 compared to 2021, and increased allocation of facilities costs. These increases were partially offset by lower utilization of third-party consultants on development activities due to a focus on internal hiring of developers, and decreased depreciation expense due to lower impairment losses on abandoned capitalized software projects.

The increase in research and development expense in 2021 was primarily due to increased equity-based compensation due to increased grant-date fair value of equity awards and higher headcount, increased payroll and related costs as a result of headcount growth of additional employees to focus on new offerings, increased technology costs from higher utilization of third-party cloud computing services and other third-party IT services, and increased allocations of facility costs and increased depreciation due to impairment losses related to abandoned capitalized software projects.

Sales and Marketing

	Year Ended December 31,						
	2022	$ Change	% Change	2021	$ Change	% Change	2020
	(In thousands, except percentages)						
Equity-based compensation	$ 12,711	$ 5,652	80%	$ 7,059	$ 3,148	80%	$ 3,911
All other sales and marketing	39,927	7,921	25%	32,006	13,674	75%	18,332
Total sales and marketing	$ 52,638	$ 13,573	35%	$ 39,065	$ 16,822	76%	$ 22,243
Percent of revenue	17%			16%			11%

Sales and marketing expense changed as follows (in thousands):

	Change from December 31, 2021 to December 31, 2022	Change from December 31, 2020 to December 31, 2021
Increased payroll and related	$ 5,677	$ 10,926
Increased equity-based compensation	5,652	3,148
Increased marketing	1,617	903
Increased travel and entertainment	1,225	297
Increased technology	234	303
Increased facilities and infrastructure expenses	215	443
(Decreased) increased outside services and contractors	(1,036)	709
Other items	(11)	93
Total change	$ 13,573	$ 16,822

The increase in sales and marketing expense in 2022 was primarily due to increased equity-based compensation due to increased grant-date fair value of equity awards and higher headcount, as well as increased payroll and related costs as a result of additional employees to expand sales coverage. In addition, sales and marketing expense increased from higher marketing costs due to increased focus on public relations, events and branding across the globe including the in-person Clearwater Connect conference in September 2022, increased travel and entertainment costs due to the relaxation of travel restrictions from the COVID-19 pandemic in 2022 compared to 2021, increased utilization of IT services and increased allocation of facilities cost. These increases were partially offset by lower utilization of third-party consultants supporting marketing initiatives.

The increase in sales and marketing expense in 2021 was primarily due to increased payroll and related costs as a result of additional employees to expand sales coverage as well as increased equity-based compensation due to increased grant-date fair value of equity awards and higher headcount. In addition, sales and marketing expense increased from higher marketing costs due to increased focus on public relations and branding, higher utilization of third-party contractors on marketing activities, increased allocation of facility and technology costs, and increased travel and entertainment costs due to a reduction in travel restrictions related to the COVID-19 pandemic.

General and Administrative

	Year Ended December 31,						
	2022	$ Change	% Change	2021	$ Change	% Change	2020
	(In thousands, except percentages)						
Equity-based compensation	$ 25,987	$ 11,546	80%	$ 14,441	$ (373)	(3%)	$ 14,814
All other general and administrative	37,780	8,279	28%	29,501	441	2%	29,060
Total general and administrative	$ 63,767	$ 19,825	45%	$ 43,942	$ 68	0%	$ 43,874
Percent of revenue	21%			17%			22%

General and administrative expense changed as follows (in thousands):

	Change from December 31, 2021 to December 31, 2022	Change from December 31, 2020 to December 31, 2021
Increased (decreased) equity-based compensation	$ 11,546	$ (373)
Increased insurance	1,858	852
Increase (decreased) accrued sales tax exposure	1,755	(10,907)
Increased transaction expenses	1,711	—
Increased technology	1,637	919
Increased payroll and related	1,311	3,445
Increased outside services and contractors	1,052	3,767
Increased (decreased) travel and entertainment	705	(129)
Increased facilities and infrastructure expenses	104	306
(Decreased) increased Up-C structure expenses	(1,502)	1,670
(Decreased) increased recruiting expense	(1,024)	381
Other items	672	137
Total change	$ 19,825	$ 68

The increase in general and administrative expense in 2022 was primarily due to increased equity-based compensation expense due to increased grant-date fair value of equity awards, additional headcount and additional equity awards to JUMP employees, and higher insurance costs for our directors and officers. Accrued sales tax exposure has moved $1.8 million year on year as we have released less accrued sales tax during 2022 when compared to 2021. In December 2021, we reduced our estimated sales tax liability by $2.0 million as actual amounts remitted via voluntary disclosure agreements were less than estimated as more customers were able to prove partial usage outside of the jurisdiction. In addition, general and administrative expense increased due to increased transaction expenses related to the completed acquisition of JUMP Technology and other contemplated but not completed acquisitions, higher utilization of IT services, increased payroll and related costs as a result of headcount growth of additional employees, higher utilization of accounting and legal professional services in connection with being a public company, increased travel and entertainment expense due to the relaxation of travel restrictions from the COVID-19 pandemic in 2022 compared to 2021, and increased allocation of depreciation and facility costs. These increases were partially offset by decreased costs associated with setting up our the Up-C structure and the Tax Receivable Agreement, and decreased third-party agency recruitment costs.

The increase in general and administrative expense in 2021 is due to higher utilization of third-party contractors on accounting, IT and compliance activities, increased payroll and related costs as a result of headcount growth. In addition, general and administrative expense increased due to accounting and legal professional service costs associated with creating our Up-C structure and developing the Tax Receivable Agreement, higher utilization of IT services, increased insurance costs for our directors and officers, increased recruiting costs to support growth initiatives and increased allocation of facility costs. These increases were offset by the absence of an expense related to accrued sales tax liability as we recorded $9.1 million of additional liability for sales tax during 2020. Beginning January 2021, we commenced collecting and remitting sales tax to jurisdictions on behalf of customers which has not resulted in additional exposure. In December 2021, we reduced our estimated sales tax liability by $2.0 million as actual amounts remitted via voluntary disclosure agreements were less than estimated as more customers were able to prove partial usage outside of the jurisdiction. Additional reductions in general and administrative expense are due to decreased equity-based compensation as a result of equity award modifications that took place in January and November 2020, and decreased travel and entertainment expense.

Recapitalization Compensation Expense

During November 2020, we completed the Recapitalization transaction on behalf of existing CWAN LLC unitholders. The transaction allowed existing unitholders to sell their units to new investors. In connection with the transaction, selling unitholders contributed $49.0 million towards bonuses paid to employees and related payroll taxes in 2020. These amounts were recorded as Recapitalization compensation expense within the consolidated statement of operations. The bonuses were paid to employees from departments which have historically been recorded in the below categories in the consolidated statements of operations:

	Year Ended December 31, 2020
Cost of revenue	$ 6,205
Research and development	8,891
Sales and marketing	7,951
General and administrative	25,951
Total recapitalization compensation	$ 48,998

Non-Operating Expenses

Interest Expense, Net

	Year Ended December 31,						
	2022	$ Change	% Change	2021	$ Change	% Change	2020
	(In thousands, except percentages)						
Interest (income) expense, net	$ (1,137)	$ (26,819)	(104%)	$ 25,682	$ 2,828	12%	$ 22,854
Tax receivable agreement expense	11,639	11,639	NMF	—	—	NMF	—
Loss on extinguishment	—	(10,303)	(100%)	10,303	10,303	NMF	—
Other (income) expense, net	(50)	(133)	(160%)	83	27	48%	56

NMF - not meaningful

The decrease in interest (income) expense, net for the year ended December 31, 2022 is due to decreased interest expense from lower borrowings under the New Credit Agreement compared with borrowings under the Previous Credit Agreement, and by increased interest income on our cash and cash equivalents from higher interest rates. The increase in interest expense in 2021 was primarily due to increased interest expense related to incremental borrowings following our debt refinancing in October 2020, offset by repayment in September 2021.

The TRA expense is incurred in the period in which we determine that it is probable that payments will be made under the terms of the TRA. Before considering tax deductions subject to our TRA Agreements, we estimate that we would have reported taxable income in 2022 due to the capitalization of research and development expenses under Section 174 and equity-based compensation expense that has yet to meet the rules for tax deductibility. Therefore, we expect to utilize tax deductions subject to our TRA and have therefore recorded the associated TRA expense. The TRA liability related to this expense is expected to be paid in the fourth quarter of 2023.

The loss on extinguishment relates to a prepayment premium and unamortized debt issue costs following the repayment of borrowings under the Previous Credit Agreement in September 2021. Other (income) expense, net relates to foreign exchange gains and losses driven by fluctuations in exchange rates.

Provision for Income Taxes

	Year Ended December 31,		
	2022	2021	2020
	(In thousands, except percentages)		
Provision for income taxes	$ 1,360	$ 487	$ 902
Percent of revenue	0%	0%	0%
Change over prior year	$ 873	$ (415)	
Percent change over prior year	179%	(46%)	

The increase (decrease) in provision for income taxes in 2022 and 2021 relates to change in mix of foreign jurisdiction income in the period.

Financial Information by Quarter (Unaudited)

The following table sets forth the Company's unaudited quarterly consolidated statements of operations data for 2022 and 2021. This information should be read in conjunction with our consolidated financial statements and related notes thereto included in this report. We have prepared the unaudited consolidated quarterly financial information for the quarters presented on the same basis as our consolidated financial statements. The historical quarterly results presented are not necessarily indicative of the results that may be expected for any future periods.

	For the Three Months Ended (Unaudited)							
	2022				2021			
	Dec 31	Sep 30	Jun 30	Mar 31	Dec 31	Sep 30	Jun 30	Mar 31
	(In thousands, except per share data)							
Revenue	$ 82,687	$ 76,552	$ 73,409	$ 70,778	$ 69,762	$ 64,489	$ 60,876	$ 56,894
Cost of revenue(2)	22,973	22,720	20,919	21,172	20,180	17,785	15,576	14,322
Gross profit	59,714	53,832	52,490	49,606	49,582	46,704	45,300	42,572
Operating expenses:								
Research and development(2)	24,553	25,438	22,836	21,294	21,699	18,415	16,740	15,836
Sales and marketing(2)	14,383	13,187	13,074	11,993	12,914	10,126	8,814	7,211
General and administrative(2)	16,903	16,371	15,453	15,040	14,316	10,900	11,184	7,543
Total operating expenses	55,839	54,996	51,363	48,327	48,929	39,441	36,738	30,590
Income (loss) from operations	3,875	(1,164)	1,127	1,279	653	7,263	8,562	11,982
Interest (income) expense, net	(1,276)	(693)	403	429	421	8,302	8,497	8,527
Tax receivable agreement expense	5,939	2,600	3,100	—	—	—	—	—
Loss on debt extinguishment	—	—	—	—	—	10,303	—	—
Other (income) expense, net	778	(469)	(444)	85	147	(130)	—	—
Loss before provision for income taxes	(1,566)	(2,602)	(1,932)	765	85	(11,212)	65	3,455
Provision for income taxes	401	424	298	237	(49)	216	276	44
Net loss	(1,967)	(3,026)	(2,230)	528	134	(11,428)	(211)	3,411
Less: Net income attributable to non-controlling interests	941	(52)	198	130	33	(3,114)	—	—
Net loss attributable to Clearwater Analytics Holdings, Inc.	$ (2,908)	$ (2,974)	$ (2,428)	$ 398	$ 101	$ (8,314)	—	—
Net loss per share attributable to Class A and Class D common stock (1):								
Basic	$ (0.02)	$ (0.02)	$ (0.01)	$ 0.00	$ 0.00	$ (0.05)	NMF	NMF
Diluted	$ (0.02)	$ (0.01)	$ (0.01)	$ 0.00	$ 0.00	$ (0.05)	NMF	NMF

Liquidity and Capital Resources

To date, we have primarily financed our operations through cash flows from operations and financing activities.

As of December 31, 2022, we had cash and cash equivalents of $250.7 million. Cash and cash equivalents primarily consist of money market mutual funds, which are highly liquid investments purchased with an original or remaining maturity of 90 days or less at the date of purchase. We used proceeds from the IPO and cash generated from operating activities for the purchase consideration paid upon completion of the acquisition of JUMP Technology. We believe our existing cash and cash equivalents will be sufficient to meet our operating working capital and capital expenditure requirements over the next 12 months. Our future financing requirements will depend on many factors, including our growth rate, revenue retention rates, the timing and extent of spending to support development of our platform and any future investments or acquisitions we may make. Additional funds may not be available on terms favorable to us or at all, including as a result of disruptions in the credit markets. See "Risk Factors" elsewhere in this Annual Report on Form 10-K.

The following table shows our cash flows from operating activities, investing activities and financing activities for the stated periods:

	Year Ended December 31,		
	2022	2021	2020
		(In thousands)	
Net cash provided by (used in) operating activities	$ 58,005	$ 3,358	$ (6,486)
Net cash used in investing activities	(76,551)	(5,025)	(3,806)
Net cash provided by financing activities	16,229	195,288	51,041
Effect of exchange rate changes on cash and cash equivalents	(1,556)	(112)	85
Change in cash and cash equivalents	$ (3,873)	$ 193,509	$ 40,834

Cash Flows from Operating Activities

Net cash provided operating activities of $58.0 million during 2022 was primarily the result of our net loss plus non-cash charges, including equity-based compensation, tax receivable agreement expense, operating lease expense and depreciation and amortization. Cash flows resulting from changes in assets and liabilities include an increase in accounts receivable, increase in prepaid expenses and other assets and an increase in deferred commissions. Accounts receivable increased $19.1 million, which is comprised of $9.5 million from growth in revenues and $9.6 million from aging of receivable balances for certain customers due to short-term deterioration in days sales outstanding which we continue to believe is collectible. Prepaid expenses and other assets increased $5.0 million due to timing of payments to data vendors, and deferred commissions increased $5.8 million due to higher revenue in the year.

Net cash provided by operating activities of $3.4 million during 2021 was primarily the result of our net loss plus non-cash charges including equity-based compensation, depreciation and amortization, and debt extinguishment costs offset by changes in operating assets and liabilities that decreased operating cash flow by $43.4 million. Accounts receivable increased $17.3 million during the year. The increase is comprised of $8.8 million from growth in revenues and $8.5 million from aging of small receivable balances across several customers due to short-term deterioration in days sales outstanding which we have determined to be collectible. Prepaid expenses and other assets increased $13.1 million primarily from the prepayment of management fees to certain affiliates of the Principal Equity Owners in the amount of $9.6 million, insurance for our directors and officers and increased prepaid data costs. Deferred commissions increased $5.2 million due to higher revenue in the year. Accrued expenses decreased $3.5 million primarily due to payment of accrued reimbursement of excess contribution related to the Recapitalization transaction. Accrued sales tax liability decreased $8.5 million as we remitted sales tax payable for prior periods to different jurisdictions, and accrued interest on debt decreased $2.3 million due to lower interest payments due under the New Credit Agreement.

Net cash used in operating activities of $6.5 million during 2020 was primarily the result of our net loss plus non-cash charges including equity-based compensation, depreciation and amortization. Cash flows resulting from changes in assets and liabilities include an increase in accounts receivable, an increase in accrued expenses and other liabilities, an increase in accrued sales tax liability, an increase in deferred commissions, and an increase in accrued interest on debt. Accounts receivable increased as a result of increased revenue and timing of collections. Accrued expenses and other liabilities increased due to accrued reimbursement to members of an excess contribution following the Company's calculation of actual costs incurred related to the Recapitalization. Accrued sales tax liability increased due to a change in our estimate of the liability following the completion of a comprehensive review of sales tax reporting obligations across jurisdictions during 2020. The increase in deferred commissions is due to higher revenues during the period. Accrued interest on debt increased due to incremental borrowings following our debt refinancing in October 2020.

Cash Flows from Investing Activities

Net cash used in investing activities of $76.5 million during 2022 was primarily due to $65.8 million related to the acquisition of JUMP, net of cash acquired, $3.0 million attributable to the purchase of short-term investments, and $7.8 million attributable to the purchase of property plant and equipment, including internally developed software.

Net cash used in investing activities of $5.0 million during 2021 was attributable to the purchase of property and equipment, including internally developed software.

Net cash used in investing activities of $3.8 million during 2020 was attributable to the purchase of property and equipment.

Cash Flows from Financing Activities

Net cash provided by financing activities during 2022 was $16.2 million, of which $18.3 million was proceeds from the exercise of options and $4.2 million was proceeds from our employee stock purchase plan, which was offset by $3.2 million from minimum tax withholding paid on behalf of employees for net share settlement, and $2.8 million used in the repayment of borrowings.

Net cash provided by financing activities during 2021 was $195.3 million, of which $582.2 million was proceeds from the IPO, net of underwriting discounts, $53.6 million was proceeds from borrowings, net of debt issuance costs from our New Credit Agreement, $2.8 million was proceeds from the exercise of options and $1.6 million was proceeds from the issuance of common units to directors appointed prior to the IPO, which was offset by $434.9 million repayment of borrowings, $5.1 million payment of expenses associated with the IPO, $2.0 million prepayment premium and legal fees in relation to early repayment of the Previous Credit Agreement, and $2.2 million from minimum tax withholding paid on behalf of employees for net unit settlement.

Net cash provided by financing activities during 2020 was $51.0 million, of which $202.7 million was from proceeds from borrowings under an amendment to our credit facility and $49.0 million was from contributions from members for Recapitalization compensation expenses, which was offset by $173.2 million of dividends and distributions to members, $21.6 million for the repayment of borrowings and a $5.8 million payment of debt issuance costs.

Indebtedness

For a discussion of our "Indebtedness", refer to Note 8 - "Credit Agreement" in the notes to our audited financial statements of this Annual Report.

Critical Accounting Estimates

Management's discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements and related notes, which have been prepared in accordance with GAAP. We review the accounting policies used in reporting our financial results on a regular basis. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent liabilities.

On an ongoing basis, we evaluate the process we use to develop estimates. We base our estimates on historical experience and on other information that we believe is reasonable for making judgments at the time the estimates are made. Actual results may differ from our estimates due to actual outcomes being different from those on which we based our assumptions.

We believe the following accounting policies contain the more significant judgments and estimates used in the preparation of our consolidated financial statements:

- Revenue recognition
- Equity-based compensation
- Income taxes

Revenue Recognition

We earn revenues primarily from providing access to our SaaS platform solution to our clients, and to a lesser degree, from services that support the implementation on the platform. We recognize revenue when we satisfy performance obligations under the terms of the contract in an amount that reflects the consideration we expect to receive in exchange for the services. We determine the appropriate amount of revenue to be recognized using the following steps: (i) identification of contracts with clients, (ii) identification of the performance obligations in the contract, (iii) determination of transaction price, (iv) allocation of contract transaction price to the performance obligation, and (v) recognition of revenue when or as we satisfy a performance obligation. Often contracts contain more than one performance obligation. Performance obligations are the unit of accounting for revenue recognition and generally represent the distinct services that are promised to the client.

We typically bill our clients monthly in arrears based on a percentage of the average of the daily value of the assets within a client's accounts on our platform. Payment terms may vary by contract but generally include a requirement of payment within 30 days following the month in which services were provided. Clients generally have the right to cancel with 30 days' notice with no penalty.

Our services allow the client access without taking possession of the software. Non-refundable fees invoiced in advance of the delivery of our performance obligations are deemed set-up activities and are deferred as a material right and recognized over time, typically 12 months. After set-up activities, clients typically receive benefits from implementation services prior to the "go live" date, at which point they can use the platform as intended in the arrangement. We have determined these implementation services are generally a separate performance obligation. As our platform must stand ready to provide the services throughout the contract period, revenues are recognized as the services are provided over time beginning on the date the service is made available as intended in the arrangement.

Equity-Based Compensation

We measure and recognize equity-based compensation expense for instruments based on the estimated fair value of equity-based awards on the date of grant using the Black-Scholes option-pricing model for options and the fair value of the equity on the date of grant for RSUs. We recognize equity-based compensation expense over the requisite service period on a straight-line basis, which is generally consistent with the vesting of the awards, based on the estimated fair value of the equity-based awards issued to employees and directors that are expected to vest. Equity-based compensation that vests on a performance event, such as annual targets for the Company, begins to be recognized at the date that the performance event becomes probable, and compensation expense is recognized on a straight-line basis over any remaining service period. If there are any modifications of equity-based awards, we may be required to accelerate, increase, decrease or reverse any equity-based compensation expense on the unvested awards. The Company records forfeitures when they occur for all equity-based awards.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting and the tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse.

Deferred tax assets are evaluated for future realization and reduced by a valuation allowance to the extent we believe it is more likely than not that they will not be realized. We consider all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, carryback potential if permitted under tax law, and results of recent operations.

We record uncertain tax positions in accordance with ASC 740, Income Taxes on the basis of a two-step process in which (1) we determine whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position, and (2) for those tax positions that meet the more likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. We consider many factors when evaluating our uncertain tax positions, which involve significant judgment and may require periodic adjustments. The resolution of these uncertain tax positions in a manner inconsistent with management's expectations could have a material impact on our consolidated financial statements. We recognize interest and penalties related to uncertain tax positions as a component of our provision for income taxes. Accrued interest and penalties are included with the related tax liability.

We account for amounts payable under the TRA in accordance with Accounting Standards Codification ("ASC") Topic 450, Contingencies. As such, subsequent changes to the measurement of the TRA liability are recognized in the statements of operations.

JOBS Act Accounting Election

We meet the definition of an emerging growth company under the Jumpstart Our Business Startups Act of 2012, which permits us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We have elected to use this extended transition period until we are no longer an emerging growth company or until we affirmatively and irrevocably opt out of the extended transition period. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements applicable to public companies.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

AUM Market Price Risk

Substantially all of our revenue is derived from fees that are primarily based on the amount of assets on our platform. These fees are stated in basis points, or 1/100th of 1%. Though in substantially all cases we charge a minimum fee regardless of the assets that are loaded onto our platform, our revenues fluctuate based on the value of the assets that our clients maintain on our platform. Movements in funds invested between different securities or fluctuations in securities prices or investment performance could cause the value of AUM to decline, which would result in lower fees we receive from our clients.

Interest Rate Risk

We have interest rate risk relating to debt and associated interest expense under the New Credit Agreement, which is indexed to LIBOR or LIBOR equivalent once LIBOR is phased out. At any time, a rise in interest rates could have a material adverse impact on our earnings and cash flows. Conversely, a decrease in interest rates could result in a material increase in earnings and cash flows. We estimate that a hypothetical increase or decrease in LIBOR of 100 basis points would increase or decrease, respectively, our interest expense by approximately $0.5 million on an annual basis, based on our $51.6 million debt balance under the New Credit Agreement at December 31, 2022.

Inflation

Our business, financial condition and results of operations may be impacted by macroeconomic conditions, including rising inflation. Although our operations in India have been impacted by rising inflation in the region, we currently do not believe that inflation has had a material direct effect on our overall business, financial condition or results of operations. However, if our costs were to become subject to significant inflationary pressures, we may not be able to fully offset higher costs through price increases and our inability or failure to do so could potentially harm our business, financial condition, and results of operations.

Item 8. Financial Statements and Supplementary Data.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements of Clearwater Analytics Holdings, Inc. and Subsidiaries

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors

Clearwater Analytics Holdings, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Clearwater Analytics Holdings, Inc. and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, changes in equity (deficit), and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for leases as of January 1, 2022 due to the adoption of Accounting Standard Update No. 2016-02, Leases (Topic 842).

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2019.

Boise, Idaho
March 3, 2023

Clearwater Analytics Holdings, Inc.
Consolidated Balance Sheets
(In thousands, except share amounts and per share amounts)

	December 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 250,724	$ 254,597
Short-term investments	4,890	—
Accounts receivable, net	72,575	50,190
Prepaid expenses and other current assets	28,157	16,551
Total current assets	356,346	321,338
Property and equipment, net	15,064	10,738
Operating lease right-of-use assets, net	24,114	—
Deferred contract costs, non-current	6,563	5,687
Debt issuance costs - line of credit	728	922
Other non-current assets	5,880	5,670
Intangible assets, net	29,456	—
Goodwill	43,791	—
Total assets	$ 481,942	$ 344,355
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 3,092	$ 1,416
Accrued expenses and other current liabilities	42,119	27,032
Notes payable, current portion	2,750	2,750
Operating lease liability, current portion	5,851	—
Tax receivable agreement liability	12,200	—
Total current liabilities	66,012	31,198
Notes payable, less current maturities and unamortized debt issuance costs	48,492	51,157
Operating lease liability, less current portion	19,505	—
Other long-term liabilities	9,547	132
Total liabilities	143,556	82,487
Commitments and contingencies (Note 11)		
Stockholders' Equity		
Class A common stock, par value $0.001 per share; 1,500,000,000 shares authorized, 61,148,890 shares issued and outstanding as of December 31, 2022, 47,948,888 shares issued and outstanding as of December 31, 2021	61	48
Class B common stock, par value $0.001 per share; 500,000,000 shares authorized, 1,439,251 shares issued and outstanding as of December 31, 2022, 11,151,110 shares issued and outstanding as of December 31, 2021	1	11
Class C common stock, par value $0.001 per share; 500,000,000 shares authorized, 47,377,587 shares issued and outstanding as of December 31, 2022 and December 31, 2021	47	47
Class D common stock, par value $0.001 per share; 500,000,000 shares authorized, 130,083,755 shares issued and outstanding as of December 31, 2022 and December 31, 2021	130	130
Additional paid-in-capital	455,320	388,591
Accumulated other comprehensive income (loss)	609	(34)
Accumulated deficit	(186,647)	(191,926)
Total stockholders' equity attributable to Clearwater Analytics Holdings, Inc.	269,521	196,867
Non-controlling interests	68,865	65,001
Total stockholders' equity	338,386	261,868
Total liabilities and Stockholders' Equity	$ 481,942	$ 344,355

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

Clearwater Analytics Holdings, Inc.
Consolidated Statements of Operations
(In thousands, except share amounts and per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Revenue	$ 303,426	$ 252,022	$ 203,222
Cost of revenue[(2)]	87,784	67,864	53,263
Gross profit	215,642	184,158	149,959
Operating expenses:			
Research and development[(2)]	94,120	72,690	55,262
Sales and marketing[(2)]	52,638	39,065	22,243
General and administrative[(2)]	63,767	43,942	43,874
Recapitalization compensation expenses	—	—	48,998
Total operating expenses	210,525	155,697	170,377
Income (loss) from operations	5,117	28,461	(20,418)
Interest (income) expense, net	(1,137)	25,682	22,854
Tax receivable agreement expense	11,639	—	—
Loss on debt extinguishment	—	10,303	—
Other (income) expense, net	(50)	83	56
Loss before provision for income taxes	(5,335)	(7,607)	(43,328)
Provision for income taxes	1,360	487	902
Net loss	(6,695)	(8,094)	(44,230)
Less: Net income attributable to non-controlling interests	1,272	119	—
Net loss attributable to Clearwater Analytics Holdings, Inc.	$ (7,967)	$ (8,213)	$ —
Net loss per share attributable to Class A and Class D common stock (Note 13) [(1)]:			
Basic and diluted	$ (0.04)	$ (0.05)	NMF
Weighted average shares of Class A and Class D common stock outstanding:			
Basic and diluted	185,560,683	177,680,507	NMF

NMF - not meaningful

(1) Basic and diluted net loss per share of Class A and Class D common stock is applicable only for the period from September 24, 2021 to December 31, 2022, which is the period following our initial public offering and related transactions.

(2) Amounts include equity-based compensation as follows:

	2022	2021	2020
Cost of revenue	$ 9,043	$ 4,786	$ 1,669
Operating expenses:			
Research and development	17,950	10,409	4,208
Sales and marketing	12,711	7,059	3,911
General and administrative	25,987	14,441	14,814
Total equity-based compensation expense	$ 65,691	$ 36,695	$ 24,602

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

Consolidated Statements of Comprehensive Loss
(In thousands)

	Year Ended December 31,		
	2022	**2021**	**2020**
Net loss	$ (6,695)	$ (8,094)	$ (44,230)
Other comprehensive income (loss), net of taxes:			
Foreign currency translation adjustment	824	(102)	71
Comprehensive loss	$ (5,871)	$ (8,196)	$ (44,159)
Less: Comprehensive income attributable to non-controlling interests	1,453	17	—
Comprehensive loss attributable to Clearwater Analytics Holdings, Inc.	$ (7,324)	$ (8,213)	$ —

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

Consolidated Statements of Changes in Equity (Deficit)

(In thousands, except share amounts)

	Class A Shares	Class A Amount	Class B Shares	Class B Amount	Class C Shares	Class C Amount	Class D Shares	Class D Amount	Additional Paid in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Non-controlling Interest	Total stockholders' equity
Balance at December 31, 2021	47,948,888	$ 48	11,151,110	$ 11	47,377,587	$ 47	130,083,755	$ 130	$ 388,591	$ (34)	$ (191,926)	$ 65,001	$ 261,868
Exercise of options to purchase common stock	2,747,332	3	—	—	—	—	—	—	14,261	—	—	4,020	18,284
Restricted stock units released	588,854	—	—	—	—	—	—	—	—	—	—	—	—
Shares withheld for tax obligations	(196,961)	—	—	—	—	—	—	—	(2,487)	—	—	(702)	(3,189)
ESPP shares issued	348,918	—	—	—	—	—	—	—	3,288	—	—	927	4,215
Equity-based compensation	—	—	—	—	—	—	—	—	51,667	—	—	14,569	66,236
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	643	—	181	824
Net loss	—	—	—	—	—	—	—	—	—	—	(7,967)	1,272	(6,695)
Accrued tax distributions payable to Continuing Equity Owners	—	—	—	—	—	—	—	—	—	—	—	(3,157)	(3,157)
Effect of LLC unit exchanges	9,711,859	10	(9,711,859)	(10)	—	—	—	—	—	—	13,246	(13,246)	—
Balance at December 31, 2022	61,148,890	$ 61	1,439,251	$ 1	47,377,587	$ 47	130,083,755	$ 130	$ 455,320	$ 609	$ (186,647)	$ 68,865	$ 338,386

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

		Clearwater Analytics Holdings, Inc. Stockholders' Equity												
	CWAN Holdings, LLC (Prior to Transactions) Members' Deficit	Class A Shares	Class A Amount	Class B Shares	Class B Amount	Class C Shares	Class C Amount	Class D Shares	Class D Amount	Additional Paid in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Non-controlling Interest	Total stockholders' equity/ members' deficit
Balance at December 31, 2020	$ (245,806)	—	—	—	—	—	—	—	—	$ (98,860)	$ 58	—	—	$ (344,608)
Activity prior to the Transactions														
Issuance of common units	—	—	—	—	—	—	—	—	—	1,560	—	—	—	1,560
Repurchase of common units	—	—	—	—	—	—	—	—	—	(626)	—	—	—	(626)
Exercise of options to purchase common units	—	—	—	—	—	—	—	—	—	259	—	—	—	259
Options withheld for minimum tax obligations for net unit settlement	—	—	—	—	—	—	—	—	—	(2,185)	—	—	—	(2,185)
Equity-based compensation	—	—	—	—	—	—	—	—	—	17,981	—	—	—	17,981
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	—	(101)	—	—	(101)
Net income	2,829	—	—	—	—	—	—	—	—	—	—	—	—	2,829
Effect of the Transactions														
Effect of organizational transactions	242,977	12,866,089	13	11,151,110	11	47,377,587	47	130,083,755	130	—	—	(243,178)	—	—
Issuance of Class A common stock sold in initial public offering, net of underwriting discounts and offering costs	—	34,500,000	35	—	—	—	—	—	—	576,809	—	—	—	576,844
Allocation of equity to non-controlling interest	—	—	—	—	—	—	—	—	—	(122,753)	11	60,258	62,484	—
Activity subsequent to the Transactions														
Exercise of options to purchase common stock	—	582,799	1	—	—	—	—	—	—	1,935	—	—	636	2,571
Equity-based compensation	—	—	—	—	—	—	—	—	—	14,472	—	—	4,758	19,230
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	—	(2)	—	1	(1)
Net loss	—	—	—	—	—	—	—	—	—	—	—	(8,213)	(2,710)	(10,923)
Accrued tax distributions payable to Continuing Equity Owners	—	—	—	—	—	—	—	—	—	—	—	—	(169)	(169)
Tax adjustments related to organizational transactions	—	—	—	—	—	—	—	—	—	—	—	(793)	—	(793)
Balance at December 31, 2021	$ —	47,948,888	$ 48	11,151,110	$ 11	47,377,587	$ 47	130,083,755	$ 130	$ 388,591	$ (34)	$ (191,926)	$ 65,001	$ 261,868

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

	CWAN Holdings, LLC (Prior to Transactions)			
	Additional Paid-In Capital	**Accumulated Other Comprehensive Income (Loss)**	**Members' Deficit**	**Total**
Balance at December 31, 2019	867	$ (13)	$ (201,576)	$ (200,722)
Repurchase of common units	(567)	—	—	(567)
Exercise of options to purchase common units	424	—	—	424
Dividend to unitholders	(163,258)	—	—	(163,258)
Distributions to unitholders for taxes	(9,926)	—	—	(9,926)
Contributions from selling unitholders	48,998	—	—	48,998
Equity-based compensation	24,602	—	—	24,602
Foreign currency translation adjustment	—	71	—	71
Net loss	—	—	(44,230)	(44,230)
Balance at December 31, 2020	(98,860)	$ 58	$ (245,806)	$ (344,608)

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

Clearwater Analytics Holdings, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31, 2022	2021	2020
OPERATING ACTIVITIES			
Net loss	$ (6,695)	$ (8,094)	$ (44,230)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	5,139	3,493	2,271
Noncash operating lease cost	5,950	—	—
Equity-based compensation	65,691	36,695	24,602
Change in tax receivable liability	12,200	—	—
Amortization of deferred contract acquisition costs	4,327	3,385	2,340
Amortization of debt issuance costs, included in interest expense	279	1,545	2,506
Debt extinguishment costs	—	10,303	—
Deferred tax benefit	(803)	(675)	—
Changes in operating assets and liabilities, excluding the impact of business acquisitions:			
Accounts receivable, net	(19,098)	(17,308)	(6,325)
Prepaid expenses and other assets	(4,956)	(13,136)	(767)
Deferred commissions	(5,845)	(5,161)	(4,092)
Accounts payable	1,609	361	67
Accrued expenses and other liabilities	1,243	500	8,040
Accrued sales tax liability	(1,036)	(8,550)	9,102
Net cash provided by (used in) operating activities	58,005	3,358	(6,486)
INVESTING ACTIVITIES			
Purchases of property and equipment	(7,758)	(5,025)	(3,806)
Purchase of short-term investments	(3,000)	—	—
Acquisition of business, net of cash acquired	(65,793)	—	—
Net cash used in investing activities	(76,551)	(5,025)	(3,806)
FINANCING ACTIVITIES			
Contributions from selling unitholders	—	—	48,998
Proceeds from issuance of common unit options	—	1,560	—
Proceeds from exercise of options	18,284	2,830	424
Minimum tax withholding paid on behalf of employees for net share/ unit settlement	(3,189)	(2,185)	—
Dividend distributed to unitholders	—	—	(163,258)
Distributions to unitholders for taxes	—	—	(9,926)
Repurchase of common units	—	(626)	(567)
Proceeds from employee stock purchase plan	4,215	—	—
Repayments of borrowings	(2,750)	(434,919)	(21,557)
Payments of costs associated with early repayment of debt	—	(2,029)	—
Proceeds from borrowings	—	55,000	202,688
Payment of debt issuance costs	—	(1,400)	(5,761)
Proceeds from initial public offering, net of underwriting discounts	—	582,188	—
Payment of costs associated with offering	(214)	(5,131)	—
Payment of tax distributions to Continuing Equity Owners	(117)	—	—
Net cash provided by financing activities	16,229	195,288	51,041
Effect of exchange rate changes on cash and cash equivalents	(1,556)	(112)	85
Change in cash and cash equivalents during the period	(3,873)	193,509	40,834
Cash and cash equivalents, beginning of period	254,597	61,088	20,254
Cash and cash equivalents, end of period	$ 250,724	$ 254,597	$ 61,088
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Cash paid for interest	$ 1,395	$ 26,113	$ 22,182
Cash paid for income taxes	$ 2,044	$ 802	$ 429
NON-CASH INVESTING AND FINANCING ACTIVITIES			
Purchase of property and equipment included in accounts payable and accrued expense	$ 350	$ 322	$ 489
Business acquisition holdback liability included in accrued expense and other long-term liabilities	$ 7,220	$ —	$ —
Direct costs incurred with the offering included in accrued expense	$ —	$ 214	$ —
Tax distributions payable to Continuing Equity Owners included in accrued expenses	$ 3,196	$ 169	$ —
Tax liability related to organizational transaction included in accrued expenses	$ —	$ 793	$ —

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

Note 1. Organization and Description of Business

Clearwater Analytics Holdings, Inc. (the "Company" or "Clearwater") was incorporated as a Delaware corporation on May 18, 2021, as a holding company for the purpose of facilitating the IPO and other related transactions in order to carry on the business of the Company. Prior to the IPO, all business operations were conducted through Carbon Analytics Holdings, LLC, which changed its name to CWAN Holdings, LLC ("CWAN Holdings") in connection with the IPO. Clearwater provides a SaaS solution for automated investment data aggregation, reconciliation, accounting and reporting services to insurers, investment managers, corporations, institutional investors and government entities. Following the IPO, Clearwater's principal asset consists of ownership of common units in CWAN Holdings. As the sole managing member of CWAN Holdings, Clearwater operates and controls all the business operations of the Company. Our corporate structure following the IPO, as described above, is commonly referred to as an "Up-C" structure.

The Company headquarters are located in Boise, ID, and we operate in five offices throughout the U.S. and seven offices internationally.

Initial Public Offering

On September 28, 2021, the Company completed the IPO, in which it sold 34,500,000 shares of Class A common stock (including shares issued pursuant to the exercise in full of the underwriters' option to purchase additional shares) at a public offering price of $18.00 per share for net proceeds of $582.2 million, after deducting underwriting discounts of $38.8 million (but excluding other offering expenses of $5.3 million). The Company used proceeds from the IPO to (i) purchase 34,500,000 common units of CWAN Holdings ("LLC interests"); (ii) repay approximately $437.4 million of outstanding borrowings under the credit agreement with Ares Capital Corporation and Golub Capital LLC (the "Previous Credit Agreement") including prepayment premiums and accrued interest; (iii) pay $5.3 million of expenses related to the IPO; with the remaining proceeds intended to be used for general corporate purposes.

Transactions

In connection with the IPO, the Company completed the following organizational transactions (the "Transactions"):

- the amendment and restatement of the limited liability company agreement of CWAN Holdings to, among other things, appoint Clearwater Analytics Holdings, Inc. as the sole managing member of CWAN Holdings and provide certain exchange and redemption rights to direct or indirect holders of interests in CWAN Holdings and/or our Class B common stock, Class C common stock and/or Class D common stock immediately following consummation of the Transactions, including the Principal Equity Owners, and certain of our directors and officers and their respective permitted transferees (the "Continuing Equity Owners");
- the amendment and restatement of the certificate of incorporation of Clearwater Analytics Holdings, Inc. to create Class A, B, C and D common stock;
- the mergers of Blocker Entities into Clearwater Analytics Holdings, Inc and the issuance of Class A common stock, Class B common stock, Class C common stock, and Class D common stock to Blocker Shareholders and the Continuing Equity Owners. Blocker Entities refers to entities affiliated with certain of the Continuing Equity Owners, each of which was a direct or indirect owner of LLC Interests in CWAN Holdings prior to the Transactions and was taxable as a corporation for U.S. federal income tax purposes, and Blocker Shareholders refers to entities affiliated with certain of the Continuing Equity Owners, each of which was an owner of one or more of the Blocker Entities prior to the Transactions, which exchanged their interests in the Blocker Entities for shares of our Class A common stock, in the case of Continuing Equity Owners other than the Principal Equity Owners, and for shares of our Class D common stock, in the case of the Principal Equity Owners, in connection with the consummation of the Transactions;
- the issue of 11,151,110 shares of Class B common stock to Continuing Equity Owners other than the Principal Equity Owners and 47,377,587 shares of Class C common stock to the Principal Equity Owners, on a one-to-one basis with the number of common units of CWAN Holdings. Holders of our Class B and Class C common stock, along with the holders of our Class A and Class D common stock have certain voting rights, but holders of our Class B and Class C common stock do not have an economic interest in the Company;

- the issue of 130,083,755 shares of Class D common stock to the Principal Equity Owners, on a one-to-one basis, with the number of common units of CWAN Holdings. Holders of Class D common stock have certain voting rights and are entitled to an economic interest in the Company;
- the execution of the Tax Receivable Agreement, by and among Clearwater, CWAN Holdings and the other parties thereto (the "Tax Receivable Agreement" or "TRA") (Note 16).

As of December 31, 2022, the Company owns 79.7% of the interests in CWAN Holdings. Continuing Equity Owners which hold Class B and Class C common stock own the remaining 20.3% of the interests in CWAN Holdings. The attributes of the Company's classes of common stock are summarized in the following table:

Class of Common Stock	Votes per Share	Economic Rights
Class A common stock	1	Yes
Class B common stock	1	No
Class C common stock	10	No
Class D common stock	10	Yes

Note 2. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements and accompanying notes have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP").

Principles of consolidation

The consolidated financial statements include the accounts of the Company and its directly and indirectly wholly-owned or controlled subsidiaries. As the Transactions are considered transactions between entities under common control, the financial statements for periods prior to the IPO and the Transactions have been adjusted to combine the previously separate entities for presentation purposes. All intercompany balances and transactions have been eliminated through consolidation. Clearwater Analytics Holdings, Inc. consolidated the financial results of CWAN Holdings as a Variable Interest Entity ("VIE"). Clearwater Analytics Holdings, Inc. owns the majority economic interest and has the power to control all the business and affairs of CWAN Holdings.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and the related disclosures at the date of the consolidated financial statements, as well as the reported amounts of revenue and expenses during the periods presented. Actual results could differ materially from those estimates.

Items subject to estimates and assumptions include the useful lives and recoverability of long-lived assets, the average period of benefit associated with deferred contract costs, sales reserves, the incremental borrowing rate applied in lease accounting, accruals for sales tax liabilities, the fair value of equity awards, business combinations, tax valuation allowance and probability of making payments under the TRA, among others. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the result of which forms the basis for making judgments about the carrying values of assets and liabilities, and measurement of revenues and expenses. To the extent there are material differences between these estimates, judgments, or assumptions and actual results, the Company's consolidated financial statements will be affected.

Revenue Recognition

The Company earns revenue primarily from providing access to its SaaS platform solution to its customers, and to a lesser degree, from services that support the implementation on the SaaS platform. The Company recognizes revenue when it satisfies performance obligations under the terms of the contract in an amount that reflects the consideration the Company expects to receive in exchange for the services. The Company determines the appropriate amount of revenue to be recognized using the following steps: (i) identification of contracts with customers, (ii) identification of the performance obligations in the contract, (iii) determination of transaction price, (iv) allocation of contract transaction price to the performance obligations, and (v) recognition of revenue when or as the Company satisfies a performance obligation. Often contracts contain more than one performance obligation. Performance obligations are the unit of accounting for revenue recognition and generally represent the distinct services that are promised to the customer.

Due to the acquisition of JUMP on November 30, 2022, the Company has an immaterial amount of revenue from selling perpetual and term-based software licenses, maintenance and support and acquired $3.7 million in contract assets. Contract assets (as reflected in prepaid expenses and other current assets, and non-current assets - see Note 7 to these Financial Statements) are recorded upon delivery or the license being made available to the customer, to the extent we have an unconditional right to receive payment in the future related to those licenses. The non-current portion relates to unbilled receivables from multi-year license contracts.

The Company's SaaS services allow the customer to access the services without taking possession of the software. Non-refundable fees invoiced in advance of the delivery of the Company's performance obligations are deemed set up activities and are deferred as a material right and recognized over time, typically 12 months. After set up activities, customers typically receive benefits from implementation services prior to the "go live" date, at which point they can use the platform as intended in the arrangement. We have determined these implementation services are generally a separate performance obligation. As the Company's platform must stand ready to provide the services throughout the contract period, revenues are recognized as the services are provided over time beginning on the date the service is made available as intended in the arrangement. Customers generally have the right to cancel with 30 days' notice with no penalty.

The Company typically bills its customers monthly in arrears based on a percentage of the average of the daily value of the assets within a customer's accounts on the platform. Payment terms may vary by contract but generally include a requirement of payment within 30 days following the month in which services were provided.

Sales tax collected from customers and remitted to governmental authorities is not included in revenue and is reflected as a liability on the Company's consolidated balance sheets. Payment terms may vary by contract but generally include a requirement of payment within 30 days.

Costs Incurred to Obtain Revenue Contracts

The Company's incremental direct costs of obtaining a contract consist of sales commissions which are deferred and amortized ratably over the term of economic benefit, which the Company has determined to be four years. These deferred contract costs are classified as current or non-current based on the timing of when the Company expects to recognize the expense. The current and non-current portions of deferred commissions are included in prepaid expenses and other current assets, and deferred contract costs, non-current, respectively, in the Company's consolidated balance sheets.

Recoverability of these costs is subject to various business risks. The Company compares the carrying value of these assets with the undiscounted future cash flows expected to be generated by them to determine if there is impairment. No impairment losses were recognized during the years ended December 31, 2022, 2021 and 2020.

Deferred Revenue

Deferred revenue (as reflected in accrued expenses and other current liabilities – see Note 7 to these Financial Statements) generally consists of non-refundable fees invoiced during the period in which the Company is performing set-up activities. Deferred revenue that will be recognized during the succeeding twelve-month period and is recorded as current deferred revenue.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash in banks and highly liquid investments, primarily money market funds, purchased with an original maturity of three months or less at the time of purchase.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivable. The Company maintains the vast majority of its cash with United States financial institutions of high credit quality. The Company performs periodic evaluations of the credit standing of such institutions.

Accounts receivable are recorded net of an allowance for expected credit losses. Management's evaluation of the adequacy of the allowance for expected credit losses considers historical collection experience, changes in customer payment terms, the aging of receivable balances, as well as current and expected economic conditions, all of which may impact a customer's ability to pay. Receivables are written-off and charged against its recorded allowance when the Company has exhausted collection efforts without success.

During the years ended December 31, 2022, 2021 and 2020, the Company did not have any clients that contributed more than 10% of revenue. As of December 31, 2022 and 2021, the Company did not have any clients that accounted for 10% or more of total accounts receivable.

Fair Value of Financial Instruments

The Company's financial instruments consist of cash and cash equivalents, short-term investments, accounts receivable, accounts payable, accrued liabilities and notes payable. Cash equivalents are stated at carrying value, which approximates fair value as of the balance sheet dates, due to the short period of time to maturity. Short-term investments include held-to-maturity debt securities which are recorded at amortized cost, and available-for-sale debt securities which are recorded at fair value. Accounts receivable, accounts payable and accrued liabilities are stated at their carrying value, which approximates fair value due to the short time to the expected receipt or payment. The carrying amounts reported in the consolidated balance sheets for the Company's notes payable approximates fair value because the interest rate is variable and reflects current market values. As of December 31, 2022 and December 31, 2021, the Company has not elected the fair value option for any financial assets or liabilities for which such an election would have been permitted.

The Company measures financial assets and liabilities at fair value at each reporting period using a fair value hierarchy that requires the use of observable inputs and minimizes the use of unobservable inputs. The Company defines fair value as the price that would be received from selling an asset or paid by the Company to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

- Level I – Quoted prices in active markets for identical assets or liabilities.
- Level II – Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level III – Inputs that are generally unobservable and typically reflect management's estimate of assumptions that market participants would use in pricing the asset or liability.

The Company measures its cash equivalents, which includes money market accounts and available-for-sale debt securities at fair value, and held-to-maturity debt securities at amortized cost, and classifies them in accordance with the fair value hierarchy on a recurring basis.

Short-term Investments

We classify our investments with an original maturity of greater than three months, but less than one year, as short-term investments. Investments in debt securities that we have the positive intent and ability to hold until maturity are classified as held-to-maturity debt securities. Our held-to-maturity debt securities consist of short term certificates of deposit which mature in less than one year. Held-to-maturity debt investments are recorded at amortized cost, which approximates fair value, and realized gains or losses are reported in earnings. Investments in debt securities that we have the positive intent to sell before reaching maturity are classified as available-for-sale debt securities. Available-for-sale investments are recorded at fair value, and unrealized gains or losses related to changes in fair value between periods are reported in accumulated other comprehensive income (loss).

Short term investments include certificates of deposits which are classified as held-to-maturity debt securities and recorded at cost of $3.0 million as of December 31, 2022. During the year ended December 31, 2022, there were no unrealized gains or loss recorded related our certificates of deposits. We did not have held-to-maturity debt securities as of December 31, 2021.

Short term investments include non-US treasury securities which are classified as available-for-sale debt securities and recorded at fair value of $1.9 million as of December 31, 2022. Holding gains and losses for the year ended December 31, 2022 were not material and none of the available-for-sale securities were in a material unrealized loss position as of December 31, 2022. During the year ended December 31, 2022 there were no sales of available-for-sale securities. The fair value of available-for-sale securities, by contractual maturity as of December 31, 2022 was $1.0 million due in one year or less, and $0.9 million due in two to five years. We did not have available-for-sale securities as of December 31, 2021.

Property and Equipment, Net

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets, which are generally three to five years. Leasehold improvements are amortized on a straight-line basis over the shorter of the remaining lease term or the estimated useful lives of related improvements. Expenditures for repairs and maintenance are charged to expense in the period incurred.

Costs associated with the development of internal use software incurred during the application and development stage are capitalized and recorded as part of property and equipment, net. Costs related to preliminary project activities and post implementation activities are expensed as incurred. Upgrades and enhancements are capitalized if the expenditures will result in adding functionality to the software.

Depreciation and amortization periods for property and equipment are as follows:

Property and Equipment	Estimated Useful Life
Computer equipment	3 years
Furniture and fixtures	3 - 5 years
Internally developed software	4 years
Leasehold improvements	Lesser of estimated useful life or remaining lease term

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment when circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of these assets is measured by a comparison of the carrying amounts to the sum of the future undiscounted cash flows the assets are expected to generate. If a long-lived asset is considered impaired, the impairment equals the amount by which the carrying value of the asset exceeds its fair value. During the years ended December 31, 2022, 2021 and 2020, we recorded an impairment loss of $0.1 million, $0.5 million and $0, respectively. The impairment losses recorded in 2022 and 2021 related to abandoned capitalized software projects (See Note 7 to these Financial Statements).

Cost of Revenue

Cost of revenue consists of expenses that are related to delivery of revenue generating services, including expenses associated with client services, global delivery, reconciliation, and agreements related to the purchase of data used in the provision of the Company's services. Certain personnel expenses associated with supporting these functions, including associated allocated overhead expenses, are also included in cost of revenue.

Capitalized software costs are amortized using the straight-line method over the estimated economic life of the related software, which is generally four years, and are recorded as cost of revenue in the consolidated statements of operations.

Research and Development

Research and development costs consist of personnel expenses, including salaries and benefits, bonuses, equity-based compensation and related overhead costs for employees engaged in the design, development and maintenance of the Company's offerings and other internally used systems and applications.

Equity-Based Compensation

The Company measures and recognizes equity-based compensation expense for stock options based on the estimated fair value of equity-based awards on the date of grant using the Black-Scholes option-pricing model for options and the fair value of the equity on the date of grant for RSUs. The Company recognizes equity-based compensation expense over the requisite service period on a straight-line basis, which is generally consistent with the vesting of the awards, based on the estimated fair value of the equity-based awards issued to employees and directors that are expected to vest. Equity-based compensation that vests on a performance event, such as annual targets for the Company, begins to be recognized at the date that the performance event becomes probable, and compensation expense is recognized on a straight-line basis over any remaining service period. If there are any modifications of equity-based awards, the Company may be required to accelerate, increase, decrease, or reverse any equity-based compensation expense on the unvested awards. The Company records forfeitures when they occur for all equity-based awards.

Equity-based compensation expense related to purchase rights issued under the Employee Stock Purchase Plan ("ESPP") is based on a Black-Scholes option pricing formula to determine fair value of the estimated awards as of the beginning of the offering period. Equity-based compensation expense is recognized following the straight-line attribution method over the offering period.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting and the tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse.

Deferred tax assets are evaluated for future realization and reduced by a valuation allowance to the extent we believe it is more likely than not that they will not be realized. We consider all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, carryback potential if permitted under tax law, and results of recent operations.

We record uncertain tax positions in accordance with ASC 740, Income Taxes on the basis of a two-step process in which (1) we determine whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position, and (2) for those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. We consider many factors when evaluating our uncertain tax positions, which involve significant judgment and may require periodic adjustments. The resolution of these uncertain tax positions in a manner inconsistent with management's expectations could have a material impact on our consolidated financial statements. We recognize interest and penalties related to uncertain tax positions as a component of our provision for income taxes. Accrued interest and penalties are included with the related tax liability.

We account for amounts payable under the TRA in accordance with Accounting Standards Codification ("ASC") Topic 450, Contingencies. As such, subsequent changes to the measurement of the TRA liability are recognized in the consolidated statements of operations as tax receivable agreement expense, which is a component of other income (expense), net.

Tax receivable agreement liability in the consolidated balance sheets includes both accrued amounts payable related to the TRA, and accrued amounts payable related to the TRA Bonus Agreement.

Debt Issuance Costs

Debt issuance costs are amortized over the period the related obligation is outstanding using the effective interest method. Debt issuance costs related to the term note are included within notes payable on the consolidated balance sheet. Debt issuance costs associated with the line of credit are included as a non-current asset on the consolidated balance sheets. Amortization of debt issuance costs are included in interest (income) expense in the consolidated statements of operations.

Comprehensive Loss

Comprehensive loss is comprised of two elements: net loss and other comprehensive loss. Other comprehensive loss refers to losses that are recorded as an element of stockholders' equity but are excluded from the Company's net loss. For all periods presented, the Company's other comprehensive loss is comprised of foreign currency translation adjustments related to its foreign subsidiaries.

Foreign Currency

The functional currencies of the Company's foreign subsidiaries are their local currencies. The assets and liabilities of the Company's foreign subsidiaries are translated at the spot rate in effect at the applicable reporting date, and the consolidated statements of operations are translated at the average exchange rates in effect during the applicable period. The resulting unrealized cumulative translation adjustment is recorded as a component of accumulated other comprehensive loss in stockholders' equity.

The Company has transactions in foreign currencies other than the functional currency. Transactions denominated in currencies other than the functional currency are recorded based on exchange rates at the time the transactions occur. Subsequent changes in exchange rates result in transaction gains and losses which are reflected in the consolidated statements of operations as unrealized (based on the applicable period-end exchange rate) or realized upon settlement of the transactions. Foreign currency gains and losses resulting from transactions denominated in a currency other than the functional currency are included in other (income) expense, net in the consolidated statements of operations. During the years ended December 31, 2022, 2021 and 2020, the Company recognized net foreign currency gains (losses) of $86,000, ($83,000), and ($38,000), respectively.

Non-Controlling Interests

The non-controlling interests balance represents the economic interests in CWAN Holdings held by Continuing Equity Owners, based on the portion of Class B and Class C common stock owned by Continuing Equity Owners. Income or loss is attributed to the non-controlling interests based on the weighted-average Class B and Class C common stock outstanding during the period. As of December 31, 2022, the non-controlling interests owned 20.3% of CWAN Holdings. The non-controlling interests' ownership percentage can fluctuate over time as Continuing Equity Owners elect to exchange Class B and Class C common stock for Class A and Class D common stock of Clearwater Analytics Holdings, Inc.

Net Loss Per Share

Basic net loss per share is computed by dividing net loss attributable to Clearwater Analytics Holdings, Inc. for the period following the Transactions by the weighted-average number of shares of Class A and Class D common stock during the same period.

Diluted net loss per share of Class A and Class D common stock is computed by dividing net income attributable to Clearwater Analytics Holdings, Inc., adjusted for the assumed exchange of all potentially dilutive instruments for Class A and Class D common stock and shares issuable under the ESPP, by the weighted-average number of shares of Class A and Class D common stock outstanding, adjusted to give effect to potentially dilutive elements. The dilutive effect of outstanding awards, if any, is reflected in diluted earnings per share by application of the treasury stock method or if-converted method, as applicable.

Business Combinations

We include the results of operations of the businesses that we acquire beginning as of the respective dates of acquisition. We allocate the fair value of the purchase price of our acquisitions to the assets acquired and liabilities assumed, generally based on their estimated fair values. The excess of the purchase price over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates and assumptions, especially with respect to intangible assets. Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired technology, useful lives, royalty rates, and discount rates. Additional information existing as of the acquisition date but unknown to us may become known during the remainder of the measurement period, not to exceed 12 months from the acquisition date, which may result in changes to the amounts and allocations recorded.

Intangible Assets

Purchased intangible assets with finite lives are carried at cost, less accumulated amortization. Amortization is computed over the estimated useful lives of the respective assets. Finite-lived intangible assets are evaluated for impairment when impairment indicators are present. No impairment charge was recorded for the year ended December 31, 2022.

Impairment of Goodwill

Goodwill is evaluated for impairment on an annual basis in the fourth quarter of our fiscal year, and whenever events or changes in circumstances indicate the carrying amount of goodwill may not be recoverable. We have elected to first assess qualitative factors to determine whether it is more likely than not that the fair value of our single reporting unit is less than its carrying amount, including goodwill. If we determine that it is more likely than not that the fair value is less than its carrying amount, then the quantitative impairment test will be performed. Under the quantitative impairment test, if the carrying amount exceeds its fair value, we will recognize an impairment loss in an amount equal to that excess but limited to the total amount of goodwill.

Recently Adopted Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) (“ASU No. 2016-02”). In July 2018, the FASB issued ASU No. 2018-10, Codification Improvements to Topic 842, Leases, which provides clarification to ASU 2016-02. These ASU's (collectively, the “new lease standard”) requires lessees to recognize on the balance sheet the assets and liabilities for the assets and obligations created by those leases. The standard was effective for public companies for annual periods beginning after December 15, 2018, including interim periods therein. The Company is allowed to use the private company adoption timelines, and therefore the standard is effective for the Company for its annual period beginning January 1, 2022, and interim periods therein.

On January 1, 2022, the Company adopted ASU No. 2016-02, and its associated amendments using the modified retrospective transition method by applying the new standard to all leases existing at the date of initial application and not restating comparative periods. There was no cumulative-effect adjustment recorded to stockholders' equity upon adoption. The Company elected the package of practical expedients permitted under the transition guidance, which allowed the Company to carry forward its historical lease classification, assessment on whether a contract was or contains a lease, and initial direct costs for leases that existed prior to January 1, 2022. The Company also elected to combine its lease and non-lease components and not recognize right-of-use (“ROU”) assets and lease liabilities for leases with an initial term of 12 months or less. The Company did not elect to apply the hindsight practical expedient when determining lease term and assessing impairment of ROU assets.

At the date of adoption, the Company derecognized a deferred rent liability of approximately $1.5 million, and recognized a $23.1 million ROU asset and $24.6 million lease liability based on the present value of the remaining minimum rental payments under current leasing standards for existing operating leases. The Company does not have any finance leases. The adoption of this standard did not have a material impact on the Company's results of operations or cash flows.

In October 2021, the FASB issued ASU No. 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers. The ASU provides an exception for companies to apply revenue guidance to recognize and measure contract assets and liabilities from contracts with customers acquired in a business combination on the acquisition date, instead of measuring them at fair value. The standard is effective for public companies for annual periods beginning after December 15, 2022, including interim periods therein. Early adoption is permitted for both interim and annual financial statements. We early adopted this guidance in our fourth quarter of fiscal 2022 on a prospective basis. The adoption of this standard did not have a material impact on our consolidated financial statements.

Note 3. Revenue Recognition

The Company is applying the optional exemption to not disclose transaction price allocated to the remaining performance obligations as the Company's performance obligations are part of contracts that have an expected original duration of one year or less.

Of the total revenue recognized for the year ended December 31, 2022, $0.4 million was included in the deferred revenue balance as of December 31, 2021. Of the total revenue recognized for the year ended December 31, 2021, $0.7 million was included in deferred revenue balance as of December 31, 2020. Revenue by geography as presented in Note 15. Segment and Geographic Information is determined based on the billing address of the customer.

Note 4. Fair Value Measurements

The following tables set forth the fair value of the Company's financial assets measured at fair value as of December 31, 2022 and December 31, 2021 in accordance with the fair value hierarchy (in thousands):

	December 31, 2022			
	Level I	Level II	Level III	Total
Financial Assets:				
Cash equivalents:				
Money market funds	$ 243,387	$ —	$ —	$ 243,387
Short-term investments:				
Certificates of deposit	—	3,000	—	$ 3,000
Non-US Treasury securities	—	1,890	—	$ 1,890
Total assets measured at fair value	$ 243,387	$ 4,890	$ —	$ 248,277

	December 31, 2021			
	Level I	Level II	Level III	Total
Financial Assets:				
Cash equivalents:				
Money market funds	$ 248,744	$ —	$ —	$ 248,744
Total assets measured at fair value	$ 248,744	$ —	$ —	$ 248,744

During the year ended December 31, 2022 and 2021, there were no transfers of assets or liabilities between Level 1, Level 2 and Level 3 of the fair value hierarchy.

Note 5. Business Combinations

On November 30, 2022, we completed our acquisition of JUMP Technology ("JUMP"), acquiring 100% of the outstanding common shares and voting interest in JUMP. We believe the acquisition will strengthen our position to become an industry-leading provider of innovative, end-to-end solutions to investment management companies globally. The total purchase consideration for the acquisition of JUMP was €75 million in cash, which approximated to $77.1 million based on the exchange rate at the time of acquisition. A total of €67.5 million cash was paid as purchase consideration upon completion of the acquisition. The Share Purchase Agreement includes an indemnification holdback which requires the remaining €7.5 million cash to be paid as purchase consideration over the subsequent two years subject to no indemnification claims being submitted. We expensed acquisition-related costs in the amount of $1.7 million in general and administrative expenses in 2022.

We have accounted for this transaction as a business combination and allocated the fair value of the consideration to the tangible and intangible assets acquired as well as liabilities assumed, based on their estimated fair values. The excess of the purchase price over the fair values of these identifiable assets and liabilities was recorded as goodwill. The preliminary allocated fair value is summarized as follows (in thousands):

		Fair Value
Cash and cash equivalents	$	4,353
Short-term investments		1,832
Accounts receivable		3,186
Operating lease right-of-use asset		3,715
Other assets		5,776
Intangible assets		28,890
Goodwill		42,450
Operating lease liability		(3,622)
Deferred tax liability		(5,670)
Other liabilities		(3,765)
Total consideration		77,145
Deferred consideration related to indemnification holdback		(6,999)
Cash acquired		(4,353)
Cash paid for acquisition of business, net of cash acquired	$	65,793

We expect to finalize the allocation of the purchase consideration as soon as practicable, pending finalization of taxes and any other adjustments related to acquired assets or liabilities, but no later than 12 months from the Acquisition Date.

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating JUMP technology into our platform and strengthening our ability to serve a global customer base and accelerate delivery of solutions to investment management companies. The goodwill is not expected to be deductible for income tax purposes.

The following table presents details of the preliminary fair values of identified intangible assets acquired (in thousands, except years):

		Fair Value	Estimated Useful Life
Developed technology	$	24,317	7 years
Customer relationships		4,261	13 years
Trade name / Trademarks		312	2 years
Total	$	28,890	

The identified intangible assets are measured at fair value as Level III in accordance with the fair value hierarchy.

Revenue of $2.7 million and net income of $1.1 million is included in our consolidated statements of operations for the year ended December 31, 2022. Pro forma information has not been presented as disclosure is impracticable due to JUMP's historical financial statements not being prepared in accordance with US GAAP.

A total of 3,200,000 RSU equity awards were granted to JUMP employees on November 30, 2022 and are recognized separately from the acquisition of assets and assumptions of liabilities related to JUMP. The Company estimated the fair value of each RSU awarded using the closing price of the Company's shares on the NYSE on November 30, 2022. The RSUs are either subject to time-based vesting conditions and vest over four years, or subject to performance-based vesting and vest upon achievement of targets tied to annual revenue growth in 2023. A total of $1.8 million equity-based compensation related to JUMP employees is recorded in general and administrative expenses for the year ended December 31, 2022.

Note 6. Goodwill and Intangible Assets

Goodwill

The following table presents details of our goodwill during the year ended December 31, 2022 (in thousands):

		Amount
Balance as of December 31, 2021	$	—
Goodwill acquired		42,450
Foreign currency translation adjustments		1,341
Balance as of December 31, 2022	$	43,791

Purchased Intangible Assets

The following table presents details of our purchased intangible assets (in thousands):

	December 31, 2022						
	Gross Carrying Amount		Accumulated Amortization		Net Carrying Amount		Weighted Average Remaining Useful Life (In Years)
Intangible assets with finite lives:							
Developed technology	$	25,086	$	(255)	$	24,831	6.9
Customer relationships		4,395		(29)		4,366	12.9
Trade name / Trademarks		322		(63)		259	1.9
Total intangible assets	$	29,803	$	(347)	$	29,456	

We recognized amortization expense of $0.4 million for the year ended December 31, 2022.

The following table summarizes estimated future amortization expense of our intangible assets subject to amortization as of December 31, 2022 (in thousands):

	Fiscal Years											
	Total		2023		2024		2025		2026		2027 and Thereafter	
Total future amortization expense	$	29,456	$	4,076	$	4,069	$	3,922	$	3,922	$	13,467

Note 7. Balance Sheet Components

Accounts Receivable, net

Accounts receivable, net consisted of the following (in thousands):

	December 31,			
	2022		2021	
Unbilled accounts receivable	$	30,963	$	27,086
Billed accounts receivable		41,718		23,227
Allowance for doubtful accounts and reserves		(106)		(123)
Accounts receivable, net	$	72,575	$	50,190

The majority of invoices included within the unbilled accounts receivable balance are issued within the first few days of the month directly following the period of service.

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following (in thousands):

	December 31,	
	2022	2021
Prepaid expenses	$ 14,947	$ 11,722
Deferred contract costs, current portion	4,215	3,573
Contract assets	2,518	—
Tax receivable	2,602	—
Other receivable	1,540	—
Other current assets	2,335	1,256
Prepaid expense and other current assets	$ 28,157	$ 16,551

Property and Equipment, net

Property and equipment, net consisted of the following (in thousands):

	December 31,	
	2022	2021
Computer equipment	$ 12,794	$ 13,886
Leasehold improvements	3,575	3,045
Furniture and fixtures	1,207	1,126
Internally developed software	11,561	4,925
Construction in progress	379	—
Total property and equipment	29,516	22,982
Less: accumulated depreciation	(14,452)	(12,244)
Total property and equipment, net	$ 15,064	$ 10,738

Internally developed software includes $0.5 million of capitalized equity-based compensation for the years ended December 31, 2022 and 2021. Depreciation expense was $4.8 million, $3.5 million and $2.3 million for the year ended December 31, 2022, 2021 and 2020, respectively. Depreciation expense includes $0.1 million and $0.5 million of impairment losses related to abandoned in process capitalized software projects that are recorded within research and development expense in the consolidated statements of operations for the year ended December 31, 2022 and 2021, respectively. We determined that these software projects would not generate future cash flows through use or disposal to a third party and, as such, the fair value as of December 31, 2022 and 2021 was $0.

Other Non-current Assets

Other Non-current assets consisted of the following (in thousands):

	December 31,	
	2022	2021
Prepaid management fee to Principal Equity Owners	$ 2,009	$ 4,405
Long term deposits	861	178
Long term contract asset	1,191	—
Prepaid IT services	259	412
Deferred tax asset	1,560	675
Other non-current assets	$ 5,880	$ 5,670

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31, 2022	December 31, 2021
Accrued sales tax exposure	$ 408	$ 1,444
Accrued interest	548	9
Accrued bonus	10,005	8,295
Accrued vendor liabilities	4,811	4,756
Accrued benefits and retirement	10,566	4,368
Acquisition holdback liability	3,770	—
Deferred revenue	1,185	795
Accrued commissions	2,709	2,350
Deferred rent	—	1,514
Income tax payable	920	771
Tax distributions payable to Continuing Equity Owners	3,196	169
Other current liabilities	4,001	2,561
Accrued expenses and other liabilities	$ 42,119	$ 27,032

Other Long-term Liabilities

Other long-term liabilities consisted of the following (in thousands):

	December 31, 2022	December 31, 2021
Asset retirement obligation	$ 119	$ 132
Deferred revenue	—	—
Acquisition holdback liability	3,496	—
Deferred tax liabilities	5,932	—
Other long-term liabilities	$ 9,547	$ 132

Note 8. Credit Agreement

Previous Credit Agreement

On October 19, 2020, we entered into the Fifth Amendment to the Credit Agreement with Ares Capital Corporation and Golub Capital LLC. The agreement provided for a total term loan of $435 million and revolving line of credit of $30 million. Under the terms of the Fifth Amendment to the Credit Agreement, we were required to maintain certain customary affirmative and negative covenants, including covenants that limited our ability to, among other things, incur indebtedness, merge or consolidate, dispose of assets, make investments, make acquisitions, enter into transactions with affiliates, pay dividends or make distributions. We were also required to maintain compliance with a consolidated net leverage ratio. The line of credit and term note agreements also included customary events of default.

The outstanding borrowings under the Fifth Amendment to the Credit Agreement of $432.7 million were repaid in full in September 2021 in connection with the closing of the IPO. The repayment of the borrowings resulted in a loss on extinguishment of $10.3 million.

New Credit Agreement

In connection with the closing of the IPO, Clearwater Analytics, LLC (the "Borrower") has entered into a new credit agreement (the "New Credit Agreement") with JPMorgan Chase Bank, N.A., that included a $55 million term loan facility (the "New Term Loan") and a $125 million revolving facility (the "Revolving Facility"). The New Term Loan and Revolving Facility will be used for working capital and other general corporate purposes (including acquisitions permitted under the New Credit Agreement).

The interest rates applicable to the loans under the New Credit Agreement are based on a fluctuating rate of interest determined by reference to a base rate plus an applicable margin of 0.75% or a LIBOR rate plus an applicable margin of 1.75%, in each case with a step-up of 0.25% if certain secured net leverage levels are not achieved. The applicable margin is adjusted after the completion of each full fiscal quarter based upon the pricing grid in the New Credit Agreement. The revolving commitment has an unused commitment fee of 25 basis points, stepping up to 30 basis points if certain secured net leverage levels are not achieved.

Under the New Credit Agreement, the term loan amortizes at a rate of 5.00% per annum, paid quarterly. The New Credit Agreement contains mandatory prepayments to the extent the company incurs certain indebtedness or receives proceeds from certain dispositions or casualty events.

The obligations of the Borrower under the New Credit Agreement are anticipated to be jointly and severally guaranteed by its direct parent and certain of its subsidiaries (collectively, the “Guarantors”, and together with the Borrower, the “Loan Parties”). The obligations of the Loan Parties are anticipated to be secured by a first priority lien on substantially all of their assets, subject to customary exceptions.

The New Credit Agreement contains customary affirmative and negative covenants, including, without limitation, covenants that restrict our ability to borrow money, grant liens, make investments, make restricted payments or dispose of assets, and customary events of default. Specifically, we are required to maintain a consolidated secured net indebtedness to consolidated EBITDA ratio of not more than 4.75:1.00 as of the last day of each fiscal quarter commencing with the fiscal quarter ending December 31, 2021.

Future maturities of debt as of December 31, 2022 are as follows:

For the year ending December 31,	
2023	$ 2,750
2024	2,750
2025	2,750
2026	43,313
2027	—
Thereafter	—
Total principal debt	51,563
Unamortized loan costs	(321)
Net carrying amount	$ 51,242

Note 9. Employee Retirement Plan

The Company’s U.S. 401K and international retirement plans are defined contribution plans (“the Plans”) that are available to employees that meet certain eligibility requirements. Company cash contributions to the Plans are based on a percentage of employee contributions subject to an annual limitation. The Company reserves the right to amend the Plans at any time.

The Company made contributions of $5.6 million, $4.5 million, and $3.4 million during the year ended December 31, 2022, 2021 and 2020, respectively.

Note 10. Leases

The Company adopted ASC 842 as of January 1, 2022. The Company leases facilities under non-cancelable operating lease agreements with varying terms that range from one to 10 years. In addition, some of these leases have renewal options for up to five years. The Company determines if an arrangement contains a lease at inception. Operating leases are included in operating lease right-of-use (“ROU”) assets, and operating lease liabilities on the Company's consolidated balance sheets. The Company does not have any finance leases.

Operating lease ROU assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. As most of the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at commencement date in determining the present value of future payments. Variable lease payments are expensed as incurred and are not included within the ROU asset and lease liability calculation. Optional periods to extend a lease under renewal options are included in the lease term when it is reasonably certain that the option will be exercised. The operating lease ROU asset also includes any lease payments made and excludes lease incentives and initial direct costs incurred. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term. Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet. The Company recognizes lease expense for these leases on a straight-line basis over the lease term. The Company does not account for lease components (e.g., fixed payments including rent) separately from the non-lease components (e.g., common-area maintenance costs).

The following table summarizes the impacts of adopting Topic 842 on the Company's consolidated balance sheets as of January 1, 2022 (in thousands):

	As Reported Balance as of January 1, 2022	Adjustments due to Topic 842	As Adjusted Balance as of January 1, 2022
Assets			
Operating lease right-of-use assets	$ —	$ 23,091	$ 23,091
Liabilities			
Accrued expenses and other liabilities	$ 27,032	$ (1,514)	$ 25,518
Operating lease liability, current portion	$ —	$ 4,948	$ 4,948
Operating lease liability, less current portion	$ —	$ 19,657	$ 19,657

Operating lease cost was $6.4 million for the year ended December 31, 2022. Variable lease cost and short-term lease cost were immaterial during the year ended December 31, 2022. Future minimum lease payments at December 31, 2022 under the Company's non-cancellable leases were as follows:

For the year ending December 31,	
2023	$ 6,727
2024	6,356
2025	6,434
2026	5,785
2027	2,088
Thereafter	158
Total future minimum lease payments	27,548
Less: Imputed interest	(2,192)
Present value of future minimum lease payments	25,356
Less: Current portion of operating lease liability	(5,851)
Operating lease liabilities - noncurrent	$ 19,505

The following table presents supplemental information for the Company's non-cancellable operating leases for the year ended December 31, 2022 (in thousands, except for weighted average and percentage data):

Weighted average remaining lease term	4.21
Weighted average discount rate	3.98%
Cash paid for amounts included in the measurement of lease liabilities	$ 4,949
Noncash right-of-use assets obtained in exchange for operating lease obligations[(1)]	$ 2,936

(1) Amount includes (i) $3.5 million related to the Company entering into new non-cancellable operating lease agreements during 2022 and (ii) partially offset by a noncash reduction of $0.6 million related to the remeasurement of the existing Noida, India lease due to a change in the lease term of the agreement.

Rent expense was $3.9 million and $3.4 million for the year ended December 31, 2021 and 2020, respectively.

Future minimum lease payments under non-cancelable leases as of December 31, 2021 under ASC 840 were (in thousands):

For the year ending December 31,	
2022	$ 3,927
2023	3,843
2024	3,649
2025	3,434
2026	3,007
Thereafter	809
Total minimum lease payments	$ 18,669

Note 11. Commitments and Contingencies

Purchase Obligations

The Company has future minimum purchase obligations under arrangements with third parties who provide hosting infrastructure services, cloud services, and SaaS accounting solutions.

The following is a schedule of future minimum purchase obligations as of December 31, 2022 (in thousands):

For the year ending December 31,	
2023	$ 12,661
2024	11,968
2025	4,553
2026	610
2027	241
Total future purchase obligations	$ 30,033

Note 12. Non-controlling Interest

In connection with the Transactions, the Company became the sole managing member of CWAN Holdings, and has the sole voting interest in, and control of the management of, CWAN Holdings. As a result, the Company consolidates the financial results of CWAN Holdings. The non-controlling interest on our consolidated balance sheet relates to the interests of CWAN Holdings held by the Continuing Equity Owners. The ownership of the LLC interests is summarized as follows:

	December 31, 2022		December 31, 2021	
	Shares	Ownership %	Shares	Ownership %
Clearwater Analytics Holdings, Inc. interest in CWAN Holdings	191,232,645	79.7%	178,032,643	75.3%
Continuing Equity Owners' interest in CWAN Holdings	48,816,838	20.3%	58,528,697	24.7%
	240,049,483	100.0%	236,561,340	100.0%

Note 13. Loss Per Share

The following table sets forth reconciliations of the numerators and denominators used to compute basic and diluted net loss per share of Class A and Class D common stock for the periods following the Transactions (in thousands):

	Year Ended December 31,	
	2022	2021
Numerator:		
Net loss	$ (6,695)	$ (8,094)
Less: Net income attributable to CWAN Holdings prior to the Transactions	—	2,829
Less: Net income (loss) attributable to non-controlling interests	1,272	(2,710)
Net loss attributable to Clearwater Analytics Holdings, Inc. - basic and diluted	(7,967)	(8,213)

The following table sets forth the computation of basic and diluted net loss per share of Class A and Class D common stock (in thousands, except share amounts and per share amounts):

	Year Ended December 31, 2022		Year Ended December 31, 2021	
	Class A	Class D	Class A	Class D
Basic and diluted net loss attributable to Class A and Class D common stockholders				
Numerator:				
Allocation of net loss attributable to Clearwater Analytics, Inc.	$ (2,382)	$ (5,585)	$ (2,200)	$ (6,013)
Denominator:				
Weighted average number of shares of Class A and Class D common stock outstanding - basic and diluted[(1)]	55,476,928	130,083,755	47,596,752	130,083,755
Basic and diluted net loss per share attributable to Class A and Class D common stockholders	$ (0.04)	$ (0.04)	$ (0.05)	$ (0.05)

(1) Weighted average number of shares of Class A and Class D common stock outstanding for the year ended December 31, 2021 represents only the period from September 24, 2021 to December 31, 2021, which represents the period wherein we had outstanding Class A and Class D common stock.

Shares of the Company's Class B and Class C common stock do not participate in the earnings or losses of the Company and are therefore not participating securities. As such, separate presentation of basic and diluted earnings per share of Class B and Class C common stock under the two-class method has not been presented.

The following weighted-average potentially dilutive securities were evaluated under the treasury stock method for potentially dilutive effects and have been excluded from diluted net loss per share in the periods presented due to their anti-dilutive effect:

	Year Ended December 31,	
	2022	2021
Conversion of Class B and Class C common stock	52,301,672	58,528,697
Stock options of Clearwater Analytics Holdings, Inc.	10,280,184	14,575,237
RSUs of Clearwater Analytics Holdings, Inc.	1,342,284	1,514,207
Employee stock purchase plans	179,314	262,139
Total	64,103,454	74,880,280

Note 14. Equity-Based Compensation

In September 2021, the Board of Directors of the Company (the “Board”) adopted the Clearwater Analytics Holdings, Inc. 2021 Omnibus Incentive Plan (the “2021 Plan”), pursuant to which employees, consultants and directors of our Company and our affiliates performing services for us, including our executive officers, are eligible to receive awards. The 2021 Plan provides for the grant of stock options, stock appreciation rights, restricted stock, restricted stock units (“RSUs”), bonus stock, dividend equivalents, other stock-based awards, substitute awards, annual incentive awards and performance awards intended to align the interests of participants with those of our shareholders. A total of 57,197,804 shares of common stock are authorized for issuance under the 2021 Plan. In connection with the approval of the 2021 Plan, the 2017 Equity Incentive Plan (the “2017 Plan”) was terminated and all outstanding stock options and RSUs were transferred to the 2021 Plan.

Options

The following table summarizes the stock option activity for the year ended December 31, 2022, 2021 and 2020 (in thousands, except per share data):

	Stock Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Balance - December 31, 2019	15,841,250	$ 4.88	8.55	$ 2,770
Granted	6,626,178	5.12		
Exercised	(6,796,126)	4.24		54,747
Forfeited	(778,130)	4.24		
Balance - December 31, 2020	14,893,172	$ 4.60	9.19	$ 116,029
Granted	10,303,307	13.49		
Exercised	(1,124,740)	4.35		16,346
Forfeited	(1,756,568)	7.23		
Balance - December 31, 2021	22,315,171	$ 8.52	6.25	$ 322,877
Granted	43,986	18.19		
Exercised	(2,950,662)	7.45		$ 31,341
Forfeited	(1,653,725)	11.16		
Balance - December 31, 2022	17,754,770	$ 8.47	7.06	$ 183,315
Options vested - December 31, 2022	9,401,413	$ 6.98		$ 110,894

The weighted-average grant-date fair value of stock options granted during the years ended December 31, 2022, 2021 and 2020 was $7.74 per share, $5.11 per share and $1.60 per share, respectively. The aggregate intrinsic value disclosed in the above table is based on the difference between the exercise price of the stock option and the estimated fair value of the Company's common stock as of the respective period-end dates. As of December 31, 2022, the total unrecognized compensation expense related to unvested options was $41.0 million, which is expected to be recognized over a weighted average period of 2.1 years.

In general, options which vest over a four-year period are subject to time-based vesting conditions based on continuous employment over the four-year period:

Time-based vesting – 25% of the units awarded are eligible to vest on the first anniversary of employment, and 75% are subsequently eligible to vest on a monthly basis over the remaining three-year period, subject to continued employment.

In January 2020, the Company offered to option holders a one-time modification to reduce the exercise price of all equity options with exercise prices greater than $4.40 per unit to $4.40, the ‘fair value’ at the date of modification. In total, 8,778,750 options had their exercise price reduced for 68 option holders who accepted the repricing. The option awards subject to repricing were accounted for as modified awards due to the change in exercise price of option awards as a result of the repricing. The incremental compensation charge resulting from the modification is $1.9 million. For vested option awards, $0.7 million was recognized on the date of modification and for unvested option awards $1.2 million will be recognized over the remaining requisite service period.

In October 2020, in conjunction with the recapitalization transaction described in Note 18, the Company accelerated the vesting on 4,150,845 options for 27 employees. The total incremental expense associated with the acceleration was $18.8 million, recognized on the date of modification. The option awards subject to acceleration were accounted for as modified awards due to the change in the vesting period of existing awards.

In September 2021, the Company modified the vesting conditions of 12,493,241 unvested stock options, which had been issued prior to the nine months ended September 30, 2021. All unvested options that had a performance condition were modified to remove the performance condition. The options will continue to vest on the same schedule under the original terms of the awards. The modification resulted in incremental share-based compensation expense of $15.2 million, which is being recognized over the remaining term of the modified stock options.

RSUs

During June 2021, the Company began to grant RSUs to employees. The summary of RSU activity is as follows (in thousands, except per share data):

	Units Activity	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value
Unvested units as of December 31, 2020	—	$ —	$ —
Granted	6,162,095	17.84	
Released	—	—	—
Canceled	(91,427)	18.03	—
Unvested units as of December 31, 2021	6,070,668	$ 17.84	$ 138,958
Granted	4,745,363	18.86	—
Released	(588,854)	17.54	—
Canceled	(699,829)	18.47	—
Unvested units as of December 31, 2022	9,527,348	$ 18.32	$ 178,638

The aggregate intrinsic value disclosed in the above table is based on the closing stock price on the NYSE on December 31, 2022 and 2021. As of December 31, 2022, there was $100.8 million of unrecognized equity-based compensation expense related to RSUs, which is expected to be recognized over a weighted average period of 3.1 years.

In general, RSUs are either subject to time-based vesting conditions, or both time-based vesting conditions and performance-based vesting, in each case based on continuous employment of the employee.

Time-based vesting – units awarded are eligible to vest in substantially equal annual installments on each anniversary from the grant date over a four year period.

Performance-based vesting – units awarded are eligible to vest in equal three annual installments upon the achievement of annual targets tied to annual revenue growth. All terms of performance conditions are established on grant date.

Determination of Fair Value

The Company estimated the fair value of each stock option awarded on the date of grant using the Black-Scholes option-pricing model utilizing the assumptions noted below:

Fair Value of Units/Stock – prior to the IPO, the fair value of the common stock underlying the equity-based awards was determined by the Company’s Board of Directors, with input from management and third-party valuations. Subsequent to the IPO, the fair value of the common stock underlying equity-awards was determined using the closing stock price on the NYSE on the date of the award being granted.

Expected Term – the expected term represents the period that the awards are expected to be outstanding. The Company issues “plain vanilla,” awards and the Company determines the expected term using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the equity-based awards.

Expected Volatility – the stock price volatility based on the volatility of a set of publicly traded comparable companies with a look back period consistent with the expected life.

Risk-Free Interest Rate – the risk-free interest rate is calculated using the average of the published interest rates of U.S. Treasury zero-coupon issues with maturities that approximate the expected term of the equity-based awards.

Dividend Rate – the dividend yield assumption is zero. Although the Company made a special one-time dividend in conjunction with the recapitalization transaction, the Company has no history of making regular dividends, nor plans to make future dividend payments.

The following assumptions were used to calculate the fair value of stock options granted to employees on the date of grant using the Black-Scholes option-pricing model:

	Year Ended December 31,		
	2022	2021	2020
Weighted-average grant date fair value per option	$ 7.74	$ 5.11	$ 1.60
Fair value of units/ stock	$17.72 - $18.68	$12.40 - $23.89	$4.40 - $12.40
Expected term (in years)	5.5	6.00 - 6.25	6.25
Expected volatility	44%	40 - 42%	30%
Risk-free interest rates	1.8 - 2.0%	0.6 - 1.3%	0.4 - 1.7%

In addition to the Black-Scholes assumptions discussed immediately above, forfeitures may also have a significant impact on the related equity-based compensation. The forfeiture of options and RSUs is recognized as forfeitures occur.

In the period subsequent to the IPO, the Company estimated the fair value of each RSU awarded using the closing price of the Company's shares on the NYSE on the date of the award being granted.

Employee Stock Purchase Plan

In September 2021, the Board adopted the Clearwater Analytics Holdings, Inc. 2021 Employee Stock Purchase Plan ("ESPP"). As of January 1, 2022, a total of 5,837,791 shares of Class A common stock were available for issuance under the ESPP. The offering periods are scheduled to start on June 1 and December 1 of each year. Eligible employees may purchase the Company's common stock through payroll deductions at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of six-month offering periods. An employee's payroll deductions under the ESPP are limited to 10% of the employee's compensation and an employee may not purchase more than $25,000 of stock during any calendar year in which the employee's option to purchase stock under the ESPP is outstanding at any time.

On May 31, 2022, a total of 200,220 shares were issued to employees for the offering period ended May 31, 2022. On November 30, 2022, a total of 148,698 shares were issued to employees for the offering period ended November 30, 2022. As of December 31, 2022, total unrecognized equity-based compensation costs related to ESPP were $0.9 million, which is expected to be recognized over the remaining current offering period ending May 31, 2023.

ESPP payroll contributions accrued at December 31, 2022 totaled $0.5 million and are included within accrued expenses in the consolidated balance sheets. Employee payroll contributions used to purchase shares under the ESPP will be reclassified to stockholders' equity at the end of the offering period.

The fair value of the purchase right for the ESPP is estimated on the date of grant using the Black-Scholes model with the following assumptions for the year ended December 31, 2021:

	Year Ended December 31, 2022	Year Ended December 31, 2021
Expected volatility	34.9 - 57.1%	34.9%
Risk-free interest rate	0.1 - 4.6%	0.1%
Expected term (years)	0.5	0.5

Note 15. Segment and Geographic Information

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision group, in deciding how to allocate resources and assessing performance. The Company's chief operating decision maker is the Company's Chief Executive Officer ("CEO"). The Company's CEO reviews financial information presented on a consolidated basis and makes decisions and allocates resources based on the Company as a whole. The Company has one business activity as a provider of a SaaS solution for investment data aggregation, accounting, analytics, and reporting services. Accordingly, the Company operates as one operating segment, and all required segment financial information is found in the consolidated financial statements.

The following table presents the Company’s revenue disaggregated by geography, based on billing address of the customer (in thousands):

	Year Ended December 31,		
	2022	2021	2020
United States	$ 261,755	$ 229,482	$ 183,745
Rest of World	41,671	22,540	19,477
Total revenue	$ 303,426	$ 252,022	$ 203,222

The following table presents the Company’s long-lived assets including property, plant and equipment, net, operating lease right-of-use assets, net, and intangibles assets, net, disaggregated by geography (in thousands):

	Year Ended December 31,		
	2022	2021	2020
United States	$ 28,179	$ 9,297	$ 7,566
Rest of World	40,455	1,441	1,283
Total long-lived assets, net	$ 68,634	$ 10,738	$ 8,849

Note 16. Income Taxes

As a result of the IPO, Clearwater Analytics Holdings, Inc. owns a portion of CWAN Holdings, which contains all operations of the business and is treated as a partnership for U.S. federal and most applicable state and local income tax purposes. As a partnership, CWAN Holdings is generally not subject to U.S. federal, state, and local income taxes. Any taxable income or loss generated by CWAN Holdings is passed through to and included in the taxable income or loss of its members in accordance with the terms of the operating agreement of CWAN Holdings. Before the IPO, the majority of CWAN Holdings’ income was passed through to its members and nontaxable to the entity. CWAN Holdings’ international wholly-owned subsidiaries are subject to taxes in foreign jurisdictions.

Clearwater Analytics Holdings, Inc. is taxed as a corporation and pays corporate federal, state, and local taxes on income allocated to it from CWAN Holdings based on Clearwater Analytics Holdings, Inc.’s economic interest held in CWAN Holdings. While the Company consolidates CWAN Holdings for financial reporting purposes, the Company will not be taxed on the earnings attributed to the non-controlling interests. As a result, the income tax burden on the earnings attributed to the non-controlling interests is not reported by the Company in its consolidated financial statements.

The components of the net income (loss) before the provision for income taxes were as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Domestic	$ (9,306)	$ (11,117)	$ (46,789)
Foreign	3,971	3,510	3,461
Total	$ (5,335)	$ (7,607)	$ (43,328)

The provision for income taxes was as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Federal	$ —	$ —	$ —
State	491	111	29
International	1,737	1,055	873
Total current income tax expense	$ 2,228	$ 1,166	$ 902
Federal	—	—	—
State	(3)	(13)	—
International	(865)	(666)	—
Total deferred income tax expense	$ (868)	$ (679)	$ —
Total provision for income taxes	$ 1,360	$ 487	$ 902

The provision for income taxes differs from the amount computed by applying the statutory federal rate as follows (in thousands, except percentages):

	Year Ended December 31,		
	2022	2021	2020
Tax at federal statutory rate	$ (1,120)	$ (1,597)	$ (9,099)
Noncontrolling interest and nontaxable income	(41)	643	9,825
State taxes	(1,592)	(1,935)	29
Foreign rate differential	92	54	(12)
Executive compensation deduction limitations	5,544	—	—
Global intangible low taxed income inclusion	1,854	845	—
Equity-based compensation	(2,316)	(1,746)	—
Permanent items	394	(57)	—
Tax credits and incentives	(1,623)	(55)	—
Return to provision	(38,107)	(320)	—
Changes in tax law	63,504	—	—
Valuation allowance	(25,356)	4,652	—
Other	127	3	159
Total	$ 1,360	$ 487	$ 902
Effective tax rate	(25.5%)	(6.4%)	(2.1%)

In 2022, our tax rate was affected by changes in tax law related to state tax rates and apportionment, a return to provision adjustment related to partnership basis of our continuing equity owners and their upstream entities, recognition of additional valuation allowance and the disallowance of tax deductibility of certain expenses. In 2021 and 2020, our tax rate was affected primarily by the recognition of a valuation allowance and the portion of earnings attributed to the non-controlling interests.

Deferred income taxes result from differences in the recognition of amounts for tax and financial reporting purposes, as well as operating loss and tax credit carryforwards. Significant components of our deferred income tax assets and liabilities are as follows (in thousands):

	Year Ended December 31,	
	2022	2021
Investment in Partnership	$ 336,276	$ 311,858
Loss and tax credit carryforwards	80,711	75,931
Equity-based compensation	8,336	7,935
Lease liability	2,057	—
Other	1,099	186
Total deferred tax assets	$ 428,479	$ 395,910
Valuation allowance	(422,555)	(395,220)
Net deferred tax asset	$ 5,924	$ 690
Intangible assets	(7,364)	—
Right of use asset	(1,988)	—
Revenue	(833)	—
Other	(111)	(15)
Total deferred tax liabilities	(10,296)	(15)
Net deferred tax liabilities	$ (4,372)	$ 675

We recognize deferred tax assets to the extent that we believe that these assets are more likely than not to be realized. The realization of tax benefits of net deferred tax assets is dependent upon future levels of taxable income, of an appropriate character, in the periods the items are expected to be deductible or taxable. Based on the available objective evidence during the year ended December 31, 2022, we believe that it is more likely than not that the tax benefits of the U.S. losses incurred may not be realized. Accordingly, we have recorded a full valuation allowance against the tax benefits of the U.S. losses incurred. We intend to maintain the full valuation allowance on the U.S. net deferred tax assets until sufficient positive evidence exists to support a reversal of, or decrease in, the valuation allowance. The valuation allowance increased $27 million during the year ended December 31, 2022 and was primarily attributable to increases in deferred taxes related to tax basis step ups from the non-controlling interests exchanging their partnership units for our publicly traded stock and the capitalization of R&D expenses under Section 174.

As of December 31, 2022, we had net operating loss carryforwards of approximately $238 million for federal income tax purposes, a small portion of which will begin to expire in 2036 if unused. We had net operating loss carryforwards of approximately $318 million for state income tax purposes, which will begin to expire in the year 2025 if unused. We had net operating loss carryforwards of approximately $9 million for foreign income tax purposes, which do not expire and can be carried forward indefinitely.

As of December 31, 2022, we also had research and development credit carryforwards of approximately $3.1 million for federal income tax and $500,000 for state income tax purposes. The research and development tax credits will begin to expire in 2036 and 2034 for federal and state purposes, respectively, if unused.

The federal and state net operating loss carryforwards may be subject to significant limitations under Section 382 and Section 383 of the Internal Revenue Code of 1986 and similar provisions under state law. The Tax Reform Act of 1986 contains provisions that limit the federal net operating loss carryforwards that may be used in any given year in the event of special occurrences, including significant ownership changes. We have completed a Section 382 review and determined that none of our operating losses will expire solely due to Section 382 limitation(s).

We indefinitely reinvest earnings from our foreign subsidiaries and therefore no deferred tax liability has been recognized on the basis difference created by such earnings. We have not provided foreign withholding taxes for any undistributed earnings of our foreign subsidiaries.

A reconciliation of the beginning and ending balance of total unrecognized tax benefits is as follows (in thousands):

	Year Ended December 31,		
	2022	**2021**	**2020**
Balance - Beginning of Year	$ 3,548	$ —	$ —
Increases related to current year's tax positions	959	89	—
Increases related to organizational transactions	—	3,455	
Increases (decreases) related to prior year's tax positions	(182)	3	—
Decreases related to lapse of statute	(487)	—	—
Increases related to exchanges	94	1	—
Balance - End of Year	$ 3,932	$ 3,548	$ —

None of the tax benefits included in the balance of unrecognized tax benefits as of December 31, 2022 would affect the effective tax rate if recognized.

We recognize interest and penalties related to unrecognized tax benefits as income tax expense. During the year ended December 31, 2022, 2021, and 2020, we did not recognize any interest and penalties for income taxes.

We file income tax returns in the U.S. federal jurisdiction, various state jurisdictions, and various foreign jurisdictions. As of December 31, 2022, all of the years remain open to examination by the federal and state tax authorities for three or four years from the tax year in which net operating losses or tax credits are utilized. We believe that an adequate provision has been made for any adjustments that may result from tax examinations. Although the timing of the resolution, settlement, and closure of audits is not certain, we do not expect our unrecognized tax benefits to materially change in the next 12 months.

On March 16, 2022, Idaho enacted House Bill 563 that amended portions of relevant tax laws. Due to our valuation allowance in the U.S., this legislation did not have a significant impact on the provision for income taxes for the year ended December 31, 2022. However, we expect our blended state tax rate to decrease due to the new law.

On August 9, 2022, the Creating Helpful Incentives to Produce Semiconductors Act (“CHIPS Act”) was passed into law and amended portions of relevant tax laws. The CHIPS Act did not have a significant impact on the provision for income taxes for the year ended December 31, 2022. We do not expect this legislation to materially affect us.

On August 16, 2022, the Inflation Reduction Act was passed into law and amended portions of relevant tax laws. The Inflation Reduction Act did not have a significant impact on the provision for income taxes for the year ended December 31, 2022. We do not expect this legislation to materially affect us.

Tax Receivable Agreement Liability

Pursuant to our election under Section 754 of the Internal Revenue Code (the "Code"), we expect to obtain an increase in our share of the tax basis in the net assets of CWAN Holdings when its units are redeemed or exchanged. We intend to treat any redemptions and exchanges of CWAN Holdings units as direct purchases of the units for U.S. federal income tax purposes. These increases in tax basis may reduce the amounts that we would otherwise pay in the future to various tax authorities. They may also decrease gains (or increase losses) on future dispositions of certain capital assets to the extent tax basis is allocated to those capital assets.

In connection with the IPO and related transactions, we entered into a TRA that provides for the payment by us of 85% of the amount of any tax benefits that we actually realize, or in some cases are deemed to realize, as a result of (i) increases in our share of the tax basis in the net assets of CWAN Holdings resulting from any redemptions or exchanges of CWAN Holdings units, (ii) tax basis increases attributable to payments made under the TRA, and (iii) deductions attributable to imputed interest and TRA bonus payments pursuant to the TRA (the "TRA Payments"). We expect to benefit from the remaining 15% of any tax benefits that we may actually realize. The TRA Payments are not conditioned upon any continued ownership interest in CWAN Holdings or the Company. The rights of each member of CWAN Holdings, that is a party to the TRA, are assignable to transferees of their respective CWAN Holdings units.

The estimation of a liability under the TRA is, by its nature, imprecise and subject to significant assumptions regarding a number of factors, including (but not limited to) the amount and timing of taxable income generated by the Company each year as well as the tax rate then applicable. The future tax benefits related to ownership exchanges as of December 31, 2022 are estimated to be $405 million, of which $345 million is estimated to be the associated TRA liability.

As noted above, the Company evaluated the realizability of its U.S. deferred tax assets and has recorded a full valuation allowance against the future realization of those benefits. As such, no TRA liability related to future years has been recorded as of December 31, 2022, as it is not probable that we will realize any tax benefits.

Before considering the tax benefits subject to our TRA Agreement, we estimate that we would have reported taxable income in 2022 due to the capitalization of research and development expenses under Section 174 and equity-based compensation expense that has not met the rules for tax deductibility. Therefore, we expect to utilize tax benefits subject to our TRA and have recorded the associated TRA expense and a TRA liability of $12.2 million as of December 31, 2022, of which $561,000 is related to the TRA Bonus Agreement and is recorded in general and administrative expenses in the Consolidated Statement of Operations.

As non-controlling interest holders exercise their right to exchange their units in CWAN Holdings, a TRA liability may be recorded based on 85% of the estimated future tax benefits that the Company may realize as a result of increases in the tax basis of CWAN Holdings. The amount of the increase in the tax basis, the related estimated tax benefits, and the related TRA liability to be recorded will depend on, but is not limited to, the price of the Company's Class A stock at the time of the relevant redemption or exchange.

17. Recapitalization

On November 2, 2020, the Company completed a recapitalization transaction on behalf of existing unitholders. The transaction allowed existing unitholders to sell their units to new investors. In addition, option holders were offered the opportunity to exercise and sell a portion of their vested options, which were accelerated in certain cases (See Note 14, Equity-Based Compensation – Modification of option awards). In total, 132,658,542 units transferred ownership. After completion of the recapitalization transaction, entities ultimately controlled by WCAS maintained a majority interest in and control of the Company.

In connection with the transaction, selling unitholders contributed $49.0 million for bonuses paid to employees and related payroll taxes in 2020. These amounts have been recorded as an expense in the recapitalization compensation expenses category within the consolidated statement of operations. The bonuses relate to employees from departments which have historically been recorded as expenses in the below categories in the consolidated statements of operations:

	Year Ended December 31, 2020
Cost of revenue	$ 6,205
Research and development	8,891
Sales and marketing	7,951
General and administrative	25,951
Total recapitalization compensation	$ 48,998

As of December 31, 2020, the Company calculated the actual costs incurred with the recapitalization compensation expenses and accrued $4.9 million to be reimbursed to unitholders as an excess contribution. The amounts were reimbursed in 2021.

Note 18. Transactions with Related Parties

During January 2021, the Company paid $9.6 million in relation to management fees to Principal Equity Owners which is recorded as prepaid management fees within prepaid expenses and other current assets and non-current assets. The prepaid management fees are being amortized over four years. In the year ended December 31, 2022, 2021, and 2020 the Company recognized a management fee to Principal Equity Owners of $2.5 million, $2.4 million and $1.6 million, respectively.

In the year ended December 31, 2022, the Company accrued $3.2 million tax distributions payable and $11.6 million related to TRA Payments payable to certain Continuing Equity Owners which is expected to be paid in the fourth quarter of 2023.

Note 19. Subsequent Events

The Company authorized the issuance of 6.0 million RSUs to Company employees, including 3.3 million RSUs subject to time-based vesting conditions which vest in equal annual installments on each anniversary from the grant date over a four year period, and 2.7 million RSUs subject to performance based vesting which are eligible to vest in three equal annual installments from January 1, 2023 upon the achievement of annual targets tied to annual revenue growth. All terms of performance conditions are established on the grant date. The RSUs were granted on February 20, 2023, and the Company estimated the fair value of each RSU awarded using the closing price of the Company’s shares on the NYSE on the date of the award being granted. The unrecognized compensation of these awards is $114.1 million which is expected to be recognized over a weighted average period of 3.55 years.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. 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 Securities Exchange Act of 1934, as amended (the "Exchange Act") that are designed to ensure that information required to be disclosed by a company in the reports that 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 that information required to be disclosed by a company in the reports that 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 December 31, 2022. Based on the evaluation of our disclosure controls and procedures as of December 31, 2022, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) of the 1934 Act. Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2022 based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

On November 30, 2022, we completed the acquisition of JUMP. As permitted by the SEC, we have elected to exclude the internal controls of this acquisition that has not been integrated into our existing processes and controls from our assessment of the effectiveness of internal control over financial reporting as of December 31, 2022. The excluded aggregate financial position of JUMP collectively represented less than 5% of our consolidated total assets (excluding goodwill and intangible assets) as of December 31, 2022, and less than 1% of our revenues for the year then ended. We will include the internal controls of JUMP in our assessment of the effectiveness of our internal control over financial reporting as of December 31, 2023.

As a result of this assessment, management concluded that, as of December 31, 2022, our internal control over financial reporting was effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America.

Our independent registered accounting firm is not required to issue an attestation report on our internal control over financial reporting for so long as we qualify as an "emerging growth company," as defined under the JOBS Act.

Changes in Internal Control Over Financial Reporting

On November 30, 2022, we acquired JUMP. As a result of this acquisition, the Company is reviewing the internal controls over the acquired company and making appropriate changes as deemed necessary. Except for the changes in internal controls related to JUMP, there was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the period covered by this Annual Report on Form 10-K 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 that 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 that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that 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 that 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 that 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.

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions That Prevent Inspections

Not applicable**.**

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Directors

Our business and affairs are managed under the direction of our Board, which is composed of ten individuals, including our chair.

Our certificate of incorporation provides that our Board of Directors is divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with the directors serving three-year terms.

Below is a list of names, ages, positions, and a brief account of the business experience of the individuals who serve as directors of the Company as of February 17, 2023:

Name	Age	Position(s) Held
Jacques Aigrain	68	Class I Director
Kathleen A. Corbet	63	Class I Director
Lisa Jones	61	Class I Director
Jaswinder Pal Singh	58	Class I Director
Christopher Hooper	41	Class II Director
D. Scott Mackesy	54	Class II Director
Sandeep Sahai	59	Chief Executive Officer and Class II Director
Eric Lee	51	Class III Director, Chair of the Board
Cary Davis	56	Class III Director
Andrew Young	44	Class III Director

Class I Directors (terms expiring in fiscal year 2025)

Jacques Aigrain has been a Director since February 2021. Mr. Aigrain currently serves as Chairman of the board of directors at LyondellBasell NV (since 2011) and Singular Bank SAU (since 2019) and a director at TradeWeb Markets Inc. (since August 2022). Mr. Aigrain was a director of the London Stock Exchange Group (LSEG Ltd) until April 2022 and WPP Plc until May 2022, both since 2013. Mr. Aigrain worked for nine years at SwissRe AG, including as Chief Executive Officer, and spent 20 years in global leadership roles at JP Morgan Chase & Co. in New York, London and Paris. Mr. Aigrain holds a master's degree in economics from Paris Dauphine University and a PhD in economics from Sorbonne University.

We believe Mr. Aigrain's extensive experience in finance and as a chief executive officer, and his experience on the audit committees of public companies, including as chair, qualifies him to serve as a director of our Board.

Kathleen A. Corbet has been a Director since March 2021. She also serves as principal at Cross Ridge Capital, LLC, a venture capital and management consulting firm she founded in 2008 for early-stage venture firms, government agencies, municipalities and non-profit enterprises. Ms. Corbet currently serves on the boards of Massachusetts Mutual Life Insurance Company (since 2008) and Waveny LifeCare Network (since 2017). In addition, she served as President of Standard & Poor's from 2004 to 2007. Ms. Corbet held several executive positions with AllianceBernstein from 1993 to 2004, including Chief Executive Officer of the Alliance Fixed Income division from 2000 to 2004. She also held directorships at BlackRock TCP Capital Corp., CEB Inc. and AxiomSL. Ms. Corbet holds a bachelor's degree in computer science and marketing from Boston College and an MBA from New York University Stern School of Business.

We believe Ms. Corbet's extensive experience in finance and as a chief executive officer, and her service on the audit committees of public companies, including as chair, qualifies her to serve as a director of our Board.

Lisa Jones has been a Director since September 2022. Ms. Jones has been the Head of the Americas, President and Chief Executive Officer of Amundi US, Inc since August 2014. She is also President of Amundi Distributor, Inc., head of the US Executive Committee and US Management Committee, and member of the Global Executive Committee. Ms. Jones' past roles include President and CEO at Pioneer Investments, Managing Director and Global Head of Distribution at Morgan Stanley Investment Management, Head of Institutional Business at Eaton Vance Corporation, and President of the Institutional Division at MFS Investment Management. Ms. Jones holds a degree in economics from Trinity College.

We believe Ms. Jones' deep expertise in the financial services and asset management sector serving markets all over the world, and her experience as a chief executive officer, qualifies her to serve as a director of our Board.

Jaswinder Pal Singh has been a Director since July 2022. Dr. Singh is a tenured full professor of Computer Science at Princeton University. He currently serves as Chairman at 8x8 and a director at Hiro Systems, PBC. Dr. Singh is the co-founder of CaaStle and Trust Machines. He has also served as a consultant to Intel, Microsoft and the US. Government. Dr. Singh graduated from Princeton University with degrees in electrical engineering and computer science and obtained his Master's and PH.D. degrees from Stanford University.

We believe Dr. Singh's expertise in technology, computer science and cybersecurity, coupled with his experience as a company founder and board chair qualifies him to serve as a director of our Board.

Class II Directors (terms expiring in fiscal year 2023)

Christopher Hooper has been a Director since July 2017. Mr. Hooper has served since 2017 as a General Partner in the Technology Group at Welsh Carson and leads the firm's San Francisco office, having originally joined Welsh Carson in 2005. He currently serves as a Director at Green Street, Avetta and LINQ. Earlier in his career, Mr. Hooper worked as a Principal at Golden Gate Capital in San Francisco and as an Analyst at Lazard in New York. Mr. Hooper holds a bachelor's degree from Colgate University.

We believe Mr. Hooper's expertise in technology investments, finance and mergers and acquisitions qualifies him to serve as a director of our Board.

D. Scott Mackesy has been a director since December 2022. Mr. Mackesy is the managing partner of Welsh Carson and is a member of its management committee, having joined Welsh Carson in 1998. Mr. Mackesy focuses on overall firm strategy at Welsh Carson. Mr. Mackesy currently serves on the board of directors for several of Welsh Carson's portfolio companies, including Avetta, CenterWell Primary Care, Emerus and Valtruis. Prior to joining Welsh Carson, Mr. Mackesy worked for six years at Morgan Stanley Dean Witter. Mr. Mackesy holds a Bachelor of Arts degree from the College of William & Mary.

Sandeep Sahai has been our Chief Executive Officer since July 2018 and a Director since September 2016. During his tenure, the Company has grown organically across both its core markets and new regions. From a largely single office business, the Company now has offices and operating centers around the world and serves large and complex global customers. Before Clearwater, he held the title of CEO of Solmark from 2014 to June 2018, an investment partnership where he was the lead partner. Previously, Mr. Sahai worked for Headstrong from 2004 to 2011, including as President and Chief Operating Officer from 2007 to 2009, and President and Chief Executive Officer from 2009 to 2011. After Headstrong's acquisition by Genpact in 2011, Mr. Sahai served as Senior Vice President of IT Solutions and Capital Markets at Genpact from 2011 to 2014. Mr. Sahai also held directorships at AIM Software (Austria) from 2015 to 2019, Simeio Solutions from 2015 to 2020 and Magic Software from 2014 to 2018. In addition, he served as Operating Partner at Welsh Carson beginning in 2014. Mr. Sahai holds an engineering degree from the Indian Institute of Technology, Varanasi and an MBA from the Indian Institute of Management, Kolkata.

We believe Mr. Sahai's successful leadership of Clearwater into a period of strong and consistent growth, his deep understanding of the Company, technology operations and the investment accounting industry, and his experience as an entrepreneur and business leader, qualifies him to serve as a director of our Board.

Class III Directors (terms expiring in fiscal year 2024)

Eric Lee has been the Chairman of our Board of Directors since September 2016. Mr. Lee is a General Partner at Welsh Carson, serves as its Head of Diversity and Inclusion, and is a member of the Management and Investment Committees. Mr. Lee joined Welsh Carson in 1999 and helps to lead the firm's Technology investment practice. He currently serves on the board of directors for several of Welsh Carson's portfolio companies, including Revel Systems and Owl Practice Suite. Before joining Welsh Carson, he worked at Goldman Sachs & Co. in the Mergers & Acquisitions and High Technology investment banking groups from 1995 to 1999. Mr. Lee holds a bachelor's degree from Harvard College.

We believe Mr. Lee's experience in technology investments, finance and mergers and acquisitions qualifies him to serve as a director of our Board.

Cary Davis has been a Director since November 2020. Mr. Davis joined Warburg Pincus in 1994 and is responsible for Technology investments in the Software and Financial Technology sectors. He currently serves as a Director of BitSight, Crowdstrike, Cyren, eSentire, RS Eergy Group, Reorg Research and Varo Money. Mr. Davis is Chairman of the American Academy in Rome and a Trustee of the Andy Warhol Foundation. Prior to joining Warburg Pincus, Mr. Davis was an Executive Assistant to Michael Dell at Dell Computer and a consultant at McKinsey & Company. He has also been an adjunct professor at the Columbia University Graduate School of Business, Chairman of the Jewish Community House of Bensonhurst and Chairman of the Boys Prep Charter School. Mr. Davis holds a bachelor's degree in Economics from Yale University and an MBA from Harvard Business School.

We believe Mr. Davis' experience in technology investments, finance and mergers and acquisitions qualifies him to serve as a director of our Board.

Andrew Young has been a Director since November 2020. Mr. Young joined the London office of Permira Advisers in 2011 and relocated to Menlo Park in 2018, where he currently works as a Partner. He also serves on the board of Zwift, Seismic, Carta and Reorg Research. Prior to joining Permira, Mr. Young worked for Pacific Equity Partners as an investment executive in their Sydney and New York offices. Before that, he worked as an associate at Citi. Mr. Young holds a bachelor's degree in Finance from University of Technology, Sydney and an MBA from London Business School.

We believe Mr. Young's experience in technology investments, finance and mergers and acquisitions qualifies him to serve as a director of our Board.

Selection of Directors

Our Board of Directors' policy is to encourage selection of directors who will contribute to the Company's overall corporate goals. The Board is composed of individuals that have experience in a number of areas deemed important to the Company's success, including technology investments and operations, leadership, strategy and strategic planning, finance, risk management, corporate governance, mergers and acquisitions, diversity and inclusion and entrepreneurship. The Company's Nominating and Corporate Governance Committee believes that all directors must, at a minimum, meet the Company's Code of Ethics and Corporate Governance Guidelines, which include the following criteria:

- directors should be persons of good reputation and character who conduct themselves in accordance with high personal and professional ethical standards, including the policies set forth in the Company's Code of Ethics;
- directors should have the educational background, experience, qualifications and skills relevant for effective management and oversight of the Company's management, which may include experience at senior executive levels in comparable companies, public service, professional service firms or educational institutions;
- directors must have the time and willingness to effectively carry out their duties and responsibilities; and
- the Board as a whole should consider its diversity, including gender, race and ethnicity.

Although the Board does not have a specific diversity target or policy, we value diversity and six of our ten Board members identify as female, a racial or ethnic minority or a member of the LGBTQ+ community. The director demographic matrix below provides certain highlights of the composition of our Board members and Board nominees.

Board Diversity Matrix
(As of February 14, 2023)

Total Number of Directors	10

Gender:	Female	Male	Non-Binary	Gender Undisclosed
Number of Directors Based on Gender Identity	2	8	N/A	N/A
Demographic Background Number of Directors who Identify in Any of the Categories Below:				
African American or Black	0	0	N/A	N/A
Alaskan Native or Native American	0	0	N/A	N/A
Asian	0	3	N/A	N/A
Hispanic or Latinx	0	0	N/A	N/A
Native Hawaiian or Pacific Islander	0	0	N/A	N/A
White	2	5	N/A	N/A
Two or More Races or Ethnicities	0	0	N/A	N/A
LGBTQ+	0	0	1	N/A
Did Not Disclose Demographic Background	0	0	N/A	N/A

Subject to any earlier resignation or removal in accordance with the terms of our certificate of incorporation, our bylaws and the Stockholders' Agreement, our Class I directors will serve until the annual meeting of stockholders to be held in fiscal year 2025, our Class II directors will serve until the upcoming annual meeting of stockholders to be held in fiscal year 2023, and our Class III directors will serve until the annual meeting of stockholders to be held in fiscal year 2024. In addition, our certificate of incorporation provides that as long as our Principal Equity Owners beneficially own (directly or indirectly) 50% or more of the voting power of the Company entitled to vote, directors may be removed with or without cause upon the affirmative vote of at least a majority of the voting power of our outstanding shares of stock entitled to vote thereon. However, once our Principal Equity Owners cease to beneficially own in the aggregate (directly or indirectly) 50% or more of the voting power of the Company, our directors may be removed only for cause upon the affirmative vote of at least 66 2/3% of the voting power of our outstanding shares of stock entitled to vote thereon.

Stockholders' Agreement

In connection with our IPO, we entered into a Stockholders Agreement, dated as of September 28, 2021, by and between our Company and the Principal Equity Owners (the "Stockholders' Agreement"), which provides that, while we are a controlled company, our Principal Equity Owners have the right to designate all of the nominees to our Board of Directors subject to the maintenance of certain ownership requirements. When we are no longer a controlled company the Principal Equity Owners will have the right to designate six members of our Board of Directors subject to the maintenance of certain ownership requirements in us. The Stockholders' Agreement provides that the authorized number of directors will not increase above ten for so long as the Company is a controlled Company (or eleven for so long as the Company is not a controlled company).

Stockholder Recommendations for Director Nominees

The Nominating and Corporate Governance Committee will consider stockholder nominations for membership on the Board. For the 2024 Annual Meeting, nominations may be submitted to 777 W. Main St., Suite 900, Boise, ID. 83702, Attn: Chief Legal Officer and Corporate Secretary, and such nominations will then be forwarded to the Chair of the Nominating and Corporate Governance Committee.

Subject to the terms of our certificate of incorporation and bylaws, as well as the Stockholders' Agreement, the Nominating and Corporate Governance Committee will identify the desired skills and experience of a new director and will nominate individuals who it believes can strengthen the Board's capabilities and further diversify the collective experience represented by the then-current directors. The Nominating and Corporate Governance Committee may engage third parties to assist in the search and provide recommendations. Also, directors are generally asked to recommend candidates for the position. The candidates will then be evaluated based on the process outlined in our Corporate Governance Guidelines and the Nominating and Corporate Governance Committee Charter, and the same process will be used for all candidates, including candidates recommended by stockholders.

Controlled Company Exemption

Since completion of our IPO, the Principal Equity Owners have controlled a majority of the voting power of our outstanding common stock. As a result, we are a "controlled company" under NYSE corporate governance standards. As a controlled company, exemptions under the NYSE standards free us from the obligation to comply with certain corporate governance requirements, including the requirements:

- that a majority of our Board of Directors consist of independent directors;
- that nominating and corporate governance matters be decided solely by independent directors; and
- that employee and officer compensation matters be decided solely by independent directors.

We intend to continue to utilize these exemptions. These exemptions do not modify the independence requirements for our Audit Committee, and we intend to comply with the requirements of Rule 10A-3 under the Exchange Act, and the rules of NYSE within the applicable time frame.

Board Meetings and Committees

Our Board has an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. In the future, our Board may establish other committees, as it deems appropriate, to assist it with its responsibilities.

In 2022, our Board held 6 meetings. During 2022, the Audit Committee held 8 meetings, the Compensation Committee held 4 meetings and the Nominating and Corporate Governance Committee held 4 meetings. Directors are expected to attend the annual meeting of stockholders and all or substantially all of the Board meetings and meetings of committees on which they serve. In 2022, each director attended at least 75% of the meetings of the Board during such director's tenure and the total number of meetings held by any of the committees of the Board on which the director served.

Each of our standing committees has a written charter which is available on the Investor Relations page of our website at https://investors.clearwateranalytics.com. Our website is not part of this Annual Report.

Our Human Capital Management and Culture

We have a team-oriented culture and encourage candor from our employees, which we believe helps us to succeed and drive operational excellence. We also seek to, and have a history of, promoting from within our organization as well as hiring top talent from outside of our company to expand our capabilities. We continually monitor and evaluate employee engagement.

We aim to hire individuals who share our passion, commitment and entrepreneurial spirit. We are also committed to diversity and inclusion because we believe that diversity leads to better outcomes for our business and enables us to better meet the needs of our clients. We recognize the importance of diversity in leadership roles within our company.

We encourage our employees to operate by a common set of values, which includes being:

- infectiously passionate about Clearwater;
- intensely committed to our clients;
- devoted to building an outstanding, engaged team;
- focused on execution and dedicated to getting things done;
- continuously innovative and improving; and
- dedicated to building truly differentiated offerings; and
- committed to having values beyond reproach.

We believe that operating with purpose, passion and creativity benefits our clients, stockholders, employees and suppliers, as well as the communities where we operate, and the environment.

Environmental, Social and Governance ("ESG")

Clearwater is focused on ESG objectives to create long-term value and manage risks, as well as to positively impact our community through both company and employee efforts. Clearwater has recently, with the aid of a well-known consulting firm, completed an ESG materiality assessment and identified the following ESG priorities:

- Environmental: renewable energy, greenhouse gas emissions, climate risk and action, responsible sourcing and procurement;
- Social: diversity, equity and inclusion, community engagement and responsible products and offerings; and
- Governance: data privacy, corporate governance, ethics and anti-corruption and risk management

Clearwater has a number of on-going initiatives and has demonstrated progress in several of these areas, including offering employee benefits that promote responsible transportation, volunteerism and charitable contributions, transitioning to a cloud-based server provider, prioritizing board diversity with a Board of Directors that is 60% comprised of women, racial and ethnic minority and LGBTQ+ directors. Clearwater has also instituted leading information security practices and routinely meets the high security expectations of its client base.

Clearwater is particularly proud of Clearwater Cares, our corporate social responsibility program, through which we have worked with our employees to identify three company-wide priorities: science, technology, engineering and mathematics (or STEM) education, human services and sustainability. For example, in Boise, Idaho, employees volunteered at an Hour of Code event and Clearwater donated funds for classroom tools for robotics and game design. Clearwater has also donated to food drives in Boise, Edinburgh, Scotland and Noida, India. We have aligned with the Salma Public School in Uttar Pradesh, India, where employees have participated in interactive learning sessions, sports day and other activities. Employees there also worked with a local non-governmental agency to donate winter essentials to the needy. We offer our employees 16 hours of paid time off to perform volunteer services and have matched employee donations to company identified charities.

The table below sets forth the composition of our Board committees as of February 17, 2023:

Board Member	Audit Committee	Compensation Committee	Nominating and Corporate Governance Committee
Eric Lee, Chair		X(Chair)	X(Chair)
Jacques Aigrain	X		
Kathleen A. Corbet	X(Chair)		
Cary Davis		X	X
Christopher Hooper			X
Sandeep Sahai			
Andrew Young		X	X
Lisa Jones	X		
Jaswinder Pal Singh			
D. Scott Mackesy		X	

Audit Committee

Our Audit Committee is responsible for, among other matters: (1) appointing, compensating, retaining, evaluating, terminating and overseeing our independent registered public accounting firm; (2) discussing with our independent registered public accounting firm its independence from us; (3) reviewing with our independent registered public accounting firm the matters required to be reviewed by applicable auditing requirements; (4) approving all audit and permissible non-audit services to be performed by our independent registered public accounting firm; (5) overseeing the financial reporting process and discussing with management and our independent registered public accounting firm the interim and annual financial statements that we file with the SEC; (6) reviewing and monitoring our internal controls, disclosure controls and procedures and compliance with legal and regulatory requirements; (7) establishing procedures for the confidential anonymous submission of concerns regarding questionable accounting, internal controls, auditing and federal securities law matters; (8) reviewing and approving related person transactions and (9) providing risk oversight, including with respect to cybersecurity risk. The foregoing is a summary of the responsibilities of the Audit Committee. For a full list of responsibilities, please refer to our Audit Committee charter, which can be found on the Company's website, https://clearwateranalytics.com/, by clicking on "Investors" and then clicking on "Governance Documents." Information contained on this website is not a part of this Annual Report, and the inclusion of this website address in this Annual Report is an inactive textual reference only.

Our Audit Committee consists of Ms. Corbet, Mr. Aigrain and Ms. Jones, with Ms. Corbet serving as chair. Our Board of Directors has determined that each member of our Audit Committee meets the definition of "independent director" under Rule 10A-3 under the Exchange Act and NYSE rules. Additionally our Board of Directors has determined that each of Ms. Corbet, Mr. Aigrain and Ms. Jones is an "audit committee financial expert" as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable NYSE rules and regulations.

Compensation Committee

Our Compensation Committee is responsible for, among other matters: (1) reviewing officer and executive compensation goals, policies, plans and programs; (2) reviewing and approving or recommending to our Board of Directors or the independent directors, as applicable, the compensation of our directors, Chief Executive Officer and other executive officers; (3) reviewing and approving employment agreements and other similar arrangements between us and our officers and other key executives; and (4) appointing and overseeing any compensation consultants.

Our Compensation Committee consists of Mr. Lee, Mr. Mackesy, Mr. Young and Mr. Davis, with Mr. Lee serving as chair. As a controlled company, we are not required to ensure that the composition of our Compensation Committee meets the requirements for independence under current rules and regulations of the SEC and NYSE. Each member of the Compensation Committee is a nonemployee director, as defined pursuant to Rule 16b-3 promulgated under the Exchange Act, and an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code").

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee is responsible for, among other matters: (1) identifying individuals qualified to become members of our Board of Directors, consistent with criteria approved by our Board of Directors; (2) overseeing the organization of our Board of Directors to discharge the board's duties and responsibilities properly and efficiently; and (3) developing and recommending to our Board of Directors a set of corporate governance guidelines and principles.

Our Nominating and Corporate Governance Committee consists of Mr. Lee, Mr. Davis, Mr. Hooper and Mr. Young, with Mr. Lee serving as chair. As a controlled company, we are not required to ensure that the composition of our Nominating and Corporate Governance Committee meets the requirements for independence under current rules and regulations of the SEC and NYSE.

Board Leadership Structure

The following section describes our Board leadership structure, the reasons our Board considers that this structure is appropriate at this time, the roles of various positions, and related key governance practices. Our Board believes that the mix of experienced independent directors and directors affiliated with our Principal Equity Owners that currently make up our Board and our Board committee composition and the separation of the roles of Chair and Chief Executive Officer benefit the Company and its stockholders.

Independence

Our Board has an effective mix of independent directors and non-independent directors. Our Board has affirmatively declared that the following six directors are independent under the current rules and regulations of the NYSE: Mr. Cary Davis, Mr. Andrew Young, Mr. Jacques Aigrain, Ms. Kathleen A. Corbet, Dr. Jaswinder Pal Singh and Ms. Lisa Jones. Audit Committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Exchange Act, which requires that the Audit Committee consist exclusively of independent directors for purposes of Rule 10A-3. Our Board has determined that each of Ms. Corbet, Mr. Aigrain and Ms. Jones, each of whom currently serves on the Audit Committee, is an independent director for purposes of Rule 10A-3.

Chair and Chief Executive Officer

With respect to the roles of Chair and Chief Executive Officer, our Corporate Governance Guidelines provide for the separation of the roles. The Board believes that separating the roles of Chair and Chief Executive Officer is the most effective leadership structure because it allows for Mr. Sahai to focus on, among other things, executing our strategic plans and overseeing day-to-day operations. Meanwhile, in his capacity as chair, Mr. Lee can focus on leading the Board of Directors, ensuring that it provides strong oversight of management and that all directors have access to the resources required to discharge their duties appropriately.

Self-Evaluation

Using survey materials and Board and committee discussions, in February 2023 our Nominating and Corporate Governance Committee coordinated performance evaluations of our Board, Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee to determine whether the Board, these committees and management are functioning together effectively.

Code of Ethics

We maintain a Code of Ethics that is applicable to all of our directors, officers and employees, including our Chief Executive Officer, Chief Financial Officer and other senior officers. The Code of Ethics sets forth our policies and expectations on a number of topics, including conflicts of interest, corporate opportunities, confidentiality, compliance with laws (including insider trading laws), use of our assets and business conduct and fair dealing. The Code of Ethics may be found on our website at investors.clearwateranalytics.com under Governance: Governance Documents: Code of Ethics.

If we make any substantive amendments to, or grant any waivers from, the Code of Ethics for our principal executive officer, principal financial officer, principal accounting officer or persons performing similar functions, or any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Hedging Policy

The Company's Insider Trading Policy requires executive officers and directors to consult the Company's Chief Legal Officer, Chief Financial Officer or Chief Executive Officer prior to engaging in transactions involving the Company's securities. In order to protect the Company from exposure under insider trading laws, executive officers and directors are encouraged to enter into pre-programmed trading plans under Exchange Act Rule 10b5-1. The Company's Insider Trading Policy prohibits directors and employees (including officers) from trading in publicly-traded options, puts and calls or similar instruments on the Company's securities or selling such securities short. In addition, directors and employees (including officers) are prohibited from engaging in any transactions (including variable forward contracts, equity swaps, collars and exchange funds) that are designed to hedge or offset any decrease in the market value of the Company's equity securities.

Anti-Corruption Policy

The Company's Anti-Corruption Policy requires compliance with all laws, domestic and foreign, including, but not limited to, the U.S. Foreign Corrupt Practices Act of 1977 and the UK Bribery Act, prohibiting improper payments or inducements to any person, including government officials. The Anti-Corruption Policy provides guidance on the types of improper payments that the Company prohibits and how to recognize and deal with corruption, bribery, and other unethical conduct.

Board's Role in Risk Oversight

Our management is responsible for identifying and managing risks facing our Company. Our Board is responsible to understand the principal risks associated with our business on an ongoing basis and to oversee the key risk decisions of management. The Board accomplishes this oversight both directly through its interactions with management, including through periodic detailed operating performance reviews, and through its Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee. The Board of Directors considers this information and provides feedback, makes recommendations, and, as appropriate, authorizes or directs management to address particular exposures to risk.

The Audit Committee reviews and discusses with management and the Company's auditors, as appropriate, the Company's major risk exposures and the steps taken by management to monitor and control these exposures, including the Company's procedures and related policies with respect to risk assessment and risk management, including by periodically inquiring of management with respect to information security and cybersecurity matters and meeting with our Chief Information Security Officer to assess information security and cybersecurity risks.

The Compensation Committee reviews the compensation arrangements for the Company's employees to evaluate whether incentive and other forms of pay encourage unnecessary or excessive risk taking.

The Nominating and Corporate Governance Committee oversees and reviews the Company's major corporate governance risks.

Compensation Committee Interlocks and Insider Participation

None of our executive officers currently serves, or in the past fiscal year has served, as a member of the Board or compensation committee of any entity that has one or more executive officers serving on our Board or Nominating and Corporate Governance Committee.

Communications by Stockholders and Other Interested Parties with the Board

Stockholders and other interested parties may contact an individual director, the Board as a group, or a specified Board committee or group, including the independent directors as a group, by sending regular mail to:

Clearwater Analytics Holdings, Inc.
777 W. Main St, Suite 900
Boise, ID. 83702
Telephone: (208) 433-1200
Attention: Board of Directors
c/o Chief Legal Officer and Secretary

Each communication should specify which director or directors the communication is addressed to, as well as the general topic of the communication. The Company will receive the communications and process them before forwarding them to the addressee. The Company may also refer communications to other departments within the Company. The Company generally will not forward to the directors a communication that is primarily commercial in nature, relates to an improper or irrelevant topic, or requests general information regarding the Company.

Executive Officers

Below is a list of the names, ages, positions, and a brief account of the business experience of the individuals who serve as executive officers of the Company as of February 17, 2023:

Name	Age	Position(s) Held
Sandeep Sahai	59	Chief Executive Officer and Director
Jim Cox	51	Chief Financial Officer
Scott Erickson	42	President, Americas and Asia
Cindy Blendu	46	Chief Human Resources and Transformation Officer
Souvik Das	51	Chief Technology Officer
Susan Ganeshan	53	Chief Marketing Officer
James Price	48	Chief Quality Officer
Gayatri Raman	48	President, Europe and Asia
Subi Sethi	47	Chief Client Officer
Alphonse Valbrune	52	Chief Legal Officer

Sandeep Sahai has been our Chief Executive Officer since July 2018 and a Director since September 2016. During his tenure, the Company has grown organically across both its core markets and new regions. From a largely single office business, the Company now has offices and operating centers around the world and serves large and complex global customers. Before Clearwater, he held the title of CEO of Solmark from 2014 to June 2018, an investment partnership where he was the lead partner. Previously, Mr. Sahai worked at Headstrong from 2004 to 2011, including as President and Chief Operating Officer from 2007 to 2009, and President and Chief Executive Officer from 2009 to 2011. After Headstrong's acquisition by Genpact in 2011, Mr. Sahai served as Senior Vice President of IT Solutions and Capital Markets at Genpact from 2011 to 2014. Mr. Sahai also held directorships at AIM Software (Austria) from 2015 to 2019, Simeio Solutions from 2015 to 2020 and Magic Software from 2014 to 2018. In addition, he served as Operating Partner at Welsh Carson beginning in 2014. Mr. Sahai holds an engineering degree from the Indian Institute of Technology, Varanasi and an MBA from the Indian Institute of Management, Kolkata.

Jim Cox has been our Chief Financial Officer since April 2019. Prior to Clearwater, Mr. Cox served as a Chief Financial Officer at Advent Software from 2009 until Advent's sale to SSNC in 2015 and remained with the company until 2016. He also previously served as Chief Financial Officer at Lithium Technologies from August 2016 to February 2018, Glassdoor from February 2018 to October 2018 and Doximity from December 2018 to March 2019. Mr. Cox began his career in public accounting at Price Waterhouse. Mr. Cox holds a bachelor's degree in Economics from Ohio University.

Scott Erickson has been our President, Americas and Asia since December 2022. Prior to that, Mr. Erickson was our President, Americas and New Markets from June 2021 to December 2022. Before that, he served as our Chief Operating Officer from June 2017 to June 2021. Mr. Erickson joined Clearwater in 2005 and has served in a number of roles leading multiple Clearwater departments, such as Director of Operations and Client Services, Director of Product Management, Director of both Client Services and Product Management, and Director of Sales. Mr. Erickson holds a bachelor's degree from Whitman College and an MBA from Northwest Nazarene University.

Cindy Blendu has been our Chief Human Resources and Transformation Officer since November 2018. She added chief human resources officer responsibilities in April 2019. Ms. Blendu founded Headpoint Consulting in June 2018, but has not been actively involved since joining Clearwater. Previously, she served as Global Head of HR at Solera Holdings from May 2017 to April 2018 and before that as Senior Vice President Corporate Functions at Advantia Health from June 2016 to May 2017. Prior to Advantia, Ms. Blendu served at CSC (now DXC Technology), where she was the VP, Strategic HR and Operations and before that led the IT Planning, Governance and IT Program Management functions. She started her career at Deloitte Consulting and after business school spent ten years with Boston Consulting Group. Ms. Blendu holds a bachelor's degree in accounting and finance from Miami University (Ohio), an MBA from MIT Sloan School of Management and spent two years at the U.S. Coast Guard Academy.

Souvik Das has been our Chief Technology Officer since August 2021. Mr. Das served as Chief Technology Officer at Zenefits from October 2017 to July 2021, where he was responsible for leading engineering, information security, IT and business technology teams. Prior to Zenefits, he served as SVP Engineering at Grand Rounds from May 2016 to September 2017. Mr. Das holds a bachelor's degree in Computer Science and Engineering from the Indian Institute of Technology, Kharagpur, and a master's degree in Computer Science from the University of Georgia, Athens.

Susan Ganeshan has been our Chief Marketing Officer since June 2021. Ms. Ganeshan served as Chief Marketing Officer at Granicus from May 2018 to June 2021. Prior to that, she served as Chief Marketing Officer at Clarabridge from May 2014 to November 2017. In the past, she has worked at newBrandAnalytics (acquired by Sprinklr), webMethods (acquired by Software AG), Checkfree (now Fiserv), and Deloitte Consulting. Ms. Ganeshan holds a bachelor's degree in mathematics from the University of Pittsburgh.

James Price has been our Chief Quality Officer since April 2020. Mr. Price joined Clearwater Analytics in November 2004 and, prior to his current role, he served as the first software development team lead, and then our Director of Development from 2004 to 2016 and our Chief Technology Officer from 2016 to 2020. Mr. Price previously worked as a software developer at Hewlett Packard, Xpit.com, RateXchange and CQG Inc. as a developer and lead architect. Mr. Price holds a bachelor's degree in computer science from Utah State University.

Gayatri Raman has been our President, Europe since December 2022. Previously, she served as our President, Europe and Asia from June 2021 to December 2022, and Managing Director, International Business from February 2020 to June 2021. Before joining Clearwater, Ms. Raman was Chief Executive Officer of AIM Software, a leading data management software provider, from March 2017 to October 2019, and before that Chief Operating Officer from 2015 to 2017. Previously, she was Head of Sales for Capgemini's Capital Markets business. She started her career in consulting with Accenture. Ms. Gayatri holds a bachelor's degree in engineering from Bombay University.

Subi Sethi has been our Chief Client Officer since January 2020. Before joining Clearwater, Ms. Sethi led the end-to-end operations at UnitedHealth Group's Optum Global Solutions from March 2014 to January 2020. Prior to joining Optum Global Solutions, she worked with Genpact from 2005 to 2014 across varied leadership positions in functions like Operations, Quality, Transitions and Technology. Ms. Sethi holds a degree in mathematics from Delhi University and a degree in Advanced Management from the Institute of Management Technology, Ghaziabad.

Alphonse Valbrune has been our Chief Legal Officer since August 2020. Previously, from 2011 to 2020, Mr. Valbrune held several roles within the legal group of Genpact, most recently leading the group of attorneys responsible for the commercial transactions of Genpact's Banking and Capital Markets vertical. For more than ten years, Mr. Valbrune served as General Counsel and Deputy General Counsel at Headstrong, a global professional services firm. Prior to that, Mr. Valbrune was an associate attorney at Skadden, Arps, Slate, Meagher & Flom, where he specialized in corporate finance and mergers and acquisitions. Mr. Valbrune holds a bachelor's degree from Harvard College and a JD from Columbia University School of Law.

Item 11. Executive Compensation.

The following section may contain statements regarding future individual and company performance targets and goals. These targets and goals should not be understood to be statements of management's expectations or estimates of results or other guidance. We specifically caution investors not to apply these statements to other contexts.

We are currently considered an "emerging growth company" within the meaning of the Securities Act, for purposes of the SEC's executive compensation disclosure rules. Accordingly, we are required to provide a Summary Compensation Table and an Outstanding Equity Awards at Fiscal Year-End Table, as well as limited narrative disclosures regarding executive compensation.

As an emerging growth company, we are exempt from certain requirements related to executive compensation, including the requirements to hold a nonbinding advisory vote on executive compensation and to provide information relating to the ratio of total compensation of our Chief Executive Officer to the median of the annual total compensation of all of our employees, each as required by the Investor Protection and Securities Reform Act of 2010, which is part of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

We will remain an emerging growth company until the earliest to occur of (i) the last day of the fiscal year in which we have total annual gross revenues of $1.235 billion or more; (ii) December 31, 2026; (iii) the date on which we have, during the previous three-year period, issued more than $1 billion in non-convertible debt; and (iv) the date on which we are deemed to be a " large accelerated filer" under the rules of the SEC.

This section discusses the material components of the executive compensation program for our Chief Executive Officer and our three other most highly compensated officers, whom we refer to as our "named executive officers." Although the SEC reporting rules only require us to include our Chief Executive Officer and our two other most highly compensated officers as "named executive officers" in this Annual Report, we have also included information regarding Mr. Erickson, our President, Americas and New Markets, in order to present a more comprehensive view of our executive compensation programs.

For the fiscal year ended December 31, 2022 ("Fiscal 2022"), our named executive officers and their positions were as follows:

- Sandeep Sahai, Chief Executive Officer;
- Jim Cox, Chief Financial Officer;
- Scott Erickson, President Americas and Asia; and
- Souvik Das, Chief Technology Officer.

2022 Summary Compensation Table

The following table summarizes the compensation paid to, awarded to, or earned by the named executive officers for our last two most recently completed fiscal years.

Name and Principal Position	Year	Salary[(1)] ($)	Stock Awards[(2)] ($)	Option Awards[(3)] ($)	Non-Equity Incentive Plan Compensation[(4)] ($)	All Other Compensation[(5)] ($)	Total ($)
Sandeep Sahai							
Chief Executive Office	2022	653,400	—	—	787,420	277,802	1,718,622
	2021	653,400	13,516,020	6,607,953	834,183	25,447	21,637,003
Jim Cox							
Chief Financial Officer	2022	425,000	—	—	384,852	115,391	925,243
	2021	425,000	7,656,534	2,147,584	344,529	25,147	10,598,794
Scott Erickson							
President, Americas and Asia	2022	362,500	—	—	309,074	134,349	805,923
	2021	300,000	4,525,002	2,147,584	318,362	24,966	7,315,914
Souvik Das(*)							
Chief Technology Officer	2022	375,000	1,612,500	—	148,501	25,845	2,161,846

* Mr. Das was not a named executive officer for fiscal year 2021.

(1) Amounts reported in this column reflect the actual base salaries paid to our named executive officers for our fiscal years ended December 31, 2022 ("Fiscal 2022") and our fiscal year ended December 31, 2021 ("Fiscal 2021").

(2) Amounts reported in this column reflect the aggregate grant date fair value of restricted stock units, computed in accordance with FASB ASC Topic 718, made to our named executive officers in Fiscal 2022 and Fiscal 2021. The restricted stock units subject to performance-based vesting conditions are valued based on the probable outcome of the performance-based vesting conditions. The grant fair date value of the 2021 restricted stock units subject to performance-based vesting conditions assuming maximum performance is achieved would be $7,433,811, $4,211,084, and $2,488,741 for Messrs. Sahai, Cox, and Erickson, respectively. The grant date fair value of the 2022 restricted stock units subject to performance-based vesting conditions assuming maximum performance is achieved would be $886,875 for Mr. Das. Assumptions used in the calculation of these amounts are included in Note 14 to our audited consolidated financial statements included in Part II Item 8 of this Annual Report on Form 10-K.

(3) Amounts reported in this column reflect the aggregate grant date fair value of option grants, computed in accordance with FASB ASC Topic 718, made to our named executive officers in Fiscal 2021. Assumptions used in the calculation of these amounts are included in Note 14 to our audited consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

(4) Amounts reported in this column reflect (i) with respect to Fiscal 2022, annual bonuses paid in February 2023 in respect of Fiscal 2022 performance, and (ii) with respect to Fiscal 2021, annual bonuses paid in February 2022 in respect of Fiscal 2021 performance.

(5) All Other Compensation paid in Fiscal 2022 is comprised of the following:

Name	Year	401(k) Contribution ($)[(a)]	Other Personal Benefits ($)[(b)]	TRA Bonus ($)[(c)]
Sandeep Sahai	2022	12,200	12,445	253,157
Jim Cox	2022	12,200	13,736	89,455
Scott Erickson	2022	12,200	63,616	58,533
Souvik Das(*)	2022	12,200	13,645	—

(a) Amounts reported in this column represent the amount of Company matching contributions made to each named executive officer’s account under our 401(k) plan.

(b) Amounts reported in this column represent health insurance premiums paid by the Company on behalf of each of our named executive officers. In the case of Mr. Erickson, a pro-rata amount in relation to an annual $100,000 temporary cost of living adjustment subsidy is included, which Mr. Erickson is eligible to receive so long as Mr. Erickson remains in New York.

(c) Amounts reported in this column represent amounts earned in relation to the TRA Bonus.

Narrative Disclosure to Summary Compensation Table

Elements of Compensation

The compensation of our named executive officers generally consists of base salary, non-equity incentive plan compensation, long-term incentive compensation in the form of equity awards and other benefits, as described below.

(a) Base Salary

The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting his skill set, experience, role, responsibilities and contributions. Mr. Sahai’s, Mr. Cox’s and Mr Das's base salary did not change in Fiscal 2022. Effective July 2022, we increased Mr. Erickson’s base salary by $125,000. As of the end of Fiscal 2022, our named executive officers were entitled to the following base salaries.

Named Executive Officer		Base Salary
Sandeep Sahai	$	653,400
Jim Cox	$	425,000
Souvik Das	$	375,000
Scott Erickson	$	425,000

(b) Non-equity Incentive Plan Compensation

Each of our named executive officers was eligible to receive an annual cash incentive award for Fiscal 2022, based on achievement of both individual and company-wide performance measures. The performance objectives include measurable objectives that will contribute to the Company's strategic goals. The Fiscal 2022 target bonus amounts for Messrs. Sahai, Cox, Das and Erickson were $784,080, $400,000, $150,000 and $290,000, respectively. Messrs. Sahai, Cox, Das and Erickson each earned 100.4%, 96.2%, 99.0% and 106.6% of their respective target bonus for Fiscal 2022, due to the Company's achievement of its company-wide performance measures and each named executive officer's achievement of his individual objectives.

(c) Equity Compensation

Options

As of the end of Fiscal 2022, each of our named executive officers held options to purchase Class A Common Stock of the Company under our 2021 Omnibus Incentive Plan (the "2021 Plan"). These options were originally awarded as options to purchase Class B Common Units of CWAN Holdings, LLC ("Class B Common Units") under the Carbon Analytics Holdings LLC 2017 Equity Incentive Plan, as amended from time to time (the "2017 Equity Incentive Plan"). In connection with the IPO, the options in the 2017 Equity Incentive Plan (the "Pre-Conversion Options") were converted into options to purchase shares of our Class A common stock, the 2017 Equity Incentive Plan was canceled and terminated, and the converted options are now governed under the terms of our 2021 Plan.

In March 2021, we granted Messrs. Sahai, Cox and Erickson 1,350,000 Pre-Conversion Options, 437,500 Pre-Conversion Options and 437,500 Pre-Conversion Options, respectively, under the 2017 Equity Incentive Plan. These options have an exercise price of $12.40 and generally vest 25% on January 1, 2022 and 1/48th monthly thereafter, in each case, subject to the executive's continued employment through the applicable vesting date.

In August 2021, we granted Mr. Das 500,000 Pre-Conversion Options. These options have an exercise price of $17.84 and generally vest 25% on the first anniversary date of issuance and 1/48th monthly thereafter, in each case, subject to Mr. Das' continued employment through the applicable vesting date.

Prior to 2021, Messrs. Sahai, Cox and Erickson generally were granted both time-vesting Pre-Conversion Options and performance-vesting Pre-Conversion Options, representing 40% and 60% of the total number of options, respectively. The time-vesting Pre-Conversion options generally vested in equal 20% installments on each of the first five anniversaries of the grant date, such that all of the time-vesting Pre-Conversion Options would have been fully vested as of the fifth anniversary of the grant date, and the performance-vesting Pre-Conversion Options vested in equal 20% installments at the end of each of the first five fiscal years after the grant date, based on the achievement of performance objectives set by CWAN Holdings, LLC, in each case subject to each of the named executive officers' continued employment through the applicable vesting date. Performance-vesting Pre-Conversion Options would partially vest based on partial achievement of performance objectives set by CWAN Holdings, LLC, as determined by the board of CWAN Holdings, LLC. To the extent that any performance-vesting Pre-Conversion Options did not vest based on the achievement of the applicable performance goals for the applicable fiscal year, then, unless otherwise determined by the board of CWAN Holdings, LLC, the performance-vesting options could remain outstanding and eligible to vest based on the achievement of the performance goals for subsequent fiscal year(s).

In connection with the IPO, the board of CWAN Holdings, LLC approved the following changes to the terms and conditions of our named executive officers' (and our other employees') Pre-Conversion Options: (i) removal of the restrictions on the exercisability of the vested options, and (ii) removal of the performance-vesting criteria such that all unvested options currently outstanding will vest as if they are time- vesting options.

Restricted Stock Units

In March 2022, we granted Mr. Das an award of RSUs of Clearwater under the 2021 Plan. We granted 75,000 RSUs, which consist of 50% time-vesting RSUs and 50% performance-vesting RSUs. The time-vesting RSUs generally vest in 25% installments on each of the first four anniversaries of March 18, 2022, in each case, subject to continued employment through the applicable vesting date. The performance-vesting RSUs will vest in 33.33% installments on each of the first three anniversaries of January 1, 2022, based on the achievement of our annual revenue growth rate during the applicable year and, in each case, subject to continued employment through the applicable vesting date.

In September 2021, we granted Messrs. Sahai, Cox, and Erickson, an award of RSUs under the 2021 Plan. We granted Messrs. Sahai, Cox, and Erickson 750,890, 425,363, and 251,389, respectively, which consist of 50% time-vesting RSUs and 50% performance-vesting RSUs. The time-vesting RSUs generally vest in 25% installments on each of the first four anniversaries of January 1, 2022, in each case, subject to continued employment through the applicable vesting date. The performance-vesting RSUs will vest in 33.33% installments on each of the first three anniversaries of January 1, 2022, based on the achievement of our annual revenue growth rate during the applicable year and, in each case, subject to continued employment through the applicable vesting date.

During each annual performance-vesting period, 0% of the performance-vesting RSUs will vest if our annual revenue growth is less than 18%, 80% of the performance-vesting RSUs will vest if our annual revenue growth is at least 18% and less than 20%, 100% of the performance-vesting RSUs will vest if our annual revenue growth is at least 20% and less than 23%, and 110% of the performance-vesting RSUs will vest if our annual revenue growth is at least 23%. In addition, our named executive officers will be eligible to receive an annual grant of RSUs beginning with the 2022 fiscal year.

(d) Other Benefits

We currently provide broad-based welfare benefits that are available to all of our employees, including our named executive officers, and include health, dental, life, vision and short- and long-term disability insurance.

In addition, we maintain, and the named executive officers, participate in, a 401(k) plan, which is intended to be qualified under Section 401(a) of the Code, which provides eligible employees with an opportunity to save for retirement on a tax-advantaged basis, and we match 4% of an employee's contributions up to $285,000 of the employee's eligible earnings. Employees' contributions and our matching contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participant's directions.

Outstanding Equity Awards at 2022 Fiscal Year End

The following table summarizes the outstanding equity awards held by our named executive officers as of December 31, 2022, using the closing stock price on such date of $18.75.

		Option awards				Stock awards			
Name	Grant Date	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexcercisable[(1)]	Option exercise price ($)	Option expiration date	Number of shares or units of stock that have not vested (#)[(2)]	Market value of shares or units of stock that have not vested ($)[(3)]	Equity incentive plan awards: number of unearned shares, units or other rights that have not vested (#)[(4)]	Equity incentive plan awards: market or payout value of unearned shares, units or other rights that have not vested ($)
Sandeep Sahai	11/2/2017	108,175	—	4.00	11/14/2027	—	—	—	—
	11/28/2018	2,149,238	416,250	4.40	11/28/2028	—	—	—	—
	1/21/2020	360,017	311,160	4.40	1/21/2030	—	—	—	—
	3/8/2021	646,875	703,125	12.40	3/8/2031	—	—	—	—
	9/24/2021	—	—	—	—	375,445	7,039,594	—	—
	9/24/2021	—	—	—	—	—	—	375,445	7,039,594
Jim Cox	5/20/2019	592,550	352,500	4.40	5/20/2029	—	—	—	—
	1/21/2020	111,628	96,481	4.40	1/21/2030	—	—	—	—
	3/8/2021	209,635	227,865	12.40	3/8/2031	—	—	—	—
	9/24/2021	—	—	—	—	212,682	3,987,788	—	—
	9/24/2021	—	—	—	—	—	—	212,681	3,987,769
Scott Erickson	11/2/2017	259,620	—	4.00	11/2/2027	—	—	—	—
	4/10/2018	58,088	11,250	4.00	4/10/2028	—	—	—	—
	1/1/2019	27,606	14,688	4.40	1/1/2029	—	—	—	—
	1/21/2020	54,446	49,173	4.40	1/21/2030	—	—	—	—
	3/8/2021	209,635	227,865	12.40	3/8/2031	—	—	—	—
	9/24/2021	—	—	—	—	125,694	2,356,763	—	—
	9/24/2021	—	—	—	—	—	—	125,964	2,361,825
Souvik Das	8/2/2021	166,667	333,333	17.84	8/2/2031	—	—	—	—
	9/24/2021	—	—	—	—	18,750	351,563	—	—
	9/24/2021	—	—	—	—	—	—	18,750	351,563
	3/18/2022	—	—	—	—	37,500	703,125	—	—
	3/18/2022	—	—	—	—	—	—	37,500	703,125

(1) Option awards in this column are all subject to time-vesting conditions, and 25% of the options awarded are eligible to vest on the first anniversary of the grant date, and 75% are subsequently eligible to vest on a monthly basis over the remaining three-year period of employment.
(2) The stock awards in this column consist of RSUs that will vest in equal annual installments on each of the first four anniversaries of January 1, 2022.

(3) The amounts reflected in this column reflect the market value of unvested RSUs, determined by multiplying the number of such awards by the market price of our common stock at the close of the last trading day of fiscal year 2022, which was $18.75 per share.
(4) The stock awards listed in this column consist of RSUs that are subject to certain performance-based vesting requirements based on annual revenue growth rate, and vest in equal annual installments on each of the first three anniversaries of January 1, 2022. Pursuant to SEC rules, the amount reflected in the table represents the number of shares payable determined based on achievement at 100%.

Employment Agreements

We are party to employment agreements with Messrs. Sahai, Cox, Erickson and Das, which provide for at-will employment, subject to the severance entitlements described below, and set forth each named executive officer's initial annual base salary and target annual bonus opportunity (with the rate of each for Fiscal 2022 set forth above), among other terms and conditions.

The employment agreements provide that, upon termination of a named executive officer's employment by us for any reason other than for "cause," or by the named executive officer for "good reason," each as defined therein and summarized below, subject to the named executive officer's execution, delivery and non-revocation of a general release of all claims in favor of the Company, the named executive officer is entitled to severance.

For Mr. Sahai, severance consists of (i) 12 months of continued base salary payments and (ii) target annual bonus for the year of termination, based on our achievement of target bonus performance measurement for the year of termination and payable at the time that annual bonuses for the applicable fiscal year are paid generally. In addition, upon termination of employment (other than for "cause"), Mr. Sahai's vested options remain outstanding until the earlier of (i) a Change in Control (as defined in the 2017 Equity Incentive Plan) transaction, upon which the vested options are canceled in exchange for cash consideration or (ii) the expiration of the term. Mr. Sahai's employment agreement also provides that upon a transaction that consists of a final sale of the Company or a substantial sale of our equity or assets, the Company may, at our discretion, grant a transaction bonus to Mr. Sahai.

For Mr. Cox and Mr. Erickson severance consists of six months of continued base salary payments. For Mr. Das severance consists of three months of continued base salary payments.

Under Mr. Sahai's employment agreement, "cause" generally means: (i) material breach by Mr. Sahai of any term of the employment agreement, or the Company's policies, his fiduciary duties to the Company, Clearwater Analytics, LLC or any of their affiliates, or of any law, statute, or regulation, (ii) misconduct which is materially injurious to the Company, Clearwater Analytics, LLC or any of their affiliates, either monetarily or otherwise, or which impairs his ability to effectively perform his duties or responsibilities, (iii) personal conduct which materially impairs his ability to perform his duties or manage subordinate employees, including but not limited to the abuse of alcohol or controlled substances, sexual harassment and discrimination, (iv) habitual or repeated neglect of his duties or responsibilities, (v) failure to comply with any valid and legal directive of the Board of Directors, which failure has a material impact on the Company, (vi) appropriation of (or attempted appropriation of) a business opportunity of the Company, Clearwater Analytics, LLC, or their affiliates, including attempting to secure or securing any personal profit in connection with an transaction by the Company or its affiliates, (vii) commission or conviction for (or the procedural equivalent or conviction for), or entering of a guilty plea or plea of no contest with respect to any felony or a crime, which in the Company's reasonable judgment, involves moral turpitude, (viii) willful unauthorized disclosure (or attempted disclosure) of confidential information, (ix) intentional injury of another employee or any person in the course of performing services for the Company, or (x) any conflict of interest, including, but not limited to solicitation of business on behalf of a competitor or potential competitor or breach of any fiduciary duty to the Company, Clearwater Analytics, LLC or any of their affiliates. With respect to clauses (i) through (iii), if capable of cure, Mr. Sahai must be given a reasonable opportunity to comply with such policy or cure his failure or misconduct to the satisfaction of the Board of Directors within the reasonable time prescribed by the Board of Directors to cure such failure or misconduct as set forth in a written notice of such breach from Board of Directors.

Under Mr. Cox's, Mr. Erickson's and Mr. Das's employment agreements, "cause" generally means the named executive officer's: (i) material breach of any term of the employment agreement, or the Company's policies, his fiduciary duties to the Company, Clearwater Analytics, LLC or any of their affiliates, or of any law, statute or regulation, (ii) misconduct which is injurious to the Company, Clearwater Analytics, LLC or any of their affiliates, either monetarily or otherwise, or which impairs his ability to effectively perform his duties or responsibilities, (iii) personal conduct which reflects poorly on the Company, Clearwater Analytics, LLC or named executive officer, or which impairs his ability to perform his duties or manage subordinate employees, including but not limited to the abuse of alcohol or controlled substances, sexual harassment and discrimination, (iv) habitual or repeated neglect of his duties or responsibilities, (v) failure to comply with any valid and legal directive of the Company or the chief executive officer of the Company, (vi) appropriation of (or attempted appropriation of) a business opportunity of the Company, Clearwater Analytics, LLC or their affiliates, including attempting to secure or securing any personal profit in connection with any transaction by the Company or its affiliates, (vii) commission or conviction for (or the procedural equivalent or conviction for), or entering of a guilty plea or plea of no contest with respect to any felony or a crime, which in the Company's reasonable judgment, involve moral turpitude, (viii) willful unauthorized disclosure (or attempted disclosure) of confidential information, (ix) intentional injury of another employee or any person in the course of performing services for the Company or (x) any conflict of interest, including, but not limited to solicitation of business on behalf of a competitor or potential competitor or breach of any fiduciary duty to the Company, Clearwater Analytics, LLC or any of their affiliates. With respect to clauses (i) through (iii), if capable of cure, the named executive officer must be given a reasonable opportunity to comply with such policy or cure his failure or misconduct to the satisfaction of the Company within the reasonable time prescribed by the Company to cure such failure or misconduct as set forth in a written notice of such breach from the Company.

Under Mr. Sahai's employment agreement, "good reason" generally means the occurrence of any of the following: (i) a reduction, without Mr. Sahai's consent, of his base salary or target annual bonus opportunity, unless the reduction is generally applicable to substantially all senior executives of the Company, (ii) a relocation of Mr. Sahai's principal place of employment by more than 50 miles, (iii) material breach of the employment agreement by the Company or (iv) a substantial diminution in Mr. Sahai's authority or duties that is materially inconsistent with his position of Chief Executive Officer without his consent.

Under Mr. Cox's, Mr. Erickson's and Mr. Das's employment agreements, "good reason" generally means the occurrence of any of the following: (i) a material reduction, without the named executive officer's consent of his base salary or target annual bonus opportunity, unless the reduction is generally applicable to substantially all senior employees of the Company, (ii) a material breach of the employment agreement by the Company, or (iii) a substantial diminution in the named executive officer's authority or duties that is materially inconsistent with his position without his consent.

Each named executive officer is subject to non-competition during employment and for 12 months (18 months with respect to the non-solicitation and non-hire covenants for Mr. Erickson, Mr. Cox and Mr. Das) thereafter, as well as perpetual confidentiality, assignment of inventions covenants and mutual non-disparagement covenants.

Equity Awards

Each named executive officer's employment agreement provided that upon a Change in Control (as defined in the 2017 Equity Incentive Plan), the named executive officer's then unvested options will be eligible to performance-vest as follows: (i) if an affiliate of Welsh Carson's expected internal rate of return from the Change in Control transaction (including any rollover shares) is at least 20%, then 50% of the then unvested options will vest immediately prior to the Change in Control transaction; (ii) if an affiliate of Welsh Carson's expected internal rate of return is at least 28%, then 100% of the then unvested options will vest immediately prior to the Change in Control transaction; and (iii) if an affiliate of Welsh Carson's expected internal rate of return from the Change in Control transaction is between 20% and 28%, then unvested options will vest on a pro-rated basis immediately prior to the Change in Control.

In connection with the IPO, the board of CWAN Holdings, LLC amended the above-described option acceleration terms of the named executive officers (and other executive officers) to provide for accelerated vesting of any then unvested options outstanding at the time of the consummation of the IPO to the earlier of a Change in Control or the date that WCAS and its affiliates own less than 5% of the common stock of Clearwater.

In the event the equity awards issued following the consummation of the IPO that are held by our named executive officers are assumed or substituted in connection with a "change in control" (as defined in the 2021 Plan), such awards will not accelerate by reason of the change in control unless the named executive officer also experiences an involuntary termination as a result of the change in control. The awards held by a named executive officer who experiences an involuntary termination as a result of a change in control will immediately vest as of the date of such termination.

A named executive officer will be deemed to experience an involuntary termination as a result of a change in control if the named executive officer experiences a termination by the Company other than for " cause" (as defined in the 2021 Plan) or, if applicable, for "good reason" (as defined in the 2021 Plan), or otherwise experiences a termination under circumstances which entitle the named executive officer to mandatory severance payment(s) pursuant to applicable law, at any time beginning on the date of the change in control up to and including the second anniversary of the change in control.

TRA Bonus Agreements

As described in the section titled "Certain Relationships and Related Party Transactions—Tax Receivable Agreement," in connection with the IPO we have entered into a Tax Receivable Agreement with certain of the Continuing Equity Owners and the Blocker Shareholders. In addition, in connection with the IPO we entered into TRA Bonus Agreements substantially concurrently with or prior to the consummation of this offering, pursuant to which certain executive officers, including Messrs. Sahai, Cox and Erickson, will, subject to the terms and conditions of his or her TRA Bonus Agreement, be eligible to receive a cash bonus payment (the "TRA Bonus"). The Tax Receivable Agreement provides for the payment by us to certain of the Continuing Equity Owners and the Blocker Shareholders, collectively, of 85% (less payments under the TRA Bonus Agreements) of the amount of tax benefits, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of (i) Clearwater Analytics Holdings, Inc.'s allocable share of the Blocker Entities' share of existing tax basis acquired in connection with the Transactions and certain tax attributes of the Blocker Entities, such as net operating losses, to which Clearwater Analytics Holdings, Inc. will be the successor as a result of the Transactions, (ii) certain increases in the tax basis of assets of CWAN Holdings, LLC and its subsidiaries resulting from purchases or exchanges of LLC Interests, (iii) payments made under TRA Bonus Agreements and (iv) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to certain payments that we make under the Tax Receivable Agreement (collectively, the "Tax Attributes"). We expect to benefit from the remaining 15% (taking into account amounts paid pursuant to the TRA Bonus Agreements) of the tax benefits, if any, that we may actually realize. Pursuant to the terms of the TRA Bonus Agreements, when the Continuing Equity Owners and the Blocker Shareholders are paid pursuant to the Tax Receivable Agreement (including in the event of a change of control (as defined in the TRA Bonus Agreements)), the TRA Bonus recipients, including our named executive officers, will be eligible to receive an amount up to 4.6% in the aggregate of the payments that would have been made to certain of the Continuing Equity Owners and Blocker Shareholders under the Tax Receivable Agreement but for the amounts payable under the TRA Bonus Agreements (the "TRA Bonus Pool"), subject to each TRA Bonus recipient's continued employment through the applicable payment date. Upon a termination of employment of the TRA Bonus recipients, including our named executive officers (i) by the Company without cause, (ii) by the TRA Bonus recipient for good reason or (iii) due to the TRA Bonus recipient's death or disability (each as defined in the TRA Bonus Agreements) that occurs during the six month period prior to a change in control, the TRA Bonus recipient, including our named executive officers, will be eligible to receive his or her share of the TRA Bonus.

Director Compensation

Pursuant to guidelines adopted by the Board in September 2022 each of Jacques Aigrain, Kathleen A. Corbet, Lisa Jones and Jaswinder Singh, are eligible to receive an annualized cash retainer equal to $40,000 per calendar year for serving on the Board. In addition, Mr. Aigrain and Ms. Jones are eligible to receive an annualized cash retainer equal to $10,000 for serving on the Audit Committee and Ms. Corbet is eligible to receive an annualized cash retainer equal to $20,000 for serving as the chairperson of the Audit Committee.

Mr. Aigrain and Ms. Corbet each received in March 2022, 21,143 and 22,573 options, respectively, to purchase Class B Common Units, and Ms. Jones and Mr. Singh received in September 9,423 and 10,993 RSUs respectively.

In March 2021 Mr. Aigrain and Ms. Corbet each received 48,387 options to purchase Class B Common Units. In March 2021, our former director Mr. Ryu received an award of 279,033 options to purchase Class B Common Units. In March 2021 Mr. Aigrain, Ms. Corbet and Mr. Ryu invested in Class B Common Units having an investment value equal to $310,000, $250,000, and $1,000,000, respectively.

Pursuant to guidelines adopted in September 2022, each director not affiliated with a Principal Equity Owner will be eligible to receive an annual RSU grant equal to $200,000 divided by the 10 trading-day average closing share price leading up to the date of grant. Grants will be made annually on the date of the annual shareholder meeting and vest at the next annual general meeting. Consistent with such policy, in March 2023, upon the vesting of their options issued in March 2022, Mr. Aigrain and Ms. Corbet will receive RSU calculated as set forth above, pro-rated for the period from March 2023 to June 2023, when we expect to hold our Annual Shareholders' Meeting.

All of our directors will also continue to be reimbursed for their reasonable out-of-pocket expenses related to their Board service. Our former director, Mr. Ryu, ceased to serve as a member of our Board of Directors on June 2, 2022. Thereafter, Mr. Ryu began to serve as a senior advisor to our Company pursuant to an Advisory Services Agreement, dated April 16, 2022, by and between our Company and Mr. Ryu.

The following table presents the total compensation for each person who served as a member of our Board during Fiscal 2022.

Name	Fees Earned or Paid Cash ($)(1)	Option Awards ($)(2)(3)	Stock Awards ($)(3)(4)	Total ($)
Jacques Aigrain	50,000	169,476	—	219,476
Kathleen A. Corbet	60,000	171,120	—	231,120
Lisa Jones	13,995	—	148,601	162,596
Jaswinder Pal Singh	13,043	—	173,360	186,403
Marcus Ryu(5)	16,923	—	—	16,923
Eric Lee	—	—	—	—
Cary Davis	—	—	—	—
Anthony J. DeNicola	—	—	—	—
Christopher Hooper	—	—	—	—
Andrew Young	—	—	—	—
D. Scott Mackesy	—	—	—	—

(1) Amounts in this column reflect the cash compensation earned by directors in Fiscal 2022.
(2) Amounts reported in this column reflect the aggregate grant date fair value of option grants, computed in accordance with FASB ASC Topic 718, made to our directors in Fiscal 2022. Assumptions used in the calculation of these amounts are included in the notes to our financial statements included in this Annual Report.
(3) The aggregate number of options outstanding and aggregate number of stock awards outstanding held by our non-employee directors as of December 31, 2022, are set forth in the table below.
(4) Amounts reported in this column reflect the aggregate grant date fair value of restricted stock units, computed in accordance with FASB ASC Topic 718, made to our directors in Fiscal 2022.
(5) Effective as of June 2022, Mr. Ryu ceased to serve as a member of our Board of Directors and began serving as a senior advisor to our Company with respect to our go-to-market strategy in the insurance sector for a period of 18 months following the 2022 annual meeting of stockholders.

Name	Number of Option Awards Outstanding	Number of Stock Awards Outstanding
Jacques Aigrain	69,800	—
Kathleen A. Corbet	70,960	—
Lisa Jones	—	9,423
Jaswinder Pal Singh	—	10,993
Marcus Ryu	174,395	—

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The following table sets forth certain information regarding the beneficial ownership of our Class A common stock and Class D common stock as of February 17, 2023 with respect to:

- each person known by us to beneficially own 5% of any class of our outstanding shares;
- each member of our Board of Directors and each named executive officer; and
- the members of our Board of Directors and our executive officers as a group.

The percentage of beneficial ownership of shares of our Class A common stock, our Class B common stock, our Class C common stock and Class D common stock is based on 61,819,248 shares of Class A common stock, 130,083,755 shares of Class D common stock and 240,719,841 LLC Interests (together with the corresponding shares of Class B common stock or Class C common stock, as the case may be), in each case outstanding as of February 17, 2023. The shares of Class B common stock have no economic rights, but each share entitles the holder to one vote on all matters on which stockholders of the Company are entitled to vote generally. The shares of Class C common stock have no economic rights, but each share entitles the holder to ten votes on all matters on which stockholders of the Company are entitled to vote generally (dropping to one vote upon the automatic conversion of the shares of Class C common stock to Class B common stock upon the earlier of Welsh Carson owning less than 5% of the common stock or seven years from the IPO). The shares of Class D common stock have the same economic rights as shares of Class A common stock, but each share entitles the holder to ten votes on all matters on which stockholders of the Company are entitled to vote generally (dropping to one vote upon the automatic conversion of the shares of Class D common stock to Class A common stock upon the earlier of Welsh Carson owning less than 5% of the common stock or seven years from the IPO).

We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that each person or entity named in the table below has sole voting and investment power with respect to all shares of common stock that he, she or it beneficially owns, subject to applicable community property laws.

Except as otherwise noted below, the address of each beneficial owner listed in the table below is c/o Clearwater Analytics Holdings, Inc., 777 W. Main Street, Suite 900, Boise, Idaho 83702.

Named of Beneficial Owner	Class A of Common Stock Beneficially Owned(1)(2)	Class D of Common Stock Beneficially Owned(1)(3)	Combined Voting Power(4)
5% Stockholders			
Entities affiliated with Welsh Carson(5)	—	111,015,690	60.4%
Entities affiliated with Permira(6)	—	33,222,826	18.1%
Entities affiliated with Warburg Pincus(7)	—	33,222,826	18.1%
Entities affiliated with Durable(8)	8,826,623	—	*
Kayne Anderson Rudnick Investment Management LLC(9)	5,478,204	—	*
Wasatch Advisors, Inc.(10)	5,317,971	—	*
Alger Associates, Inc.(11)	4,582,822	—	*
JPMORGAN CHASE & CO.(12)	4,468,384	—	*
Conestoga Capital Advisors LLC(13)	3,638,570	—	*
Entities affiliated with Dragoneer(14)	3,333,174	—	*
BAMCO Inc.(15)	3,280,244	—	*
Named Executive Officers and Directors:			
Sandeep Sahai	92,226	—	*
Jim Cox	36,063	—	*
Souvik Das	—	—	*
Scott Erickson	21,424	—	*
Eric Lee	—	—	—
Jacques Aigrain	—	—	—
Kathleen A. Corbet	—	—	—
Cary Davis	—	—	—
Christopher Hooper	—	—	—
Andrew Young	—	—	—
Lisa Jones	—	—	—
D. Scott Mackesy	—	—	—
Jaswinder Pal Singh	—	—	—
All named executive officers and directors as a group (13 individuals)	149,713	—	*

* Represents less than 1.0% of outstanding shares or voting power, as applicable.

(1) Each holder of Class C common stock and Class D common stock is entitled to ten votes per share and each holder of Class A common stock and Class B common stock is entitled to one vote per share on all matters submitted to our stockholders for a vote. Our Class B common stock and Class C common stock do not have any of the economic rights (including rights to dividends and distributions upon liquidation) associated with our Class A common stock and Class D common stock.

(2) The numbers of shares of Class A common stock beneficially owned and percentages of beneficial ownership set forth in the table assume that all LLC Interests (together with the corresponding shares of Class B common stock) held by such Other Continuing Equity Owners have been exchanged for shares of Class A common stock.

(3) The numbers of shares of Class D common stock beneficially owned and percentages of beneficial ownership set forth in the table assume that all LLC Interests (together with the corresponding shares of Class C common stock) held by all Principal Equity Owners have been exchanged for shares of Class D common stock.

(4) Percentage of voting power represents voting power with respect to all shares of our Class A common stock, Class B common stock, Class C common stock and Class D common stock voting together as a single class (subject to class-specific weightings) and as calculated on a fully diluted basis.

(5) Includes 21,189,927 shares of Class C common stock held by WCAS XII Carbon Analytics Acquisition, L.P., 24,572,711 shares of Class C common stock held by WCAS XIII Carbon Analytics Acquisition, L.P., 1,614,949 shares of Class C common stock held by WCAS GP CW LLC, 15,098,470 shares of Class D common stock held by Welsh, Carson, Anderson & Stowe XII, L.P., 6,520,137 shares of Class D common stock held by Welsh, Carson, Anderson & Stowe XII Delaware, L.P., 946,180 shares of Class D common stock held by Welsh, Carson, Anderson & Stowe XII Delaware II, L.P., 6,557,817 shares of Class D common stock held by Welsh, Carson, Anderson & Stowe XII Cayman, L.P., 14,677,126 shares of Class D common stock held by WCAS XII Carbon Investors, L.P. and 19,838,373 shares of Class D common stock held by WCAS XIII Carbon Investors, L.P. The general partner of Welsh, Carson, Anderson & Stowe XII Delaware, L.P. and Welsh, Carson, Anderson & Stowe XII Cayman, L.P. is WCAS XII Associates Cayman, L.P. The general partner of WCAS XII Carbon Analytics Acquisition, L.P., Welsh, Carson, Anderson & Stowe XII, L.P., WCAS XII Associates Cayman, L.P. and Welsh, Carson, Anderson & Stowe XII Delaware II, L.P. is WCAS XII Associates LLC ("WCAS XII Associates"). The general partner of WCAS XIII Carbon Analytics Acquisition, L.P. and the managing member of WCAS GP CW LLC is WCAS XIII Associates LLC ("WCAS XIII Associates"). Investment and voting decisions with respect to the shares held by the WCAS Entities are made by a committee comprised of three or more individuals and all members of such committee disclaim beneficial ownership of the shares. The address of the foregoing persons is c/o Welsh, Carson, Anderson & Stowe, 599 Lexington Avenue, 18th Floor, New York, New York 10022. The foregoing information is based solely on a Schedule 13G filed by WCAS XII Carbon Analytics Acquisition, L.P. with the SEC on February 14, 2022.

(6) Includes 33,222,826 shares of Class D common stock held by Galibier Purchaser, LLC. Galibier Holdings, LP is the sole member of Galibier Purchaser, LLC. Galibier Holdings, LP is the sole member of Galibier Purchaser, LLC. Galibier Holdings GP, LLC, is the general partner of Galibier Holdings, LP. Galibier Holdings GP, LLC is the general partner of Galibier Holdings, LP. Gali SCSp is the sole member of Galibier Holdings GP, LLC. Permira VII GP S.a r.l. is the general Partner of Gali SCSp. The address for each of Galibier Purchaser, LLC; Galibier Holdings, LP; and Galibier Holdings GP, LLC is 320 Park Avenue, 28th Floor, New York, New York 10022, USA. The address for each of Gali SCSp and Permira VII GP S.a r.l. is 488, route de Longwy, Luxembourg. The foregoing information is based solely on a Schedule 13G filed by Permira VII GP S.a r.l. with the SEC on February 14, 2022.

(7) Includes 33,222,826 shares of Class D common stock held by WP CA Holdco, L.P. ("WP Holdco"). The general partner of WP Holdco is WP CA Holdco GP, LLC ("WP Holdco GP"). The managing members of WP Holdco GP are Warburg Pincus (Callisto) Global Growth (Cayman), L.P. ("WP Callisto") and Warburg Pincus Financial Sector (Cayman), L.P. ("WP FS" and together with WP Callisto, the "Holdco GP Managers"). Warburg Pincus LLC ("WP LLC") is the manager of the Holdco GP Managers. Warburg Pincus (Cayman) Global Growth GP, L.P. ("WP GG Cayman GP") is the general partner of WP Callisto. Warburg Pincus (Cayman) Financial Sector GP, L.P. ("WP FS Cayman GP") is the general partner of WP FS. Warburg Pincus (Cayman) Global Growth GP LLC ("WP GG Cayman GP LLC") is the general partner of WP GG Cayman GP. Warburg Pincus (Cayman) Financial Sector GP LLC ("WP FS Cayman GP LLC") is the general partner of WP FS Cayman GP. Warburg Pincus Partners II (Cayman), L.P. ("WPP II Cayman") is the managing member of each of WP GG Cayman GP LLC and WP FS Cayman GP LLC. Warburg Pincus Partners II Holdings (Cayman), L.P. ("WPP II Holdings Cayman") is a limited partner of WPP II Cayman. WPP II Administrative (Cayman), LLC ("WPP II Administrative") is the general partner of WPP II Holdings Cayman. Warburg Pincus (Bermuda) Private Equity GP Ltd. is the general partner of WPP II Cayman and the managing member of WPP II Administrative. Investment and voting decisions with respect to the issuer's shares held by WP Holdco are made by a committee comprised of three or more individuals and all members of such committee disclaim beneficial ownership of the Issuer's shares. The address of the foregoing persons is c/o Warburg Pincus LLC, 450 Lexington Avenue, New York, New York 10017. The foregoing information is based solely on a Schedule 13G filed by Warburg Pincus LLC with the SEC on February 14, 2022.

(8) Durable Capital Master Fund LP ("Durable Fund") directly holds 8,826,623 shares of Class A common stock. Durable Fund, as the investment adviser to Durable Capital Master Fund LP, has sole power to direct the vote and disposition of such shares. Durable Capital Partners GP LLC ("Durable GP") is the general partner of the Durable Fund, and Henry Ellenbogen is the chief investment officer of Durable Fund and the managing member of Durable GP. The address of the principal business office of the Durable Fund is 5425 Wisconsin Avenue, Suite 802, Chevy Chase, Maryland 20815. The foregoing information is based solely on a Schedule 13G filed by the Durable Fund with the SEC on February 10, 2023.

(9) Represents shares beneficially owned by Kayne Anderson Rudnick Investment Management LLC, 2000 Avenue of the Stars, Suite 1110, Los Angeles, CA 90067. The foregoing information is based solely on a Schedule 13G filed by Kayne Anderson Rudnick Investment Management LLC with the SEC on February 14, 2023.

(10) Represents shares beneficially owned by Wasatch Advisors, Inc., 505 Wakara Way, Salt Lake City, UT 84108. The foregoing information is based solely on a Schedule 13G filed by Wasatch Advisors, Inc. with the SEC on February 10, 2023.

(11) Represents shares beneficially owned by Alger Associates, Inc., 100 Pearl Street, 27th Floor, New York, NY 10004. The foregoing information is based solely on a Schedule 13G filed by Wasatch Advisors, Inc. with the SEC on February 14, 2023.

(12) Represents shares beneficially owned by JPMORGAN CHASE & CO., 383 Madison Avenue, New York, NY 10179. The foregoing information is based solely on a Schedule 13G filed by Wasatch Advisors, Inc. with the SEC on January 9, 2023.

(13) Represents shares beneficially owned by Conestoga Capital Advisors LLC, 550 E. Swedesford Rd. Ste 120, Wayne, PA 19087. The foregoing information is based solely on a Schedule 13G filed by Wasatch Advisors, Inc. with the SEC on January 18, 2023.

(14) Calculated DF Holdings, L.P., a Delaware limited partnership, is the direct holder of 3,333,174 shares of Class A common stock, which excludes 1,220,833 shares of Class A common stock of the issuer issuable upon exchange of 1,220,833 Class A LLC Units of CWAN Holdings, LLC, together with an equivalent number of voting, Class B common stock, par value $0.001 of the issuer. Dragoneer Investment Group, LLC (the "Dragoneer Adviser") is a registered investment adviser under the Investment Advisers Act of 1940, as amended. As the managing member of Dragoneer Adviser, Cardinal DIG CC, LLC may also be deemed to share voting and dispositive power with respect to the common stock. As general partner of Calculated DF Holdings, L.P., Dragoneer CF GP, LLC, a Cayman limited liability company, may also be deemed to beneficially own the shares of Class A common stock. Marc Stad is the sole member of Cardinal DIG CC, LLC and Dragoneer CF GP, LLC. The address for the foregoing persons is One Letterman Drive, Building D, Suite M500, San Francisco, California 94129. The foregoing information is based solely on a Schedule 13G filed by Marc Stad with the SEC on February 14, 2023.

(15) Represents shares beneficially owned by Baron Capital Group, Inc., BAMCO, Inc., Baron Capital Management, Inc. and Ronald Baron. The address for the foregoing persons is 767 Fifth Avenue, 49th Floor, New York, NY 10153. The foregoing information is based solely on a Schedule 13G filed by BAMCO, Inc. with the SEC on February 14, 2023.

Equity compensation plans information as of December 31, 2022 follows:

	Number of securities to be issued upon exercise of outstanding options, warrants and rights	**Weighted-average exercise price of outstanding options, warrants and rights[3]**	**Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))**
	(a)	(b)	(c)
Equity compensation plans approved by security holders[1]:			
2021 Omnibus Incentive Plan	27,282,118[2]	$ 8.47	25,961,402[4]
2021 Employee Stock Purchase Plan	—	N/A	3,123,260[5]
Total	27,282,118		29,084,662

(1) We have two equity compensation plans that have been approved by our stockholders: the 2021 Omnibus Incentive Plan and the 2021 Employee Stock Purchase Plan (the "ESPP").

(2) Consists of 17,754,770 shares of Class A common stock issuable upon the exercise of stock options, and 9,527,348 shares of our Class A common stock issuable upon the settlement of RSUs.

(3) The weighted average exercise price relates only to stock options.

(4) Consists of shares of our Class A common stock available for future stock-based awards under our 2021 Omnibus Incentive Plan which may include the grant of stock options, stock appreciation rights, restricted stock, restricted stock units ("RSUs"), bonus stock, dividend equivalents, other stock-based awards, substitute awards, annual incentive awards and performance awards. The number of shares remaining available will be increased on the first day of each fiscal year during the term of the 2021 Plan commencing with the 2022 fiscal year by 5% of the total number of shares of common stock outstanding on the last day of the immediately preceding fiscal year or a lessor amount determined by the Board.

(5) The number of shares remaining available under the 2021 ESPP increased on the first day of each calendar year beginning in the 2022 fiscal year and ending in and including the 2031 fiscal year, by an amount equal to the lessor of (i) 1.0% of the shares outstanding on the final day of the immediately preceding calendar year and (ii) such smaller number of shares as identified by our Board.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The following is a summary of transactions to which we are a party in which the amount involved exceeded or exceeds $120,000 and in which any of our directors, executive officers, holders of more than 5% of any class of our voting securities or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than compensation arrangements with directors and executive officers, which are described under "Executive Compensation."

Review, Approval or Ratification of Transactions with Related Persons

The Audit Committee has primary responsibility for reviewing and approving transactions with related parties. Our Audit Committee charter provides that the Audit Committee shall review and approve in advance any related party transactions.

Our Related Parties policy entered into at the time of the IPO provides that our executive officers, directors, nominees for election as directors, beneficial owners of more than 5% of any class of our voting stock, any member of the immediate family of any of the foregoing persons, and any firm, corporation or other entity in which any of the foregoing persons is employed, is a general partner or principal or in a similar position, or in which such person has a 5% or greater beneficial ownership interest, is not permitted to enter into a related party transaction with us without the consent of our Audit Committee, subject to the exceptions described below. In approving or rejecting any such proposal, our Audit Committee is to consider the relevant facts and circumstances available and deemed relevant to our Audit Committee, including whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related party's interest in the transaction. Our Audit Committee has determined that certain transactions will not require Audit Committee approval, including certain employment arrangements of executive officers, director compensation, transactions with another company at which a related party's only relationship is as a non-executive employee or beneficial owner of less than 5% of that company's shares, transactions where a related party's interest arises solely from the ownership of our common stock (on an as-adjusted basis) and all holders of our common stock (on an as-exchanged basis) received the same benefit on a pro rata basis, and transactions available to all employees generally.

Services Agreements with Entities Affiliated with the Principal Equity Owners

We have received professional, consulting and advisory services from WCAS XIII Carbon Analytics Acquisition, L.P. and WCAS Management Corporation, each of which are affiliates of Welsh Carson, and from Warburg Pincus LLC, and from Permira. In the years ended December 31, 2022 and 2021, CWAN Holdings recognized management fees to such affiliates of Welsh Carson, Warburg Pincus LLC, and Permira of approximately \$2.5 million and \$2.4 million, respectively. During January 2021, CWAN Holdings made payments in relation to management fees of \$6 million to Welsh Carson and \$1.8 million to each of Warburg Pincus and Permira. These prepaid management fees relate to the four-year period subsequent to the completion of the Recapitalization in November 2020 and are being amortized and recognized as expense over four years. The services agreements pursuant to which such fees have been paid terminated in accordance with their terms upon consummation of our IPO, and no such services will be provided afterward.

LLC Agreement

In connection with the Transactions, Clearwater Analytics Holdings, Inc. and the Continuing Equity Owners entered into the LLC Agreement.

As a result of the Transactions, including the entry into the LLC Agreement, we hold LLC Interests in CWAN Holdings and are the sole managing member of CWAN Holdings. Accordingly, we operate and control all of the business and affairs of CWAN Holdings and, through CWAN Holdings and its direct and indirect subsidiaries, conduct our business.

As the sole managing member of CWAN Holdings, Clearwater Analytics Holdings, Inc. has the right to determine when distributions will be made to the holders of LLC Interests and the amount of any such distributions (subject to the requirements with respect to the tax distributions described below). If Clearwater Analytics Holdings, Inc. authorizes a distribution, such distribution will be made to the holders of LLC Interests, including Clearwater Analytics Holdings, Inc., pro rata in accordance with their respective ownership of CWAN Holdings.

Upon the consummation of the Transactions, Clearwater Analytics Holdings, Inc. became a holding company and its principal asset is a controlling equity interest in CWAN Holdings. As such, Clearwater Analytics Holdings, Inc. has no independent means of generating revenue. CWAN Holdings is treated as a partnership for U.S. federal income tax purposes and, as such, is generally not be subject to U.S. federal income tax. Instead, taxable income is allocated to holders of LLC Interests, including Clearwater Analytics Holdings, Inc. Accordingly, Clearwater Analytics Holdings, Inc. incurs income taxes on its allocable share of any net taxable income of CWAN Holdings and also may incur expenses related to its operations. The LLC Agreement requires "tax distributions," as that term is defined in the LLC Agreement, to be made by CWAN Holdings to its "members," as that term is defined in the LLC Agreement, unless certain exceptions apply. Tax distributions generally are made quarterly to each member of CWAN Holdings including us, on a pro rata basis among the holders of LLC Interests based on CWAN Holdings' net taxable income and without regard to any applicable basis adjustment under Section 743(b) of the Code, which means that the amount of tax distributions are determined based on the holder of LLC Interests who is allocated the largest amount of taxable income on a per LLC Interest basis and at a tax rate that is determined by us, but is made pro rata based on ownership of LLC Interests. Thus, CWAN Holdings will be required to make tax distributions that, in the aggregate, will likely exceed the amount of taxes that it would have paid if it were taxed on its net income at the tax rate applicable to a similarly situated corporate taxpayer. The tax rate used to determine tax distributions applies regardless of the actual final tax liability of any such member. Tax distributions are also made only to the extent all distributions from CWAN Holdings for the relevant period were otherwise insufficient to enable each member to cover its tax liabilities as calculated in the manner described above. Clearwater Analytics Holdings, Inc. causes CWAN Holdings to make distributions or, in the case of certain expenses, payments in an amount sufficient to allow Clearwater Analytics Holdings, Inc. to pay its taxes and operating expenses, including distributions to fund any ordinary course payments due under the Tax Receivable Agreement described below.

The LLC Agreement generally does not permit transfers of LLC Interests by Continuing Equity Owners, except for transfers to Permitted Transferees, transfers pursuant to the redemption right described below and transfers approved in writing by us, as sole managing manager, and other limited exceptions. Permitted Transferees include (a) with respect to any Principal Equity Owner, any of such Principal Equity Owner's affiliates and (b) with respect to any Other Continuing Equity Owners, any such Other Continuing Equity Owner's affiliates or, in the case of individuals, members of their immediate family. In the event of a permitted transfer, such Continuing Equity Owner will be required to simultaneously transfer shares of Class B common stock or Class C common stock (as the case may be) to such transferee equal to the number of LLC Interests that were transferred. The LLC Agreement also provides that, as a general matter, a Continuing Equity Owner will not have the right to transfer LLC Interests if Clearwater Analytics Holdings, Inc. determines that such transfer would be prohibited by law or regulation, would violate other agreements with Clearwater Analytics Holdings, Inc. to which such Principal Equity Owner or Continuing Equity Owner, as applicable, may be subject or would cause or increase the possibility for CWAN Holdings to be treated as a "publicly traded partnership" taxable as a corporation for U.S. federal income tax purposes, as further described in the LLC Agreement.

The LLC Agreement allows holders of LLC Interests to exchange their LLC interests for shares of Class A common stock or, if applicable, shares of Class D common stock, on a one-for-one basis or, at our election, for an amount of cash equal to the fair market value of such shares, as calculated in accordance with the LLC Agreement though we may settle any such exchange in cash only to the extent that we have cash available at least equal to the cash price that was received pursuant to a contemporaneous public offering or private sale.

The Continuing Equity Owners may from time to time (subject to the terms of the LLC Agreement) exercise a right to require redemption of LLC Interests in exchange for cash or, at our election, shares of our Class A or Class D common stock (as the case may be) on a one-for-one basis. We may alternatively acquire such LLC Interests for cash in connection with any exercise of such right. We intend to treat such acquisitions of LLC Interests as direct purchases of LLC Interests from the Continuing Equity Owners for U.S. federal income and other applicable tax purposes. CWAN Holdings (and each of its subsidiaries classified as a partnership for U.S. federal income tax purposes) intends to have in place an election under Section 754 of the Code effective for each taxable year in which an exchange of LLC Interests for Class A common stock or Class D common stock (as the case may be) or cash occurs. As a result, an exchange of LLC Interests is expected to result in (1) an increase in our proportionate share of the existing tax basis of the assets of CWAN Holdings and its flow- through subsidiaries and (2) an adjustment in the tax basis of the assets of CWAN Holdings and its flow- through subsidiaries reflected in that proportionate share ("Basis Adjustments").

Any increases in our share of the tax basis of the assets of CWAN Holdings and its flow-through subsidiaries as a result of the purchase of LLC Interests or LLC Interest exchanges will generally have the effect of reducing the amounts that we would otherwise be obligated to pay thereafter to various tax authorities. Such basis increases may also decrease gains (or increase losses) on future dispositions of certain assets to the extent tax basis is allocated to those assets.

Each Continuing Equity Owner's exchange and redemption rights are subject to certain customary limitations, including the expiration of any contractual lock-up period relating to the shares of our Class A common stock and Class D common stock (as the case may be) that may be applicable to such Continuing Equity Owner (including a lock-up period of not more than 180 days in connection with any registration of our equity securities) and the absence of any liens or encumbrances on such LLC Interests redeemed. In addition, Continuing Equity Owners cannot exercise exchange or redemption rights during applicable blackout periods if the Company or CWAN Holdings reasonably determines in good faith that the exchange or redemption would be prohibited by law or regulation or would not be permitted under the Company's written policies, including its insider trading policy. We may impose additional restrictions on exchanges or redemptions that we determine to be necessary or advisable so that CWAN Holdings does not risk being treated as a "publicly traded partnership" for U.S. federal income tax purposes.

As a holder exchanges LLC Interests and Class B common stock or Class C common stock for shares of Class A common stock or Class D common stock, respectively, or a redemption transaction is effected, the number of LLC Interests held by Clearwater Analytics Holdings, Inc. is correspondingly increased as it acquires the exchanged LLC Interests or funds the redemption transaction, and a corresponding number of shares of Class B common stock or Class C common stock are canceled.

The LLC Agreement also requires that CWAN Holdings take actions with respect to its LLC Interests, including issuances, reclassifications, distributions, divisions, or recapitalizations, such that (i) we at all times maintain a ratio of one LLC Interest owned by us, directly or indirectly, for each share of Class A common stock or Class D common stock issued by us, and (ii) CWAN Holdings at all times maintains (a) a one-to-one ratio between the number of shares of Class A common stock or Class D common stock issued by us and the number of LLC Interests owned by us and (b) a one-to-one ratio between the number of shares of Class B common stock and/or Class C common stock owned by the Continuing Equity Owners and the number of LLC Interests owned by the Continuing Equity Owners. As such, in certain circumstances we, as sole managing member, have the authority to take all actions such that, after giving effect to all issuances, transfers, deliveries, or repurchases, the number of outstanding LLC Interests we own equals, on a one-to-one basis, the number of outstanding shares of Class A common stock and Class D common stock.

This summary does not purport to be complete and is qualified in its entirety by the provisions of our form of LLC Agreement, a copy of which is filed as Exhibit 10.6 to this Annual Report on Form 10-K.

Tax Receivable Agreement

We have entered into a Tax Receivable Agreement with the Continuing Equity Owners and the Blocker Shareholders. The Tax Receivable Agreement provides for the payment by us to the Continuing Equity Owners and the Blocker Shareholders, collectively, of 85% (less amounts paid pursuant to the TRA Bonus Agreements) of the amount of tax benefits, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of the Tax Attributes. The payment obligations under the Tax Receivable Agreement are not conditioned upon any Continuing Equity Owner or Blocker Shareholder maintaining a continued ownership interest in us or CWAN Holdings and the rights of the Continuing Equity Owners and the Blocker Shareholders under the Tax Receivable Agreement are assignable. We expect to benefit from the remaining 15% of the tax benefits, if any, that we may actually realize. For a description of the terms of the TRA Bonus Agreements, see Item 11 "Executive and Director Compensation—TRA Bonus Agreements."

For purposes of the Tax Receivable Agreement, the tax benefit deemed realized by us will generally be computed by comparing our actual cash income tax liability to the amount of such taxes that we would have been required to pay had there been no Tax Attributes; provided that, for purposes of determining the tax benefit with respect to state and local income taxes, we will use simplifying assumptions. The Tax Receivable Agreement will generally apply to each of our taxable years, beginning with the taxable year that the Tax Receivable Agreement is entered into. There is no maximum term for the Tax Receivable Agreement and the Tax Receivable Agreement will continue until all such tax benefits have been utilized or expired unless we exercise our right to terminate the Tax Receivable Agreement for an agreed-upon amount equal to the estimated present value of the remaining payments to be made under the agreement (calculated with certain assumptions, including as to utilization of the Tax Attributes).

The actual Tax Attributes, as well as any amounts paid to the Continuing Equity Owners and the Blocker Shareholders under the Tax Receivable Agreement, will vary depending on a number of factors, including:

- *the timing of any future exchanges*—for instance, the increase in any tax deductions will vary depending on the fair value of the depreciable or amortizable assets of CWAN Holdings and its flow-through subsidiaries at the time of each exchange;
- *the price of shares of our Class A common stock at the time of any future exchanges*—the Basis Adjustments (as defined therein) are directly related to the price of shares of our Class A common stock at the time of future exchanges;
- *the extent to which such exchanges are taxable*—if an exchange is not taxable for any reason, increased tax deductions as a result of the Section 754 election mentioned above will not be available to generate payments under the Tax Receivable Agreement;

- *the amount, timing and deductibility of payments under TRA Bonus Agreements*—under current law, payments under the TRA Bonus Agreements generally would be expected to give rise to compensatory tax deductions unless certain statutory limitations apply. Because these deductions constitute Tax Attributes, the amounts, timing and deductibility of such payments is not known;
- *the amount and timing of our income*—the Tax Receivable Agreement generally will require us to pay 85% of the tax benefits from the Tax Attributes as and when those benefits are treated as realized by us under the terms of the Tax Receivable Agreement. If we do not have taxable income in a particular taxable year, we generally will not be required (absent a change of control or other circumstances requiring an early termination payment) to make payments under the Tax Receivable Agreement for that taxable year because no tax benefits will have been actually realized. Nevertheless, any tax benefits with respect to the Tax Attributes that do not result in realized tax benefits in a given taxable year will likely generate tax attributes that may be utilized to generate tax benefits in future (and possibly previous) taxable years. The utilization of any such tax attributes will result in payments under the Tax Receivable Agreement; and
- *applicable tax rates*—the tax rates in effect at the time a tax benefit is recognized.

The payment obligations under the Tax Receivable Agreement and the TRA Bonus Agreements are obligations of Clearwater Analytics Holdings, Inc. and not of CWAN Holdings. Any payments made by us under the Tax Receivable Agreement or the TRA Bonus Agreements will generally reduce the amount of overall cash flow that might have otherwise been available to us or to CWAN Holdings, and to the extent that we are unable to make payments under the Tax Receivable Agreement or the TRA Bonus Agreements for any reason, the unpaid amounts will be deferred and will accrue interest until paid by us. We anticipate funding ordinary course payments under the Tax Receivable Agreement and the TRA Bonus Agreements from cash flow from operations of CWAN Holdings and its subsidiaries, borrowings under our credit facilities and/or available cash.

We expect that the payments we will be required to make under the Tax Receivable Agreement will be substantial. Assuming no material changes in relevant tax law and that we earn sufficient taxable income to realize all tax benefits that are subject to the Tax Receivable Agreement, we expect that the tax savings associated with the Transactions or exchanges of LLC Interests as described above would aggregate to approximately $735 million. Under this scenario, we would be required to pay the other parties to the Tax Receivable Agreement and under the TRA Bonus Agreements approximately 85% of such amount, or $625 million, after giving effect to recent Idaho tax legislation. The actual amounts we will be required to pay may materially differ from these hypothetical amounts, because potential future tax savings that we will be deemed to realize, and the Tax Receivable Agreement payments and the TRA Bonus Agreement payments made by us, will be calculated based in part on the market value of our common stock at the time of each redemption or exchange of an LLC Interest for cash or a share of common stock and the prevailing applicable federal tax rate (plus the assumed combined state and local tax rate) applicable to us over the life of the Tax Receivable Agreement and will depend on our generating sufficient taxable income to realize the tax benefits that are subject to the Tax Receivable Agreement.

The Tax Receivable Agreement provides that if (1) certain mergers, asset sales, other forms of business combination, or other changes of control were to occur; (2) we materially breach any of our material obligations under the Tax Receivable Agreement; or (3) at any time, we elect an early termination of the Tax Receivable Agreement, then the Tax Receivable Agreement will terminate, and our obligations, or our successor's obligations, to make payments under the Tax Receivable Agreement and the TRA Bonus Agreements will accelerate and become due and payable, based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax Receivable Agreement and, to the extent applicable, that any LLC Interests that have not been exchanged are deemed exchanged for the fair market value of our Class A common stock at the time of termination.

As a result of a change in control, material breach or our election to terminate the Tax Receivable Agreement early, (1) we could be required to make cash payments to the Continuing Equity Owners, the Blocker Shareholders and certain executive officers that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement and the TRA Bonus Agreements and (2) we would be required to make an immediate cash payment equal to the anticipated future tax benefits that are the subject of the Tax Receivable Agreement discounted in accordance with the Tax Receivable Agreement, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the Tax Receivable Agreement and the TRA Bonus Agreements could have a substantial negative impact on our liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, other forms of business combination, or other changes of control. We may not be able to finance our obligations under the Tax Receivable Agreement and the TRA Bonus Agreements.

Payments under the Tax Receivable Agreement and the TRA Bonus Agreements will be based on the tax reporting positions that we determine, which tax reporting positions will be based on the advice of our tax advisors. Although we are not aware of any issue that would cause the IRS to challenge a tax basis increase or the use of the Tax Attributes, we will not be reimbursed for any cash payments previously made to certain of our Continuing Equity Owners and Blocker Shareholders pursuant to the Tax Receivable Agreement if any tax benefits initially claimed by us are subsequently disallowed, in whole or in part, by the IRS or other applicable taxing authority. For example, if the IRS later asserts that we did not obtain a tax basis increase, among other potential challenges, then we would not be reimbursed for any cash payments previously made to certain of our Continuing Equity Owners and Blocker Shareholders pursuant to the Tax Receivable Agreement with respect to such tax benefits that we had initially claimed. Instead, any excess cash payments made by us pursuant to the Tax Receivable Agreement will be netted against any future cash payments that we might otherwise be required to make under the terms of the Tax Receivable Agreement. Nevertheless, any tax benefits initially claimed by us with respect to the Tax Attributes may not be disallowed for a number of years following the initial time of such payment or, even if challenged early, such excess cash payment may be greater than the amount of future cash payments that we might otherwise be required to make under the terms of the Tax Receivable Agreement. Accordingly, there may not be sufficient future cash payments against which to net. The applicable U.S. federal income tax rules are complex, and the IRS or a court may disagree with our tax reporting positions. As a result, it is possible that we could make cash payments under the Tax Receivable Agreement with respect to the Tax Attributes that are substantially greater than our actual cash tax savings therefrom.

Under the Tax Receivable Agreement, we are required to provide to certain Continuing Equity Owners a schedule setting forth the calculation of payments that are due under the Tax Receivable Agreement and the TRA Bonus Agreements with respect to each taxable year in which a payment obligation arises within 120 days after filing our U.S. federal income tax return for such taxable year. This calculation will be based upon the advice of our tax advisors. Payments under the Tax Receivable Agreement will generally be made within five business days after this schedule becomes final pursuant to the procedures set forth in the Tax Receivable Agreement, although interest on such payments will begin to accrue at a rate of the lesser of (i) LIBOR plus 100 basis points and (ii) 6.5% (the "Agreed Rate") from the due date (without extensions) of such tax return. Any late payments that may be made under the Tax Receivable Agreement will continue to accrue interest at the Agreed Rate until such payments are made, generally including any late payments that we may subsequently make because we did not have enough available cash to satisfy our payment obligations at the time at which they originally arose.

This summary does not purport to be complete and is qualified in its entirety by the provisions of our form of Tax Receivable Agreement, a copy of which is filed as Exhibit 10.5 to this Annual Report on Form 10-K.

Registration Rights Agreement

In connection with our IPO, we entered into a second amended and restated registration rights agreement, or the "Registration Rights Agreement," with certain of the Continuing Equity Owners, including certain members of our management. Subject to certain conditions, the Registration Rights Agreement provides certain of the Continuing Equity Owners with "long-form" demand registrations and "short-form" demand registration rights, as well as shelf registration rights. The Registration Rights Agreement also provides certain of the Continuing Equity Owners with customary "piggyback" registration rights. The Registration Rights Agreement contains provisions that require the parties thereto to coordinate with one another with respect to sales of our common stock and contains certain limitations on the ability of certain of the Continuing Equity Owners and certain members of our management party to the Registration Rights Agreement to offer, sell or otherwise dispose of shares of our common stock. The Registration Rights Agreement provides that we will pay certain expenses of these holders relating to such registrations and indemnify them against certain liabilities which may arise under the Securities Act. This summary does not purport to be complete and is qualified in its entirety by the provisions of our form of Registration Rights Agreement, a copy of which is filed as Exhibit 10.3 to this Annual Report on Form 10-K.

Stockholders' Agreement

In connection with the IPO, we entered into the Stockholders' Agreement with the Principal Equity Owners (and their respective permitted transferees thereunder party thereto from time to time). Pursuant to the Stockholders' Agreement, for so long as the Company is a "controlled company" under the NYSE standards, the Board of Directors will be comprised of no more than ten directors, and (i) Welsh Carson will have the right to designate five nominees for election to our Board of Directors, of which one must be an "independent director," as defined under the rules of NYSE and qualify as an independent director for purposes of Rule 10A-3 under the Exchange Act and NYSE rules requiring us to have one independent Audit Committee member upon the listing of our Class A common stock (an "Audit Committee Independent Director"), (ii) Permira will have the right to designate one nominee so long it owns at least 33.3% of the shares of our common stock that it holds immediately following the consummation of this offering (the "Closing Shares"), (iii) Warburg Pincus will have the right to designate one nominee so long as it owns at least 33.3% of its Closing Shares, (iv) Permira and Warburg Pincus will each have the right to designate (by mutual agreement for so long as both have such right and if only one of Warburg Pincus or Permira have such right, the one that has such right) one nominee who would qualify as an Audit Committee Independent Director so long as each owns at least 50% of its Closing Shares, (v) Welsh Carson, Permira and Warburg Pincus will each have the right to designate (by mutual agreement so long as more than one shareholder has such right and if only one of Welsh Carson, Warburg Pincus or Permira have such right, the one that has such right) one nominee who would qualify as an Audit Committee Independent Director so long as, in the case of Permira and Warburg Pincus, it owns at least 33.3% of its Closing Shares and (vi) the Chief Executive Officer of the Company must be nominated as a director. The Principal Equity Owners continue to control a majority of our voting power and, as a result, we are a "controlled company" within the meaning of the NYSE corporate governance standards. After giving effect to the multi-class common stock structure in which each share of our Class C common stock and each share of our Class D common stock entitles its holder to ten votes per share on all matters presented to our stockholders generally, we expect that we will remain a "controlled company" for so long as the Principal Equity Owners hold at least approximately 9.1% of the issued and outstanding shares of our common stock.

For so long as the Company is not a "controlled company" under the NYSE standards, pursuant to the Stockholders' Agreement, the Board of Directors would be comprised of no more than eleven directors, and (i) Welsh Carson will have the right to designate two nominees so long as it owns at least 5% of the outstanding shares of our common stock, (ii) Permira will have the right to designate one nominee so long as it owns at least the greater of 33.3% of its Closing Shares and 5% of the outstanding shares of our common stock, (iii) Warburg Pincus will have the right to designate one nominee so long as it owns at least the greater of 33.3% of its Closing Shares and 5% of the outstanding shares of our common stock and (iv) the Chief Executive Officer of the Company must be nominated as a director.

The Stockholders' Agreement also provides that (i) so long as Permira beneficially owns at least 50% of its Closing Shares and is otherwise entitled to designate at least one nominee under the Stockholders' Agreement, one Permira director nominee will be entitled to be on all committees and Permira will be entitled to appoint up to two non-voting observers at Board meetings; (ii) so long as Warburg Pincus beneficially owns at least 50% of its Closing Shares and is otherwise entitled to designate at least one nominee under the Stockholders' Agreement, one Warburg Pincus director nominee will be entitled to be on all committees and Warburg Pincus will be entitled to appoint up to two non-voting observers at Board meetings; and (iii) the Welsh Carson director nominees will be entitled to be on all committees and, so long as Welsh Carson is otherwise entitled to designate at least one nominee under the Stockholders' Agreement, Welsh Carson will be entitled to appoint up to two non-voting observers at Board meetings. The committee designation rights are subject to exceptions with respect to any such committee whose function relates solely to arrangements with the relevant Principal Equity Owner and to the extent that such membership would violate applicable securities laws or the NYSE standards.

The Principal Equity Owners have each additionally agreed to take all necessary action, including voting their respective shares of common stock, to cause the election of the directors nominated pursuant to the Stockholders' Agreement, and will each be entitled to propose the replacement of any of its board nominees whose board service ceases for any reason regardless of each Principal Equity Owner's beneficial ownership of our common stock at the time of such vacancy. No board member designated in connection with the Stockholders' Agreement will be required to immediately tender his or her resignation upon the loss of rights by any Principal Equity Owner responsible for his or her designation, and each such director may continue to serve until the end of his or her then current term. The board member designation rights pursuant to the Stockholders' Agreement will have the effect of making it more difficult for stockholders to change the composition of our Board of Directors.

Under the Stockholders' Agreement, prior to the Trigger Event, directors nominated by a Principal Equity Owner and serving as a director shall not be removed by the other Principal Equity Owners without cause.

Under the Stockholders' Agreement, we have agreed, subject to certain exceptions, to indemnify the Principal Equity Owners, and various affiliated persons and indirect equityholders of the Principal Equity Owners from certain losses arising out of any threatened or actual litigation by reason of the fact that the indemnified person is or was a holder of our common stock or, prior to the completion of the Transactions, of equity interests in CWAN Holdings.

This summary does not purport to be complete and is qualified in its entirety by the provisions of our form of Stockholders' Agreement, a copy of which is filed as Exhibit 10.4 to this Annual Report on Form 10-K.

Limitation of Liability and Indemnification of Officers and Directors

Our certificate of incorporation and bylaws provide that we shall indemnify each of our directors and officers to the fullest extent permitted by the DGCL. We have also entered into customary indemnification agreements with each of our executive officers and directors that provide them with customary indemnification in connection with their service to us or on our behalf.

Item 14. Principal Accounting Fees and Services.

Pre-Approval Policy for Services of Independent Registered Public Accounting Firm

Consistent with SEC requirements regarding auditor independence and the Audit Committee's charter, the Audit Committee has responsibility for engaging, setting compensation for and reviewing the performance of KPMG LLP. In exercising this responsibility, the Audit Committee has established procedures relating to the approval of all audit and non-audit services that are to be performed by KPMG LLP and, since our IPO, all audit and permitted services provided by KPMG LLP prior to each engagement. The Audit Committee has determined that the fees paid to KPMG LLP for services are compatible with maintaining KPMG LLP's independence as our auditors.

Fees and Services

The following table summarizes the aggregate fees for professional audit services and other services rendered by KPMG LLP for the years ended December 31, 2022 and 2021:

	Year Ended December 31,	
	2022	**2021**
Audit fees(1)	$ 1,150,000	$ 2,341,000
Audit-related fees(2)	422,500	—
Tax fees(3)	815,273	530,979
All other fees	—	—
Total	$ 2,387,773	$ 2,871,979

(1) Audit fees in 2022 include fees for our annual audit and quarterly review procedures including fees in connection with the acquisition of JUMP. Audit fees in 2021 include fees for our annual audit, quarterly review procedures, and other fees in connection with our IPO.
(2) Audit-related fees include fees for financial statement and tax due diligence in connection with the acquisition of JUMP.
(3) Tax fees include the nature of the services provided by the independent auditor, the Audit Committee determined that such services are compatible with the provision of independent audit services.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as a part of this Annual Report on Form 10-K:

(1) *All Financial Statements*: Our Financial Statements are listed in the "Index to Consolidated Financial Statements" under Part II, Item 8 of this Annual Report on Form 10-K.

(2) *Financial Statement Schedules*: All other schedules have been omitted as the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the Consolidated Financial Statements and notes thereto.

(3) *Exhibits*: Except as otherwise noted below, the exhibits listed below in the accompanying "Index to Exhibits" are filed or incorporated by reference as part of this Annual Report on Form 10-K.

INDEX TO EXHIBITS

Exhibits filed or furnished herewith are designated by an asterisk (*); all exhibits not so designated are incorporated by reference to a prior filing as indicated.

Exhibit Number	Description	Report or Registration Statement	SEC File or Registration Number	Exhibit Reference
3.1	Amended and Restated Certificate of Incorporation of Clearwater Analytics Holdings, Inc., dated September 27, 2021	8-K filed September 28, 2021	001-40838	3.1
3.2	Amended and Restated Bylaws of Clearwater Analytics Holdings, Inc., dated September 27, 2021	8-K filed September 28, 2021	001-40838	3.2
4.1*	Description of Clearwater Analytics Holdings, Inc.'s securities registered pursuant to Section 12 of the Securities Exchange Act of 1934			4.1
10.1#*	Advisory Services Agreement between Clearwater Analytics Holdings, Inc. and Joseph Kochansky, dated November 29, 2022			10.1
10.2	Registration Rights Agreement, dated September 28, 2021, by and among Clearwater Analytics Holdings, Inc. and certain holders identified therein	8-K filed September 28, 2021	001-40838	10.1
10.3	Stockholders Agreement, dated as of September 28, 2021, by and among Clearwater Analytics Holdings, Inc. and the Principal Equity Owners	8-K filed September 28, 2021	001-40838	10.2
10.4	Tax Receivable Agreement, dated as of September 28, 2021, by and among Clearwater Analytics Holdings, Inc., CWAN Holdings, LLC and the other parties thereto	8-K filed September 28, 2021	001-40838	10.3
10.5	Third and Amended Restated Limited Liability Company Agreement of CWAN Holdings, LLC, dated as of September 28, 2021, by and among CWAN Holdings, LLC and the other parties thereto	8-K filed September 28, 2021	001-40838	10.4
10.6	Credit Agreement, dated as of September 28, 2021, by and among Clearwater Analytics, LLC, as borrower, CWAN Acquisition, LLC, as holdings, the lenders party thereto and JPMorgan Chase Bank, N.A, as administrative agent, collateral agent and revolver agent	8-K filed September 28, 2021	001-40838	10.5
10.7#	Form of Tax Receivable Agreement Bonus Letter	8-K filed September 28, 2021	001-40838	10.6
10.8#	Form of 2021 Employee Stock Purchase Plan	S-1/A filed September 21, 2021	333-259155	10.1
10.9#	Form of Omnibus Incentive Plan	S-1/A filed September 21, 2021	333-259155	10.5

10.10#	Form of Director and Officer Indemnification Agreement	S-1/A filed September 21. 2021	333-259155	10.6
10.11#	Employment Agreement by and between Sandeep Sahai and Clearwater Analytics, LLC.	S-1/A filed September 21, 2021	333-259155	10.13
10.12#	Employment Agreement by and between James S. Cox Jr. and Clearwater Analytics, LLC. and Clearwater Analytics, LLC.	S-1/A filed September 21, 2021	333-259155	10.14
10.13#	Employment Agreement by and between Scott Erickson and Clearwater Analytics, LLC.	S-1/A filed September 21, 2021	333-259155	10.15
10.14#	Employment Agreement by and between James Price and Clearwater Analytics, LLC.	S-1/A filed September 21, 2021	333-259155	10.16
10.15	Form of Notice of Amendment to Option Agreement (2017 Equity Incentive Plan)	S-1/A filed September 21, 2021	333-259155	10.19
10.16#	Advisory Services Agreement between Clearwater Analytics Holdings, Inc. and Marcus Ryu, dated April 16, 2022	10-Q filed August 5, 2022	001-40838	10.1
10.17#	Employment Agreement by and between Souvik Das and Clearwater Analytics, LLC.			10.17
21.1*	Subsidiaries of the Registrant			21.1
23.1*	Consent of KPMG LLP			
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
32.1*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.			
32.2*	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.			
+101.INS	Inline XBRL Instance Document			
+101.SCH	Inline XBRL Taxonomy Extension Schema Document			
+101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document			
+101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document			
+101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document			
+101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document			
104	Cover Page Interactive Data File			

* Filed herewith.

Management contract or compensatory plan or arrangement.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Clearwater Analytics Holdings, Inc.

Date: March 3, 2023

By: /s/ Jim Cox
Jim Cox
Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Sandeep Sahai Sandeep Sahai	Chief Executive Officer (Principal Executive Officer) and Director	March 3, 2023
/s/ Jim Cox Jim Cox	Chief Financial Officer (Principal Financial and Accounting Officer)	March 3, 2023
/s/ Eric Lee Eric Lee	Director and Chairman of the Board of Directors	March 3, 2023
/s/ Jacques Aigrain Jacques Aigrain	Director	March 3, 2023
/s/ Kathleen A. Corbet Kathleen A. Corbet	Director	March 3, 2023
/s/ Cary Davis Cary Davis	Director	March 3, 2023
/s/ Lisa Jones Lisa Jones	Director	March 3, 2023
/s/ Christopher Hooper Christopher Hooper	Director	March 3, 2023
/s/ D. Scott Mackesy D. Scott Mackesy	Director	March 3, 2023
/s/ Andrew Young Andrew Young	Director	March 3, 2023
/s/ Jaswinder Pal Singh Jaswinder Pal Singh	Director	March 3, 2023

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