

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

FORM 10-K

FOR ANNUAL AND TRANSITION REPORTS
PURSUANT TO SECTIONS 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

(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 **0-24429**

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

13-3728359
(I.R.S. Employer
Identification No.)

300 Frank W. Burr Blvd.
Teaneck, New Jersey 07666

(Address of Principal Executive Offices including Zip Code)

Registrant's telephone number, including area code: **(201) 801-0233**

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Class A Common Stock, \$0.01 par value per share	CTSH	The Nasdaq Stock Market LLC

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 Section 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
		Emerging Growth Company	<input type="checkbox"/>

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. ☒

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

The aggregate market value of the registrant's voting shares of common stock held by non-affiliates of the registrant on June 30, 2022, based on \$67.49 per share, the last reported sale price on the Nasdaq Global Select Market of the Nasdaq Stock Market LLC on that date, was \$34.9 billion.

The number of shares of Class A common stock, \$0.01 par value, of the registrant outstanding as of February 10, 2023 was 509,294,618 shares.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are incorporated by reference into the Annual Report on Form 10-K: Portions of the registrant's definitive Proxy Statement for its 2023 Annual Meeting of Stockholders are incorporated by reference into Part III of this Report.

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GLOSSARY

Defined Term	Definition
10b5-1 Plan	Trading plan adopted pursuant to Rule 10b5-1 under the Exchange Act
2009 Incentive Plan	Cognizant Technology Solutions Corporation Amended and Restated 2009 Incentive Compensation Plan
2017 Incentive Plan	Cognizant Technology Solutions Corporation 2017 Incentive Award Plan
Adjusted Diluted EPS	Adjusted diluted earnings per share
AI	Artificial Intelligence
APA	Advance Pricing Agreement
ASC	Accounting Standards Codification
ASR	Accelerated Stock Repurchase
ASU	Accounting Standards Update
AustinCSI	Austin CSI, LLC
CC	Constant Currency
CITA	Commissioner of Income Tax (Appeals) in India
Class Action Settlement Loss	Loss recorded in connection with the filing of a settlement agreement that resolved the consolidated putative securities class action against us and certain of our former officers
CMT	Communications, Media and Technology
COVID-19	The novel coronavirus disease
COVID-19 Charges	Costs directly related to the COVID-19 pandemic
CPI	Consumer Price Index
Credit Agreement	Credit agreement with a commercial bank syndicate dated November 6, 2018, as amended
Credit Loss Standard	ASC Topic 326 "Financial Instruments - Credit Losses"
CTS India	Our principal operating subsidiary in India
D&I	Diversity and Inclusion
Devbridge	Devbridge Group LLC
DevOps	Agile relationship between development and IT operations
DOJ	United States Department of Justice
DSO	Days Sales Outstanding
EPS	Earnings Per Share
ESG	Environmental, social and corporate governance
ESG Mobility	ESG Mobility GmbH
EU	European Union
Exchange Act	Securities Exchange Act of 1934, as amended
Executive Committee	Cognizant's Chief Executive Officer and his direct reports
FASB	Financial Accounting Standards Board
FCPA	Foreign Corrupt Practices Act
FS	Financial Services
GAAP	Generally Accepted Accounting Principles in the United States of America
High Court	Madras, India High Court
HR	Human Resources
HS	Health Sciences
Hunter	Certain net assets of Hunter Technical Resources, LLC
India Defined Contribution Obligation	Certain statutory defined contribution obligations of employees and employers in India
India Tax Law	New tax regime enacted by the Government of India enacted December 2019
IP	Intellectual property

IoT	Internet of Things
IRS	Internal Revenue Service
IT	Information Technology
ITD	Indian Income Tax Department
Linium	The ServiceNow business of Ness Digital Engineering
Magenic	Magenic Technologies, LLC
Mobica	MOBICA HOLDINGS LIMITED
New Credit Agreement	Credit agreement with a commercial bank syndicate dated October 6, 2022
New Term Loan	Unsecured term loan under the New Credit Agreement
OneSource Virtual	Certain net assets of OneSource Virtual, Inc. and OneSource Virtual (UK) Ltd.
PSU	Performance Stock Units
Purchase Plan	Cognizant Technology Solutions Corporation 2004 Employee Stock Purchase Plan, as amended
P&R	Products and Resources
ROU	Right of Use
RSU	Restricted Stock Units
Samlink	Oy Samlink Ab
SCI	Supreme Court of India
SEC	United States Securities and Exchange Commission
Second Circuit	United States Court of Appeals for the Second Circuit
Servian	SVN HoldCo Pty Limited
SEZ	Special Economic Zone
SG&A	Selling, general and administrative
Syntel	Syntel Sterling Best Shores Mauritius Ltd.
Tax on Accumulated Indian Earnings	The income tax expense related to the reversal of our indefinite reinvestment assertion on Indian earnings accumulated in prior years
Tax Reform Act	Tax Cuts and Jobs Act
Term Loan	Unsecured term loan under the Credit Agreement
TQS	TQS Integration Limited
TriZetto	The TriZetto Group, Inc., now known as Cognizant Technology Software Group, Inc.
USDC-NJ	United States District Court for the District of New Jersey
USDC-SDNY	United States District Court for the Southern District of New York
Utegration	Utegration, LLC

Forward Looking Statements

The statements contained in this Annual Report on Form 10-K that are not historical facts are forward-looking statements (within the meaning of Section 21E of the Exchange Act) that involve risks and uncertainties. Such forward-looking statements may be identified by, among other things, the use of forward-looking terminology such as “believe,” “expect,” “may,” “could,” “would,” “plan,” “intend,” “estimate,” “predict,” “potential,” “continue,” “should” or “anticipate” or the negative thereof or other variations thereon or comparable terminology, or by discussions of strategy that involve risks and uncertainties. From time to time, we or our representatives have made or may make forward-looking statements, orally or in writing.

Such forward-looking statements may be included in various filings made by us with the SEC, in press releases or in oral statements made by or with the approval of one of our authorized executive officers. These forward-looking statements, such as statements regarding our anticipated future revenues or operating margin, earnings, capital expenditures, impacts to our business, financial results and financial condition as a result of the competitive marketplace for talent and future attrition trends, anticipated effective income tax rate and income tax expense, liquidity, financing strategy, access to capital, capital return strategy, investment strategies, cost management, plans and objectives, including those related to our digital practice areas, investment in our business, potential acquisitions, industry trends, client behaviors and trends, the outcome of and costs associated with regulatory and litigation matters, the appropriateness of the accrual related to the India Defined Contribution Obligation and other statements regarding matters that are not historical facts, are based on our current expectations, estimates and projections, management’s beliefs and certain assumptions made by management, many of which, by their nature, are inherently uncertain and beyond our control. Actual results, performance, achievements and outcomes could differ materially from the results expressed in, or anticipated or implied by, these forward-looking statements. There are a number of important factors that could cause our results to differ materially from those indicated by such forward-looking statements, including:

- economic and political conditions globally, including inflation and the invasion of Ukraine by Russia, and in particular in the markets in which our clients and operations are concentrated;
- our ability to attract, train and retain skilled employees, including highly skilled technical personnel and personnel with experience in key digital areas and senior management to lead our business globally, at an acceptable cost;
- unexpected terminations of client contracts on short notice or reduced spending by clients for reasons beyond our control;
- challenges related to growing our business organically as well as inorganically through acquisitions, and our ability to achieve our targeted growth rates;
- our ability to achieve our profitability goals and maintain our capital return strategy;
- the impact of future pandemics, epidemics or other outbreaks of disease, on our business, results of operations, liquidity and financial condition;
- fluctuations in foreign currency exchange rates, or the failure of our hedging strategies to mitigate such fluctuations;
- our ability to meet specified service levels or milestones required by certain of our contracts;
- intense and evolving competition and significant technological advances that our service offerings must keep pace with in the rapidly changing markets we compete in;
- legal, reputation and financial risks if we fail to protect client and/or our data from security breaches and/or cyber attacks;
- climate change impact on our business;
- the effectiveness of our risk management, business continuity and disaster recovery plans and the potential that our global delivery capabilities could be impacted;
- restrictions on visas, in particular in the United States, United Kingdom and EU, or immigration more generally or increased costs of such visas or the wages we are required to pay employees on visas, which may affect our ability to compete for and provide services to our clients;
- risks related to anti-outsourcing legislation, if adopted, and negative perceptions associated with offshore outsourcing, both of which could impair our ability to serve our clients;
- risks and costs related to complying with numerous and evolving legal and regulatory requirements and client expectations in the many jurisdictions in which we operate;
- potential changes in tax laws, or in their interpretation or enforcement, failure by us to adapt our corporate structure and intercompany arrangements, or adverse outcomes of tax audits, investigations or proceedings;
- potential exposure to litigation and legal claims in the conduct of our business; and
- the other factors set forth in Part I, in the section entitled “[Item 1A. Risk Factors](#)” in this report.

You are advised to consult any further disclosures we make on related subjects in the reports we file with the SEC, including this report in the sections titled [“Part I, Item 1. Business,”](#) [“Part I, Item 1A. Risk Factors”](#) and [“Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.”](#) We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

PART I


Item 1. Business

Overview

Cognizant is one of the world's leading professional services companies, engineering modern businesses and delivering strategic outcomes for our clients. We help clients modernize technology, reimagine processes and transform experiences so they can stay ahead in a fast-changing world. We tailor our services and solutions to specific industries with an integrated global delivery model that employs client service and delivery teams based at client locations and dedicated global and regional delivery centers. Our services include digital services and solutions, consulting, application development, systems integration, quality engineering and assurance, application maintenance, infrastructure and security as well as business process services and automation. Digital services continue to be an important part of our portfolio, aligning with our clients' focus on becoming data-enabled, customer-centric and differentiated businesses.

Our purpose, vision and values comprise the Cognizant agenda.

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In order to achieve this vision and support our clients, we are continuing to focus our business on four strategic priorities to increase our commercial momentum and accelerate growth. These strategic priorities include:

- Accelerating digital - growing our digital business organically and inorganically;
- Globalizing Cognizant - accelerating the growth of our business in key international markets and diversifying our leadership, capabilities and delivery footprint;
- Increasing our relevance to our clients - leading with thought leadership and capabilities to address clients' business needs; and
- Repositioning our brand - improving global brand recognition and becoming better known as a global digital partner to the entire C-suite.

We seek to drive organic growth through investments in our digital capabilities across industries and geographies, including the extensive training and reskilling of our technical teams and the expansion of our local workforces in the United States and other markets around the world. Additionally, we pursue select strategic acquisitions that can expand our talent, experience and capabilities in key digital areas or in particular geographies or industries. In 2022, we completed two such acquisitions to complement the 16 acquisitions we completed during 2020 and 2021. See [Note 3](#) to our consolidated financial statements for additional information.

Reportable Business Segments

We go to market across seven industry-based operating segments, which are aggregated into four reportable business segments:

- **Financial Services (FS)**
 - Banking
 - Insurance
- **Health Sciences (HS)** - This reportable business segment is comprised of a single operating segment of the same name.
- **Products and Resources (P&R)**
 - Retail and Consumer Goods
 - Manufacturing, Logistics, Energy and Utilities
 - Travel and Hospitality
- **Communications, Media and Technology (CMT)** - This reportable business segment is comprised of a single operating segment of the same name.

Our clients seek to partner with service providers that have a deep understanding of their businesses, industry initiatives, customers, markets and cultures and the ability to create solutions tailored to meet their individual business needs. Across industries, our clients are confronted with the risk of being disrupted by nimble, digital-native competitors. They are therefore redirecting their focus and investment to digital operating models and embracing DevOps and key technologies that enable quick adjustments to shifts in their markets. We believe that our deep knowledge of the industries we serve and our clients' businesses has been central to our growth and high client satisfaction, and we continue to invest in those digital capabilities that help to enable our clients to become modern businesses.

Our FS segment includes banking, capital markets, payments and insurance companies. Demand in this segment is driven by our clients' need to serve their customers while being compliant with significant regulatory requirements and adaptable to regulatory change, adopting and integrating digital technologies in order to do so. These digital technologies enable customer experience enhancement, robotic process automation, analytics and AI in areas such as digital lending, fraud detection and next generation payments. In addition to platforms that drive outcomes at speed, demand is also created by our clients' desire to reduce complexity through packaged solutions and suppliers with embedded product partners.


Our HS segment consists of healthcare providers and payers as well as life sciences companies, including pharmaceutical, biotech and medical device companies. Demand in this segment is driven by emerging industry trends, including the shift towards consumerism, outcome-based contracting, digital health and delivering integrated seamless, omni-channel, patient-centered experiences. These trends result in increased demand for services that drive operational improvements in areas such as clinical development, pharmacovigilance and manufacturing, as well as claims processing, enrollment, membership and billing. Demand is also created by the adoption and integration of digital technologies such as AI to shape personalized care plans and predictive data analytics to improve clinical trial designs, patient engagement and care outcomes.

Our P&R segment includes manufacturers, automakers, retailers and travel and hospitality companies, as well as companies providing logistics, energy and utility services. Demand in this segment is driven by our clients' focus on improving the efficiency and sustainability of their operations; the enablement and integration of mobile platforms to support sales and other omni-channel commerce initiatives; the generational shift from mechanical to software-defined, experience-driven vehicles; grid modernization to prepare for a decarbonized and consumer-driven energy landscape; and their adoption and integration of digital technologies, such as the application of intelligent systems to manage supply chains and enhance overall customer experiences, and IoT to instrument functions for factories, real estate, fleets and products to increase access to insight-generating data.

Our CMT segment includes global communications, media and entertainment, education, information services and technology companies. Demand in this segment is driven by our clients' need for services related to digital content, the creation of personalized user experiences, acceleration of digital engineering and access to new revenue streams to drive growth. In response to this demand, we are focusing on services and solutions in the areas of monetization of networks, assets and platforms, as well as data modernization and customer experience design.

For the year ended December 31, 2022, the distribution of our revenues across our four reportable business segments was as follows:

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The services we provide are distributed among a number of clients in each of our reportable business segments. A loss of a significant client or a few significant clients in a particular segment could materially reduce revenues for that segment. The services we provide to our larger clients are often critical to their operations and a termination of our services would typically require an extended transition period with gradually declining revenues. Nevertheless, the volume of work performed for specific clients may vary significantly from year to year.

See [Note 2](#) to our consolidated financial statements for additional information related to disaggregation of revenues by client location, service line and contract-type for each of our reportable business segments.

Services and Solutions

Our services include digital services and solutions, consulting, application development, systems integration, quality engineering and assurance, application maintenance, infrastructure and security as well as business process services and automation. Additionally, we develop, license, implement and support proprietary and third-party software products and platforms. Central to our strategy to align with our clients' need to modernize is our continued investment in digital, with a focus on four key areas: IoT, digital engineering, data and cloud. These four capabilities enable clients to put data at the core of their operations, improve the experiences they offer to their customers, tap into new revenue streams, automate operations, defend against technology-enabled competitors and reduce costs. In many cases, our clients' new digital systems are built on the backbone of their existing legacy systems, which can increase complexity and impact business continuity. In the post-pandemic environment, our clients have a sustained need to modernize their businesses, which has led to increased demand for digital capabilities such as mobile workplace solutions, e-commerce, automation, AI and cybersecurity services and solutions. We believe our deep knowledge of our clients' infrastructure and systems provides us with a significant advantage as we work with them to build new digital capabilities to make their operations more modern and intuitive. We deliver all of our services and solutions across our four reportable business segments to best address our clients' individual needs.

Our services and solutions are organized into four integrated practices to simplify our operating model and better serve our clients through integrated solutioning and delivery. These integrated practices are Core Technologies and Insights, Enterprise Platform Services, Intuitive Operations and Automation, and Software and Platform Engineering. Our consulting professionals have deep industry-specific expertise and work closely across our practices to create intuitive operating models that leverage a wide range of digital technologies across our clients' enterprises to deliver higher levels of efficiency, new value for their customers and business outcomes that align to their industries.

Core Technologies and Insights

Our Core Technologies and Insights integrated practice helps clients build agile and relevant organizations that apply the power of cloud, data, software, and IoT to help them perform better and innovate faster. Our clients are able to harness data securely in cloud-first architectures, enabling them to become highly resilient enterprises that are capable of quickly adapting to market dynamics. Areas of focus within this practice are:

- Cloud, infrastructure and security, which helps simplify, modernize and safeguard IT environments, creating new business opportunities;
- AI and analytics, which helps clients formulate actionable insights from unstructured data to drive a greater understanding of their customers and operations; and
- IoT, which unlocks greater productivity and new business models.

Enterprise Platform Services

Our Enterprise Platform Services integrated practice helps our clients digitally transform multiple front- and back-office business processes, implementing enterprise-wide platforms that enable customer experience, customer relationship management, human capital management, supply chain management, enterprise resource planning and finance. Our services decrease time to market, drive efficiencies and deliver impactful experiences. Our clients are able to better share information, simplify IT processes, automate workflow and improve flexibility. This practice focuses on application services, which help enterprises engage their partner ecosystems more productively, and run their operations and financial organizations more efficiently while enabling improved employee and customer experiences. We work closely with partners including Adobe, Amazon Web Services, Cisco, Google, Microsoft, Oracle, Pegasystems, Salesforce, SAP, ServiceNow, Workday and many others.

Intuitive Operations and Automation

Our Intuitive Operations and Automation integrated practice helps clients build and run modern operations through two main vehicles: intelligent automation and business process outsourcing services. Our automation advisory, implementation and managed services experts partner with clients to transform end-to-end processes, design and manage the next-generation human and digital workforce, enable seamless experiences and achieve multi-fold productivity increases. Our business process outsourcing services help clients transform and run functions and industry-specific processes such as finance and accounting, omni-channel customer care, loan origination, annotation services, location-based services and medical data management. Areas of focus are:

- Business process outsourcing services, which help deliver business outcomes including revenue growth, increased customer and employee satisfaction, and cost savings; and
- Intelligent automation, which includes advisory and process and IT automation solutions designed to simplify and accelerate automation adoption.

Software and Platform Engineering

Our Software and Platform Engineering integrated practice helps clients develop modern enterprises through digital products, services and solutions that help them improve employee experiences and deliver new value for their customers. Our clients are able to leverage data, technologies and our digital engineering, design and product development capabilities to build world-class experiences, and a responsive, agile and intuitive framework for continuous innovation. Areas of focus are:

- Digital engineering, which delivers modern business software; and
- Application development and management, which improves or reimagines applications.

Global Delivery Model

We operate in an integrated global delivery model, with delivery centers worldwide to provide our full range of services to our clients. Our delivery model includes employees deployed at client sites, local or in-country delivery centers, regional delivery centers and offshore delivery centers, as required to best serve our clients. As we continue to scale our digital services and solutions, we are focused on hiring in the United States and other countries where we deliver services to our clients to expand our in-country delivery capabilities. Our extensive facilities, technology and communications infrastructure are designed to enable the effective collaboration of our global workforce across locations and geographies.

Competition

The markets for our services are highly competitive, characterized by a large number of participants and subject to rapid change. Competitors may include systems integration firms, contract programming companies, application software companies, cloud computing service providers, traditional consulting firms, professional services groups of computer equipment companies, infrastructure management companies, outsourcing companies and boutique digital companies. Our direct competitors include, among others, Accenture, Atos, Capgemini, Deloitte Digital, DXC Technology, EPAM Systems, Genpact, HCL Technologies, IBM Consulting, Infosys Technologies, Tata Consultancy Services and Wipro. In addition, we compete with numerous smaller local companies in the various geographic markets in which we operate. For additional information, see [Part I, Item 1A. Risk Factors](#).

The principal competitive factors affecting the markets for our services include the provider's reputation and experience, strategic advisory capabilities, digital services capabilities, performance and reliability, responsiveness to customer needs, financial stability, corporate governance and competitive pricing of services. Accordingly, we rely on the following to compete effectively:

- investments to scale our digital services;
- our recruiting, training and retention model;
- our global delivery model;
- an entrepreneurial culture and approach to our work;
- a broad client referral base;
- investment in process improvement and knowledge capture;
- financial stability and good corporate governance;
- continued focus on responsiveness to client needs, quality of services and competitive prices; and
- project management capabilities and technical expertise.

Intellectual Property, Certain Trademarks, Trade Names and Service Marks

We provide value to our clients based, in part, on our proprietary innovations, methodologies, software, reusable knowledge capital and other IP assets. We recognize the importance of IP and its ability to differentiate us from our competitors. We seek IP protection for many of our innovations and rely on a combination of patent, copyright and trade secret laws, confidentiality procedures and contractual provisions, to protect our IP. We have registered, and applied for the registration of, U.S. and international trademarks, service marks, and domain names to protect our brands, including our Cognizant brand, which is one of our most valuable assets. We own or are licensed under a number of patents, trademarks and copyrights of varying duration, relating to our products and services. We also have policies requiring our employees to respect the IP rights of others. While our proprietary IP rights are important to our success, we believe our business as a whole is not materially dependent on any particular IP right or any particular group of patents, trademarks, copyrights or licenses, other than our Cognizant brand.

Cognizant® and other trademarks appearing in this report are registered trademarks or trademarks of Cognizant and its affiliates in the United States and other countries, or third parties, as applicable.

This Annual Report on Form 10-K includes trademarks and service marks owned by us. This Annual Report on Form 10-K also contains trademarks, trade names and service marks of other companies, which are the property of their respective owners. Solely for convenience, trademarks, trade names and service marks referred to in this Annual Report on Form 10-K may appear without the ®, ™ or SM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks, trade names and service marks. We do not intend our use or display of other parties' trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

Workforce

We had approximately 355,300 employees at the end of 2022, with 258,500 in India, 41,100 in North America, 18,200 in Continental Europe, 9,200 in the United Kingdom and 28,300 in various other locations throughout the rest of the world. This represents an increase of 24,700 employees as compared to December 31, 2021. We utilize subcontractors to provide additional capacity and flexibility in meeting client demand, though the number of subcontractors has historically been immaterial relative to our employee headcount. We are not party to any significant collective bargaining agreements.

We balance the portion of our employees in the United States and other jurisdictions that rely on visas with consideration of the needs of our business to fulfill client demand and risks to our business from potential changes in immigration laws and regulations that may increase the costs associated with and ability to staff employees on visas to work in-country. For additional information, see [Part I, Item 1A. Risk Factors](#).

Engaging Our People

As a global professional services company, Cognizant competes on the basis of the knowledge, experience, insights, skills and talent of its employees and the value they can provide to clients. We aim for our employees to feel motivated, engaged, and empowered to do their best work through careers they find meaningful. In a market where competition for skilled IT professionals is intense, we focus on the following:

- **Engagement & Retention:** We regularly monitor employee engagement and retention levels, and assess employee sentiment through third-party engagement surveys, leader listening sessions and interactions on our internal channels. On an annual basis, after each engagement survey, we develop and communicate clear action plans to continue to build on our strengths and address shortfalls. In 2022, we saw meaningful increases in our employee engagement results, including scores above benchmark across multiple categories.

Competition for skilled employees in the current labor market is intense, and we experienced significantly elevated attrition during 2022. We continue to enhance our employee value proposition and our pay-for-performance approach as well as increase our efforts with respect to recruitment, talent management and employee engagement. For the three months ended December 31, 2022 and 2021, our annualized attrition rate, including both voluntary and involuntary, was 25.3% and 34.6%, respectively. Our attrition rate for the years ended December 31, 2022 and 2021, including both voluntary and involuntary, was 31.7% and 30.8%, respectively.

- **Advancing Diversity & Inclusion:** We strive to continually improve upon D&I over the long term. A diverse and inclusive workforce strengthens our ability to innovate and to understand our clients' needs and aspirations.

Highlights from our D&I efforts include:

- Global D&I organization embedded within our HR function to drive accountability through our people processes and systems;
- Global D&I training and programs, including allyship, psychological safety, and inclusive mindset training for leaders;
- Progressive hiring policies and initiatives:
 - a diverse candidate pipeline initiative to ensure a more diverse interview slate at the Vice President level and above;
 - our Returnship Program, a 12-week paid, immersive experience for experienced professionals who have taken an extended career break;
- Seven global affinity groups sponsored by Executive Committee members that welcome, nurture and provide safe spaces in which our employees can share their unique interests and aspirations;
- For the first time in 2022, Executive Committee compensation included a metric focused on gender diversity globally, and developing and retaining talent. In addition, every leader at the level of director and above has a goal for hiring and retaining women at the senior manager level and above in their business area;
- Our sponsorships with the PGA, LPGA, where we doubled the Cognizant Founders Cup purse, and the Aston Martin Cognizant Formula One Team, where we partnered with Racing Pride to promote LGBTQ+ inclusivity in motor racing, demonstrate our commitment to equality and furthering diversity and inclusion around the world; and
- In 2022, Cognizant earned a perfect score on the Human Rights Campaign Foundation's 2022 Corporate Equality Index, a foremost benchmarking survey related to LGBTQ+ workplace equality.

As of December 31, 2022, we employed approximately 134,000 women, or 38% of our workforce, as compared to approximately 123,000 women, or 38% of our workforce, as of December 31, 2021.

In our 2022 engagement survey, D&I continued to score higher than external benchmarks, showing as a consistent strength for Cognizant.

- **High Performance Culture:** We aim to create a work environment where every person is inspired to achieve, driven to perform and rewarded for their contributions. Our culture of meritocracy fosters individual and team high performance to fuel our growth.

Highlights include:

- Annual performance-based promotions and merit increases for eligible associates at all levels;
- Encouraging regular role movement and career growth through our internal job moves initiative. This program is enhancing career velocity and bringing fresh thinking to our clients as employees identify new lateral and next-level opportunities across our organization; and
- Continuously fostering a culture focused on recognition, Cognizant has created programs to reward all levels of employees through both monetary recognition as well as peer-driven non-monetary recognition.

- **Learning & Upskilling:** From campus hire training for entry-level workforce to providing capability assurance programs for professional practitioners, our skilling ecosystem offers growth for associates at all levels. Training our talent in new digital skills supports career growth, internal talent movement, and brings seasoned Cognizant associates to projects. These trainings are provided in collaboration with the world's leading educational and technology partners.

Highlights include:

- Robust technical programs that reskill and upskill our employees with a focus on building digital skills in areas such as IoT, digital engineering, data and cloud;
- Innovative pre-employment training programs for graduates and early to mid-career professionals that focus on cultivating technology skills required for the next-generation workforce;
- Our in-house, access-from-anywhere learning experience platform provides a marketplace recognizing both formal and informal learning, as well as recommended learning journeys;
- A platform-driven mentorship program connects mentees with mentors across the global organization to learn and develop;
- Development plans for all levels to encourage employees to own and prioritize their growth; and
- Our approach to talent development has been recognized by leading learning and development organizations, such as the Association for Talent Development and the Brandon Hall group.

- **Leadership Development & Talent Management:** Cognizant continuously fosters its pipeline of diverse, high-performing leaders who have the breadth and versatility to drive growth. We are focused on building leadership capability at all levels - whether someone is a first-time manager, taking on a larger team or scope of responsibility, or leading at an executive level - through continuous assessment and high impact development opportunities.

Highlights include:

- Targeted talent programs for key talent pools that include various training opportunities, digital leadership programs, custom leadership development initiatives and leadership transition programs to equip employees for taking on a leadership role;
- Fast-tracking high-performing and high-potential leadership talent through personalized assessments, executive coaching and executive education programs;
- More than 1,000 leaders have participated in our LEAD@Cognizant partnership with Harvard University, which is a 4.5-month leadership capability program designed exclusively for Cognizant leaders to learn, practice and internalize how to set the course, connect the dots, inspire followership and deliver results through strategic alignment, collaboration and building high performing teams;
- Accelerating a diverse leadership pipeline through programs like Propel, an initiative focused on priming the next level of women leaders within Cognizant. More than 1,200 women have progressed through this initiative; and
- Periodic talent processes such as talent reviews aim to help individuals develop in role and prepare for the future, while strengthening our leadership pipeline overall.

- **Supporting Wellbeing at Work and Home:** Our Be Well program offers a portfolio of benefits and rewards across all dimensions of wellbeing - physical, mental, financial and life & work. These offerings aim to care for the diverse needs of our employees to assist them in feeling resilient, innovative and engaged. These include total compensation programs, health benefits, risk protection coverage, overall wellbeing and family care, tax savings programs, income protection, retirement and financial planning resources, time off programs, recognition and voluntary programs. We continually review and enhance our offerings to best meet the needs of today's modern workforce.

Highlights include:

- Our WorkFlex program, which provides employees greater flexibility to complete their required hours outside their standard schedule or to transition to a part-time schedule to accommodate personal priorities. In 2022, we expanded this program, making it available to more geographies;
- We ensure access and support for all employees globally for mental health through a robust Employee Assistance Program. In 2022, we expanded mental health insurance coverage in many countries;
- We provide various resources and access to third party mental health platforms, webinars, and events throughout the year. This includes global and regional wellbeing challenges that bring employees and their families together (in person and virtually) to partake in physical activities and mental health events; and
- Managers are equipped with tools and resources to support the engagement and wellbeing of their teams. This includes guides and training on topics such as engaging hybrid teams, preventing fatigue and burnout, and more.

Environmental, Social and Corporate Governance

We believe integrating ESG considerations into our strategy will help us meet client and other stakeholder expectations. Responsible operations and transparency around environmental and social efforts are increasingly important to our stakeholders, which is why our ESG program is designed to align with our clients' and employees' increasing focus on ESG-related topics in our value chain, including but not limited to, our supply chain, delivery and solutions. In 2022, we took the following steps to advance our ESG agenda:

- In 2022, we focused on engaging our associates on sustainability and community efforts, such as skills-based volunteering, on team and culture building through social impact and voluntary training on sustainability fundamentals. Employees who participated in our affinity groups or Outreach programs had a lower attrition rate than Company average in 2022;
- In June 2022, we issued our ESG report with limited assurance on greenhouse gas emissions data. We continue to report against criteria aligned to GRI (Global Reporting Index), SASB (Sustainability Accounting Standards Board) and TCFD (Taskforce on Climate-related Financial Disclosures); and
- In April 2022, we set a near-term target of sourcing 100% renewable energy for all our global offices and facilities by the end of 2026. Additionally, we continue in our commitment to drive towards reducing our greenhouse gas emissions. This commitment calls for reducing emissions from the Company's global operations and supply chain by 50% by 2030, and by 90% by 2040, in each case compared to our 2019 emissions baseline. Where absolute emissions reductions are not physically or financially viable, we plan to use carbon offsets.

Governmental Regulation

As a result of the size, breadth and geographic diversity of our business, our operations are subject to a variety of laws and regulations in the jurisdictions in which we operate, including with respect to import and export controls, temporary work authorizations or work permits and other immigration laws, content requirements, trade restrictions, tariffs, taxation, anti-corruption, the environment, government affairs, internal and disclosure control obligations, data privacy, intellectual property, employee and labor relations. For additional information, see [Part I, Item 1A, Risk Factors](#) as well as the "Business Outlook" section within [Part I, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, Executive Summary](#).

Information About Our Executive Officers

The following table identifies our current executive officers:

Name	Age	Capacities in Which Served	In Current Position Since
Ravi Kumar S	51	Chief Executive Officer	2023
Jan Siegmund	58	Chief Financial Officer	2020
Robert Telesmanic	56	Senior Vice President, Controller and Chief Accounting Officer	2017
John Kim	55	Executive Vice President, General Counsel, Chief Corporate Affairs Officer and Secretary	2021
Rebecca Schmitt	49	Executive Vice President, Chief People Officer	2020
Balu Ganesh Ayyar	61	Executive Vice President and President, Intuitive Operations and Automation	2019
Surya Gummadi	46	Executive Vice President and President, Americas	2023
Robert Walker	49	Executive Vice President and President, Global Growth Markets	2022

Ravi Kumar Singiseti (also referred to as Ravi Kumar S or Ravi Kumar) has been our Chief Executive Officer since January 2023. Prior to joining Cognizant, Mr. Kumar was the President of Infosys, where he led the Infosys Global Services Organization across all global industry segments from January 2016 to October 2022. While serving as President of Infosys, he also served as Chairman of the Board of various Infosys subsidiaries. Prior to such role, Mr. Kumar served in positions of increasing authority at Pricewaterhouse Coopers, Cambridge Tech Partners, Oracle Corporation, Sapient and Infosys. He is a member of the Board of Directors of Digimarc Corporation, where he is a member of the Compensation & Talent Management Committee and the Market Development Committee, and Transunion, where he is a member of the Compensation Committee and the Mergers, Acquisitions and Integration Committee. Mr. Kumar has a bachelor's degree in Engineering from Shivaji University and an M.B.A. from Xavier Institute of Management, India.

Jan Siegmund has been our Chief Financial Officer since September 2020. Prior to joining Cognizant, Mr. Siegmund spent over 19 years with Automatic Data Processing (ADP), where he served as Corporate Vice President and Chief Financial Officer from 2012 to 2019 and Chief Strategy Officer and President of the Added Value Services Division from 1999 to 2012. He began his career at McKinsey & Company as a Senior Engagement Manager. Mr. Siegmund is a member of the Board of Directors of The Western Union Company, where he is Chair of the Audit Committee and a member of the Compliance Committee. He holds a master's degree in Industrial Engineering from Technical University Karlsruhe, Germany, a master's degree in Economics from the University of California, Santa Barbara and a doctorate in Economics from Technical University of Dresden, Germany.

Robert Telesmanic has been our Senior Vice President, Controller and Chief Accounting Officer since January 2017, a Senior Vice President since 2010 and our Corporate Controller since 2004. Prior to that, he served as our Assistant Corporate Controller from 2003 to 2004. Prior to joining Cognizant, Mr. Telesmanic spent over 14 years with Deloitte & Touche LLP. Mr. Telesmanic has a Bachelor of Science degree from New York University and an MBA degree from Columbia University.

John Kim has been our Executive Vice President, General Counsel, Chief Corporate Affairs Officer and Secretary since March 2021. Previously, he served as our Senior Vice President and Deputy General Counsel, Global Commercial Contracts. Prior to joining Cognizant in 2019, Mr. Kim held a variety of senior leadership roles at Capgemini from January 2012 to November 2019, including Global Head of Big Deals. Prior to Capgemini, Mr. Kim served as U.S. Counsel for WNS Global Services from July 2009 to June 2011 and held a variety of leadership roles at Cendant Travel Distribution Services (now known as Travelport) from January 2001 to June 2006, including General Counsel and Chief Compliance Officer. He holds a bachelor's degree in English Literature from Columbia University and obtained his law degree from Cornell Law School.

Rebecca (Becky) Schmitt has been our Executive Vice President, Chief People Officer since February 2020. Prior to joining Cognizant, Ms. Schmitt was the Chief People Officer of Sam's Club, a division of Walmart, Inc. from October 2018 through January 2020. Prior to that, she served as SVP, Chief People Officer, US eCommerce & Corporate Functions for Walmart from October 2016 through September 2018 and as VP, HR - Technology from February 2016 until October 2016. Prior to joining Walmart, Ms. Schmitt spent over 20 years with Accenture plc in various human resources roles, culminating in her role as HR Managing Director, North America Business from March 2014 through February 2016. Ms. Schmitt has a Bachelor of Arts degree from University of Michigan, Ann Arbor.

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Balu Ganesh Ayyar has been our Executive Vice President and President, Intuitive Operations and Automation since July 2022. Previously, he was Executive Vice President and President, Digital Operations from August 2019 to June 2022. Prior to joining Cognizant, Mr. Ayyar was the CEO of Mphasis, a global IT services company listed in India, from 2009 to 2017. Prior to Mphasis, Mr. Ayyar spent nearly two decades with Hewlett-Packard, holding a variety of leadership roles across multiple geographies.

Surya Gummadi has been our Executive Vice President and President, Americas since January 2023. He held the role on an interim basis from late June 2022 to January 2023. Prior to being appointed President of the Americas, Mr. Gummadi served as Senior Vice President of our Health Sciences business segment from April 2022 to January 2023, Senior Vice President and head of our Healthcare business from July 2020 to April 2022, Vice President and market leader of our Healthcare business from February 2020 to July 2020 and Vice President and market head for our Health Plans business from October 2017 to February 2020. Prior to that, he served in a variety of roles in his 24-year tenure with Cognizant. He holds a degree in mechanical engineering from Indian Institute of Technology, Bombay.

Robert Walker has been our Executive Vice President and President, Global Growth Markets, which covers all of Cognizant's markets outside of North America, since June 2022. From January 2021 to June 2022, he served as Managing Director of our United Kingdom & Ireland business. Prior to joining Cognizant, Mr. Walker spent 24 years at Ernst & Young, including from 2006 to 2020 as a partner, including risk advisory services and most recently helping clients improve the efficiency of their business using emerging technologies and digital capabilities across a wide range of sectors and industries. He holds a bachelor's degree in Economics from Newcastle University and is a chartered accountant.

None of our executive officers is related to any other executive officer or to any of our Directors. Our executive officers are appointed annually by the Board of Directors and generally serve until their successors are duly appointed and qualified.

Corporate History

We began our IT development and maintenance services business in early 1994 as an in-house technology development center for The Dun & Bradstreet Corporation and its operating units. In 1996, we were spun-off from The Dun & Bradstreet Corporation and, in 1998, we completed an initial public offering to become a public company.

Available Information

We make our SEC filings available free of charge through our website at www.cognizant.com as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the SEC.

No information on our website is incorporated by reference into this Form 10-K or any other public filing made by us with the SEC. The SEC maintains an internet site at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

Item 1A. Risk Factors

We face various important risks and uncertainties, including those described below, that could adversely affect our business, results of operations and financial condition and, as a result, cause a decline in the trading price of our common stock.

Risks Related to our Business and Operations

Our results of operations could be adversely affected by economic and political conditions globally and in particular in the markets in which our clients and operations are concentrated.

Global macroeconomic conditions have a significant effect on our business as well as the businesses of our clients. Volatile, negative or uncertain economic conditions could cause our clients to reduce, postpone or cancel spending on projects with us and could make it more difficult for us to accurately forecast client demand and have available the right resources to profitably address such client demand. Clients may reduce demand for services quickly and with little warning, which may cause us to incur extra costs where we have employed more personnel than client demand supports.

Our business is particularly susceptible to economic and political conditions in the markets where our clients or operations are concentrated. Our revenues are highly dependent on clients located in the United States and Europe, and any adverse economic, political or legal uncertainties or adverse developments, including due to the uncertainty related to the economic environment and inflation, may cause clients in these geographies to reduce their spending and materially adversely impact our business. Many of our clients are in the financial services and healthcare industries, so any decrease in growth or significant consolidation in these industries or regulatory policies that restrict these industries may reduce demand for our services. Economic and political developments in India, where a significant majority of our operations and technical personnel are located, or in other countries where we maintain delivery operations, may also have a significant impact on our business and costs of operations. As a developing country, India has experienced and may continue to experience high inflation and wage growth, fluctuations in gross domestic product growth and volatility in currency exchange rates, any of which could materially adversely affect our cost of operations. Additionally, we benefit from governmental policies in countries that encourage foreign investment and promote the ease of doing business, such as tax incentives, and any change in policy or circumstances that results in the elimination of such benefits or degradation of the rule of law, or imposition of new adverse restrictions or costs on our operations could have a material adverse effect on our business, results of operations and financial condition.

If we are unable to attract, train and retain skilled employees to satisfy client demand, including highly skilled technical personnel and personnel with experience in key digital areas, as well as senior management to lead our business globally, our business and results of operations may be materially adversely affected.

Our success is dependent, in large part, on our ability to keep our supply of skilled employees, including project managers, IT engineers and senior technical personnel, in particular those with experience in key digital areas, in balance with client demand around the world and on our ability to attract and retain senior management with the knowledge and skills to lead our business globally. In 2021 and most of 2022, we, and we believe the IT industry as a whole, experienced unprecedented attrition. As a result, we hired over a hundred thousand new employees in each of 2021 and 2022. Correspondingly, we have needed to reskill, retain, integrate and motivate our large workforce with diverse skills and expertise in order to serve client demands across the globe, respond quickly to rapid and ongoing technological, industry and macroeconomic developments and grow and manage our business. The rate of attrition began to decrease in the second half of 2022, but if such attrition levels do not continue to decrease or if they increase again in the future, it could materially adversely affect our business. We also must continue to maintain a senior leadership team that, among other things, is effective in executing on our strategic goals and growing our digital business. The loss of senior executives, or the failure to attract, integrate and retain new senior executives as the needs of our business require, could have a material adverse effect on our business and results of operations.

Competition for skilled labor is intense and, in some jurisdictions in which we operate and in key digital areas, there are more open positions than qualified persons to fill these positions. We compete for employees not only with other companies in our industry but also with companies in other industries, such as software services, engineering services and financial services companies. Our business has experienced and may continue to experience significant employee attrition, which has caused us to incur increased costs to hire new employees with the desired skills. While we strive to adjust pricing to reduce the impact of compensation increases on our operating margin, we may not be successful in recovering these increases, which could adversely affect our profitability and operating margin. Costs associated with recruiting and training employees are significant. If we are unable to hire or deploy employees with the needed skillsets or if we are unable to adequately equip our employees with the skills needed, this could materially adversely affect our business.

Additionally, if we are unable to offer our employees a value proposition that is competitive and appealing, it could have an adverse effect on engagement and retention, which may materially adversely affect our business.

Many of our contracts with clients are short-term, and our business, results of operations and financial condition could be adversely affected if our clients terminate their contracts on short notice.

Consistent with industry practice, many of our contracts with clients are short-term or can be terminated by our clients with short notice and without significant early termination cost. Even if not terminated, clients may be able to delay, reduce or eliminate spending on the services and solutions we provide, choose not to retain us for additional stages of a project, try to renegotiate the terms of a contract or cancel or delay additional planned work. Terminations and such other events may result from factors that are beyond our control and unrelated to our work product or the progress of the project, including the business, financial or labor conditions of a client, changes in ownership, management or the strategy of a client or economic or market conditions generally or specific to a client's industry. When contracts are terminated or spending delayed, we lose the anticipated revenues and might not be able to eliminate our associated costs in a timely manner. In particular, the loss of a significant client or a few significant clients could materially reduce revenues for the Company as a whole or for a particular business segment. In addition, our operating margins in subsequent periods could be lower than expected. If we are unable to replace the lost revenues with other work on terms we find acceptable or effectively eliminate costs, our business, results of operations and financial condition could be adversely affected.

We face challenges related to growing our business organically as well as inorganically through acquisitions, and we may not be able to achieve our targeted growth rates.

Achievement of our targeted growth rates requires continued significant organic growth of our business as well as inorganic growth through acquisitions. To achieve such growth, we must, among other things, continue to significantly expand our global operations, in particular with respect to digital, and scale our infrastructure to support such business growth and ensure that our service offerings remain responsive to market demand. Continued business growth increases the complexity of our business and places significant strain on our management, employees, operations, systems, delivery, financial resources, and internal financial control and reporting functions, which we will have to continue to develop and improve to sustain such growth. Our ability to successfully manage change associated with the various business transformation initiatives is critical for the overall strategy execution. We must continually recruit and train new employees, retain and reskill, as necessary, existing sales, technical, finance, marketing and management employees with the knowledge, skills and experience that our business model requires and effectively manage our employees worldwide to support our culture, values, strategies and goals.

Additionally, we expect to continue pursuing strategic and targeted acquisitions and investments to enhance our offerings of services and solutions or to enable us to expand our talent, experience and capabilities in key digital areas or in particular geographies or industries. We may not be successful in identifying suitable opportunities, completing targeted transactions or achieving the desired results in the timeframe we expect or at all, such opportunities may divert our management's time and focus away from our core business and realizing the desired results of a particular transaction may depend upon competition, market trends, additional costs or investments and the actions of suppliers or other third parties. We may face challenges in effectively integrating acquired businesses into our ongoing operations and in assimilating and retaining employees of those businesses into our culture and organizational structure, and these risks may be magnified by the size and number of transactions we execute.

If we are unable to manage our growth effectively, complete acquisitions of the number, magnitude and nature we have targeted, or successfully integrate any acquired businesses into our operations, we may not be able to achieve our targeted growth rates or improve our market share, profitability or competitive position generally or in specific markets or services.

We may not be able to achieve our profitability goals and maintain our capital return strategy.

Our goals for profitability and capital return rely upon a number of assumptions, including our ability to improve the efficiency of our operations and make successful investments to grow and further develop our business. Our profitability depends on the efficiency with which we run our operations (including changes in our internal organizational structure) and the cost of our operations, especially the compensation and benefits costs of our employees. We have incurred, and may continue to incur, substantial costs related to implementing our strategy to optimize such costs, and we may not realize the ultimate cost savings that we expect. We may not be able to efficiently utilize our employees if increased regulation, policy changes or administrative burdens of immigration, work visas or client worksite placement prevents us from deploying our employees on a timely basis, or at all, to fulfill the needs of our clients. Our utilization rates are further affected by a number of factors, including our ability to transition employees from completed projects to new assignments, hire and assimilate new employees, forecast demand for our services and thereby maintain an appropriate headcount in each of our geographies and workforce and manage attrition, and our need to devote time and resources to training, professional development and other typically non-chargeable activities. Increases in wages and other costs, including as a result of attrition, may also put pressure on our

profitability. Our profitability is also impacted by our ability to accurately estimate, attain and sustain revenues from client engagements, margins and cash flows over contract periods and general economic and political conditions.

With respect to capital return, our ability and decisions to pay dividends and repurchase shares depend on a variety of factors, including the cash flow generated from operations, our cash and investment balances, our net income, our overall liquidity position, potential alternative uses of cash, such as acquisitions, and anticipated future economic conditions and financial results. Failure to carry out our capital return strategy may adversely impact our reputation with shareholders and shareholders' perception of our business and the trading price of our common stock.

Pandemics, epidemics or other outbreaks of disease have had and may in the future have a material adverse impact upon our business, liquidity, results of operations and financial condition.

The COVID-19 pandemic had, and any future pandemic, epidemic or other outbreak of disease may have, widespread, rapidly evolving, and unpredictable impacts on global society, economies, financial markets and business practices by, among other things, causing significant loss of life, curtailing congregation of people and disrupting communications and travel. This or other similar events may have a material adverse impact upon, our business, liquidity, results of operations and financial condition, including as a result of the following:

- *Reduced client demand for services* – The vast majority of our business is with clients in the United States, the United Kingdom and other countries in Europe, all regions that were significantly impacted by the COVID-19 pandemic and could be impacted by other future pandemics, epidemics or other outbreaks of disease. Such outbreaks could reduce demand for our services, particularly in regions or industries that are significantly impacted by such events.
- *Delivery challenges* – Due to the closures of many of our clients' facilities, including as a result of various orders from national, state or local governments, we faced challenges in delivering services to our clients and satisfying contractually agreed upon service levels during the COVID-19 pandemic and could face such closures in future pandemics, epidemics or other outbreaks of disease. The COVID-19 pandemic, particularly in India, but also in the Philippines and other countries where we have near-shore or offshore delivery operations for clients, as well as our in-country offices and offices of clients where our employees may normally work, impacted our ability to deliver services to clients. A similar future pandemic, epidemic or other outbreak of disease, or a future security incident during such circumstances, could materially impair our ability to deliver services to clients.
- *Increased strain on employees and management* – The significant challenges presented by a pandemic, such as the potentially life-threatening health risks to employees and their loved ones and the unavailability of various services our employees may rely upon, such as childcare, were and may in future pandemics, epidemics or other outbreaks of disease be a cause of employee morale concerns and may adversely impact employee productivity. Addressing these employee morale and productivity concerns as well as other significant challenges presented by such events, including various business continuity measures demands significant management time and attention.

The ultimate extent to which any future pandemics, epidemics or other outbreaks of disease impact our business, liquidity, results of operations and financial condition will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the severity of the disease to which the pandemic, epidemic or other outbreak relates; delivery, adoption and effectiveness of vaccines or other treatments for the disease, including any variants; the duration and extent of the event and waves of infection; travel restrictions and social distancing; the duration and extent of business closures and business disruptions; and the effectiveness of actions taken to contain, treat and prevent the disease. If we or our clients experience prolonged shutdowns or other business disruptions, our business, liquidity, results of operations, financial condition and the trading price of our common stock may be materially adversely affected, and our ability to access the capital markets may be limited. Further, any future pandemic, epidemic or other outbreak of disease, and the volatile regional and global economic conditions stemming from such an event, could precipitate or aggravate the other risk factors that we identify in this report, any of which could have a material adverse impact to our business.

Fluctuations in foreign currency exchange rates, or the failure of our hedging strategies to mitigate such fluctuations, can adversely impact our profitability, results of operations and financial condition.

Fluctuations in foreign currency exchange rates can also have adverse effects on our revenues, income from operations and net income when items denominated in other currencies are translated or remeasured into U.S. dollars for presentation of our consolidated financial statements. We have entered into foreign exchange forward contracts intended to partially offset the impact of the movement of the exchange rates on future operating costs and to mitigate foreign currency risk on foreign currency denominated net monetary assets. However, the hedging strategies that we have implemented, or may in the future implement, to mitigate foreign currency exchange rate risks may not reduce or completely offset our exposure to foreign exchange rate fluctuations and may expose our business to unexpected market, operational and counterparty credit risks. We are

particularly susceptible to wage and cost pressures in India and the exchange rate of the Indian rupee relative to the currencies of our client contracts due to the fact that the substantial majority of our employees are in India while our contracts with clients are typically in the local currency of the country where our clients are located.

Our failure to meet specified service levels or milestones required by certain of our client contracts may result in our client contracts being less profitable, potential liability for penalties or damages or reputational harm.

Many of our client contracts include clauses that tie our compensation to the achievement of agreed-upon performance standards or milestones. Failure to satisfy these requirements could significantly reduce our fees under the contracts, increase the cost to us of meeting performance standards or milestones, delay expected payments, subject us to potential damage claims under the contract terms or harm our reputation. The use of new technologies in our offerings can expose us to additional risks if those technologies fail to work as predicted, which could lead to cost overruns, project delays, financial penalties, or damage to our reputation. Clients also often have the right to terminate a contract and pursue damages claims for serious or repeated failure to meet these service commitments. Some of our contracts provide that a portion of our compensation depends on performance measures such as cost-savings, revenue enhancement, benefits produced, business goals attained and adherence to schedule. These goals can be complex and may depend on our clients' actual levels of business activity or may be based on assumptions that are later determined not to be achievable or accurate. As such, these provisions may increase the variability in revenues and margins earned on those contracts and have in the past resulted, and could in the future result, in significant losses on such contracts. Further, if we do not accurately estimate the effort, costs or timing for meeting our contractual commitments or completing engagements to a client's satisfaction, our contracts could have delivery inefficiencies and be less profitable than expected or unprofitable.

We face intense and evolving competition and our service offerings must keep pace with significant technological advances in the rapidly changing markets we compete in.

The markets we serve and operate in are highly competitive, subject to rapid change and characterized by a large number of participants, as described in "[Part I, Item 1, Business-Competition](#)." We compete on the basis of reputation and experience, strategic advisory capabilities, digital services capabilities, performance and reliability, responsiveness to customer needs, financial stability, corporate governance and competitive pricing of services. The less we are able to differentiate our services and solutions and/or clearly convey the value of our services and solutions, the more difficulty we have in winning new work in sufficient volumes and at our target pricing and overall economics. In addition to large, global competitors, we face competition in many geographic markets from numerous smaller, local competitors that may have more experience with operations in these markets, have well-established relationships with our desired clients, or be able to provide services and solutions at lower costs or on terms more attractive to clients than we can. Consolidation activity may also result in new competitors with greater scale, a broader footprint or vertical integration that makes them more attractive to clients as a single provider of integrated products and services. In addition, concurrent use by many clients of multiple professional service providers means that we are required to be continually competitive on the quality, scope and pricing of our offerings or face a reduction or elimination of our business. Competitors may also be willing, at times, to take on more risk or price contracts lower than us in an effort to enter the market or increase market share. If we are not able to supply clients with services that they deem superior and successfully apply current business models with market level pricing while managing discounts, we may lose business to competitors and face downward pressure on gross margins and profitability. Any inability to compete effectively would materially adversely affect our business, results of operations and financial condition.

Our relationships with our third party alliance partners, who supply us with necessary components to the services and solutions we offer our clients, are also critical to our ability to provide many of our services and solutions that address client demands. There can be no assurance that we will be able to maintain such relationships or that such components will be available on the expected timelines or for anticipated prices. Among other things, such alliance partners may in the future decide to compete with us, form exclusive or more favorable arrangements with our competitors or otherwise reduce our access to their products, thereby impairing our ability to provide the services and solutions demanded by clients. Any performance failure on the part of our alliance partners, or the discontinuance by such alliance partners of services that we have relied on them to perform for our clients, could delay our performance or require us to engage alternative third parties to perform the services at our cost or to perform them ourselves, any of which could deprive us of potential revenue or adversely impact our profitability.

Our competitiveness also depends on our ability to continue to develop and implement services and solutions that anticipate and respond to rapid and continuing changes in technology to serve the evolving needs of our clients. Examples of areas of significant change include digital-, cloud- and security-related offerings, which are continually evolving, as well as developments in areas such as AI, augmented reality, automation, blockchain, IoT, quantum computing and as-a-service solutions, among others. If we do not sufficiently invest in new technologies, successfully adapt to industry developments and changing demand, and evolve and expand our business at sufficient speed and scale to keep pace with the demands of the

markets we serve, we may be unable to develop and maintain a competitive advantage and execute on our growth strategy, which would materially adversely affect our business, results of operations and financial condition. In addition, our clients may delay spending under existing contracts and engagements or delay entering into new contracts while evaluating new technologies. Such delays can negatively impact our results of operations if we are unable to adapt our pricing or the pace and level of spending on new technologies is not sufficient to make up any shortfall. Further, as we expand into these areas, we may be exposed to operational, legal, regulatory, ethical, technological and other risks specific to such new areas, which may negatively affect our reputation and demand for our services and solutions.

We face legal, reputational and financial risks if we fail to protect client and/or Cognizant data from security breaches and/or cyberattacks.

In order to provide our services and solutions, we depend on global information technology networks and systems, to process, transmit, host and securely store electronic information (including our confidential information and the confidential information of our clients) and to communicate among our locations around the world and with our clients, suppliers and alliance partners (including numerous cloud service providers). Security breaches, employee malfeasance, or human or technological error create risks of shutdowns or disruptions of our operations and potential unauthorized access and/or disclosure of our or our clients' sensitive data, which in turn could jeopardize projects that are critical to our operations or the operations of our clients' businesses and have other adverse impacts on our business or the business of our clients.

In addition, the products, services and software that we provide to our clients, or the third-party components we use to provide such products, services and software, may unintentionally contain or introduce cybersecurity threats or vulnerabilities to our clients' information technology networks. Our clients may maintain their own proprietary, sensitive, or confidential information that could be compromised in a cybersecurity attack, or their systems may be disabled or disrupted as a result of such an attack. Our clients, regulators, or other third parties may attempt to hold us liable, through contractual indemnification clauses or directly, for any such losses or damages resulting from such an attack.

Like other global companies, we and our clients, suppliers, alliance partners (including numerous cloud service providers) and other vendors we interact with face threats to data and systems, including by nation state threat actors, insider threats (including inappropriate access), perpetrators of random or targeted malicious cyberattacks, computer viruses, malware, worms, bot attacks or other destructive or disruptive software and attempts to misappropriate client information and cause system failures and disruptions. For example, in April 2020, we announced a security incident involving a Maze ransomware attack. The attack resulted in unauthorized access to certain data and caused significant disruption to our business. In addition, Russia's invasion of Ukraine and associated international tensions have heightened the overall risk of cyber-threats and, while we have taken steps to mitigate such risks, those steps may not be successful.

A security compromise of our information systems, or of those of businesses with which we interact, that results in confidential information being accessed by unauthorized or improper persons, could harm our reputation and expose us to regulatory actions, up to and including criminal prosecution, client attrition due to reputational concerns or otherwise, containment and remediation expenses, and claims brought by our clients or others for breaching contractual confidentiality and security provisions or data protection laws. Monetary damages imposed on us could be significant and may impose costs in excess of insurance policy limits or not be covered by our insurance at all, and our insurers may not continue to provide coverage on reasonable terms or may disclaim coverage as to any future claims. Techniques used by bad actors to obtain unauthorized access, disable or degrade service, or sabotage systems continuously evolve and may not immediately produce signs of intrusion, and we may be unable to anticipate these techniques or to implement adequate preventative measures. In addition, a security breach could require that we expend substantial additional resources related to the security of our information systems, diverting resources from other projects and disrupting our businesses.

Our clients, suppliers, subcontractors, and other third parties with whom we do business, including in particular cloud service providers and software vendors, generally face similar cybersecurity threats, and we must rely on the safeguards adopted by these parties. If these third parties do not have adequate safeguards or their safeguards fail, it might result in breaches of our systems or applications and unauthorized access to or disclosure of our and our clients' confidential data. In addition, we are subject to vulnerabilities in third-party technology components we use in our business and are typically not aware of such vulnerabilities until we receive notice from the third parties who have created the exposure. Due to this delay, our responses to such vulnerabilities may not be adequate or prompt enough to prevent their exploitation.

Any remediation measures that we have taken or that we may undertake in the future in response to the security incident announced in April 2020 or other security threats may be insufficient to prevent future attacks or insufficient for us to quickly recover from any future attack to efficiently continue our business operations.

We are required to comply with increasingly complex and changing data security and privacy regulations in the United States, the EU, India and in other jurisdictions in which we operate. These laws regulate the collection, use and transfer of

personal data and can include significant financial penalties for noncompliance. Recent developments, including the new EU-U.S. Trans-Atlantic Data Privacy Framework, are expected to help secure the transfer of data from the EU to the United States. However, there remains significant regulatory uncertainty for businesses transferring data globally. This uncertainty results in increased compliance costs, as well as the risk of regulatory enforcement actions, which can result in such significant financial penalties, private lawsuits, reputational damage, blockage of international data transfers, disruption to business and loss of customers.

In the United States, federal sectoral laws, such as the Health Insurance Portability and Accountability Act, and comprehensive state legislation, such as the California Consumer Privacy Act of 2018, together with its successor, the California Privacy Rights Act (the “CPRA”) that went into effect on January 1, 2023, and similar legislation in several other states that is expected to take effect throughout 2023, impose or will impose extensive privacy requirements on organizations that handle personal data. Further, the regulations to implement the CPRA are expected to be finalized in 2023, and there is uncertainty regarding how the California Privacy Protection Agency will enforce the new law and regulations. Proposals for federal comprehensive privacy legislation continue and other new state comprehensive privacy laws are under consideration. The Indian Ministry of Information Technology released a new draft Digital Personal Data Protection Bill in November 2022 (“the 2022 Bill”), replacing the previously proposed Personal Data Protection Bill of 2019. The new 2022 Bill is designed to encourage growth in the technology sector; however, much detail (including on requirements for cross border transfers) has been left to subordinate legislation which will be prescribed by the executive arm of the government. As currently drafted, the bill limits penalties that can be imposed to 5 billion rupees or approximately \$60 million. Other countries have enacted or are considering enacting data localization laws that require certain data to stay within their borders. We may also face audits or investigations by one or more domestic or foreign government agencies or our clients pursuant to our contractual obligations relating to our compliance with these regulations. Complying with changing regulatory requirements requires us to incur substantial costs, exposes us to potential regulatory action or litigation, and may require changes to our business practices in certain jurisdictions, any of which could materially adversely affect our business operations and operating results.

Climate change and risks arising from the transition to a lower-carbon economy may impact our business.

There are inherent climate-related risks everywhere that we conduct our business. Developments related to regulatory, social or market dynamics, stakeholder expectations, national and international climate change policies, the actual or perceived frequency or intensity of extreme weather events or the availability and functionality of critical infrastructure and resources, in addition to other factors resulting from such developments or that may not otherwise be known to or anticipated by us, could significantly disrupt our supply chain, our clients' operations and our ability to deliver services. Such events could significantly increase our costs and expenses and harm our revenues, cash flows and financial performance. Further, natural disasters and adverse weather events, such as droughts, wildfires, storms, sea-level rise and flooding, occurring more frequently, with less predictability or with greater intensity, could cause community disruptions and impact our employees' abilities to commute or to work from home safely and effectively. For example, we have substantial global delivery operations in Chennai, India, a city that has experienced severe rains and related flooding. Our exposure to these economic and other risks from climate change could be exacerbated if government or market action to address climate change and its effects is insufficient or unsuccessful.

Failure or perception of failure to achieve our stated goal to lower or negate our greenhouse gas emissions or to mitigate climate risk to our business, or perception of a failure to act responsibly with respect to the environment, could lead to adverse publicity, adverse effects on our business or damage to our reputation.

In addition, governmental bodies, investors, clients, businesses, employees and potential employees are increasingly focused on ESG issues, including climate change, diversity and inclusion, human rights and supply-chain issues, which has resulted and may in the future continue to result in the adoption of new laws and regulations, reporting requirements and changing bid and buying practices. Further, we are expected to become increasingly subject to laws, regulations and international treaties relating to climate change, such as carbon pricing or product energy efficiency requirements. As these new laws, regulations, treaties and similar initiatives and programs are adopted and implemented, we will be required to comply or potentially face market access limitations, enforcement actions, civil suits or sanctions, including fines. If new laws or regulations are more stringent than current legal or regulatory requirements, we may experience increased compliance burdens and costs to meet such obligations. If we fail to comply with new laws, regulations, treaties, or reporting requirements or keep pace with ESG trends and developments or fail to meet the expectations of our clients and investors, our reputation and business could be adversely impacted.

If our risk management, business continuity and disaster recovery plans are not effective and our global delivery capabilities are impacted, our business and results of operations may be materially adversely affected and we may suffer harm to our reputation.

Our business model is dependent on our global delivery capabilities, which include coordination between our delivery centers in India, our other global and regional delivery centers, the offices of our clients and our associates worldwide. System failures, outages and operational disruptions may be caused by factors outside of our control, such as hostilities (including the ongoing conflict between Russia and Ukraine), political unrest, terrorist attacks, cybersecurity incidents, power or water shortages or telecommunications failures, natural or man-made disasters or other catastrophic events (including extreme weather conditions and other events that may be caused or exacerbated by climate change), and public health emergencies, epidemics and pandemics, affecting the geographies where our people, equipment and clients are located. Our risk management, business continuity and disaster recovery plans may not be effective at predicting or mitigating the effects of such disruptions, particularly in the case of catastrophic events or longer term, increasingly severe developments that occur as a result of climate change. Even if our operations are unaffected or recover quickly from any such events, if our clients cannot timely resume their own operations due to a catastrophic event, they may reduce or terminate our services, which may adversely affect our results of operations. Any such disruption may result in lost revenues, a loss of clients, liabilities relating to disruptions in service, expenditures to repair or replace damaged property and reputational damage, and could demand significant management time and attention, any of which would have an adverse effect on our business, results of operations and financial condition.

Legal, Regulatory and Legislative Risks

A substantial portion of our employees in the United States, United Kingdom, EU and other jurisdictions rely on visas to work in those areas such that any restrictions on such visas or immigration more generally or increased costs of obtaining such visas or increases in the wages we are required to pay employees on visas may affect our ability to compete for and provide services to clients in these jurisdictions, which could materially adversely affect our business, results of operations and financial condition.

A substantial portion of our employees in the United States and in many other jurisdictions, including countries in Europe, rely upon temporary work authorization or work permits, which makes our business particularly vulnerable to changes and variations in immigration laws and regulations, including written changes and policy changes to the manner in which the laws and regulations are interpreted or enforced, and potential enforcement actions and penalties that might cause us to lose access to such visas. The political environment in the United States, the United Kingdom and other countries in recent years has included significant support for anti-immigrant legislation and administrative changes. Many of these recent changes have resulted in, and various proposed changes may result in, increased difficulty in obtaining timely visas that could impact our ability to staff projects, including as a result of visa application rejections and delays in processing applications, and significantly increased costs for us in obtaining visas or as a result of prevailing wage requirements for our employees on visas. The current U.S. administration has continued to explore visa and immigration reform and there continues to be political support for potential new laws and regulations relating to visas or immigration and the implementation of these or similar measures in the future may have a material adverse impact on companies like ours that have a substantial percentage of our employees on visas. Our principal operating subsidiary in the United States utilizes a high number of skilled workers holding H-1B and L-1 visas and, as a result, may be subject to increased costs if any such laws, regulations, policy changes or executive orders go into effect. In the EU, many countries continue to implement new regulations to move into compliance with the EU Directive of 2014 to harmonize immigration rules for intracompany transferees in most EU member states and to facilitate the transfer of managers, specialists and graduate trainees both into and within the region. The changes have had significant impact on mobility programs and have led to new notification and documentation requirements for companies sending employees to EU countries. Recent changes or any additional adverse revisions to immigration laws and regulations in the jurisdictions in which we operate may cause us delays, staffing shortages, additional costs or an inability to bid for or fulfill projects for clients, any of which could have a material adverse effect on our business, results of operations and financial condition.

Anti-outsourcing legislation, if adopted, and negative perceptions associated with offshore outsourcing could impair our ability to serve our clients and materially adversely affect our business, results of operations and financial condition.

The practice of outsourcing services to organizations operating in other countries is a topic of political discussion in the United States, which is our largest market, as well as other regions in which we have clients. For example, in the United States, measures aimed at limiting or restricting the performance of services from an offshore location or imposing burdens on U.S. companies that utilize such services have been put forward for consideration at both the federal and state levels to address concerns over the perceived association between offshore outsourcing and the loss of jobs domestically. If any such measure is enacted in the United States or another region in which we have clients, our ability to provide services to our clients could be impaired.

In addition, from time to time there has been publicity about purported negative experiences associated with offshore outsourcing, such as alleged domestic job loss and theft and misappropriation of sensitive client data, particularly involving service providers in India. Current or prospective clients may elect to perform certain services themselves or may be discouraged from utilizing global service delivery providers like us due to negative perceptions that may be associated with using global service delivery models or firms. Any slowdown or reversal of existing industry trends toward global service delivery would seriously harm our ability to compete effectively with competitors that provide the majority of their services from within the country in which our clients operate.

We are subject to numerous and evolving legal and regulatory requirements and client expectations in the many jurisdictions in which we operate, and violations of, unfavorable changes in or an inability to meet such requirements or expectations could harm our business.

We provide services to clients and have operations in many parts of the world and in a wide variety of different industries, subjecting us to numerous, and sometimes conflicting, laws and regulations on matters as diverse as trade controls and sanctions, immigration (including temporary work authorizations or work permits), content requirements, trade restrictions, tariffs, taxation, antitrust laws, anti-money laundering and anti-corruption laws (including the FCPA and the U.K. Bribery Act), the environment, including climate change regulation and reporting requirements, government affairs, internal and disclosure control obligations, data privacy, intellectual property, employment and labor relations and human rights. We face significant regulatory compliance costs and risks as a result of the size and breadth of our business. For example, we may experience increased costs in 2023 and future years for employment and post-employment benefits in India as a result of the issuance of the Code on Social Security, 2020, which enhanced social security coverage (a portion of which is paid by the employer) and extended such benefits to all workers.

We are also subject to a wide range of potential enforcement actions, audits or investigations regarding our compliance with these laws or regulations in the conduct of our business, and any finding of a violation could subject us to a wide range of civil or criminal penalties, including fines, debarment, or suspension or disqualification from government contracting, prohibitions or restrictions on doing business in one or more jurisdictions, loss of clients and business, legal claims by clients and unfavorable publicity or damage to our reputation. We could also face significant compliance and operational burdens and incur significant costs in our efforts to comply with or rectify non-compliance with these laws or regulations. Such burdens or costs may result in an adverse effect on our financial condition and results of operations.

We commit significant financial and managerial resources to comply with our internal control over financial reporting requirements, but we have in the past identified and may in the future identify material weaknesses or significant deficiencies in our internal control over financial reporting that cause us to incur incremental remediation costs in order to maintain adequate controls. For example, we had to spend significant resources on conducting an internal investigation and cooperating with investigations by the DOJ and the SEC, both concluded in 2019, focused on whether certain payments relating to Company-owned facilities in India were made in violation of the FCPA and other applicable laws.

Our employees, subcontractors, vendors, agents, alliance partners, the companies we acquire and their employees, vendors and agents, and other third parties with which we associate, could take actions that violate policies or procedures designed to promote legal and regulatory compliance or applicable anticorruption laws or regulations. Violations of these laws or regulations by us, our employees or any of these third parties could subject us to criminal or civil enforcement actions (whether or not we participated or knew about the actions leading to the violations), including fines or penalties, disgorgement of profits and suspension or disqualification from work, including U.S. federal contracting, any of which could materially adversely affect our business, including our results of operations and our reputation.

Changes in tax laws or in their interpretation or enforcement, failure by us to adapt our corporate structure and intercompany arrangements or adverse outcomes of tax audits, investigations or proceedings could have a material adverse effect on our effective tax rate, results of operations and financial condition.

The interpretation of tax laws and regulations in the many jurisdictions in which we operate and the related tax accounting principles are complex and require considerable judgment to determine our income taxes and other tax liabilities worldwide. Tax laws and regulations affecting us and our clients, including applicable tax rates, and the interpretation and enforcement of such laws and regulations are subject to change as a result of economic, political and other factors, and any such changes or changes in tax accounting principles could increase our effective worldwide income tax rate and have a material adverse effect on our net income, cash flows and financial condition. We routinely review and update our corporate structure and intercompany arrangements, including transfer pricing policies, consistent with applicable laws and regulations, to align with our evolving business operations across the numerous jurisdictions, such as the United States, India and the United Kingdom, in which we operate. Failure to successfully adapt our corporate structure and intercompany arrangements to align with our

evolving business operations may increase our worldwide effective tax rate and have a material adverse effect on our earnings, cash flows and financial condition.

Our worldwide effective income tax rate may increase or our financial condition may be materially impacted as a result of developments, changes in interpretations and assumptions made, additional guidance that may be issued and ongoing and future actions the Company has or may take with respect to our corporate structure and intercompany arrangements. For example, our effective income tax rate and financial condition could be materially affected by the adoption and implementation of the Base Erosion and Profit Shifting project of the Organisation for Economic Cooperation and Development (OECD), composed of governments of various countries, many of which we do business in. Additionally, our cash flows could be materially affected by the issuance of additional interpretive guidance by the U.S. Treasury regarding the capitalization and amortization of research and experimental expenses for tax purposes, as more fully described in [Note 11](#) to the consolidated financial statements. While we currently do not believe that the Inflation Reduction Act of 2022 will have a material impact on us, any additional regulatory guidance which may be issued under this act may have a material impact on our tax rate and financial results.

Additionally, we are subject to routine tax audits, investigations and proceedings in various jurisdictions. Tax authorities have disagreed, and may in the future disagree, with our judgments, and are taking increasingly aggressive positions, including with respect to our intercompany transactions. For example, we are currently involved in an ongoing dispute with the ITD in which the ITD asserts that we owe additional taxes for two transactions by which CTS India repurchased shares from its shareholders, as more fully described in [Note 11](#) to the consolidated financial statements. We may not accurately predict the outcomes of these audits, investigations and proceedings and the amounts ultimately paid upon their resolution could be materially different from the amounts previously included in our income tax provision. Adverse outcomes in any such audits, investigations or proceedings could increase our tax exposure and cause us to incur increased expense, which could materially adversely affect our results of operations and financial condition.

Our business subjects us to considerable potential exposure to litigation and legal claims and could be materially adversely affected if we incur legal liability.

We are subject to, and may become a party to, a variety of litigation or other claims and suits that arise from time to time in the conduct of our business. Our business is subject to the risk of litigation involving current and former employees, clients, alliance partners, subcontractors, suppliers, competitors, shareholders, government agencies or others through private actions, class actions, whistleblower claims, administrative proceedings, regulatory actions or other litigation. While we maintain insurance for certain potential liabilities, such insurance does not cover all types and amounts of potential liabilities and is subject to various exclusions as well as deductibles and caps on amounts recoverable.

Our client engagements expose us to significant potential legal liability and litigation expense if we fail to meet our contractual obligations or otherwise breach obligations to third parties or if our subcontractors breach or dispute the terms of our agreements with them and impede our ability to meet our obligations to our clients. For example, third parties could claim that we or our clients, whom we typically contractually agree to indemnify with respect to the services and solutions we provide, infringe upon their IP rights. Any such claims of IP infringement could harm our reputation, cause us to incur substantial costs in defending ourselves, expose us to considerable legal liability or prevent us from offering some services or solutions in the future. We may have to engage in legal action to protect our own IP rights, and enforcing our rights may require considerable time, money and oversight, and existing laws in the various countries in which we provide services or solutions may offer only limited protection.

We also face considerable potential legal liability from a variety of other sources. Our acquisition activities have in the past and may in the future be subject to litigation or other claims, including claims from employees, clients, stockholders, or other third parties. We have also been the subject of a number of putative securities class action complaints and putative shareholder derivative complaints relating to the matters that were the subject of our now concluded internal investigation into potential violations of the FCPA and other applicable laws, and may be subject to such legal actions for these or other matters in the future. See "[Part I, Item 3. Legal Proceedings](#)" for more information. We establish reserves for these and other matters when a loss is considered probable and the amount can be reasonably estimated; however, the estimation of legal reserves and possible losses involves significant judgment and may not reflect the full range of uncertainties and unpredictable outcomes inherent in litigation, and the actual losses arising from particular matters may exceed our estimates and materially adversely affect our results of operations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We have operations in major metro areas across nearly 50 countries around the world, with our worldwide headquarters located in a leased facility in Teaneck, New Jersey in the United States. We utilize a global delivery model with delivery centers worldwide, including in-country, regional and global delivery centers. We have over 28 million square feet of owned and leased facilities for our delivery centers. Our largest delivery center presence is in India, representing 87% of our total delivery centers on a square-foot basis, with the largest presence in Chennai (10 million square feet), Hyderabad (4 million square feet), Pune (3 million square feet), Kolkata (3 million square feet) and Bangalore (2 million square feet). We also have a significant number of delivery centers in other countries, including the United States, Philippines, Germany, Canada, Mexico and countries throughout Europe. In addition, we have sales and marketing offices, innovation labs, and digital design and consulting centers in major business markets, including New York, London, Paris, Melbourne, and Singapore, among others, which are used to support our clients across all four of our reportable business segments.

We believe our current facilities are adequate to support our operations in the immediate future, and that we will be able to obtain suitable additional facilities on commercially reasonable terms as needed.

Item 3. Legal Proceedings

See [Note 15](#) to our consolidated financial statements.

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

Our Class A common stock trades on the Nasdaq Stock Market under the symbol "CTSH." As of December 31, 2022, the number of holders of record of our Class A common stock was 106 and the approximate number of beneficial holders of our Class A common stock was 501,800.

Cash Dividends

During 2022, we paid quarterly cash dividends of \$0.27 per share, or \$1.08 per share in total for the year. In February 2023, our Board of Directors approved a cash dividend of \$0.29 per share with a record date of February 17, 2023 and a payment date of February 28, 2023. We intend to continue to pay quarterly cash dividends in accordance with our capital allocation framework. Future dividend payments depend on a variety of factors, including our cash flow generated from operations, cash and investment balances, net income, overall liquidity position, potential alternative uses of cash, such as acquisitions, and anticipated future economic conditions and financial results.

Issuer Purchases of Equity Securities

Our stock repurchase program, as amended in November 2022, allows for the repurchase of up to \$11.5 billion, excluding fees and expenses, of our Class A common stock through open market purchases, including under a 10b5-1 Plan or in private transactions, including through ASR agreements entered into with financial institutions, in accordance with applicable federal securities laws. The repurchase program does not have an expiration date. The timing of repurchases and the exact number of shares to be purchased are determined by management, in its discretion, or pursuant to a 10b5-1 Plan, and will depend upon market conditions and other factors.

During the three months ended December 31, 2022, we repurchased \$300 million of our Class A common stock under our stock repurchase program. The following table sets out the stock repurchase activity under our stock repurchase program during the fourth quarter of 2022 and the approximate dollar value of shares that may yet be purchased under the program as of December 31, 2022.

Month	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased under the Plans or Programs (in millions)
October 1, 2022 - October 31, 2022	—	\$ —	—	\$ 1,075
November 1, 2022 - November 30, 2022	2,759,018	58.24	2,759,018	2,914
December 1, 2022 - December 31, 2022	2,397,159	58.12	2,397,159	2,775
Total	5,156,177	\$ 58.18	5,156,177	

We regularly purchase shares in connection with our stock-based compensation plans as shares of our Class A common stock are tendered by employees for payment of applicable statutory tax withholdings. For the three months ended December 31, 2022, we purchased 0.2 million shares at an aggregate cost of \$15 million in connection with employee tax withholding obligations.

Recent Sales of Unregistered Securities


None.

Performance Graph

The following graph compares the cumulative total stockholder return on our Class A common stock with the cumulative total return on the S&P 500 Index and the S&P 500 Information Technology Index for the period beginning December 31, 2017 and ending on the last day of our last completed fiscal year. The stock performance shown on the graph below is not indicative of future price performance.

COMPARISON OF CUMULATIVE TOTAL RETURN⁽¹⁾⁽²⁾
Among Cognizant, the S&P 500 Index and the S&P 500 Information Technology Index

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Company / Index	Base Period 12/31/17	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22
Cognizant Technology Solutions Corp	\$ 100	\$ 90.34	\$ 89.37	\$ 119.69	\$ 131.22	\$ 85.90
S&P 500 Index	100	95.62	125.72	148.85	191.58	156.88
S&P 500 Information Technology Index	100	99.71	149.86	215.63	290.08	208.30

(1) Graph assumes \$100 invested on December 31, 2017 in our Class A common stock, the S&P 500 Index and the S&P 500 Information Technology Index.

(2) Cumulative total return assumes reinvestment of dividends.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Executive Summary

Cognizant is one of the world's leading professional services companies, engineering modern businesses and delivering strategic outcomes for our clients. We help clients modernize technology, reimagine processes and transform experiences so they can stay ahead in a fast-changing world. We tailor our services and solutions to specific industries with an integrated global delivery model that employs client service and delivery teams based at client locations and dedicated global and regional delivery centers. Our services include digital services and solutions, consulting, application development, systems integration, quality engineering and assurance, application maintenance, infrastructure and security as well as business process services and automation. Digital services continue to be an important part of our portfolio, aligning with our clients' focus on becoming data-enabled, customer-centric and differentiated businesses.

2022 Financial Results

Revenues	Income from Operations	Operating Margin	Diluted EPS
ctsh-20221231_g4.jpg	ctsh-20221231_g5.jpg	ctsh-20221231_g6.jpg	ctsh-20221231_g7.jpg
	GAAP Adjusted ¹	GAAP Adjusted ¹	GAAP Adjusted ¹
Revenue up \$921 million or 5.0% from 2021; 7.5% in constant currency ¹	Income from Operations up \$142 million or 5.0% from 2021 Adjusted Income from Operations ¹ up \$122 million or 4.3% from 2021	Operating margin flat compared to 2021 Adjusted Operating Margin ¹ down 10 basis points from 2021	Diluted EPS up \$0.36 or 8.9% from 2021 Adjusted Diluted EPS ¹ up \$0.28 or 6.8% from 2021

During the year ended December 31, 2022, revenues increased by \$921 million as compared to the year ended December 31, 2021, representing growth of 5.0%, or 7.5% on a constant currency basis¹. Our recently completed acquisitions contributed 100 basis points to revenue growth while the previously disclosed sale of the Samlink subsidiary, which was completed on February 1, 2022, negatively impacted revenue growth by 60 basis points.

Revenue growth was strongest in our Communications, Media and Technology and Products and Resources segments. Revenues in our Financial Services segment reflect the negative impact of the previously disclosed sale of the Samlink subsidiary, which was completed on February 1, 2022. For further details, see the "Revenues - Reportable Business Segments" section within the [Results of Operations](#).

Revenue growth was driven by our clients' continued adoption and integration of digital technologies as well as pricing improvements but was negatively impacted by challenges attracting and retaining personnel and slowing demand for our services through the second half of 2022. For the year ended December 31, 2022, our attrition, including both voluntary and involuntary, was 31.7% as compared to 30.8% for the year ended December 31, 2021. For the three months ended December 31, 2022, our annualized attrition rate, including both voluntary and involuntary, was 25.3% as compared to 34.6% for the three months ended December 31, 2021. Attrition and hiring challenges have also resulted in increased cost of delivery.

¹ Adjusted Income From Operations, Adjusted Operating Margin, Adjusted Diluted EPS and constant currency revenue growth are not measurements of financial performance prepared in accordance with GAAP. See "Non-GAAP Financial Measures" for more information and reconciliations to the most directly comparable GAAP financial measures.

Our operating margin and Adjusted Operating Margin² were each 15.3% for the year ended December 31, 2022. Our 2022 operating margin was positively impacted by economies of scale that allowed us to leverage our cost structure over a larger organization, delivery efficiencies, pricing improvements and the depreciation of the Indian rupee against the U.S. dollar, partially offset by increased compensation costs for our delivery personnel (including employees and subcontractors) as well as a 30 basis point negative impact due to the impairment of certain capitalized costs related to a large volume-based contract with a Health Sciences client. Our 2021 GAAP operating margin was negatively impacted by the Class Action Settlement Loss, which was excluded from our Adjusted Operating Margin² in 2021.

Business Outlook

See "Overview" within [Part I, Item 1. Business](#) for information on our four strategic priorities.

We expect clients to continue to contend with industry-specific changes driven by evolving digital technologies, uncertainty in the regulatory environment, industry consolidation and convergence as well as international trade policies and other macroeconomic factors, including the increasing uncertainty related to the global economy, which could affect their demand for our services.

As a global professional services company, we compete on the basis of the knowledge, experience, insights, skills and talent of our employees and the value they can provide to our clients. Our success is dependent, in large part, on our ability to keep our supply of skilled employees, in particular those with experience in key digital areas, in balance with client demand. Competition for skilled employees in the current labor market is intense and in 2021 and 2022, we experienced significantly elevated voluntary attrition. We saw improvement in our annualized attrition rate for the three months ended December 31, 2022 and we expect our annualized attrition rate for the first quarter of 2023 to be lower than our full year 2022 rate. Attrition can be difficult to predict as it is impacted by both macroeconomic and internal factors. Challenges attracting and retaining personnel have negatively impacted and may continue to negatively impact cost of delivery and our ability to satisfy client demand. Further, our ongoing and anticipated future efforts with respect to recruitment, talent management and employee engagement may not be successful and may continue to result in increased compensation costs. While we strive to adjust pricing to reduce the impact of compensation increases on our operating margin, we may not be successful in fully recovering these increases, which could adversely affect our profitability.

The invasion of Ukraine by Russia and the sanctions and other measures being imposed in response to this conflict have increased the level of economic and political uncertainty worldwide. We do not have employees, facilities or significant operations in either Russia or Ukraine and revenues generated from clients in both countries were immaterial in both 2021 and 2022. However, the continuation of the hostilities or the expansion of the current conflict's scope into surrounding geographic areas could impact us or our clients, vendors or subcontractors, which could in turn impact our operations and financial performance. We continue to monitor the situation closely to ensure business continuity plans are in place for neighboring countries where we have a presence.

Our future results may be affected by potential tax law changes and other potential regulatory changes, including possible U.S. corporate income tax reform and potentially increased costs for employment and post-employment benefits in India as a result of the Code on Social Security, 2020. For additional information, see [Part I, Item 1A, Risk Factors](#).

² Adjusted Operating Margin is not a measurement of financial performance prepared in accordance with GAAP. See "Non-GAAP Financial Measures" for more information and reconciliation to the most directly comparable GAAP financial measures.

Results of Operations

For a discussion of our results of operations for the year ended December 31, 2020, including a year-to-year comparison between 2021 and 2020, refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report Form 10-K for the year ended December 31, 2021.

The Year Ended December 31, 2022 Compared to The Year Ended December 31, 2021

The following table sets forth certain financial data for the years ended December 31:

(Dollars in millions, except per share data)	2022	% of Revenues	2021	% of Revenues	Increase / Decrease	
					\$	%
Revenues	\$ 19,428	100.0	\$ 18,507	100.0	\$ 921	5.0
Cost of revenues ^(a)	12,448	64.1	11,604	62.7	844	7.3
Selling, general and administrative expenses ^(a)	3,443	17.7	3,503	18.9	(60)	(1.7)
Depreciation and amortization expense	569	2.9	574	3.1	(5)	(0.9)
Income from operations	2,968	15.3	2,826	15.3	142	5.0
Other income (expense), net	48		1		47	*
Income before provision for income taxes	3,016	15.5	2,827	15.3	189	6.7
Provision for income taxes	(730)		(693)		(37)	5.3
Income (loss) from equity method investments	4		3		1	33.3
Net income	\$ 2,290	11.8	\$ 2,137	11.5	\$ 153	7.2
Diluted EPS	\$ 4.41		\$ 4.05		\$ 0.36	8.9
<i>Other Financial Information</i> ³						
Adjusted Income From Operations and Adjusted Operating Margin	\$ 2,968	15.3	\$ 2,846	15.4	\$ 122	4.3
Adjusted Diluted EPS	\$ 4.40		\$ 4.12		\$ 0.28	6.8

(a) Exclusive of depreciation and amortization expense

* Not meaningful

Revenues - Overall

During 2022, revenues increased by \$921 million as compared to 2021, representing growth of 5.0%, or 7.5% on a constant currency basis³. Our recently completed acquisitions contributed 100 basis points to revenue growth while the previously disclosed sale of the Samlink subsidiary, which was completed on February 1, 2022, negatively impacted revenue growth by 60 basis points. Revenue growth was driven by our clients' continued adoption and integration of digital technologies as well as pricing improvements but was negatively impacted by challenges attracting and retaining personnel and slowing demand for our services through the second half of 2022. Revenues from clients added during 2022 were \$172 million.

³ Adjusted Income From Operations, Adjusted Operating Margin, Adjusted Diluted EPS and constant currency revenue growth are not measurements of financial performance prepared in accordance with GAAP. See "Non-GAAP Financial Measures" for more information and reconciliations to the most directly comparable GAAP financial measures, as applicable.

Revenues - Reportable Business Segments

The following charts set forth revenues and change in revenues by reportable business segment and geography for the year ended December 31, 2022 as compared to the year ended December 31, 2021:

Financial Services					Health Sciences			
Dollars in millions	Revenues	Increase / (Decrease)			Revenues	Increase / (Decrease)		
		\$	%	CC % ⁴		\$	%	CC % ⁴
North America	\$ 4,312	108	2.6	2.8	\$ 4,853	282	6.2	6.2
United Kingdom	599	52	9.5	18.6	171	3	1.8	10.5
Continental Europe	590	(155)	(20.8)	(13.0)	483	6	1.3	10.0
Europe - Total	1,189	(103)	(8.0)	0.4	654	9	1.4	10.1
Rest of World	571	16	2.9	8.4	124	3	2.5	11.6
Total	\$ 6,072	21	0.3	2.8	\$ 5,631	294	5.5	6.8

Products and Resources					Communications, Media and Technology			
Dollars in millions	Revenues	Increase / (Decrease)			Revenues	Increase / (Decrease)		
		\$	%	CC % ⁴		\$	%	CC % ⁴
North America	\$ 3,078	141	4.8	5.0	\$ 2,192	268	13.9	14.0
United Kingdom	521	50	10.6	22.7	519	63	13.8	26.3
Continental Europe	585	46	8.5	21.1	137	(21)	(13.3)	(2.6)
Europe - Total	1,106	96	9.5	21.8	656	42	6.8	18.8
Rest of World	382	53	16.1	20.8	311	6	2.0	9.5
Total	\$ 4,566	290	6.8	10.2	\$ 3,159	316	11.1	14.6

Financial Services - revenues increased 0.3%, or 2.8% on a constant currency basis⁴

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Banking ↓ \$97M
Insurance ↑ \$118M

Revenue growth reflected the growing demand for digital services among U.S. regional banks, public sector clients in the United Kingdom and insurance clients. The previously disclosed sale of the Samlink subsidiary, which was completed on February 1, 2022, negatively impacted revenue growth in this segment by 170 basis points, or \$104 million. Revenues from clients added since December 31, 2021 were \$26 million.

Health Sciences - revenues increased 5.5%, or 6.8% on a constant currency basis⁴

Effective in the second quarter of 2022, we combined the healthcare operating segment with the life sciences operating segment and renamed our Healthcare reportable business segment to Health Sciences. See [Note 18](#) to our consolidated financial statements for additional information.

Revenue growth was driven by increased demand for digital services among healthcare and pharmaceutical clients. Revenues from clients added since December 31, 2021 were \$23 million.

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↑ \$294M

⁴ Constant currency revenue growth is not a measurement of financial performance prepared in accordance with GAAP. See "Non-GAAP Financial Measures" for more information.

Products and Resources - revenues increased 6.8%, or 10.2% on a constant currency basis⁵

	Manufacturing, Logistics, Energy and Utilities	↑	\$151M	Revenue growth in this segment was primarily driven by demand for our digital services among automotive, logistics, utilities, consumer goods and travel and hospitality clients. Revenue growth in this segment included approximately 200 basis points related to recently completed acquisitions. Revenues from clients added since December 31, 2021 were \$54 million.
	Retail and Consumer Goods	↑	\$78M	
	Travel and Hospitality	↑	\$61M	

Communications, Media and Technology - revenues increased 11.1%, or 14.6% on a constant currency basis⁵

In 2022, we combined the communications and media operating segment with the technology operating segment. See [Note 18](#) to our consolidated financial statements for additional information.

Revenues in this segment reflected growing demand from our technology clients for services related to digital content, primarily driven by the largest clients in this segment, as well as demand for personalized user experiences and data modernization. Revenues from clients added since December 31, 2021 were \$69 million.

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s - Geographic Markets

Revenues of \$19,428 million by geographic market were as follows for the year ended December 31, 2022:

ctsh-20221231_g12.jpg	2022 as compared to 2021			Increase / (Decrease)		
	(Dollars in millions)			\$	%	CC % ⁵
	North America			799	5.9	6.0
	United Kingdom			168	10.2	21.1
	Continental Europe			(124)	(6.5)	3.1
	Europe - Total			44	1.2	11.4
	Rest of World			78	6.0	12.1
	Total revenues			921	5.0	7.5

North America continues to be our largest market, representing 74.3% of total revenues for the year ended December 31, 2022. Outside of our North America region, revenues were negatively impacted by foreign currency exchange rate movements. Constant currency revenue growth in the United Kingdom was strong among Communications, Media and Technology clients, Products and Resources clients and Financial Services clients, including certain public sector clients. Constant currency revenue growth in the Continental Europe region was driven by growth in the German market, which benefited from an acquisition that closed in the first half of 2021 and strong demand from our pharmaceutical clients, partially offset by a negative 540 basis point, or \$104 million, impact from the previously disclosed sale of the Samlink subsidiary, which was completed on February 1, 2022. Constant currency revenue growth in the Rest of World region was primarily driven by the Australian market, which benefited from an acquisition that closed in the first half of 2021.

⁵ Constant currency revenue growth is not a measurement of financial performance prepared in accordance with GAAP. See “Non-GAAP Financial Measures” for more information.

Cost of Revenues (Exclusive of Depreciation and Amortization Expense)

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- ↑ \$844M
- ↑ 1.4% as a % of revenue
- % of Revenues

Our cost of revenues consists primarily of salaries, incentive-based compensation, stock-based compensation expense, employee benefits, project-related immigration and travel for technical personnel, subcontracting and equipment costs relating to revenues. The increase, as a percentage of revenues, was due to higher compensation costs for delivery personnel (including employees and subcontractors) as well as a 30 basis point negative impact due to the impairment of certain capitalized costs related to a large volume-based contract with a Health Sciences client, partially offset by delivery efficiencies and the depreciation of the Indian rupee against the U.S. dollar. Challenges attracting and retaining highly qualified personnel have resulted in higher compensation costs.

SG&A Expenses (Exclusive of Depreciation and Amortization Expense)

SG&A expenses consist primarily of salaries, incentive-based compensation, stock-based compensation expense, employee benefits, immigration, travel, marketing, communications, management, finance, administrative and occupancy costs. The decrease, as a percentage of revenues, was primarily due to economies of scale that allowed us to leverage our cost structure over a larger organization, the beneficial impact of foreign currency exchange rate movements and the optimization of non-strategic SG&A expenses.

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- ↓ \$60M
- ↓ 1.2% as a % of revenue
- % of Revenues

Depreciation and Amortization Expense

Depreciation and amortization expense decreased by 0.2%, as a percentage of revenue in 2022 as compared to 2021 primarily due to scale, as the expense remained relatively flat while revenues increased.

Operating Margin and Adjusted Operating Margin⁶ - Overall

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Our 2022 operating margin was positively impacted by economies of scale that allowed us to leverage our cost structure over a larger organization, delivery efficiencies and the depreciation of the Indian rupee against the U.S. dollar, partially offset by increased compensation costs for our delivery personnel (including employees and subcontractors) as well as a 30 basis point negative impact due to the impairment of certain capitalized costs related to a large volume-based contract with a Health Sciences client. Our 2021 GAAP operating margin was negatively impacted by the Class Action Settlement Loss, which was excluded from our Adjusted Operating Margin⁶ in 2021.

⁶ Adjusted Income From Operations and Adjusted Operating Margin are not measurements of financial performance prepared in accordance with GAAP. See “Non-GAAP Financial Measures” for more information and reconciliations to the most directly comparable GAAP financial measures, as applicable.

A predominant portion of our costs in India are denominated in the Indian rupee, representing approximately 23.5% of our global operating costs during the year ended December 31, 2022. These costs are subject to foreign currency exchange rate fluctuations, which have an impact on our results of operations. We enter into foreign exchange derivative contracts to hedge certain Indian rupee denominated payments in India. These hedges are intended to mitigate the volatility of the changes in the exchange rate between the U.S. dollar and the Indian rupee. Net of the impact of the hedges, the depreciation of the Indian rupee contributed 73 basis points to the improvement in our operating margin for the year ended December 31, 2022 as compared to December 31, 2021.

Excluding the impact of applicable designated cash flow hedges, the depreciation of the Indian rupee against the U.S. dollar positively impacted our operating margin by approximately 115 basis points in 2022, while in 2021 the appreciation of the Indian rupee against the U.S. dollar negatively impacted our operating margin by approximately 5 basis points. Each additional 1.0% change in exchange rate between the Indian rupee and the U.S. dollar will have the effect of moving our operating margin by approximately 18 basis points (excluding the impact of our cash flow hedges). In 2022, the settlement of our cash flow hedges negatively impacted our operating margin by approximately 7 basis points, compared to a positive impact of 35 basis points in 2021.

We finished the year ended December 31, 2022 with approximately 355,300 employees as compared to 330,600 employees for the year ended December 31, 2021. Annualized attrition, including both voluntary and involuntary, was approximately 25.3% for the three months ended December 31, 2022. Attrition, including both voluntary and involuntary, was approximately 31.7% for the year ended December 31, 2022.

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* Annualized attrition

Segment Operating Profit

In 2022, we made certain changes to the internal measurement of segment operating profit for the purpose of evaluating segment performance and resource allocation. The primary reason for the change was to charge to the segments the costs that they directly manage and control. Specifically, segment operating profit now includes costs related to non-delivery personnel that support consulting services, which were previously included in "unallocated costs." We have reported 2022 segment operating profits using the new allocation methodology and have recast the 2021 results to conform to the new methodology. Segment operating profit and operating margin percentage were as follows:

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Segment operating profit

%

Segment operating margin

In 2022, segment operating margins benefited from delivery efficiencies and the depreciation of the Indian rupee against the U.S. dollar offset by increased compensation costs for delivery personnel (including employees and subcontractors). The 2022 Health Sciences segment operating margin was negatively affected by the impairment of certain capitalized costs related to a large volume-based contract with a Health Sciences client, investments to support revenue growth and elevated pricing pressure.

Total segment operating profit was as follows for the year ended December 31:

(Dollars in millions)	2022	% of Revenues	2021	% of Revenues	Increase
Total segment operating profit	\$ 5,746	29.6	\$ 5,460	29.5	\$ 286
Less: unallocated costs	2,778	14.3	2,634	14.2	144
Income from operations	\$ 2,968	15.3	\$ 2,826	15.3	\$ 142

Other Income (Expense), Net

Total other income (expense), net consists primarily of foreign currency exchange gains and losses, interest income and interest expense. The following table sets forth total other income (expense), net for the years ended December 31:

(in millions)	2022	2021	Increase / Decrease
Foreign currency exchange (losses)	\$ (16)	\$ (33)	\$ 17
Gains on foreign exchange forward contracts not designated as hedging instruments	23	13	10
Foreign currency exchange gains (losses), net	7	(20)	27
Interest income	59	30	29
Interest expense	(19)	(9)	(10)
Other, net	1	—	1
Total other income (expense), net	\$ 48	\$ 1	\$ 47

The foreign currency exchange losses were attributed to the remeasurement of net monetary assets and liabilities denominated in currencies other than the functional currencies of our subsidiaries. The gains on foreign exchange forward contracts not designated as hedging instruments related to the realized and unrealized gains and losses on contracts entered into to offset our foreign currency exposures. As of December 31, 2022, the notional value of our undesignated hedges was \$1,433 million. The increase in interest income and interest expense was each primarily attributable to higher interest rates in the current period.

Provision for Income Taxes

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↑ \$37M

○ Effective Income Tax Rate
↓ 0.3%

The effective income tax rate in 2022 decreased as compared to the 2021 period primarily due to higher discrete tax benefits in 2022, such as the recognition in the third quarter of 2022 of an income tax benefit of \$36 million related to a specific uncertain tax position that was previously unrecognized in our prior-year consolidated financial statements and the impact of depreciation of the Indian rupee against the U.S. dollar on our undistributed foreign earnings, partially offset by changes in the geographic mix of taxable income. See [Note 11](#) to our consolidated financial statements for additional information.

Net Income

The increase in net income was primarily driven by higher income from operations.

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↑ \$153M

○ % of Revenues

Non-GAAP Financial Measures

Portions of our disclosure include non-GAAP financial measures. These non-GAAP financial measures are not based on any comprehensive set of accounting rules or principles and should not be considered a substitute for, or superior to, financial measures calculated in accordance with GAAP, and may be different from non-GAAP financial measures used by other companies. In addition, these non-GAAP financial measures should be read in conjunction with our financial statements prepared in accordance with GAAP. The reconciliations of non-GAAP financial measures to the corresponding GAAP measures set forth below should be carefully evaluated.

Our non-GAAP financial measures Adjusted Operating Margin and Adjusted Income From Operations exclude unusual items, such as the Class Action Litigation Settlement in 2021. Our non-GAAP financial measure Adjusted Diluted EPS excludes unusual items, such as the Class Action Litigation Settlement in 2021 and the effect of recognition in the third quarter of 2022 of an income tax benefit related to a specific uncertain tax position that was previously unrecognized in our prior-year consolidated financial statements, net non-operating foreign currency exchange gains or losses and the tax impact of all the applicable adjustments. The income tax impact of each item excluded from Adjusted Diluted EPS is calculated by applying the statutory rate and local tax regulations in the jurisdiction in which the item was incurred. Constant currency revenue growth is

defined as revenues for a given period restated at the comparative period's foreign currency exchange rates measured against the comparative period's reported revenues. Free cash flow is defined as cash flows from operating activities net of purchases of property and equipment.

We believe providing investors with an operating view consistent with how we manage the Company provides enhanced transparency into our operating results. For internal management reporting and budgeting purposes, we use various GAAP and non-GAAP financial measures for financial and operational decision-making, to evaluate period-to-period comparisons, to determine portions of the compensation for executive officers and for making comparisons of our operating results to those of our competitors. We believe that the presentation of non-GAAP financial measures, which exclude certain costs, read in conjunction with our reported GAAP results and reconciliations to the most comparable GAAP measure, as applicable, can provide useful supplemental information to our management and investors regarding financial and business trends relating to our financial condition and results of operations.

A limitation of using non-GAAP financial measures versus financial measures calculated in accordance with GAAP is that non-GAAP financial measures do not reflect all of the amounts associated with our operating results as determined in accordance with GAAP and may exclude costs that are recurring such as net non-operating foreign currency exchange gains or losses. In addition, other companies may calculate non-GAAP financial measures differently than us, thereby limiting the usefulness of these non-GAAP financial measures as a comparative tool. We compensate for these limitations by providing specific information regarding the GAAP amounts excluded from non-GAAP financial measures to allow investors to evaluate such non-GAAP financial measures.

The following table presents a reconciliation of each non-GAAP financial measure to the most comparable GAAP measure, as applicable, for the years ended December 31:

(Dollars in millions, except per share data)	2022	% of Revenues	2021	% of Revenues
GAAP income from operations and operating margin	\$ 2,968	15.3 %	\$ 2,826	15.3 %
Class Action Settlement Loss ⁽¹⁾	—	—	20	0.1
Adjusted Income From Operations and Adjusted Operating Margin	\$ 2,968	15.3 %	\$ 2,846	15.4 %
GAAP diluted EPS	\$ 4.41		\$ 4.05	
Effect of above adjustments, pre-tax	—		0.04	
Effect of non-operating foreign currency exchange losses (gains), pre-tax ⁽²⁾	(0.01)		0.03	
Tax effect of above adjustments ⁽³⁾	0.07		—	
Effect of recognition of income tax benefit related to an uncertain tax position ⁽⁴⁾	(0.07)		—	
Adjusted Diluted EPS	\$ 4.40		\$ 4.12	
Net cash provided by operating activities	\$ 2,568		\$ 2,495	
Purchases of property and equipment	(332)		(279)	
Free cash flow	\$ 2,236		\$ 2,216	

(1) During 2021, we recorded a Class Action Settlement Loss in "Selling, general and administrative expenses" in our consolidated financial statements. For further information, see "Note 15 - Commitments and Contingencies" in the notes to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021.

(2) Non-operating foreign currency exchange gains and losses, inclusive of gains and losses on related foreign exchange forward contracts not designated as hedging instruments for accounting purposes, are reported in "Foreign currency exchange gains (losses), net" in our consolidated statements of operations.

(3) Presented below are the tax impacts of each of our non-GAAP adjustments to pre-tax income for the years ended December 31:

(in millions)	2022	2021
Non-GAAP income tax benefit (expense) related to:		
Class Action Settlement Loss	\$ —	6
Foreign currency exchange gains and losses	(39)	(5)

The effective tax rate related to non-operating foreign currency exchange gains and losses varies depending on the jurisdictions in which such income and expenses are generated and the statutory rates applicable in those jurisdictions. As such, the income tax effect of non-operating foreign currency exchange gains and losses shown in the above table may not appear proportionate to the net pre-tax foreign currency exchange gains and losses reported in our consolidated statements of operations.

- (4) During the three months ended September 30, 2022, we recognized an income tax benefit of \$36 million related to a specific uncertain tax position that was previously unrecognized in our prior-year consolidated financial statements. The recognition of the benefit in the third quarter of 2022 was based on management's reassessment regarding whether this unrecognized tax benefit met the more-likely-than-not threshold in light of the lapse in the statute of limitations as to a portion of such benefit.

Liquidity and Capital Resources

Cash generated from operations has historically been our primary source of liquidity to fund operations and investments to grow our business. As of December 31, 2022, we had cash, cash equivalents and short-term investments of \$2,501 million. Additionally, as of December 31, 2022, we had available capacity under our credit facilities of approximately \$2,000 million.

The following table provides a summary of our cash flows for the years ended December 31:

(in millions)	2022	2021	Increase / Decrease
Net cash provided by (used in):			
Operating activities	\$ 2,568	\$ 2,495	\$ 73
Investing activities	(106)	(2,164)	2,058
Financing activities	(1,939)	(1,203)	(736)
<i>Other Cash Flow Information⁷</i>			
Free cash flow	2,236	2,216	20

Operating activities

The increase in cash provided by operating activities in 2022 compared to 2021 was primarily driven by higher income from operations.

We monitor turnover, aging and the collection of trade accounts receivable by client. Our DSO calculation includes trade accounts receivable, net of allowance for credit losses, and contract assets, reduced by the uncollected portion of our deferred revenue. DSO was 74 days as of December 31, 2022 and 69 days as of December 31, 2021.

Investing activities

The decrease in cash used in investing activities in 2022 compared to 2021 was primarily driven by net maturities of investments in 2022 as compared to net purchases of investments in 2021 as well as lower payments for business combinations in 2022.

Financing activities

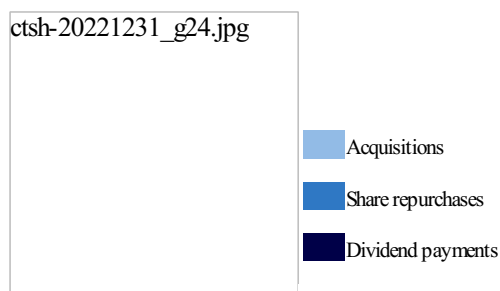
The increase in cash used in financing activities in 2022 compared to 2021 was primarily driven by higher repurchases of common stock.

In October 2022, we completed a debt refinancing and entered into the New Credit Agreement with a commercial bank syndicate providing for a \$650 million New Term Loan and a \$1,850 million unsecured revolving credit facility, which are each due to mature in October 2027. The Credit Agreement was terminated upon the closing of the New Credit Agreement and the proceeds from the New Term Loan were used primarily to repay our outstanding Term Loan balance. We are required under the New Credit Agreement to make scheduled quarterly principal payments on the New Term Loan beginning in December 2023. See [Note 10](#) to our consolidated financial statements. We believe that we currently meet all conditions set forth in the New Credit Agreement to borrow thereunder, and we are not aware of any conditions that would prevent us from borrowing part or all of the remaining available capacity under the revolving credit facility as of December 31, 2022 and through the date of this filing. As of December 31, 2022, we had no outstanding balance on our revolving credit facility.

⁷ Free cash flow is not a measurement of financial performance prepared in accordance with GAAP. See "Non-GAAP Financial Measures" for more information.

In March 2022, our India subsidiary renewed its one-year 13 billion Indian rupee (\$157 million at the December 31, 2022 exchange rate) working capital facility, which requires us to repay any balances drawn down within 90 days from the date of disbursement. There is a 1.0% prepayment penalty applicable to payments made within 30 days of disbursement. This working capital facility contains affirmative and negative covenants and is renewable annually. As of December 31, 2022, there was no balance outstanding under the working capital facility.

Capital Allocation Framework



Our capital allocation framework anticipates the deployment of approximately 50% of our free cash flow⁸ for acquisitions, 25% for share repurchases and 25% for dividend payments. We review our capital allocation on an ongoing basis, considering our financial performance and liquidity position, investments required to execute our strategic plans and initiatives, acquisition opportunities, the economic outlook, regulatory changes and other relevant factors. As these factors may change over time, the actual amounts expended on stock repurchase activity, dividends, and acquisitions, if any, during any particular period cannot be predicted and may fluctuate from time to time.

Other Liquidity and Capital Resources Information

We seek to ensure that our worldwide cash is available in the locations in which it is needed. As part of our ongoing liquidity assessments, we regularly monitor the mix of our domestic and international cash flows and cash balances. We evaluate on an ongoing basis what portion of the non-U.S. cash, cash equivalents and short-term investments is needed locally to execute our strategic plans and what amount is available for repatriation back to the United States.

We expect operating cash flows, cash and short-term investment balances, together with the available capacity under our revolving credit facilities, to be sufficient to meet our operating requirements, including purchase commitments, tax payments, including Tax Reform Act transition tax payments, and servicing our debt for the next twelve months. Our Tax Reform Act transition tax payments are due in annual installments of \$94 million, \$126 million and \$157 million for the years 2023, 2024 and 2025, respectively. In 2022, our Tax Reform Act transition tax payment was \$50 million. We also have purchase commitments of approximately \$350 million that will be paid over the next three years, of which approximately \$150 million will be paid during the next twelve months. See [Note 7](#) to our consolidated financial statements for a description of our operating lease obligations.

Provisions enacted in the Tax Reform Act in December 2017 related to the capitalization of research and experimental expenditures became effective on January 1, 2022. These provisions require us to capitalize research and experimental expenditures and amortize them for tax purposes over five or fifteen years, depending on where the research is conducted. Previously these expenses could be deducted in the year incurred. The implementation of these provisions has increased our income taxes payable in the United States for the 2022 tax year by approximately \$300 million. The incremental tax amount related to the 2022 mandatory capitalization of research and experimental expenditures had not been paid as of December 31, 2022, and will be paid on or before April 15, 2023. We estimate an additional similar amount of cash taxes to be paid in 2023 related to the capitalization of 2023 research and experimental expenditures. The capitalized expenses are recorded as a deferred tax asset and do not significantly impact our effective income tax rate.

The ability to expand and grow our business in accordance with current plans, make acquisitions, meet long-term capital requirements beyond a twelve-month period and execute our capital return plan will depend on many factors, including the rate, if any, at which cash flow increases, our ability and willingness to pay for acquisitions with capital stock and the availability of public and private debt, including the ability to extend the maturity of or refinance our existing debt, and equity financing. We cannot be certain that additional financing, if required, will be available on terms and conditions acceptable to us, if at all.

⁸ Free cash flow is not a measurement of financial performance prepared in accordance with GAAP. See “Non-GAAP Financial Measures” for more information.

Critical Accounting Estimates

Management's discussion and analysis of our financial condition and results of operations is based on our accompanying consolidated financial statements that have been prepared in accordance with GAAP. We base our estimates on historical experience, current trends and on various other assumptions that are believed to be relevant at the time our consolidated financial statements are prepared. We evaluate our estimates on a continuous basis. However, the actual amounts may differ from the estimates used in the preparation of our consolidated financial statements.

We believe the following accounting estimates are the most critical to aid in fully understanding and evaluating our consolidated financial statements as they require the most difficult, subjective or complex judgments, resulting from the need to make estimates about the effect of matters that are inherently uncertain. Changes to these estimates could have a material effect on our results of operations and financial condition. Our significant accounting policies are described in [Note 1](#) to our consolidated financial statements.

Revenue Recognition. Revenues related to fixed-price contracts for application development and systems integration services, consulting or other technology services are recognized as the service is performed using the cost-to-cost method, under which the total value of revenues is recognized on the basis of the percentage that each contract's total labor cost to-date bears to the total expected labor costs. Revenues related to fixed-price application maintenance, quality engineering and assurance and business process services are recognized using the cost-to-cost method, if the right to invoice is not representative of the value being delivered. The cost-to-cost method requires estimation of future costs, which is updated as the project progresses to reflect the latest available information. Such estimates and changes in estimates involve the use of judgment. The cumulative impact of any revision in estimates is reflected in the financial reporting period in which the change in estimate becomes known. Net changes in estimates of such future costs were immaterial to the consolidated results of operations for the periods presented.

Income Taxes. Determining the consolidated provision for income taxes, deferred income tax assets (and related valuation allowance, if any) and liabilities requires significant judgment. We are required to calculate and provide for income taxes in each of the jurisdictions where we operate. Changes in the geographic mix of income before taxes or estimated level of annual pre-tax income can affect our overall effective income tax rate. In addition, transactions between our affiliated entities are arranged in accordance with applicable transfer pricing laws, regulations and relevant guidelines. As a result, and due to the interpretive nature of certain aspects of these laws and guidelines, we have pending applications for APAs before the taxing authorities in some of our most significant jurisdictions. It could take years for the relevant taxing authorities to negotiate and conclude these applications. The consolidated provision for income taxes may change period to period based on changes in facts and circumstances, such as settlements of income tax audits, the expiration of the applicable statute of limitations or finalization of our applications for APAs.

Our provision for income taxes also includes the impact of reserves established for uncertain income tax positions, as well as the related interest, which may require us to apply judgment to complex issues and may require an extended period of time to resolve. Although we believe we have adequately reserved for our uncertain tax positions, no assurance can be given that the final outcome of these matters will not differ from our recorded amounts. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the expiration of the applicable statute of limitations. To the extent that the final outcome of these matters differs from the amounts recorded, such differences will impact the provision for income taxes in the period in which such determination is made.

Business Combinations, Goodwill and Intangible Assets. Goodwill and intangible assets, including indefinite-lived intangible assets, arise from the accounting for business combinations. We account for business combinations using the acquisition method which requires us to estimate the fair value of identifiable assets acquired, liabilities assumed, including any contingent consideration, and any noncontrolling interest in the acquiree to properly allocate purchase price to the individual assets acquired and liabilities assumed. The allocation of the purchase price utilizes estimates and assumptions in determining the fair values of identifiable assets acquired and liabilities assumed, especially with respect to intangible assets, including the timing and amount of forecasted revenues and cash flows, anticipated growth rates, client attrition rates and the discount rate reflecting the risk inherent in future cash flows.

At each acquisition date, we allocate goodwill and intangible assets to our reporting units based on how we expect each reporting unit to benefit from the respective business combination. Our seven industry-based operating segments are our reporting units. We exercise judgment to allocate goodwill to the reporting units expected to benefit from each business combination. Goodwill is tested for impairment at the reporting unit level on an annual basis and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. These events or circumstances could include a significant change in the business climate, regulatory environment, established business plans, operating performance indicators or competition. Evaluation of goodwill for impairment requires

judgment, including the identification of reporting units, assignment of assets, liabilities and goodwill to reporting units and determination of the fair value of each reporting unit.

We estimate the fair value of our reporting units using a combination of an income approach, utilizing a discounted cash flow analysis, and a market approach, using market multiples. Under the income approach, we estimate projected future cash flows, the timing of such cash flows and long-term growth rates, and determine the appropriate discount rate that reflects the risk inherent in the projected future cash flows. The discount rate used is based on a market participant weighted-average cost of capital and may be adjusted for the relevant risk associated with business-specific characteristics and the uncertainty related to the reporting unit's ability to execute on the projected future cash flows. Under the market approach, we estimate fair value based on market multiples of revenues and earnings derived from comparable publicly-traded companies with characteristics similar to the reporting unit. The estimates used to calculate the fair value of a reporting unit change from year to year based on operating results, market conditions and other factors. Changes in these estimates and assumptions could materially affect the determination of fair value for each reporting unit.

Based on our most recent evaluation of goodwill performed during the fourth quarter of 2022, we concluded that the goodwill in each of our reporting units was not at risk of impairment. As of December 31, 2022, our goodwill balance was \$5,710 million.

We review our finite-lived assets, including our finite-lived intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. The carrying amount may not be recoverable when the sum of undiscounted expected future cash flows is less than the carrying amount of such asset groups. The impairment loss is determined as the amount by which the carrying amount of the asset group exceeds its fair value. Assessing the fair value of asset groups involves significant estimates and assumptions including estimation of future cash flows, the timing of such cash flows and discount rates reflecting the risk inherent in future cash flows.

Recently Adopted and New Accounting Pronouncements

See [Note 1](#) to our consolidated financial statements for additional information.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Foreign Currency Risk

We are exposed to foreign currency exchange rate risk in the ordinary course of doing business as we transact or hold a portion of our funds in foreign currencies. Accordingly, we periodically evaluate the need for hedging strategies, including the use of derivative financial instruments, to mitigate the effect of foreign currency exchange rate fluctuations and expect to continue to use such instruments in the future to reduce foreign currency exposure to changes in the value of certain foreign currencies. All hedging transactions are authorized and executed pursuant to regularly reviewed policies and procedures.

Revenues from our clients in the United Kingdom, Continental Europe and Rest of World represented 9.3%, 9.2% and 7.1%, respectively, of our 2022 revenues, and are typically denominated in currencies other than the U.S. dollar. Accordingly, our revenues may be affected by fluctuations in the exchange rates, primarily the British pound and the Euro, as compared to the U.S. dollar.

A predominant portion of our costs in India are denominated in the Indian rupee, representing 23.5% of our global operating costs during 2022, and are subject to foreign currency exchange rate fluctuations. These foreign currency exchange rate fluctuations have an impact on our results of operations.

We have entered into a series of foreign exchange forward contracts that are designated as cash flow hedges of certain Indian rupee denominated payments in India. These U.S. dollar / Indian rupee hedges are intended to partially offset the impact of movement of exchange rates on future operating costs. As of December 31, 2022, the notional value and weighted average contract rates of these contracts by year of maturity were as follows:

	Notional Value (in millions)	Weighted Average Contract Rate (Indian rupee to U.S. dollar)
2023	\$ 1,865	81.3
2024	1,010	84.3
Total	\$ 2,875	82.3

As of December 31, 2022, the net unrealized loss on our outstanding foreign exchange forward contracts designated as cash flow hedges was \$68 million. Based upon a sensitivity analysis at December 31, 2022, which estimates the fair value of the contracts assuming certain market exchange rate fluctuations, a 10.0% change in the foreign currency exchange rate against the U.S. dollar with all other variables held constant would have resulted in a change in the fair value of our foreign exchange forward contracts designated as cash flow hedges of approximately \$267 million.

A portion of our balance sheet is exposed to foreign currency exchange rate fluctuations, which may result in non-operating foreign currency exchange gains or losses upon remeasurement. In 2022, we reported foreign currency exchange losses, exclusive of hedging gains, of approximately \$16 million, which were primarily attributed to the remeasurement of net monetary assets and liabilities denominated in currencies other than the functional currencies of our subsidiaries. We use foreign exchange forward contracts that are scheduled to mature in the first quarter of 2023 to provide an economic hedge against balance sheet exposure to certain monetary assets and liabilities denominated in currencies other than the functional currency of the subsidiary. At December 31, 2022, the notional value of these outstanding contracts was \$1,433 million and the net unrealized loss was \$1 million. Based upon a sensitivity analysis of our foreign exchange forward contracts at December 31, 2022, which estimates the fair value of the contracts assuming certain market exchange rate fluctuations, a 10.0% change in the foreign currency exchange rate against the U.S. dollar with all other variables held constant would have resulted in a change in the fair value of our foreign exchange forward contracts not designated as hedges of approximately \$79 million.

Interest Rate Risk

In October 2022, we completed a debt refinancing and entered into the New Credit Agreement with a commercial bank syndicate providing for a \$650 million New Term Loan and a \$1,850 million unsecured revolving credit facility, which are due to mature in October 2027. The New Credit Agreement requires interest to be paid, at our option, at either the Term Benchmark, Adjusted Daily Simple RFR or the ABR Rate (each as defined in the New Credit Agreement), plus, in each case, an Applicable Margin (as defined in the New Credit Agreement). The New Term Loan is a Term Benchmark loan. Thus, our debt exposes us to market risk from changes in interest rates. We performed a sensitivity analysis to determine the effect of interest rate fluctuations on our interest expense. A 100 basis point change in interest rates, with all other variables held constant, would have an immaterial effect on our reported interest expense.

We have \$1,238 million of cash equivalents and \$310 million of short-term investments as of December 31, 2022. Our cash equivalents consist of commercial paper, money market funds and time deposits. Our short-term investments consist primarily of certificates of deposits and commercial paper, classified as either available-for-sale or held-to-maturity, and time deposits. Our investments are exposed to fluctuations in interest rates, which may affect our interest income and the fair market value of our investments. As of December 31, 2022, a 100 basis point change in interest rates, with all other variables held constant, would have an immaterial effect on the fair value of our available-for-sale and held-to-maturity securities.

Information provided by the sensitivity analysis of foreign currency risk and interest rate risk does not necessarily represent the actual changes that would occur under normal market conditions.

Item 8. Financial Statements and Supplementary Data

The financial statements required to be filed pursuant to this Item 8 are appended to this Annual Report on Form 10-K. A list of the financial statements filed herewith is found in Part IV, "[Item 15. Exhibits, Financial Statements and Financial Statement Schedule.](#)"

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

Our management, under the supervision and with the participation of our chief executive officer and our chief financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of December 31, 2022. Based on this evaluation, our chief executive officer and our chief financial officer concluded that, as of December 31, 2022, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended) that occurred during the fiscal quarter ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Responsibility for Financial Statements

Our management is responsible for the integrity and objectivity of all information presented in this annual report. The consolidated financial statements were prepared in conformity with accounting principles generally accepted in the United States of America and include amounts based on management's best estimates and judgments. Management believes the consolidated financial statements fairly reflect the form and substance of transactions and that the financial statements fairly represent the Company's financial position and results of operations.

The Audit Committee of the Board of Directors, which is composed solely of independent directors, meets regularly with the Company's independent registered public accounting firm and representatives of management to review accounting, financial reporting, internal control and audit matters, as well as the nature and extent of the audit effort.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934, as amended, and is a process designed by, or under the supervision of, our chief executive and chief financial officers and effected by our Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Our management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2022. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework (2013)*.

Based on its evaluation, our management has concluded that, as of December 31, 2022, our internal control over financial reporting was effective. PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the financial statements included in this annual report, has issued an attestation report on our internal control over financial reporting, as stated in their report which is included on page F-2.

Inherent Limitations of Internal Controls

Because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

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

The information relating to our executive officers in response to this item is contained in part under the caption “Information About Our Executive Officers” in [Part I](#) of this Annual Report on Form 10-K.

We have adopted a written code of ethics, entitled “Code of Ethics,” that applies to all of our directors, executive officers and employees, including our principal executive officer, principal financial officer, principal accounting officer and controller, or persons performing similar functions. We make available our code of ethics free of charge through our website which is located at www.cognizant.com. We intend to post on our website all disclosures that are required by law or Nasdaq Stock Market listing standards concerning any amendments to, or waivers from, any provision of our code of ethics.

The remaining information required by this item will be included under the caption "Corporate governance" in our definitive proxy statement for the 2023 Annual Meeting of Stockholders, which will be filed with the SEC pursuant to Regulation 14A not later than 120 days after the end of the fiscal year ended December 31, 2022 and is incorporated herein by reference to such proxy statement.

Item 11. Executive Compensation

The information required by this item will be included in our definitive proxy statement for the 2023 Annual Meeting of Stockholders and is incorporated herein by reference to such proxy statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be included in our definitive proxy statement for the 2023 Annual Meeting of Stockholders and is incorporated herein by reference to such proxy statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item will be included in our definitive proxy statement for the 2023 Annual Meeting of Stockholders and is incorporated herein by reference to such proxy statement.

Item 14. Principal Accountant Fees and Services

The information required by this item will be included in our definitive proxy statement for the 2023 Annual Meeting of Stockholders and is incorporated herein by reference to such proxy statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules

- (a) (1) Consolidated Financial Statements.
Reference is made to the Index to Consolidated Financial Statements on Page F-1.
- (2) Consolidated Financial Statement Schedule.
Reference is made to the Index to Financial Statement Schedule on Page F-1.
- (3) Exhibits.

Schedules other than as listed above are omitted as not required or inapplicable or because the required information is provided in the consolidated financial statements, including the notes thereto.

EXHIBIT INDEX

Number	Exhibit Description	Incorporated by Reference				Filed or Furnished Herewith
		Form	File No.	Exhibit	Date	
3.1	Restated Certificate of Incorporation, dated June 5, 2018	8-K	000-24429	3.1	6/7/2018	
3.2	Amended and Restated Bylaws, as adopted on September 14, 2018	8-K	000-24429	3.1	9/20/2018	
4.1	Specimen Certificate for shares of Class A common stock	S-4/A	333-101216	4.2	1/30/2003	
4.2	Description of Capital Stock	10-K	000-24429	4.2	2/14/2020	
10.1†	Form of Indemnification Agreement for Directors and Officers	10-Q	000-24429	10.1	8/7/2013	
10.2†	Form of Amended and Restated Executive Employment and Non-Disclosure, Non-Competition, and Invention Assignment Agreement, between the Company and each of the following current or former Executive Officers: Brian Humphries, Jan Siegmund, Becky Schmitt, Robert Telesmanic, Balu Ganesh Ayyar, Ursula Morgenstern and John Kim	10-K	000-24429	10.3	2/27/2018	
10.3†	2022 Form of Executive Employment and Non-Disclosure, Non-Competition and Invention Assignment Agreement, to be entered into between the Company and certain Executive Officers	10-Q	000-24429	10.1	7/28/2022	
10.4†	UK Form of Executive Employment and Non-Disclosure, Non-Competition and Invention Assignment Agreement, entered into between the Company and the following Executive Officer: Robert Walker	10-Q	000-24429	10.2	7/28/2022	
10.5†	Executive Employment and Non-Disclosure, Non-Competition and Invention Assignment Agreement, entered into between the Company and Ravi Kumar Singiseti, dated effective January 12, 2023	8-K	000-24429	10.2	1/12/2023	
10.6†	Letter Agreement, dated as of December 9, 2022, by and between the Company and Brian Humphries regarding Base Pay Denomination Adjustment					Filed
10.7†	Letter Agreement, dated as of January 9, 2023, by and among Cognizant Worldwide Limited, the Company and Brian Humphries amendment Employment Agreement	8-K	000-24429	10.3	1/12/2023	
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Number	Exhibit Description	Incorporated by Reference				Filed or Furnished Herewith
		Form	File No.	Exhibit	Date	
10.8†	Offer Letter, by and between the Company and Brian Humphries, acknowledged and agreed November 30, 2018	10-K	000-24429	10.4	2/19/2019	
10.9†	Offer Letter, by and between the Company and Jan Siegmund, acknowledged and agreed July 8, 2020	8-K	000-24429	10.1	7/29/2020	
10.10†	Offer Letter, by and between the Company and Becky Schmitt, acknowledged and agreed November 26, 2019	10-K	000-24429	10.6	2/12/2021	
10.11†	Offer Letter, by and between the Company and Rajesh Nambiar, acknowledged and agreed September 16, 2020	10-K	000-24429	10.6	2/16/2022	
10.12†	Offer Letter, by and between the Company and Ravi Kumar Singiseti, acknowledged and agreed January 9, 2023	8-K	000-24429	10.1	1/12/2023	
10.13†	General Release and Severance Agreement between the Company and Gregory Hyttenrauch, dated as of July 26, 2022	10-Q	000-24429	10.3	7/28/2022	
10.14†	General Release between the Company and Ursula Morgenstern, dated as of June 30, 2020					Filed
10.15†	Non-Employee Director Compensation Guidelines (effective as of June 7, 2022)					Filed
10.16†	2004 Employee Stock Purchase Plan (as amended and restated effective as of January 1, 2022)	10-K	000-24429	10.7	2/16/2022	
10.17†	Cognizant Technology Solutions Corporation Amended and Restated 2009 Incentive Compensation Plan, effective March 9, 2015	10-Q	000-24429	10.1	5/4/2015	
10.18†	Form of Cognizant Technology Solutions Corporation Stock Option Agreement	8-K	000-24429	10.1	7/6/2009	
10.19†	Form of Cognizant Technology Solutions Corporation Notice of Grant of Stock Option	8-K	000-24429	10.2	7/6/2009	
10.20†	Form of Cognizant Technology Solutions Corporation Restricted Stock Unit Award Agreement Time-Based Vesting	8-K	000-24429	10.3	7/6/2009	
10.21†	Form of Cognizant Technology Solutions Corporation Notice of Award of Restricted Stock Units Time-Based Vesting	8-K	000-24429	10.4	7/6/2009	
10.22†	Form of Cognizant Technology Solutions Corporation Restricted Stock Unit Award Agreement Performance-Based Vesting	8-K	000-24429	10.5	7/6/2009	
10.23†	Form of Cognizant Technology Solutions Corporation Notice of Award of Restricted Stock Units Performance-Based Vesting	8-K	000-24429	10.6	7/6/2009	
10.24†	Form of Restricted Stock Unit Award Agreement Non-Employee Director Deferred Issuance	8-K	000-24429	10.7	7/6/2009	
10.25†	Form of Cognizant Technology Solutions Corporation Notice of Award of Restricted Stock Units Non-Employee Director Deferred Issuance	8-K	000-24429	10.8	7/6/2009	
10.26†	Cognizant Technology Solutions Corporation 2017 Incentive Award Plan	8-K	000-24429	10.1	6/7/2017	
Cognizant		45				December 31, 2022 Form 10-K

Number	Exhibit Description	Incorporated by Reference				Filed or Furnished Herewith
		Form	File No.	Exhibit	Date	
10.27†	Form of Restricted Stock Unit Award Grant Notice	10-Q	000-24429	10.2	8/3/2017	
10.28†	Form of Performance-Based Restricted Stock Unit Award Grant Notice	10-Q	000-24429	10.3	8/3/2017	
10.29†	Form of Restricted Stock Unit Award Grant Notice	10-Q	000-24429	10.4	8/3/2017	
10.30†	Form of Stock Option Grant Notice and Stock Option Agreement	10-Q	000-24429	10.5	8/3/2017	
10.31†	Form of Restricted Stock Unit Award Grant Notice (March 5, 2020 form)	10-Q	000-24429	10.1	5/8/2020	
10.32†	Form of Performance-Based Restricted Stock Unit Award Grant Notice (March 5, 2020 form)	10-Q	000-24429	10.2	5/8/2020	
10.33†	Credit Agreement, dated as of October 6, 2022, among Cognizant Technology Solutions Corporation, Cognizant Worldwide Limited, certain financial institutions party thereto and JPMorgan Chase Bank, N.A., as administrative agent	8-K	000-24429	10.1	10/7/2022	
10.34†	Retirement, Death and Disability Policy	10-Q	000-24429	10.1	7/30/2020	
21.1	List of subsidiaries of the Company					Filed
23.1	Consent of PricewaterhouseCoopers LLP					Filed
31.1	Certification Pursuant to Rule 13a-14(a) and 15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Chief Executive Officer)					Filed
31.2	Certification Pursuant to Rule 13a-14(a) and 15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Chief Financial Officer)					Filed
32.1	Certification Pursuant to 18 U.S.C. Section 1350 (Chief Executive Officer)					Furnished
32.2	Certification Pursuant to 18 U.S.C. Section 1350 (Chief Financial Officer)					Furnished
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.					Filed
101.SCH	Inline XBRL Taxonomy Extension Schema Document					Filed
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					Filed
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					Filed
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					Filed
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					Filed
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					Filed

† A management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 15(a)(3) of Form 10-K.

Item 16. Form 10-K Summary

None.

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December 31, 2022 Form 10-K

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION

By: /s/ RAVI KUMAR S
Ravi Kumar S,
Chief Executive Officer
(Principal Executive Officer)

Date: **February 15, 2023**

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ RAVI KUMAR S</u> Ravi Kumar S	Chief Executive Officer and Director (Principal Executive Officer)	February 15, 2023
<u>/s/ JAN SIEGMUND</u> Jan Siegmund	Chief Financial Officer (Principal Financial Officer)	February 15, 2023
<u>/s/ ROBERT TELESMANIC</u> Robert Telesmanic	Senior Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 15, 2023
<u>/s/ STEPHEN J. ROHLEDER</u> Stephen J. Rohleder	Chair of the Board and Director	February 15, 2023
<u>/s/ ZEIN ABDALLA</u> Zein Abdalla	Director	February 15, 2023
<u>/s/ VINITA BALI</u> Vinita Bali	Director	February 15, 2023
<u>/s/ MAUREEN BREAKIRON-EVANS</u> Maureen Breakiron-Evans	Director	February 15, 2023
<u>/s/ ARCHANA DESKUS</u> Archana Deskus	Director	February 15, 2023
<u>/s/ JOHN M. DINEEN</u> John M. Dineen	Director	February 15, 2023
<u>/s/ LEO S. MACKAY, JR.</u> Leo S. Mackay, Jr.	Director	February 15, 2023
<u>/s/ MICHAEL PATSALOS-FOX</u> Michael Patsalos-Fox	Director	February 15, 2023
<u>/s/ JOSEPH M. VELLI</u> Joseph M. Velli	Director	February 15, 2023
<u>/s/ SANDRA S. WIJNBERG</u> Sandra S. Wijnberg	Director	February 15, 2023

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION
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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Cognizant Technology Solutions Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial position of Cognizant Technology Solutions Corporation and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of operations, of comprehensive income, of stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's 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 (COSO).

In our opinion, the consolidated financial statements referred to above 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 three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue Recognition – Expected Labor Costs to Complete for Certain Fixed-Price Contracts

As described in Notes 1 and 2 to the consolidated financial statements, fixed-price contracts comprised \$8.3 billion of the Company's total revenues for the year ended December 31, 2022, which includes performance obligations where control is transferred over time. For performance obligations where control is transferred over time, revenues are recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the deliverables to be provided. Management recognizes revenues related to fixed-price contracts for application development and systems integration services, consulting or other technology services as the service is performed using the cost-to-cost method, under which the total value of revenues is recognized on the basis of the percentage that each contract's total labor cost to date bears to the total expected labor costs. The cost-to-cost method requires estimation of future costs, which is updated as the project progresses to reflect the latest available information. Revenues related to fixed-price application maintenance, testing and business process services are recognized based on management's right to invoice for services performed for contracts in which the invoicing is representative of the value being delivered. If management's invoicing is not consistent with the value delivered, revenues are recognized as the service is performed based on the cost-to-cost method described above.

The principal considerations for our determination that performing procedures relating to revenue recognition – expected labor costs to complete for certain fixed-price contracts is a critical audit matter are the significant judgment by management when developing the estimated total expected labor costs to complete fixed-price contracts and the significant auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence relating to management's estimate of total expected labor costs.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the revenue recognition process, including controls over the development of the estimated total expected labor costs to complete fixed-price contracts. These procedures also included, among others, evaluating and testing management's process for developing the estimated total expected labor costs for a sample of contracts, which included evaluating the reasonableness of the total expected labor cost assumptions used by management. Evaluating the reasonableness of the assumptions related to the total expected labor costs involved assessing management's ability to reasonably develop total expected labor costs by (i) performing a comparison of actual labor costs incurred with expected labor costs for similar completed projects and (ii) evaluating the timely identification of circumstances that may warrant a modification to previous labor cost estimates, including actual labor costs in excess of estimates.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 15, 2023

We have served as the Company's auditor since 1997.

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(in millions, except par values)	December 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 2,191	\$ 1,792
Short-term investments	310	927
Trade accounts receivable, net	3,796	3,557
Other current assets	969	1,066
Total current assets	7,266	7,342
Property and equipment, net	1,101	1,171
Operating lease assets, net	876	933
Goodwill	5,710	5,620
Intangible assets, net	1,168	1,218
Deferred income tax assets, net	642	404
Long-term investments	427	463
Other noncurrent assets	662	701
Total assets	\$ 17,852	\$ 17,852
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 360	\$ 361
Deferred revenue	398	403
Short-term debt	8	38
Operating lease liabilities	174	195
Accrued expenses and other current liabilities	2,407	2,532
Total current liabilities	3,347	3,529
Deferred revenue, noncurrent	19	40
Operating lease liabilities, noncurrent	714	783
Deferred income tax liabilities, net	180	218
Long-term debt	638	626
Long-term income taxes payable	283	378
Other noncurrent liabilities	362	287
Total liabilities	5,543	5,861
Commitments and contingencies (See Note 15)		
Stockholders' equity:		
Preferred stock, \$0.10 par value, 15 shares authorized, none issued	—	—
Class A common stock, \$0.01 par value, 1,000 shares authorized, 509 and 525 shares issued and outstanding as of December 31, 2022 and 2021, respectively	5	5
Additional paid-in capital	15	27
Retained earnings	12,588	11,922
Accumulated other comprehensive income (loss)	(299)	37
Total stockholders' equity	12,309	11,991
Total liabilities and stockholders' equity	\$ 17,852	\$ 17,852

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

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

(in millions, except per share data)	Year Ended December 31,		
	2022	2021	2020
Revenues	\$ 19,428	\$ 18,507	\$ 16,652
Operating expenses:			
Cost of revenues (exclusive of depreciation and amortization expense shown separately below)	12,448	11,604	10,671
Selling, general and administrative expenses	3,443	3,503	3,100
Restructuring charges	—	—	215
Depreciation and amortization expense	569	574	552
Income from operations	2,968	2,826	2,114
Other income (expense), net:			
Interest income	59	30	119
Interest expense	(19)	(9)	(24)
Foreign currency exchange gains (losses), net	7	(20)	(116)
Other, net	1	—	3
Total other income (expense), net	48	1	(18)
Income before provision for income taxes	3,016	2,827	2,096
Provision for income taxes	(730)	(693)	(704)
Income (loss) from equity method investments	4	3	—
Net income	\$ 2,290	\$ 2,137	\$ 1,392
Basic earnings per share	\$ 4.42	\$ 4.06	\$ 2.58
Diluted earnings per share	\$ 4.41	\$ 4.05	\$ 2.57
Weighted average number of common shares outstanding—Basic	518	527	540
Dilutive effect of shares issuable under stock-based compensation plans	1	1	1
Weighted average number of common shares outstanding—Diluted	519	528	541

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

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in millions)	Year Ended December 31,		
	2022	2021	2020
Net income	\$ 2,290	\$ 2,137	\$ 1,392
Change in Accumulated other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(228)	(75)	119
Unrealized gains and losses on cash flow hedges	(108)	2	29
Other comprehensive income (loss)	(336)	(73)	148
Comprehensive income	\$ 1,954	\$ 2,064	\$ 1,540

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

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in millions, except per share data)	Class A Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount				
Balance, December 31, 2019	548	\$ 5	\$ 33	\$ 11,022	\$ (38)	\$ 11,022
Cumulative effect of changes in accounting principle ⁽¹⁾	—	—	—	1	—	1
Net income	—	—	—	1,392	—	1,392
Other comprehensive income (loss)	—	—	—	—	148	148
Common stock issued, stock-based compensation plans	6	—	142	—	—	142
Stock-based compensation expense	—	—	232	—	—	232
Repurchases of common stock	(24)	—	(375)	(1,246)	—	(1,621)
Dividends declared, \$0.88 per share	—	—	—	(480)	—	(480)
Balance, December 31, 2020	530	5	32	10,689	110	10,836
Net income	—	—	—	2,137	—	2,137
Other comprehensive income (loss)	—	—	—	—	(73)	(73)
Common stock issued, stock-based compensation plans	5	—	130	—	—	130
Stock-based compensation expense	—	—	246	—	—	246
Repurchases of common stock	(10)	—	(381)	(394)	—	(775)
Dividends declared, \$0.96 per share	—	—	—	(510)	—	(510)
Balance, December 31, 2021	525	5	27	11,922	37	11,991
Net income	—	—	—	2,290	—	2,290
Other comprehensive income (loss)	—	—	—	—	(336)	(336)
Common stock issued, stock-based compensation plans	4	—	86	—	—	86
Stock-based compensation expense	—	—	261	—	—	261
Repurchases of common stock	(20)	—	(359)	(1,059)	—	(1,418)
Dividends declared, \$1.08 per share	—	—	—	(565)	—	(565)
Balance, December 31, 2022	509	\$ 5	\$ 15	\$ 12,588	\$ (299)	\$ 12,309

(1) Reflects the adoption of the Credit Loss Standard on January 1, 2020.

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

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in millions)	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income	\$ 2,290	\$ 2,137	\$ 1,392
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	569	574	559
Deferred income taxes	(273)	27	184
Stock-based compensation expense	261	246	232
Other	45	(1)	119
Changes in assets and liabilities:			
Trade accounts receivable	(238)	(407)	264
Other current and noncurrent assets	343	348	73
Accounts payable	(11)	(35)	109
Deferred revenue, current and noncurrent	(26)	19	65
Other current and noncurrent liabilities	(392)	(413)	302
Net cash provided by operating activities	2,568	2,495	3,299
Cash flows from investing activities:			
Purchases of property and equipment	(332)	(279)	(398)
Purchases of available-for-sale investment securities	(1,227)	(430)	—
Proceeds from maturity of available-for-sale investment securities	1,315	120	—
Purchases of held-to-maturity investment securities	(44)	(203)	(202)
Proceeds from maturity of held-to-maturity investment securities	54	180	467
Purchases of other investments	(546)	(1,660)	(531)
Proceeds from maturity or sale of other investments	1,013	1,078	549
Proceeds from sales of businesses	28	—	—
Payments for business combinations, net of cash acquired	(367)	(970)	(1,123)
Net cash (used in) investing activities	(106)	(2,164)	(1,238)
Cash flows from financing activities:			
Issuance of common stock under stock-based compensation plans	86	130	142
Repurchases of common stock	(1,422)	(771)	(1,621)
Repayment of Term Loan borrowings and finance lease and earnout obligations	(686)	(53)	(50)
Proceeds from debt refinancing	650	—	—
Debt issuance costs	(3)	—	—
Proceeds from borrowing under the revolving credit facility	—	—	1,740
Repayment of notes outstanding under the revolving credit facility	—	—	(1,740)
Dividends paid	(564)	(509)	(480)
Net cash (used in) financing activities	(1,939)	(1,203)	(2,009)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(21)	(16)	(17)
Increase (decrease) in cash, cash equivalents and restricted cash	502	(888)	35
Cash and cash equivalents, beginning of year	1,792	2,680	2,645
Cash, cash equivalents and restricted cash, end of year	\$ 2,294	\$ 1,792	\$ 2,680
Supplemental information:			
Cash paid for income taxes during the year	\$ 813	\$ 625	\$ 745
Cash interest paid during the year	\$ 15	\$ 7	\$ 25

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

COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in millions, except share data)

Note 1 — Business Description and Summary of Significant Accounting Policies

The terms “Cognizant,” “we,” “our,” “us” and “the Company” refer to Cognizant Technology Solutions Corporation and its subsidiaries unless the context indicates otherwise.

Description of Business. We are one of the world’s leading professional services companies, engineering modern businesses and delivering strategic outcomes for our clients. We help clients modernize technology, reimagine processes and transform experiences so they can stay ahead in a fast-changing world. We tailor our services and solutions to specific industries with an integrated global delivery model that employs client service and delivery teams based at client locations and dedicated global and regional delivery centers. Our services include digital services and solutions, consulting, application development, systems integration, quality engineering and assurance, application maintenance, infrastructure and security as well as business process services and automation. Digital services continue to be an important part of our portfolio, aligning with our clients’ focus on becoming data-enabled, customer-centric and differentiated businesses.

Basis of Presentation, Principles of Consolidation and Use of Estimates. The consolidated financial statements are presented in accordance with GAAP and reflect the consolidated financial position, results of operations, comprehensive income and cash flows of our consolidated subsidiaries for all periods presented. All intercompany balances and transactions have been eliminated in consolidation.

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts in the consolidated financial statements and accompanying disclosures. We evaluate our estimates on a continuous basis. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. The actual amounts may vary from the estimates used in the preparation of the accompanying consolidated financial statements.

Cash and Cash Equivalents and Investments. Cash and cash equivalents consist of all cash balances, including money market funds, certificates of deposits and commercial paper that have a maturity, at the date of purchase, of 90 days or less.

We determine the appropriate classification of our investments in marketable securities at the date of purchase and reevaluate such designation at each balance sheet date. We classify and account for our marketable debt securities as either available-for-sale or held-to-maturity. After consideration of our risk versus reward objectives, as well as our liquidity requirements, we may sell our available-for-sale securities prior to their stated maturities. We classify these marketable securities with maturities at the date of purchase beyond 90 days as short-term investments based on their highly liquid nature and because such marketable securities represent an investment of cash that is available for current operations. Available-for-sale securities are reported at fair value with changes in unrealized gains and losses recorded as a separate component of “Accumulated other comprehensive income (loss)” on the consolidated statements of financial position until realized. We determine the cost of the securities sold based on the specific identification method. Our held-to-maturity investment securities are financial instruments that we have the intent and ability to hold to maturity and we classify these securities with maturities less than one year as short-term investments. Any held-to-maturity investment securities with maturities beyond one year from the balance sheet date are classified as long-term investments. Held-to-maturity securities are reported at amortized cost. Interest and amortization of premiums and discounts for debt securities are included in interest income.

For available-for-sale debt securities, if we do not intend to sell the security or it is not more likely than not that we will be required to sell the security before recovery of our amortized cost, we evaluate qualitative criteria, such as the financial health of and specific prospects for the issuer, to determine whether we do not expect to recover the amortized cost basis of the security. We also evaluate quantitative criteria including determining whether there has been an adverse change in expected future cash flows. If we do not expect to recover the entire amortized cost basis of the security, we consider the security to contain an expected credit loss, and we record the difference between the security’s amortized cost basis and its recoverable amount in earnings as an allowance for credit loss and the difference between the security’s recoverable amount and fair value in other comprehensive income. If we intend to sell the security or it is more likely than not we will be required to sell the security before recovery of its amortized cost basis, the security is considered impaired, and we recognize the entire difference between the security’s amortized cost basis and its fair value in earnings.

On initial recognition and on an ongoing basis, we evaluate our held-to-maturity investment securities for expected credit losses collectively when they share similar risk characteristics or individually, when the risk characteristics are different. The allowance for expected credit losses is determined using our historical loss experience. We monitor the credit ratings of the

securities in our portfolio to evaluate the need for any changes to the allowance. An increase or a decrease in the allowance for expected credit losses is recorded through income as a credit loss expense or a reversal thereof. The allowance for expected credit losses is presented as a deduction from the amortized cost. A held-to-maturity investment security is written off when deemed uncollectible.

Financial Assets and Liabilities. Cash and certain cash equivalents, time deposits, trade receivables, accounts payable and other accrued liabilities are short-term in nature and, accordingly, their carrying values approximate fair value.

Property and Equipment. Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets. Leasehold improvements are amortized on a straight-line basis over the shorter of the term of the lease or the estimated useful life of the asset. Deposits paid towards acquisition of long-lived assets and the cost of assets not put in use by the balance sheet date are disclosed under the caption "Capital work-in-progress" in [Note 6](#).

Leases. Our lease asset classes primarily consist of operating leases for office space, data centers and IT equipment. At inception of a contract, we determine whether a contract contains a lease, and if a lease is identified, whether it is an operating or finance lease. In determining whether a contract contains a lease we consider whether (1) we have the right to obtain substantially all of the economic benefits from the use of the asset throughout the term of the contract, (2) we have the right to direct how and for what purpose the asset is used throughout the term of the contract and (3) we have the right to operate the asset throughout the term of the contract without the lessor having the right to change the terms of the contract. Some of our lease agreements contain both lease and non-lease components that we account for as a single lease component for all of our lease asset classes.

Our ROU lease assets represent our right to use an underlying asset for the lease term and may include any advance lease payments made and any initial direct costs and exclude lease incentives. Our lease liabilities represent our obligation to make lease payments arising from the terms of the lease. ROU lease assets and lease liabilities are recognized at the commencement of the lease and are calculated using the present value of lease payments over the lease term. Typically, our lease agreements do not provide sufficient detail to determine the rate implicit in the lease. Therefore, we use our estimated country-specific incremental borrowing rate based on information available at the commencement date of the lease to calculate the present value of the lease payments. In estimating our country-specific incremental borrowing rates, we consider market rates of comparable collateralized borrowings for similar terms. Our lease terms may include the option to extend or terminate the lease before the end of the contractual lease term. Our ROU lease assets and lease liabilities include these options when it is reasonably certain that they will be exercised.

A portion of our real estate lease costs is subject to annual changes in the CPI. Changes in CPI subsequent to the lease commencement are treated as variable lease payments and are recognized in the period in which the obligation for those payments is incurred. Other variable lease costs primarily relate to adjustments for common area maintenance, utilities, property tax and lease concessions. These variable costs are recognized in the period in which the obligation is incurred.

We elect not to recognize ROU assets and lease liabilities for short-term leases with a term equal to or less than 12 months. We recognize the lease payments in our income statement on a straight-line basis over the lease term and variable lease payments in the period in which the obligation for those payments is incurred.

Both ROU assets and finance lease assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the related asset group may not be recoverable.

Internal Use Software. We capitalize certain costs that are incurred to purchase, develop and implement internal-use software during the application development phase, which primarily include coding, testing and certain data conversion activities. Capitalized costs are amortized on a straight-line basis over the useful life of the software. Costs incurred in performing planning and post-implementation activities are expensed as incurred.

Cloud Computing Arrangements. We defer certain implementation costs that are incurred when implementing cloud computing service or software-as-a-service arrangements, which primarily include efforts associated with configuration and development activities. Once the service is ready for use, deferred costs are expensed over the term of the arrangement and recognized in income from operations.

Software to be Sold, Leased or Marketed. We capitalize costs incurred after technological feasibility is reached but before software is available for general release to clients, which primarily include coding and testing activities. Once the product is ready for general release, capitalized costs are amortized over the useful life of the software.

Business Combinations. We account for business combinations using the acquisition method, which requires the identification of the acquirer, the determination of the acquisition date and the allocation of the purchase price paid by the acquirer to the identifiable tangible and intangible assets acquired, the liabilities assumed, including any contingent consideration and any noncontrolling interest in the acquiree at their acquisition date fair values. Goodwill represents the excess of the purchase price over the fair value of net assets acquired, including the amount assigned to identifiable intangible assets. Identifiable intangible assets with finite lives are amortized over their expected useful lives. Acquisition-related costs are expensed in the periods in which the costs are incurred. The results of operations of acquired businesses are included in our consolidated financial statements from the acquisition date.

Equity Method Investments. Equity investments that give us the ability to exercise significant influence, but not control, over an investee are accounted for using the equity method of accounting and recorded in the caption "Long-term investments" on our consolidated statements of financial position. Equity method investments are initially recorded at cost. We periodically review the carrying value of our equity method investments to determine if there has been an other-than-temporary decline in the carrying value. The investment balance is increased to reflect contributions and our share of earnings and decreased to reflect our share of losses, distributions and other-than-temporary impairments. Our proportionate share of the net income or loss of the investee is recorded in the caption "Income (loss) from equity method investments" on our consolidated statements of operations.

Long-lived Assets and Finite-lived Intangible Assets. We review long-lived assets and certain finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. The carrying amount may not be recoverable when the sum of undiscounted expected future cash flows is less than the carrying amount of such asset groups. The impairment loss is determined as the amount by which the carrying amount of the asset group exceeds its fair value. Intangible assets consist primarily of customer relationships and developed technology, which are being amortized on a straight-line basis over their estimated useful lives.

Goodwill and Indefinite-lived Intangible Assets. At each acquisition date, we allocate goodwill and intangible assets to our reporting units based on how we expect each reporting unit to benefit from the respective business combination. Our seven industry-based operating segments are our reporting units. We evaluate goodwill and indefinite-lived intangible assets for impairment at least annually, or as circumstances warrant. Goodwill is evaluated at the reporting unit level by comparing the fair value of the reporting unit with its carrying amount including goodwill. An impairment of goodwill exists if the carrying amount of the reporting unit exceeds its fair value. The impairment loss is the amount by which the carrying amount exceeds the reporting unit's fair value, limited to the total amount of goodwill allocated to that reporting unit. For indefinite-lived intangible assets, if our qualitative assessment indicates that it is more-likely-than-not that an indefinite-lived intangible asset is impaired, we test the assets for impairment by comparing the fair value of such assets to their carrying value. If an impairment is indicated, a write down to the fair value of indefinite-lived intangible asset is recorded.

Stock Repurchase Program. Under the Board of Directors authorized stock repurchase program, the Company is authorized to repurchase its Class A common stock through open market purchases, including under a 10b5-1 Plan, or in private transactions, including through ASR agreements entered into with financial institutions, in accordance with applicable federal securities laws. We account for the repurchased shares as constructively retired. Shares are returned to the status of authorized and unissued shares at the time of repurchase or in the periods they are delivered if repurchased under an ASR. To reflect share repurchases in the consolidated statements of financial position, we (1) reduce common stock for the par value of the shares, (2) reduce additional paid-in capital for the amount in excess of par during the period in which the shares are repurchased and (3) record any residual amount in excess of available additional paid-in capital to retained earnings. Upfront payments related to ASRs are accounted for as a reduction to stockholders' equity in the consolidated statements of financial position in the period the payments are made.

Revenue Recognition. We recognize revenues as we transfer control of deliverables (products, solutions and services) to our clients in an amount reflecting the consideration to which we expect to be entitled. To recognize revenues, we apply the following five step approach: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenues when a performance obligation is satisfied. We account for a contract when it has approval and commitment from all parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectibility of consideration is probable. We apply judgment in determining the customer's ability and intention to pay based on a variety of factors including the customer's historical payment experience.

For performance obligations where control is transferred over time, revenues are recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the deliverables to be provided.

Revenues related to fixed-price contracts for application development and systems integration services, consulting or other technology services are recognized as the service is performed using the cost-to-cost method, under which the total value of revenues is recognized on the basis of the percentage that each contract's total labor cost to date bears to the total expected labor costs. Revenues related to fixed-price application maintenance, quality engineering and assurance as well as business process services are recognized based on our right to invoice for services performed for contracts in which the invoicing is representative of the value being delivered. If our invoicing is not consistent with the value delivered, revenues are recognized as the service is performed based on the cost-to-cost method described above. The cost-to-cost method requires estimation of future costs, which is updated as the project progresses to reflect the latest available information. Such estimates and changes in estimates involve the use of judgment. The cumulative impact of any revision in estimates is reflected in the financial reporting period in which the change in estimate becomes known and any anticipated losses on contracts are recognized immediately, where appropriate.

Revenues related to fixed-price hosting and infrastructure and security services are recognized based on our right to invoice for services performed for contracts in which the invoicing is representative of the value being delivered. If our invoicing is not consistent with the value delivered, revenues are recognized on a straight-line basis unless revenues are earned and obligations are fulfilled in a different pattern. The revenue recognition method applied to the types of contracts described above provides the most faithful depiction of performance towards satisfaction of our performance obligations; for example, the cost-to-cost method is used when the value of services provided to the customer is best represented by the costs expended to deliver those services.

Revenues related to our time-and-materials, transaction-based or volume-based contracts are recognized over the period the services are provided either using an output method such as labor hours, or a method that is otherwise consistent with the way in which value is delivered to the customer.

Revenues related to our non-hosted software license arrangements that do not require significant modification or customization of the underlying software are recognized when the software is delivered as control is transferred at a point in time. For software license arrangements that require significant functionality enhancements or modification of the software, revenues for the software license and related services are recognized as the services are performed in accordance with the methods applicable to application development and systems integration services described above. In software hosting arrangements, the rights provided to the customer, such as ownership of a license, contract termination provisions and the feasibility of the client to operate the software, are considered in determining whether the arrangement includes a license or a service. Sales and usage-based fees promised in exchange for licenses of intellectual property are not recognized as revenue until the uncertainty related to the variable amounts is resolved. Revenues related to software maintenance and support are generally recognized on a straight-line basis over the contract period.

Incentive revenues, volume discounts, or any other form of variable consideration is estimated using either the sum of probability weighted amounts in a range of possible consideration amounts (expected value) or the single most likely amount in a range of possible consideration amounts (most likely amount), depending on which method better predicts the amount of consideration to which we may be entitled. We include in the transaction price variable consideration only to the extent it is probable that a significant reversal of revenues recognized will not occur when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether and when to include estimated amounts in the transaction price may involve judgment and are based largely on an assessment of our anticipated performance and all information that is reasonably available to us.

Revenues also include the reimbursement of out-of-pocket expenses. Our warranties generally provide a customer with assurance that the related deliverable will function as the parties intended because it complies with agreed-upon specifications and are therefore not considered an additional performance obligation in the contract.

We may enter into arrangements that consist of multiple performance obligations. Such arrangements may include any combination of our deliverables. To the extent a contract includes multiple promised deliverables, we apply judgment to determine whether promised deliverables are capable of being distinct and are distinct in the context of the contract. If these criteria are not met, the promised deliverables are accounted for as a combined performance obligation. For arrangements with multiple distinct performance obligations, we allocate consideration among the performance obligations based on their relative standalone selling price. Standalone selling price is the price at which we would sell a promised good or service separately to the customer. When not directly observable, we typically estimate standalone selling price by using the expected cost plus a margin approach. We typically establish a standalone selling price range for our deliverables, which is reassessed on a periodic basis or when facts and circumstances change.

We assess the timing of the transfer of goods or services to the customer as compared to the timing of payments to determine whether a significant financing component exists. As a practical expedient, we do not assess the existence of a significant financing component when the difference between payment and transfer of deliverables is a year or less. If the difference in timing arises for reasons other than the provision of finance to either the customer or us, no financing component is deemed to exist. The primary purpose of our invoicing terms is to provide customers with simplified and predictable ways of purchasing our services, not to receive or provide financing from or to customers. We do not consider set up or transition fees paid upfront by our customers to represent a financing component, as such fees are required to encourage customer commitment to the project and protect us from early termination of the contract.

Our contracts may be modified to add, remove or change existing performance obligations. The accounting for modifications to our contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price. Services added to our application development and systems integration service contracts are typically not distinct, while services added to our other contracts, including application maintenance, quality engineering and assurance as well as business process services contracts, are typically distinct.

From time to time, we may enter into arrangements with third party suppliers to resell products or services. In such cases, we evaluate whether we are the principal (i.e., report revenues on a gross basis) or agent (i.e., report revenues on a net basis). In doing so, we evaluate whether we control the good or service before it is transferred to the customer. If we control the good or service before it is transferred to the customer, we are the principal; if not, we are the agent. Determining whether we control the good or service before it is transferred to the customer may require judgment.

Trade Accounts Receivable, Contract Assets and Contract Liabilities. We classify our right to consideration in exchange for deliverables as either a receivable or a contract asset. A receivable is a right to consideration that is unconditional (i.e., only the passage of time is required before payment is due). For example, we recognize a receivable for revenues related to our time and materials and transaction or volume-based contracts when earned regardless of whether amounts have been billed. We present such receivables in "Trade accounts receivable, net" in our consolidated statements of financial position at their net estimated realizable value. A contract asset is a right to consideration that is conditional upon factors other than the passage of time. Contract assets are presented in "Other current assets" in our consolidated statements of financial position and primarily relate to unbilled amounts on fixed-price contracts utilizing the cost-to-cost method of revenue recognition. Our contract liabilities, or deferred revenue, consist of advance payments from clients and billings in excess of revenues recognized. We classify deferred revenue as current or noncurrent based on the timing of when we expect to recognize the revenues.

Our contract assets and contract liabilities are reported on a net basis by contract at the end of each reporting period. The difference between the opening and closing balances of our contract assets and contract liabilities primarily results from the timing difference between our performance obligations and the client's payment. We receive payments from clients based on the terms established in our contracts, which vary from contract to contract.

Allowance for Credit Losses. We calculate expected credit losses for our trade accounts receivable and contract assets. Expected credit losses include losses expected based on known credit issues with specific customers as well as a general expected credit loss allowance based on relevant information, including historical loss rates, current conditions, and reasonable economic forecasts that affect collectibility. We update our allowance for credit losses on a quarterly basis with changes in the allowance recognized in income from operations.

Costs to Fulfill. Recurring operating costs for contracts with customers are recognized as incurred. Certain eligible, nonrecurring costs (i.e., set-up or transition costs) are capitalized when such costs (1) relate directly to the contract, (2) generate or enhance resources of the Company that will be used in satisfying the performance obligation in the future, and (3) are expected to be recovered. These costs are expensed ratably over the estimated life of the customer relationship, including expected contract renewals. In determining the estimated life of the customer relationship, we evaluate the average contract term on a portfolio basis by nature of the services to be provided, and apply judgment in evaluating the rate of technological and industry change. Capitalized amounts are monitored regularly for impairment. Impairment losses are recorded when projected remaining consideration that has not already been recognized as revenue less costs related to the services being provided are not sufficient to recover the carrying amount of the capitalized costs to fulfill. Costs to fulfill are recorded in "Other noncurrent assets" in our consolidated statements of financial position and the amortization expense of costs to fulfill is included in "Cost of revenues" in our consolidated statements of operations.

Stock-Based Compensation. Stock-based compensation expense for awards of equity instruments to employees and non-employee directors is determined based on the grant date fair value of those awards. We recognize these compensation costs net

of an estimated forfeiture rate over the requisite service period of the award. Forfeitures are estimated on the date of grant and revised if actual or expected forfeiture activity differs materially from original estimates. Stock-based compensation expense relating to RSUs is recognized on a straight-line basis as shares vest over the requisite service period. Stock-based compensation costs for PSUs are recognized on a graded-vesting basis over the vesting period based on the most probable outcome of the performance conditions. If the minimum performance targets are not met, no compensation cost is recognized and any recognized compensation cost is reversed, except for awards subject to a market condition. The fair value of RSUs and PSUs is determined based on the number of stock units granted and the quoted price of our stock at the date of grant. The fair value of PSUs granted subject to a market condition is determined using a Monte Carlo valuation model.

Foreign Currency. The assets and liabilities of our foreign subsidiaries whose functional currency is not the U.S. dollar are translated into U.S. dollars at current exchange rates while revenues and expenses are translated at average monthly exchange rates. The resulting translation adjustments are recorded in the caption "Accumulated other comprehensive income (loss)" on the consolidated statements of financial position.

Foreign currency transactions and balances are those that are denominated in a currency other than the entity's functional currency. An entity's functional currency is the currency of the primary economic environment in which it operates. The U.S. dollar is the functional currency for some of our foreign subsidiaries. For these subsidiaries, transactions and balances denominated in the local currency are foreign currency transactions. Foreign currency transactions and balances related to non-monetary assets and liabilities are remeasured to the functional currency of the entity at historical exchange rates while monetary assets and liabilities are remeasured to the functional currency of the entity at current exchange rates. Foreign currency exchange gains or losses from remeasurement are included in the caption "Foreign currency exchange gain (losses), net" on our consolidated statements of operations together with gains or losses on our undesignated foreign currency hedges.

Derivative Financial Instruments. Derivative financial instruments are recorded on our consolidated statements of financial position as either an asset or liability measured at its fair value as of the reporting date. Our derivative financial instruments consist primarily of foreign exchange forward and option contracts. For derivative financial instruments to qualify for hedge accounting, the following criteria must be met: (1) the hedging instrument must be designated as a hedge; (2) the hedged exposure must be specifically identifiable and must expose us to risk; and (3) it must be expected that a change in fair value of the hedging instrument and an opposite change in the fair value of the hedged exposure will have a high degree of correlation. Changes in our derivatives' fair values are recognized in net income unless specific hedge accounting and documentation criteria are met (i.e., the instruments are designated and accounted for as hedges). We record the effective portion of the unrealized gains and losses on our derivative financial instruments that are designated as cash flow hedges in the caption "Accumulated other comprehensive income (loss)" in the consolidated statements of financial position. Any ineffectiveness or excluded portion of a designated cash flow hedge is recognized in net income. Upon occurrence of the hedged transaction, the gains and losses on the derivative are recognized in net income.

Income Taxes. We provide for income taxes utilizing the asset and liability method of accounting. Under this method, deferred income taxes are recorded to reflect the tax consequences in future years of differences between the tax basis of assets and liabilities and their financial reporting amounts at each balance sheet date, based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. If it is determined that it is more likely than not that future tax benefits associated with a deferred income tax asset will not be realized, a valuation allowance is provided. The effect of a change in tax rates on deferred income tax assets and liabilities is recognized in the provision for income taxes in the period that includes the enactment date.

Our provision for income taxes also includes the impact of provisions established for uncertain income tax positions, as well as any related penalties and interest. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the expiration of the applicable statute of limitations. To the extent that the final outcome of these matters differs from the amounts recorded, such differences will impact the provision for income taxes in the period in which such determination is made.

Earnings Per Share. Basic EPS is computed by dividing earnings available to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted EPS includes all potential dilutive common stock in the weighted average shares outstanding. We excluded less than 1 million of anti-dilutive shares in each of 2022, 2021 and 2020 from our diluted EPS calculation. We include PSUs in the dilutive common shares when they become contingently issuable per the authoritative guidance and exclude them when they are not contingently issuable.

Recently Adopted Accounting Pronouncements

Date Issued and Topic	Date Adopted and Method	Description	Impact
June 2016 Financial Instruments- Credit Losses	January 1, 2020 Modified Retrospective	The standard requires the measurement and recognition of expected credit losses using the current expected credit loss model for financial assets held at amortized cost, which includes the Company's trade accounts receivable, certain financial instruments and contract assets. It replaces the existing incurred loss impairment model with an expected loss methodology. The recorded credit losses are adjusted each period for changes in expected lifetime credit losses. The standard requires a cumulative effect adjustment to the statement of financial position as of the beginning of the first reporting period in which the guidance is effective.	As a result of the adoption, we recorded an increase to our opening retained earnings and "Trade accounts receivable, net" of \$1 million each.

Note 2 — Revenues

Disaggregation of Revenues

The tables below present disaggregated revenues from contracts with clients by client location, service line and contract type for each of our reportable business segments. We believe this disaggregation best depicts how the nature, amount, timing and uncertainty of our revenues and cash flows are affected by industry, market and other economic factors. Our consulting and technology services include consulting, application development, systems integration, quality engineering and assurance services as well as software solutions and related services while our outsourcing services include application maintenance, infrastructure and security as well as business process services. Revenues are attributed to geographic regions based upon client location, which is the client's billing address. Substantially all revenues in our North America region relate to clients in the United States.

Year Ended December 31, 2022					
(in millions)	FS	HS	P&R	CMT	Total
Revenues					
Geography:					
North America	\$ 4,312	\$ 4,853	\$ 3,078	\$ 2,192	\$ 14,435
United Kingdom	599	171	521	519	1,810
Continental Europe	590	483	585	137	1,795
Europe - Total	1,189	654	1,106	656	3,605
Rest of World	571	124	382	311	1,388
Total	\$ 6,072	\$ 5,631	\$ 4,566	\$ 3,159	\$ 19,428
Service line:					
Consulting and technology services	\$ 4,207	\$ 3,226	\$ 3,017	\$ 1,775	\$ 12,225
Outsourcing services	1,865	2,405	1,549	1,384	7,203
Total	\$ 6,072	\$ 5,631	\$ 4,566	\$ 3,159	\$ 19,428
Type of contract:					
Time and materials	\$ 3,516	\$ 2,010	\$ 1,856	\$ 1,797	\$ 9,179
Fixed-price	2,265	2,471	2,357	1,206	8,299
Transaction or volume-based	291	1,150	353	156	1,950
Total	\$ 6,072	\$ 5,631	\$ 4,566	\$ 3,159	\$ 19,428

Year Ended December 31, 2021						
(in millions)	FS	HS	P&R	CMT	Total	
Revenues						
Geography:						
North America	\$ 4,204	\$ 4,571	\$ 2,937	\$ 1,924	\$	13,636
United Kingdom	547	168	471	456		1,642
Continental Europe	745	477	539	158		1,919
Europe - Total	1,292	645	1,010	614		3,561
Rest of World	555	121	329	305		1,310
Total	\$ 6,051	\$ 5,337	\$ 4,276	\$ 2,843	\$	18,507
Service line:						
Consulting and technology services	\$ 4,079	\$ 3,090	\$ 2,725	\$ 1,693	\$	11,587
Outsourcing services	1,972	2,247	1,551	1,150		6,920
Total	\$ 6,051	\$ 5,337	\$ 4,276	\$ 2,843	\$	18,507
Type of contract:						
Time and materials	\$ 3,613	\$ 2,063	\$ 1,785	\$ 1,679	\$	9,140
Fixed-price	2,063	2,157	2,085	1,032		7,337
Transaction or volume-based	375	1,117	406	132		2,030
Total	\$ 6,051	\$ 5,337	\$ 4,276	\$ 2,843	\$	18,507
Year Ended December 31, 2020						
(in millions)	FS	HS	P&R	CMT	Total	
Revenues						
Geography:						
North America	\$ 4,013	\$ 4,181	\$ 2,650	\$ 1,737	\$	12,581
United Kingdom	463	157	371	344		1,335
Continental Europe	629	434	413	177		1,653
Europe - Total	1,092	591	784	521		2,988
Rest of World	516	80	262	225		1,083
Total	\$ 5,621	\$ 4,852	\$ 3,696	\$ 2,483	\$	16,652
Service line:						
Consulting and technology services	\$ 3,691	\$ 2,786	\$ 2,249	\$ 1,456	\$	10,182
Outsourcing services	1,930	2,066	1,447	1,027		6,470
Total	\$ 5,621	\$ 4,852	\$ 3,696	\$ 2,483	\$	16,652
Type of contract:						
Time and materials	\$ 3,548	\$ 1,950	\$ 1,548	\$ 1,515	\$	8,561
Fixed-price	1,736	1,777	1,741	871		6,125
Transaction or volume-based	337	1,125	407	97		1,966
Total	\$ 5,621	\$ 4,852	\$ 3,696	\$ 2,483	\$	16,652

In 2020, we made an offer to settle and exit a large customer engagement of our Samlink subsidiary. In connection with our settlement offer, we recorded a reduction of revenues of \$118 million and additional expenses of \$33 million, primarily related to the impairment of long-lived assets. The \$118 million reduction in revenue impacted our Financial Services segment within Continental Europe, consulting and technology services and fixed-price contracts. In 2021, the settlement agreements became final and we additionally entered into an agreement to sell the Samlink subsidiary. The sale of our Samlink subsidiary closed on February 1, 2022.

Costs to Fulfill

The following table shows significant movements in the capitalized costs to fulfill:

(in millions)	2022		2021	
Beginning balance	\$	394	\$	467
Costs capitalized		39		56
Amortization expense		(109)		(118)
Impairment charges ⁽¹⁾		(59)		(11)
Ending balance	\$	265	\$	394

(1) The impairment charges in 2022 are related to costs to fulfill a large volume-based contract with a Health Sciences client. In 2021, the impairment charges relate to various clients across multiple business segments.

Costs to obtain contracts were immaterial for the periods disclosed.

Contract Balances

A contract asset is a right to consideration that is conditional upon factors other than the passage of time. The table below shows significant movements in contract assets:

(in millions)	2022		2021	
Beginning balance	\$	310	\$	315
Revenues recognized during the period but not billed		308		275
Amounts reclassified to trade accounts receivable		(285)		(280)
Effect of foreign currency exchange movements		(7)		—
Ending balance	\$	326	\$	310

Contract liabilities, or deferred revenue, consist of advance payments and billings in excess of revenues recognized. The table below shows significant movements in the deferred revenue balances (current and noncurrent):

(in millions)	2022		2021	
Beginning balance	\$	443	\$	419
Amounts billed but not recognized as revenues		397		413
Revenues recognized related to the beginning balance of deferred revenue		(416)		(389)
Effect of foreign currency exchange movements		(7)		—
Ending balance	\$	417	\$	443

Revenues recognized during the year ended December 31, 2022 for performance obligations satisfied or partially satisfied in previous periods were immaterial.

Remaining Performance Obligations

As of December 31, 2022, the aggregate amount of transaction price allocated to remaining performance obligations, was \$3,361 million, of which approximately 55% is expected to be recognized as revenues within 2 years and 75% is expected to be recognized as revenues within 5 years. Disclosure is not required for performance obligations that meet any of the following criteria:

- (1) contracts with a duration of one year or less as determined under ASC Topic 606 "Revenue from Contracts with Customers,"
- (2) contracts for which we recognize revenues based on the right to invoice for services performed,
- (3) variable consideration allocated entirely to a wholly unsatisfied performance obligation or to a wholly unsatisfied promise to transfer a distinct good or service that forms part of a single performance obligation in accordance with ASC 606-10-25-14(b), for which the criteria in ASC 606-10-32-40 have been met, or

(4) variable consideration in the form of a sales-based or usage based royalty promised in exchange for a license of intellectual property.

Many of our performance obligations meet one or more of these exemptions and therefore are not included in the remaining performance obligation amount disclosed above.

Trade Accounts Receivable and Allowance for Credit Losses

The following table presents the activity in the allowance for credit losses for the trade accounts receivable:

(in millions)	2022		2021		2020	
Beginning balance	\$	50	\$	57	\$	67
Impact of adoption of the Credit Loss Standard		—		—		(1)
Credit loss expense		9		6		8
Write-offs charged against the allowance		(16)		(13)		(17)
Ending balance	\$	43	\$	50	\$	57

Note 3 — Business Combinations

Acquisitions completed during each of the three years ended December 31, 2022, 2021 and 2020 were not individually or in the aggregate material to our operations. Accordingly, pro forma results have not been presented. We have allocated the purchase price related to these transactions to tangible and intangible assets acquired and liabilities assumed, including goodwill, based on their estimated fair values. The primary items that generated goodwill are the value of the acquired assembled workforces and synergies between the acquired companies and us, neither of which qualify as an identifiable intangible asset.

2022

In 2022, we acquired 100% ownership in each of the following:

- AustinCSI, a digital transformation consultancy specializing in enterprise cloud and data analytics advisory services, acquired to complement our technology and industry expertise (acquired December 15, 2022); and
- Utegration, a full service consulting and solutions provider specializing in SAP technology and SAP-certified products for the energy and utilities sectors, acquired to expand and strengthen our industry expertise in our SAP practice (acquired December 19, 2022).

The allocations of preliminary purchase price to the fair value of the assets acquired and liabilities assumed were as follows:

(dollars in millions)	AustinCSI		Utegration		Total	Weighted Average Useful Life
Cash	\$	—	\$	5	\$	5
Trade accounts receivable		9		21		30
Property and equipment and other assets		4		15		19
Non-deductible goodwill		—		23		23
Tax-deductible goodwill		83		87		170
Customer relationship assets		69		83		152
Other intangible assets		—		1		1
Current liabilities		(3)		(17)		(20)
Noncurrent liabilities		(1)		(4)		(5)
Purchase price	\$	161	\$	214	\$	375

For the year ended December 31, 2022, revenues from acquisitions completed in 2022, since the dates of acquisition, were immaterial. For acquisitions completed in 2022, the allocation of purchase price is preliminary and will be finalized as soon as practicable within the measurement period, but in no event later than one year following the date of acquisition.

2021

In 2021, we acquired 100% ownership in each of the following:

- Linium, a cloud transformation consultancy group specializing in the ServiceNow platform and solutions for smart digital enterprise workflows, acquired to broaden our enterprise service management capabilities (acquired January 31, 2021);
- Magenic, a provider of agile software and cloud development, DevOps, experience design and advisory services across a range of industries, acquired to enhance our global software engineering expertise (acquired February 1, 2021);
- Servian, an Australia-based enterprise transformation consultancy specializing in data analytics, AI, digital services, experience design and cloud, acquired to enhance our digital portfolio and market presence in Australia and New Zealand (acquired April 1, 2021);
- ESG Mobility, a digital automotive engineering research and development provider for connected, autonomous and electric vehicles, acquired to expand our digital engineering expertise, particularly in connected vehicles (acquired June 1, 2021);
- TQS, a global industrial data and intelligence company, acquired to accelerate our growth in IoT, data and analytics (acquired July 30, 2021);
- Hunter, a provider of digital engineering and project management services, acquired to extend our talent network in key markets, expanding our digital engineering resources in the United States (acquired August 16, 2021); and
- Devbridge, a software consultancy and product development company, acquired to expand our software product engineering capabilities and global delivery footprint (acquired December 9, 2021).

The allocations of purchase price to the fair value of the assets acquired and liabilities assumed were as follows:

(dollars in millions)	Devbridge	Servian	Magenic	ESG Mobility	Linium	Other	Total	Weighted Average Useful Life
Cash	\$ 7	\$ 4	\$ 13	\$ 28	\$ —	\$ 2	\$ 54	
Trade accounts receivable	12	15	17	30	5	12	91	
Property and equipment and other assets	5	6	4	8	1	4	28	
Operating lease assets, net	11	5	10	27	—	1	54	
Non-deductible goodwill	41	184	10	26	—	18	279	
Tax-deductible goodwill	140	—	137	24	57	10	368	
Customer relationship assets	72	77	90	77	24	32	372	9.8 years
Other intangible assets	—	2	1	—	—	—	3	3.8 years
Current liabilities	(11)	(12)	(29)	(22)	(2)	(7)	(83)	
Noncurrent liabilities	(9)	(29)	(7)	(66)	—	(6)	(117)	
Purchase price, inclusive of contingent consideration	\$ 268	\$ 252	\$ 246	\$ 132	\$ 85	\$ 66	\$ 1,049	

For the year ended December 31, 2021, revenues from acquisitions completed in 2021, since the dates of acquisition, were \$301 million.

Note 4 — Restructuring Charges

During 2020, we incurred costs related to both our realignment program and our 2020 Fit for Growth Plan. Our realignment program, which began in 2017, targeted improved client focus, cost structure and the efficiency and effectiveness of our delivery while continuing to drive revenue growth. Our 2020 Fit for Growth Plan, which began in the fourth quarter of 2019, simplified our organizational model and optimized our cost structure in order to partially fund the investments required to execute on our strategy and advance our growth agenda and included our decision to exit certain content-related services that were not in line with our strategic vision for the Company. The total costs related to our realignment program and our 2020 Fit for Growth Plan are reported in "Restructuring charges" in our consolidated statements of operations. We do not allocate these charges to individual segments in internal management reports used by the chief operating decision maker. Accordingly, such expenses are included in our segment reporting as "unallocated costs." See [Note 18](#).

During 2020, we incurred \$42 million of certain employee retention costs and professional fees related to our realignment program and \$173 million of employee separation, employee retention and facility exit costs and other charges related to our 2020 Fit for Growth Plan. We did not incur any costs related to these plans during 2022 or 2021 and had no accrued employee separation costs related to these plans as of December 31, 2022.

Note 5 — Investments

Our investments were as follows as of December 31:

(in millions)	2022	2021
Short-term investments:		
Equity investment security	\$ 10	\$ 26
Available-for-sale investment securities	225	310
Held-to-maturity investment securities	24	37
Time deposits	51	554
Total short-term investments	\$ 310	\$ 927
Long-term investments:		
Other investments	\$ 70	\$ 66
Restricted time deposits ⁽¹⁾	357	397
Total long-term investments	\$ 427	\$ 463

(1) See [Note 11](#).

Equity Investment Security

Our equity investment security is a U.S. dollar denominated investment in a fixed income mutual fund. During 2022, we sold \$15 million of our investment in the fund. Realized and unrealized gains and losses were immaterial for the years ended December 31, 2022, 2021 and 2020.

Available-for-Sale Investment Securities

Our available-for-sale investment securities consist of highly rated U.S. dollar denominated investments in certificates of deposit and commercial paper maturing within one year. As of December 31, 2022, the amortized cost and fair value of the available-for-sale investments were each \$225 million. As of December 31, 2021, the amortized cost and fair value of the available-for-sale investments were each \$310 million. Unrealized losses were immaterial as of December 31, 2022 and 2021. There were no realized gains or losses related to the available-for-sale investment securities during the years ended December 31, 2022, 2021 and 2020. There were no sales of available-for-sale investment securities during the years ended December 31, 2022, 2021 and 2020.

Held-to-Maturity Investment Securities

Our held-to-maturity investment securities consist of Indian rupee denominated investments primarily in commercial paper and international corporate bonds. Our investment guidelines are to purchase securities that are investment grade at the time of acquisition. The basis for the measurement of fair value of our held-to-maturity investments is Level 2 in the fair value hierarchy.

The amortized cost and fair value of corporate debt securities as of December 31, 2022 and 2021 were each \$12 million and \$17 million, respectively. The amortized cost and fair value of commercial paper securities as of December 31, 2022 and 2021 were each \$12 million and \$20 million, respectively.

As of December 31, 2022, corporate debt securities in the amount of \$12 million and commercial paper in the amount of \$12 million were in an unrealized loss position. The total unrealized loss was less than \$1 million and none of the securities had been in an unrealized loss position for longer than 12 months. As of December 31, 2021, \$17 million of corporate debt securities and \$10 million of commercial paper were in an unrealized loss position. The total unrealized loss was less than \$1 million and none of the securities had been in an unrealized loss position for longer than 12 months.

The securities in our portfolio are highly rated and short-term in nature. As of December 31, 2022, our corporate debt securities were rated AA+ or better and our commercial paper securities were rated A-1+ by CRISIL, an Indian subsidiary of S&P Global, or ICRA, the Indian affiliate of Moody's.

Other Investments

As of December 31, 2022 and 2021, we had equity method investments of \$68 million and \$63 million, respectively, primarily related to an investment in the technology sector. As of December 31, 2022 and 2021, we had equity securities without a readily determinable fair value of \$2 million and \$3 million, respectively.

Note 6 — Property and Equipment, net

Property and equipment were as follows as of December 31:

	Estimated Useful Life	2022	2021
	(in years)	(in millions)	
Buildings	30	\$ 771	\$ 777
Computer equipment	3 – 5	729	638
Computer software	3 – 8	1,033	926
Furniture and equipment	5 – 9	768	772
Land		7	7
Capital work-in-progress		111	116
Leasehold improvements	Shorter of the lease term or the life of the asset	398	431
Sub-total		3,817	3,667
Accumulated depreciation and amortization		(2,716)	(2,496)
Property and equipment, net		\$ 1,101	\$ 1,171

Depreciation and amortization expense related to property and equipment was \$385 million, \$392 million and \$407 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The gross amount of property and equipment recorded under finance leases was \$17 million and \$24 million as of December 31, 2022 and 2021, respectively. Accumulated amortization for our ROU finance lease assets was \$9 million and \$17 million as of December 31, 2022 and 2021, respectively. Amortization expense related to our ROU finance lease assets was \$4 million, \$7 million and \$7 million for the years ended December 31, 2022, 2021 and 2020 respectively.

The gross amount of property and equipment recorded for software to be sold, leased or marketed reported in the caption "Computer software" above was \$241 million and \$201 million as of December 31, 2022 and 2021, respectively. Accumulated amortization for software to be sold, leased or marketed was \$143 million and \$106 million as of December 31, 2022 and 2021, respectively. Amortization expense for software to be sold, leased or marketed recorded as property and equipment was \$37 million, \$33 million and \$30 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Note 7 — Leases

The following table provides information on the components of our operating and finance leases included in our consolidated statement of financial position as of December 31:

Leases	Location on Statement of Financial Position	2022		2021	
		(in millions)			
Assets					
ROU operating lease assets	Operating lease assets, net	\$	876	\$	933
ROU finance lease assets	Property and equipment, net		8		7
	Total	\$	884	\$	940
Liabilities					
Current					
Operating lease	Operating lease liabilities	\$	174	\$	195
Finance lease	Accrued expenses and other current liabilities		5		8
Noncurrent					
Operating lease	Operating lease liabilities, noncurrent		714		783
Finance lease	Other noncurrent liabilities		8		5
	Total	\$	901	\$	991

For the years ended December 31, 2022, 2021 and 2020, our operating lease costs were \$256 million, \$293 million and \$302 million, respectively, including variable lease costs of \$17 million, \$10 million and \$14 million, respectively. Our short-term lease rental expense was \$21 million, \$22 million and \$20 million for the years ended December 31, 2022, 2021 and 2020, respectively. Lease interest expense related to our finance leases for years ended December 31, 2022, 2021 and 2020 was immaterial.

The following table provides information on the weighted average remaining lease term and weighted average discount rate for our operating leases as of December 31:

Operating Lease Term and Discount Rate	2022	2021
Weighted average remaining lease term	6.2 years	6.5 years
Weighted average discount rate	5.4 %	5.4 %

The following table provides supplemental cash flow and non-cash information related to our operating leases as of December 31:

(in millions)	2022	2021	2020
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 241	\$ 274	\$ 271
ROU assets obtained in exchange for operating lease liabilities	164	100	273

Cash paid for amounts included in the measurement of finance lease liabilities and ROU assets obtained in exchange for finance lease liabilities were each immaterial for the years ended December 31, 2022, 2021 and 2020.

The following table provides the schedule of maturities of our operating lease liabilities and a reconciliation of the undiscounted cash flows to the operating lease liabilities recognized in the statement of financial position as of December 31:

(in millions)	2022
2023	\$ 215
2024	180
2025	155
2026	129
2027	108
Thereafter	267
Total operating lease payments	1,054
Interest	(166)
Total operating lease liabilities	\$ 888

As of December 31, 2022, additional obligations related to operating leases whose lease term had yet to commence were immaterial.

Note 8 — Goodwill and Intangible Assets, net

Changes in goodwill by our reportable business segments were as follows for the years ended December 31, 2022 and 2021:

Segment	January 1, 2022	Goodwill Additions and Adjustments	Foreign Currency Translation Adjustments	December 31, 2022
(in millions)				
Financial Services	\$ 1,109	\$ 5	\$ (41)	\$ 1,073
Health Sciences	2,831	2	(14)	2,819
Products and Resources	967	127	(32)	1,062
Communications, Media and Technology	713	59	(16)	756
Total goodwill	\$ 5,620	\$ 193	\$ (103)	\$ 5,710

Segment	January 1, 2021	Goodwill Additions and Adjustments	Foreign Currency Translation Adjustments	December 31, 2021
(in millions)				
Financial Services	\$ 932	\$ 198	\$ (21)	\$ 1,109
Health Sciences	2,755	84	(8)	2,831
Products and Resources	780	200	(13)	967
Communications, Media and Technology	564	156	(7)	713
Total goodwill	\$ 5,031	\$ 638	\$ (49)	\$ 5,620

Based on our most recent goodwill impairment assessment performed as of October 31, 2022, we concluded that the goodwill in each of our reporting units was not at risk of impairment. We have not recognized any impairment losses on our goodwill.

Components of intangible assets were as follows as of December 31:

(in millions)	2022			2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	\$ 1,803	\$ (738)	\$ 1,065	\$ 1,679	\$ (610)	\$ 1,069
Developed technology	383	(369)	14	385	(330)	55
Indefinite lived trademarks	72	—	72	72	—	72
Finite lived trademarks and other	81	(64)	17	81	(59)	22
Total intangible assets	\$ 2,339	\$ (1,171)	\$ 1,168	\$ 2,217	\$ (999)	\$ 1,218

Other than certain trademarks with indefinite lives, our intangible assets have finite lives and, as such, are subject to amortization. Amortization of intangible assets totaled \$184 million, \$182 million and \$152 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The following table provides the estimated amortization expense related to our existing intangible assets for the next five years.

(in millions)	Estimated Amortization	
2023	\$	155
2024		150
2025		147
2026		144
2027		136

Note 9 — Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities were as follows as of December 31:

(in millions)	2022	2021
Compensation and benefits	\$ 1,446	\$ 1,601
Customer volume and other incentives	222	242
Income taxes	217	74
Professional fees	165	220
Other	357	395
Total accrued expenses and other current liabilities	\$ 2,407	\$ 2,532

Note 10 — Debt

In 2018, we entered into a Credit Agreement providing for a \$750 million Term Loan and a \$1,750 million unsecured revolving credit facility, which were due to mature in November 2023. In October 2022, we completed a debt refinancing and entered into a new credit agreement with a commercial bank syndicate ("New Credit Agreement") providing for a \$650 million unsecured term loan ("New Term Loan") and a \$1,850 million unsecured revolving credit facility, which are each due to mature in October 2027. The Credit Agreement was terminated upon the closing of the New Credit Agreement and the proceeds from the New Term Loan were used primarily to repay our outstanding Term Loan balance.

The New Credit Agreement requires interest to be paid, at our option, at either the Term Benchmark, Adjusted Daily Simple RFR or the ABR Rate (each as defined in the New Credit Agreement), plus, in each case, an Applicable Margin (as defined in the New Credit Agreement). Initially, the Applicable Margin is 0.875% with respect to Term Benchmark loans and RFR loans and 0.00% with respect to ABR loans. Subsequently, the Applicable Margin with respect to Term Benchmark loans and RFR loans will be determined quarterly and may range from 0.75% to 1.125%, depending on our public debt ratings, or, if we have not received public debt ratings, from 0.875% to 1.125%, depending on our Leverage Ratio, which is the ratio of indebtedness for borrowed money to Consolidated EBITDA, as defined in the New Credit Agreement. The New Term Loan is a Term Benchmark loan.

We are required under the New Credit Agreement to make scheduled quarterly principal payments on the New Term Loan beginning in December 2023. The New Credit Agreement contains customary affirmative and negative covenants as well as a financial covenant. The financial covenant is tested at the end of each fiscal quarter and requires us to maintain a Leverage Ratio not in excess of 3.50:1.00, or for a period of up to four quarters following certain material acquisitions, 3.75:1.00. We were in compliance with all debt covenants and representations of the Credit Agreement as of December 31, 2022.

In March 2022, our India subsidiary renewed its one-year 13 billion Indian rupee (\$157 million at the December 31, 2022 exchange rate) working capital facility, which requires us to repay any balances within 90 days from the date of disbursement. There is a 1.0% prepayment penalty applicable to payments made within 30 days of disbursement. This working capital facility contains affirmative and negative covenants and is renewable annually. As of December 31, 2022, we have not borrowed funds under this facility.

Short-term Debt

As of December 31, 2022 and 2021, we had \$8 million and \$38 million of short-term debt related to current maturities of our term loan, with a weighted average interest rate of 5.2% and 1.0%, respectively.

Long-term Debt

The following summarizes our long-term debt balances as of December 31:

(in millions)	2022		2021	
Term loan	\$	650	\$	666
Less:				
Current maturities		(8)		(38)
Unamortized deferred financing costs		(4)		(2)
Long-term debt, net of current maturities	\$	638	\$	626

The following represents the schedule of maturities of our New Term Loan:

Year	Amounts (in millions)
2023	\$ 8
2024	33
2025	33
2026	33
2027	543
Total	\$ 650

Note 11 — Income Taxes

Income before provision for income taxes shown below is based on the geographic location to which such income was attributed for years ended December 31:

(in millions)	2022		2021		2020
United States	\$	975	\$	818	\$ 814
Foreign		2,041		2,009	1,282
Income before provision for income taxes	\$	3,016	\$	2,827	\$ 2,096

The provision for income taxes consisted of the following components for the years ended December 31:

(in millions)	2022		2021		2020
Current:					
Federal and state	\$	492	\$	210	\$ 137
Foreign		511		456	383
Total current provision		1,003		666	520
Deferred:					
Federal and state		(240)		(50)	(77)
Foreign		(33)		77	261
Total deferred (benefit) provision		(273)		27	184
Total provision for income taxes	\$	730	\$	693	\$ 704

In the third quarter of 2020, we reversed our indefinite reinvestment assertion on Indian earnings accumulated in prior years and recorded a \$140 million Tax on Accumulated Indian Earnings. The recorded income tax expense reflects the India

withholding tax on unrepatriated Indian earnings, which were \$5.2 billion as of December 31, 2019, net of applicable U.S. foreign tax credits.

We are involved in two separate ongoing disputes with the ITD in connection with previously disclosed share repurchase transactions undertaken by CTS India in 2013 and 2016 to repurchase shares from its shareholders (non-Indian Cognizant entities) valued at \$523 million and \$2.8 billion, respectively.

The 2016 transaction was undertaken pursuant to a plan approved by the High Court in Chennai, India, and resulted in the payment of \$135 million in Indian income taxes - an amount we believe includes all the applicable taxes owed for this transaction under Indian law. In March 2018, the ITD asserted that it is owed an additional 33 billion Indian rupees (\$399 million at the December 31, 2022 exchange rate) on the 2016 transaction. We deposited 5 billion Indian rupees, representing 15% of the disputed tax amount related to the 2016 transaction, with the ITD. As of December 31, 2022 and 2021, the deposit with the ITD was \$60 million and \$67 million, respectively, presented in "Other noncurrent assets." Additionally, certain time deposits of CTS India were placed under lien in favor of the ITD, representing the remainder of the disputed tax amount. As of December 31, 2022 and 2021, the balance of deposits under lien was 30 billion Indian rupees, including previously earned interest, or \$357 million and \$397 million, respectively, as presented in "Long-term investments." The dispute in relation to the 2013 share repurchase transaction is also in litigation. At this time, the ITD has not made specific demands with regards to the 2013 transaction.

In April 2020, we received a formal assessment from the ITD on the 2016 transaction, which was consistent with the ITD's previous assertions. In June 2020, we filed an appeal against this assessment to the CITA. In March 2022, we received a negative decision from the CITA. The matter is currently pending before the Income Tax Appellate Tribunal.

We continue to believe we have paid all applicable taxes owed on both the 2016 and the 2013 transactions and we continue to defend our positions with respect to both matters. Accordingly, we have not recorded any reserves for these matters as of December 31, 2022.

The reconciliation between the U.S. federal statutory rate and our effective income tax rate were as follows for the years ended December 31:

(Dollars in millions)	2022	%	2021	%	2020	%
Tax expense, at U.S. federal statutory rate	\$ 633	21.0	\$ 594	21.0	\$ 440	21.0
State and local income taxes, net of federal benefit	63	2.1	50	1.8	52	2.5
Non-taxable income for Indian tax purposes	(6)	(0.2)	(36)	(1.3)	(48)	(2.3)
Rate differential on foreign earnings	98	3.2	137	4.8	178	8.5
Recognition of benefits related to uncertain tax positions	(43)	(1.4)	(14)	(0.5)	—	—
Credits and other incentives	(17)	(0.6)	(42)	(1.5)	(51)	(2.4)
Reversal of indefinite reinvestment assertion	—	—	—	—	140	6.6
Other	2	0.1	4	0.2	(7)	(0.3)
Total provision for income taxes	\$ 730	24.2	\$ 693	24.5	\$ 704	33.6

Our Indian subsidiaries are primarily export-oriented and, through March 31, 2022, benefited from certain income tax holiday benefits granted by the government of India for export activities conducted within SEZs. In December 2019, India enacted the India Tax Law, which enables Indian companies to elect to be taxed at a lower income tax rate of 25.17%, as compared to the otherwise applicable income tax rate of 34.94%. Once a company elects into the lower income tax rate, a company may not benefit from any income tax holidays associated with SEZs and certain other tax incentives and carryforwards, and may not reverse its election. We elected into the new tax regime starting with the India fiscal year beginning on April 1, 2022. For the years ended December 31, 2022, 2021 and 2020, the effect of the income tax holidays granted by the Indian government was to reduce the overall income tax provision and increase net income by \$6 million, \$36 million and \$48 million, respectively, and increase diluted EPS by \$0.01, \$0.07 and \$0.09, respectively.

The significant components of deferred income tax assets and liabilities recorded on the consolidated statements of financial position were as follows as of December 31:

(in millions)	2022	2021
Deferred income tax assets:		
Net operating losses	\$ 46	\$ 52
Revenue recognition	37	116
Compensation and benefits	159	230
Credit carryforwards	16	27
Expenses not currently deductible	498	121
	756	546
Less: valuation allowance	(41)	(46)
Deferred income tax assets, net	715	500
Deferred income tax liabilities:		
Depreciation and amortization	194	202
Deferred costs	48	84
Other	11	28
Deferred income tax liabilities	253	314
Net deferred income tax assets	\$ 462	\$ 186

At December 31, 2022, we had foreign and U.S. net operating loss carryforwards of approximately \$103 million and \$96 million, respectively. We have recorded valuation allowances on certain net operating loss carryforwards.

Provisions enacted in the Tax Reform Act in December 2017 related to the capitalization of research and experimental expenditures became effective on January 1, 2022. These provisions require us to capitalize research and experimental expenditures and amortize them for tax purposes over five or fifteen years, depending on where the research is conducted. Previously these expenses could be deducted in the year incurred. The implementation of these provisions has increased our deferred tax asset and income taxes payable in the United States for the 2022 tax year by approximately \$300 million. The capitalized expenses do not significantly impact our effective tax rate.

We conduct business globally and file income tax returns in the United States, including federal and state, as well as various foreign jurisdictions. Tax years that remain subject to examination by the IRS are 2017 and onward, and years that remain subject to examination by state authorities vary by state. Years under examination by foreign tax authorities are 2001 and onward. In addition, transactions between our affiliated entities are arranged in accordance with applicable transfer pricing laws, regulations and relevant guidelines. As a result, and due to the interpretive nature of certain aspects of these laws and guidelines, we have pending applications for APAs before the taxing authorities in some of our most significant jurisdictions.

We record incremental tax expense, based upon the more-likely-than-not standard, for any uncertain tax positions. In addition, when applicable, we adjust the previously recorded income tax expense to reflect examination results when the position is effectively settled or otherwise resolved. Our ongoing evaluations of the more-likely-than-not outcomes of the examinations and related tax positions require judgment and can result in adjustments that increase or decrease our effective income tax rate, as well as impact our operating results. The specific timing of when the resolution of each tax position will be reached is uncertain.

Changes in unrecognized income tax benefits were as follows for the years ended December 31:

(in millions)	2022	2021	2020
Balance, beginning of year	\$ 194	\$ 193	\$ 152
Additions based on tax positions related to the current year	53	34	28
Additions for tax positions of prior years	65	16	10
Additions for tax positions of acquired subsidiaries	—	12	3
Reductions for tax positions due to lapse of statutes of limitations	(43)	(17)	—
Settlements	—	(43)	—
Foreign currency exchange movement	—	(1)	—
Balance, end of year	\$ 269	\$ 194	\$ 193

In the third quarter of 2022, we recognized an income tax benefit of \$36 million related to a specific uncertain tax position that was previously unrecognized in our prior year consolidated financial statements. The recognition of the benefit in the third quarter of 2022 was based on management's reassessment regarding whether this unrecognized tax benefit met the more-likely-than-not threshold in light of the lapse in the statute of limitations as to a portion of such benefit. In 2021, we reached an agreement with the IRS, which settled tax years 2012 through 2016. As a result of this settlement, in the first quarter of 2021, we recorded a \$14 million discrete benefit to the provision for income taxes.

The unrecognized income tax benefits would affect our effective income tax rate, if recognized. While the Company believes uncertain tax positions may be settled or resolved within the next twelve months, it is difficult to estimate the income tax impact of these potential resolutions at this time. We recognize accrued interest and any penalties associated with uncertain tax positions as part of our provision for income taxes. The total amount of accrued interest and penalties at December 31, 2022 and 2021 was \$33 million and \$30 million, respectively, and relates to U.S. and foreign tax matters. The total amount of interest and penalties recorded in the provision for income taxes in each of 2022, 2021 and 2020 was immaterial.

Note 12 — Derivative Financial Instruments

In the normal course of business, we use foreign exchange forward and option contracts to manage foreign currency exchange rate risk. Derivatives may give rise to credit risk from the possible non-performance by counterparties. Credit risk is limited to the fair value of those contracts that are favorable to us. We have limited our credit risk by limiting the amount of credit exposure with any one financial institution and conducting ongoing evaluation of the creditworthiness of the financial institutions with which we do business. In addition, all the assets and liabilities related to the foreign exchange derivative contracts set forth in the below table are subject to master netting arrangements, such as the International Swaps and Derivatives Association Master Agreement, with each individual counterparty. These master netting arrangements generally provide for net settlement of all outstanding contracts with the counterparty in the case of an event of default or a termination event. We have presented all the assets and liabilities related to the foreign exchange derivative contracts, as applicable, on a gross basis, with no offsets, in our consolidated statements of financial position. There is no financial collateral (including cash collateral) posted or received by us related to the foreign exchange derivative contracts.

The following table provides information on the location and fair values of derivative financial instruments included in our consolidated statements of financial position as of December 31:

(in millions)		2022		2021	
Designation of Derivatives	Location on Statement of Financial Position	Assets	Liabilities	Assets	Liabilities
Foreign exchange forward and option contracts – Designated as cash flow hedging instruments	Other current assets	\$ 1	\$ —	\$ 51	\$ —
	Other noncurrent assets	1	—	15	—
	Accrued expenses and other current liabilities	—	53	—	—
	Other noncurrent liabilities	—	17	—	—
	Total	2	70	66	—
Foreign exchange forward contracts - Not designated as hedging instruments	Other current assets	4	—	3	—
	Accrued expenses and other current liabilities	—	5	—	7
	Total	4	5	3	7
Total		\$ 6	\$ 75	\$ 69	\$ 7

Cash Flow Hedges

We have entered into a series of foreign exchange derivative contracts that are designated as cash flow hedges of Indian rupee denominated payments in India. These contracts are intended to partially offset the impact of movement of the Indian rupee against the U.S. dollar on future operating costs and are scheduled to mature each month during 2023 and 2024. The changes in fair value of these contracts are initially reported in "Accumulated other comprehensive income (loss)" in our consolidated statements of financial position and are subsequently reclassified to earnings within "Cost of revenues" and "Selling, general and administrative expenses" in our consolidated statements of operations in the same period that the forecasted Indian rupee denominated payments are recorded in earnings. As of December 31, 2022, we estimate that \$40 million, net of tax, of the net losses related to derivatives designated as cash flow hedges reported in the caption "Accumulated other comprehensive income (loss)" in our consolidated statements of financial position is expected to be reclassified into earnings within the next 12 months.

The notional value of our outstanding contracts by year of maturity was as follows as of December 31:

(in millions)	2022	2021
2022	\$ —	\$ 1,643
2023	1,865	880
2024	1,010	—
Total notional value of contracts outstanding ⁽¹⁾	\$ 2,875	\$ 2,523

(1) Includes \$78 million notional value of option contracts as of December 31, 2021, with the remaining notional value related to forward contracts. There were no option contracts outstanding as of December 31, 2022.

The following table provides information on the location and amounts of pre-tax losses and gains on our cash flow hedges for the year ended December 31:

(in millions)	Change in Derivative Losses and Gains Recognized in Accumulated Other Comprehensive Income (Loss) (effective portion)		Location of Net (Losses) and Gains Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (effective portion)	Net (Losses) and Gains Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (effective portion)	
	2022	2021		2022	2021
Foreign exchange forward and option contracts – Designated as cash flow hedging instruments	\$ (153)	\$ 67	Cost of revenues	\$ (13)	\$ 55
			SG&A expenses	(1)	8
			Total	\$ (14)	\$ 63

The activity related to the change in net unrealized gains and losses on the cash flow hedges included in "Accumulated other comprehensive income (loss)" in our consolidated statements of stockholders' equity is presented in [Note 14](#).

Other Derivatives

We use foreign exchange forward contracts to provide an economic hedge against balance sheet exposures to certain monetary assets and liabilities denominated in currencies other than the functional currency of our foreign subsidiaries. We entered into foreign exchange forward contracts that are scheduled to mature in the first quarter of 2023. Realized gains or losses and changes in the estimated fair value of these derivative financial instruments are recorded in the caption "Foreign currency exchange gains (losses), net" in our consolidated statements of operations.

Additional information related to our outstanding foreign exchange forward contracts not designated as hedging instruments was as follows as of December 31:

(in millions)	2022		2021	
	Notional	Fair Value	Notional	Fair Value
Contracts outstanding	\$ 1,433	\$ (1)	\$ 847	\$ (4)

The following table provides information on the location and amounts of realized and unrealized pre-tax gains on our other derivative financial instruments for the year ended December 31:

(in millions)	Location of Net Gains on Derivative Instruments	Amount of Net Gains on Derivative Instruments	
		2022	2021
Foreign exchange forward contracts - Not designated as hedging instruments	Foreign currency exchange gains (losses), net	\$ 23	\$ 13

The related cash flow impacts of all of the derivative activities are reflected as cash flows from operating activities.

Note 13 — Fair Value Measurements

We measure our cash equivalents, certain investments, contingent consideration liabilities and foreign exchange forward and option contracts at fair value. Fair value is the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The fair value hierarchy is based on inputs to valuation techniques that are used to measure fair value that are either observable or unobservable. Observable inputs reflect assumptions market participants would use in pricing an asset or liability based on market data obtained from independent sources while unobservable inputs reflect a reporting entity's pricing based upon their own market assumptions.

The fair value hierarchy consists of the following three levels:

- Level 1 – Inputs are quoted prices in active markets for identical assets or liabilities.
- Level 2 – Inputs are quoted prices for similar assets or liabilities in an active market, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable and market-corroborated inputs which are derived principally from or corroborated by observable market data.
- Level 3 – Inputs are derived from valuation techniques in which one or more significant inputs or value drivers are unobservable.

The following table summarizes the financial assets and (liabilities) measured at fair value on a recurring basis as of December 31, 2022:

(in millions)	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	\$ 367	\$ —	\$ —	\$ 367
Time deposits	—	359	—	359
Commercial paper	—	512	—	512
Short-term investments:				
Time deposits	—	51	—	51
Equity investment security	10	—	—	10
Available-for-sale investment securities:				
Certificates of deposit and commercial paper	—	225	—	225
Other current assets				
Foreign exchange forward contracts	—	5	—	5
Long-term investments:				
Restricted time deposits ⁽¹⁾	—	357	—	357
Other noncurrent assets				
Foreign exchange forward contracts	—	1	—	1
Accrued expenses and other current liabilities:				
Foreign exchange forward contracts	—	(58)	—	(58)
Contingent consideration liabilities	—	—	(9)	(9)
Other noncurrent liabilities				
Foreign exchange forward contracts	—	(17)	—	(17)
Contingent consideration liabilities	—	—	(13)	(13)

(1) See [Note 11](#).

The following table summarizes the financial assets and (liabilities) measured at fair value on a recurring basis as of December 31, 2021:

(in millions)	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	\$ 507	\$ —	\$ —	\$ 507
Time deposits	—	4	—	4
Commercial paper	—	266	—	266
Short-term investments:				
Time deposits	—	554	—	554
Equity investment security	26	—	—	26
Available-for-sale investment securities:				
Commercial paper	—	310	—	310
Other current assets:				
Foreign exchange forward and option contracts	—	54	—	54
Long-term investments				
Restricted time deposits ⁽¹⁾	—	397	—	397
Other noncurrent assets:				
Foreign exchange forward contracts	—	15	—	15
Accrued expenses and other current liabilities:				
Foreign exchange forward contracts	—	(7)	—	(7)
Contingent consideration liabilities	—	—	(14)	(14)
Other noncurrent liabilities:				
Contingent consideration liabilities	—	—	(21)	(21)

(1) See [Note 11](#)

The following table summarizes the changes in Level 3 contingent consideration liabilities:

(in millions)	2022	2021
Beginning balance	\$ 35	\$ 54
Initial measurement recognized at acquisition	1	24
Change in fair value recognized in SG&A expenses	(1)	(30)
Payments and other adjustments	(13)	(13)
Ending balance	\$ 22	\$ 35

We measure the fair value of money market funds based on quoted prices in active markets for identical assets and measure the fair value of our equity investment security based on the published daily net asset value at which investors can freely subscribe to or redeem from the fund. The fair value of certificates of deposit and commercial paper is measured based on relevant trade data, dealer quotes, or model-driven valuations using significant inputs derived from or corroborated by observable market data, such as yield curves and credit spreads. The carrying value of the time deposits approximated fair value as of December 31, 2022 and 2021.

We estimate the fair value of each foreign exchange forward contract by using a present value of expected cash flows model. This model calculates the difference between the current market forward price and the contracted forward price for each foreign exchange forward contract and applies the difference in the rates to each outstanding contract. The market forward rates include a discount and credit risk factor. We estimate the fair value of each foreign exchange option contract by using a variant of the Black-Scholes model. This model uses present value techniques and reflects the time value and intrinsic value based on observable market rates.

We estimate the fair value of contingent consideration liabilities associated with acquisitions using a variation of the income approach, which utilizes one or more significant inputs that are unobservable. This approach calculates the fair value of such liabilities based on the probability-weighted expected performance of the acquired entity against the target performance metric, discounted to present value when appropriate.

During the years ended December 31, 2022, 2021 and 2020 there were no transfers among Level 1, Level 2 or Level 3 financial assets and liabilities.

Note 14 — Accumulated Other Comprehensive Income (Loss)

Changes in "Accumulated other comprehensive income (loss)" by component were as follows for the year ended December 31, 2022:

(in millions)	2022		
	Before Tax Amount	Tax Effect	Net of Tax Amount
Foreign currency translation adjustments:			
Beginning balance	\$ (22)	\$ 2	\$ (20)
Change in foreign currency translation adjustments	(234)	6	(228)
Ending balance	\$ (256)	\$ 8	\$ (248)
Unrealized gains (losses) on cash flow hedges:			
Beginning balance	\$ 71	\$ (14)	\$ 57
Unrealized losses arising during the period	(153)	34	(119)
Reclassifications of net losses to:			
Cost of revenues	13	(3)	10
SG&A expenses	1	—	1
Net change	(139)	31	(108)
Ending balance	\$ (68)	\$ 17	\$ (51)
Accumulated other comprehensive income (loss):			
Beginning balance	\$ 49	\$ (12)	\$ 37
Other comprehensive income (loss)	(373)	37	(336)
Ending balance	\$ (324)	\$ 25	\$ (299)

Changes in "Accumulated other comprehensive income (loss)" by component were as follows for the years ended December 31, 2021 and 2020:

(in millions)	2021			2020		
	Before Tax Amount	Tax Effect	Net of Tax Amount	Before Tax Amount	Tax Effect	Net of Tax Amount
Foreign currency translation adjustments:						
Beginning balance	\$ 56	\$ (1)	\$ 55	\$ (63)	\$ (1)	\$ (64)
Change in foreign currency translation adjustments	(78)	3	(75)	119	—	119
Ending balance	\$ (22)	\$ 2	\$ (20)	\$ 56	\$ (1)	\$ 55
Unrealized gains on cash flow hedges:						
Beginning balance	\$ 67	\$ (12)	\$ 55	\$ 31	\$ (5)	\$ 26
Unrealized gains arising during the period	67	(13)	54	39	(8)	31
Reclassifications of net (gains) to:						
Cost of revenues	(55)	10	(45)	(3)	1	(2)
SG&A expenses	(8)	1	(7)	—	—	—
Net change	4	(2)	2	36	(7)	29
Ending balance	\$ 71	\$ (14)	\$ 57	\$ 67	\$ (12)	\$ 55
Accumulated other comprehensive income (loss):						
Beginning balance	\$ 123	\$ (13)	\$ 110	\$ (32)	\$ (6)	\$ (38)
Other comprehensive income (loss)	(74)	1	(73)	155	(7)	148
Ending balance	\$ 49	\$ (12)	\$ 37	\$ 123	\$ (13)	\$ 110

Note 15 — Commitments and Contingencies

We are involved in various claims and legal proceedings arising in the ordinary course of business. We accrue a liability when a loss is considered probable and the amount can be reasonably estimated. When a material loss contingency is reasonably possible but not probable, we do not record a liability, but instead disclose the nature and the amount of the claim, and an estimate of the loss or range of loss, if such an estimate can be made. Legal fees are expensed as incurred. While we do not expect that the ultimate resolution of any existing claims and proceedings (other than the specific matters described below, if decided adversely), individually or in the aggregate, will have a material adverse effect on our financial position, an unfavorable outcome in some or all of these proceedings could have a material adverse impact on results of operations or cash flows for a particular period. This assessment is based on our current understanding of relevant facts and circumstances. As such, our view of these matters is subject to inherent uncertainties and may change in the future.

On January 15, 2015, Syntel sued TriZetto and Cognizant in the USDC-SDNY. Syntel's complaint alleged breach of contract against TriZetto, and tortious interference and misappropriation of trade secrets against Cognizant and TriZetto, stemming from Cognizant's hiring of certain former Syntel employees. Cognizant and TriZetto countersued on March 23, 2015, for breach of contract, misappropriation of trade secrets and tortious interference, based on Syntel's misuse of TriZetto confidential information and abandonment of contractual obligations. Cognizant and TriZetto subsequently added federal Defend Trade Secrets Act and copyright infringement claims for Syntel's misuse of TriZetto's proprietary technology. The parties' claims were narrowed by the court and the case was tried before a jury, which on October 27, 2020, returned a verdict in favor of Cognizant in the amount of \$855 million, including \$570 million in punitive damages. On April 20, 2021, the USDC-SDNY issued a post-trial order that, among other things, affirmed the jury's award of \$285 million in actual damages, but reduced the award of punitive damages from \$570 million to \$285 million, thereby reducing the overall damages award from \$855 million to \$570 million. The USDC-SDNY subsequently issued a final judgment consistent with the April 20th order. On May 26, 2021, Syntel filed a notice of appeal to the Second Circuit, and on June 3, 2021 the USDC-SDNY stayed execution of judgment pending appeal. We will not record the gain in our financial statements until it becomes realizable.

On February 28, 2019, a ruling of the SCI interpreting the India Defined Contribution Obligation altered historical understandings of the obligation, extending it to cover additional portions of the employee's income. As a result, the ongoing contributions of our affected employees and the Company were required to be increased. In the first quarter of 2019, we

accrued \$117 million with respect to prior periods, assuming retroactive application of the SCI's ruling, in "Selling, general and administrative expenses" in our consolidated statement of operations. There is significant uncertainty as to how the liability should be calculated as it is impacted by multiple variables, including the period of assessment, the application with respect to certain current and former employees and whether interest and penalties may be assessed. Since the ruling, a variety of trade associations and industry groups have advocated to the Indian government, highlighting the harm to the information technology sector, other industries and job growth in India that would result from a retroactive application of the ruling. It is possible the Indian government will review the matter and there is a substantial question as to whether the Indian government will apply the SCI's ruling on a retroactive basis. As such, the ultimate amount of our obligation may be materially different from the amount accrued.

On October 31, 2016, November 15, 2016 and November 18, 2016, three putative shareholder derivative complaints were filed in New Jersey Superior Court, Bergen County, naming us, all of our then current directors and certain of our current and former officers at that time as defendants. These actions were consolidated in an order dated January 24, 2017. The complaints assert claims for breach of fiduciary duty, corporate waste, unjust enrichment, abuse of control, mismanagement, and/or insider selling by defendants. On April 26, 2017, the New Jersey Superior Court deferred further proceedings by dismissing the consolidated putative shareholder derivative litigation without prejudice but permitting the parties to file a motion to vacate the dismissal in the future.

On February 22, 2017, April 7, 2017, May 10, 2017 and March 11, 2019, four additional putative shareholder derivative complaints were filed in the USDC-NJ, naming us and certain of our current and former directors and officers at that time as defendants. These actions were consolidated in an order dated May 14, 2019. On August 3, 2020, lead plaintiffs filed a consolidated amended complaint. The consolidated amended complaint asserts claims similar to those in the previously-filed putative shareholder derivative actions. On February 14, 2022, we and certain of our current and former directors and officers moved to dismiss the consolidated amended complaint. On September 27, 2022, the USDC-NJ granted those motions and dismissed the consolidated amended complaint in its entirety with prejudice. Plaintiffs filed a notice of appeal on October 27, 2022.

On June 1, 2021, an eighth putative shareholder derivative complaint was filed in the USDC-NJ, naming us and certain of our current and former directors and officers at that time as defendants. The complaint asserts claims similar to those in the previously-filed putative shareholder derivative actions. On March 31, 2022, we and certain of our current and former directors and officers moved to dismiss the complaint. On November 30, 2022, the USDC-NJ denied without prejudice those motions. The USDC-NJ ordered the parties to conduct limited discovery related to the issue of whether our board of directors wrongfully refused the plaintiff's earlier litigation demand and, after the conclusion of such limited discovery, to file targeted motions for summary judgment on the issue of wrongful refusal.

We are presently unable to predict the duration, scope or result of the putative shareholder derivative actions. Although the Company continues to defend the putative shareholder derivative actions vigorously, these lawsuits are subject to inherent uncertainties, the actual cost of such litigation will depend upon many unknown factors and the outcome of the litigation is necessarily uncertain.

We have indemnification and expense advancement obligations pursuant to our bylaws and indemnification agreements with respect to certain current and former members of senior management and the Company's board of directors. In connection with the matters that were the subject of our previously disclosed internal investigation, the DOJ and SEC investigations and the related litigation, we have received and expect to continue to receive requests under such indemnification agreements and our bylaws to provide funds for legal fees and other expenses. There are no amounts remaining available to us under applicable insurance policies for our ongoing indemnification and advancement obligations with respect to certain of our current and former officers and directors or incremental legal fees and other expenses related to the above matters.

See [Note 11](#) for information relating to the ITD Dispute.

Many of our engagements involve projects that are critical to the operations of our clients' business and provide benefits that are difficult to quantify. Any failure in a client's systems or our failure to meet our contractual obligations to our clients, including any breach involving a client's confidential information or sensitive data, or our obligations under applicable laws or regulations could result in a claim for substantial damages against us, regardless of our responsibility for such failure. Although we attempt to contractually limit our liability for damages arising from negligent acts, errors, mistakes, or omissions in rendering our services, there can be no assurance that the limitations of liability set forth in our contracts will be enforceable in all instances or will otherwise protect us from liability for damages. Although we have general liability insurance coverage, including coverage for errors or omissions, we retain a significant portion of risk through our insurance deductibles and there can be no assurance that such coverage will cover all types of claims, continue to be available on reasonable terms or will be

available in sufficient amounts to cover one or more large claims, or that the insurer will not disclaim coverage as to any future claim. The successful assertion of one or more large claims against us that exceed or are not covered by our insurance coverage or changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, results of operations, financial position and cash flows for a particular period.

In the normal course of business and in conjunction with certain client engagements, we have entered into contractual arrangements through which we may be obligated to indemnify clients or other parties with whom we conduct business with respect to certain matters. These arrangements can include provisions whereby we agree to hold the indemnified party and certain of their affiliated entities harmless with respect to third-party claims related to such matters as our breach of certain representations or covenants, our intellectual property infringement, our gross negligence or willful misconduct or certain other claims made against certain parties. Payments by us under any of these arrangements are generally conditioned on the client making a claim and providing us with full control over the defense and settlement of such claim. It is not possible to determine the maximum potential liability under these indemnification agreements due to the unique facts and circumstances involved in each particular agreement. Historically, we have not made material payments under these indemnification agreements and therefore they have not had a material impact on our operating results, financial position, or cash flows. However, if events arise requiring us to make payment for indemnification claims under our indemnification obligations in contracts we have entered, such payments could have a material adverse effect on our business, results of operations, financial position and cash flows for a particular period.

Note 16 — Employee Benefits

We contribute to defined contribution plans, including 401(k) savings and supplemental retirement plans in the United States. Total expenses for our contributions to these plans, excluding the India plans described below, were \$172 million, \$135 million and \$118 million for the years ended December 31, 2022, 2021 and 2020, respectively.

In addition, we maintain employee benefit plans that cover substantially all India-based employees. The employees' provident fund, pension and family pension plans are statutorily defined contribution retirement benefit plans. Under the plans, employees contribute up to 12.0% of their eligible compensation, which is matched by an equal contribution by the Company. For these plans, we recognized a contribution expense of \$143 million, \$121 million and \$98 million for the years ended December 31, 2022, 2021 and 2020, respectively.

We also maintain a gratuity plan in India that is a statutory post-employment benefit plan providing defined lump sum benefits. We make annual contributions to the employees' gratuity fund established with a government-owned insurance corporation to fund a portion of the estimated obligation. Our liability for the gratuity plan reflected the undiscounted benefit obligation payable as of the balance sheet date, which was based upon the employees' salary and years of service. As of December 31, 2022 and 2021, the amount accrued under the gratuity plan was \$99 million and \$118 million, which is net of fund assets of \$206 million and \$212 million, respectively. Expense recognized by us was \$45 million, \$70 million and \$35 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Note 17 — Stock-Based Compensation Plans

The Company's 2017 Incentive Plan and the Purchase Plan provide for the issuance of up to 48.8 million shares (plus any shares underlying outstanding awards that are forfeited under the 2009 Incentive Plan) and 40.0 million shares, respectively, of Class A common stock to eligible employees. The 2017 Incentive Plan does not affect any awards outstanding under the 2009 Incentive Plan. As of December 31, 2022, we have 17.3 million and 2.6 million shares available for grant under the 2017 Incentive Plan and the Purchase Plan, respectively.

The allocation of total stock-based compensation expense between cost of revenues and selling, general and administrative expenses as well as the related income tax benefit were as follows for the three years ended December 31:

(in millions)	2022	2021	2020
Cost of revenues	\$ 33	\$ 49	\$ 51
SG&A expenses	228	197	181
Total stock-based compensation expense	\$ 261	\$ 246	\$ 232
Income tax benefit	\$ 59	\$ 59	\$ 48

Restricted Stock Units and Performance Stock Units

We granted RSUs that vest in quarterly or annual installments over periods of up to four years to employees, including our executive officers. A summary of the activity for RSUs granted under our stock-based compensation plans as of December 31, 2022 and changes during the year then ended is presented below:

	Number of Units (in millions)	Weighted Average Grant Date Fair Value (in dollars)
Unvested at January 1, 2022	3.9	\$ 70.11
Granted	3.1	78.20
Vested	(2.9)	72.19
Forfeited	(0.7)	76.07
Unvested at December 31, 2022	3.4	\$ 74.54

The weighted-average grant date fair value of RSUs granted in 2022, 2021 and 2020 was \$78.20, \$74.66 and \$61.85, respectively. As of December 31, 2022, \$182 million of total remaining unrecognized stock-based compensation cost related to RSUs is expected to be recognized over the weighted-average remaining requisite service period of 1.6 years.

We granted PSUs that vest over periods up to four years to employees, including our executive officers. The vesting of PSUs is contingent on meeting certain financial performance targets, market conditions and continued service. A summary of the activity for PSUs granted under our stock-based compensation plans as of December 31, 2022 and changes during the year then ended is presented below. The presentation reflects the number of PSUs at the maximum performance milestones.

	Number of Units (in millions)	Weighted Average Grant Date Fair Value (in dollars)
Unvested at January 1, 2022	2.3	\$ 67.55
Granted	1.0	90.92
Vested	(0.1)	60.37
Forfeited	(0.4)	75.83
Adjustment at the conclusion of the performance measurement period	(0.4)	63.88
Unvested at December 31, 2022	2.4	\$ 76.93

The weighted-average grant date fair value of PSUs granted in 2022, 2021 and 2020 was \$90.92, \$73.38 and \$62.00, respectively. As of December 31, 2022, \$35 million of the total remaining unrecognized stock-based compensation cost related to PSUs is expected to be recognized over the weighted-average remaining requisite service period of 1.0 year.

All RSUs and PSUs have dividend equivalent rights, which entitle holders to the same dividend value per share as holders of common stock. Dividend equivalent rights are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs and PSUs and are accumulated and paid when the underlying shares vest.

Purchase Plan

Beginning in 2022, the Purchase Plan provides for eligible employees to purchase shares of Class A common stock at a price equal to 95% of the fair market value per share of our Class A common stock on the last date of the purchase period. This plan has been deemed non-compensatory and, therefore, no compensation expense has been recorded. During the year ended December 31, 2022, we issued 1.3 million shares of Class A common stock under the Purchase Plan.

For the years ended December 31, 2021 and 2020, the Purchase Plan provided for eligible employees to purchase shares of Class A common stock at a price of 90% of the lesser of: (a) the fair market value of a share of Class A common stock on the first date of the purchase period or (b) the fair market value of a share of Class A common stock on the last date of the purchase period. Stock-based compensation expense for the Purchase Plan was recognized over the vesting period of three months on a straight-line basis. The fair values of the options granted under the Purchase Plan were estimated at the date of grant during the years ended December 31, 2021 and 2020 based upon the following assumptions, and were as follows:

	2021		2020	
Dividend yield	1.3	%	1.1	%
Weighted average volatility factor	27.5	%	35.9	%
Weighted average risk-free interest rate	0.03	%	0.6	%
Weighted average expected life (in years)	0.25		0.25	
Weighted average grant date fair value	\$	11.72	\$	9.38

Note 18 — Segment Information

We have seven industry-based operating segments, which are aggregated into four reportable business segments:

- Financial Services, which consists of the banking and insurance operating segments;
- Health Sciences (previously referred to as Healthcare), which consists of a single operating segment of the same name;
- Products and Resources, which consists of the retail and consumer goods; manufacturing, logistics, energy, and utilities; and travel and hospitality operating segments; and
- Communications, Media and Technology, which consists of a single operating segment of the same name.

Our segments are industry-based, and as such, we report revenue from clients in the segment with which our clients are most closely aligned. Our client partners, account executives and client relationship managers are aligned in accordance with the specific industries they serve. Our chief operating decision maker evaluates the Company's performance and allocates resources based on segment revenues and operating profit. Segment operating profit is defined as income from operations before unallocated costs. Generally, operating expenses for each operating segment have similar characteristics and are subject to the same factors, pressures and challenges. However, the economic environment and its effects on industries served by the operating segments may affect revenues and operating expenses to differing degrees.

In 2022, we made certain changes to the internal measurement of segment operating profits for the purpose of evaluating segment performance and resource allocation. The primary reason for the change was to charge to the segments the costs that they directly manage and control. Specifically, segment operating profit now includes costs related to non-delivery personnel that support consulting services, which were previously included in "unallocated costs." We have reported 2022 segment operating profits using the new allocation methodology and have recast the 2021 and 2020 results to conform to the new methodology.

Additionally, we made the following changes:

- We renamed the Healthcare reportable business segment as Health Sciences. This segment, which was previously comprised of two operating segments, (i) healthcare and (ii) life sciences, is now comprised of one operating segment - health sciences.
- The Communications, Media and Technology reportable business segment, which was previously comprised of two operating segments, (i) communications and media and (ii) technology, is now comprised of one operating segment - communications, media and technology.

These changes reflect how these segments are managed and reported to the chief operating decision maker but did not affect the reportable business segments' financial results.

Expenses included in segment operating profit consist principally of direct selling and delivery costs as well as a per employee charge for use of our global delivery centers and infrastructure. Certain SG&A expenses, the excess or shortfall of incentive-based compensation for commercial and delivery employees as compared to target, a portion of depreciation and amortization and the impact of the settlements of our cash flow hedges, and for 2020, restructuring costs, COVID-19 Charges and costs related to the ransomware attack, are not allocated to individual segments in internal management reports used by the chief operating decision maker. Accordingly, such expenses are excluded from segment operating profit and are included below as "unallocated costs" and adjusted against our total income from operations. Additionally, management has determined that it is not practical to allocate identifiable assets by segment, since such assets are used interchangeably among the segments.

For revenues by reportable business segment and geographic area see [Note 2](#).

Segment operating profits by reportable business segment were as follows:

(in millions)	2022	2021	2020
Financial Services	\$ 1,771	\$ 1,707	\$ 1,419
Health Sciences	1,515	1,527	1,357
Products and Resources	1,448	1,301	1,058
Communications, Media and Technology	1,012	925	780
Total segment operating profit	5,746	5,460	4,614
Less: unallocated costs	2,778	2,634	2,500
Income from operations	\$ 2,968	\$ 2,826	\$ 2,114

Geographic Area Information

Long-lived assets by geographic area are as follows:

(in millions)	2022	2021	2020
Long-lived Assets: ⁽¹⁾			
North America ⁽²⁾	\$ 354	\$ 377	\$ 399
Europe	86	75	88
Rest of World ⁽³⁾	661	719	764
Total	\$ 1,101	\$ 1,171	\$ 1,251

(1) Long-lived assets include property and equipment, net of accumulated depreciation and amortization.

(2) Substantially all relates to the United States.

(3) Substantially all relates to India.

Note 19 — Subsequent Events

Dividend

On February 1, 2023, our Board of Directors approved the Company's declaration of a \$0.29 per share dividend with a record date of February 17, 2023 and a payment date of February 28, 2023.

Acquisitions

In January 2023, we completed the acquisition of the professional services and application management practices of OneSource Virtual, a leading provider of Workday services, solutions and products, for a purchase price of \$103 million. This acquisition complements our existing finance and HR advisory implementation services with Workday, expanding our capabilities in consulting, deployment, and post-deployment support across North America and the United Kingdom. On December 30, 2022, \$103 million was placed in an escrow account in advance of the closing date of January 1, 2023. This balance was deemed to be restricted cash as of December 31, 2022 and was presented in "Other noncurrent assets" in our consolidated statement of financial position.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated statements of financial position to the amounts shown in the consolidated statements of cash flows as of December 31:

(in millions)	2022	2021	2020
Cash and cash equivalents	\$ 2,191	\$ 1,792	\$ 2,680
Restricted cash	103	—	—
Total cash, cash equivalents and restricted cash	\$ 2,294	\$ 1,792	\$ 2,680

In January 2023, we entered into an agreement to acquire Mobica, an IoT software engineering services provider, for a preliminary purchase price of approximately \$335 million. This acquisition will expand our IoT embedded software engineering capabilities and will provide clients with a deeper and broader array of end-to-end support to enable digital transformation. The transaction is expected to close in the first quarter of 2023, subject to satisfaction of customary closing conditions.

Cognizant Technology Solutions Corporation
Valuation and Qualifying Accounts
For the Years Ended December 31, 2022, 2021 and 2020
(in millions)

Description	Balance at Beginning of Period	Charged to Costs and Expenses	Charged to Other Accounts	Deductions /Other	Balance at End of Period
(in millions)					
Warranty accrual:					
2022	\$ 39	\$ 41	\$ —	\$ 39	\$ 41
2021	\$ 32	\$ 36	\$ 3	\$ 32	\$ 39
2020	\$ 33	\$ 32	\$ —	\$ 33	\$ 32
Valuation allowance—deferred income tax assets:					
2022	\$ 46	\$ 3	\$ —	\$ 8	\$ 41
2021	\$ 29	\$ 17	\$ —	\$ —	\$ 46
2020	\$ 24	\$ 5	\$ —	\$ —	\$ 29