

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

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 0-25346

ACI WORLDWIDE, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

47-0772104

(I.R.S. Employer Identification No.)

2811 Ponce de Leon Blvd PH 1 Coral Gables, Florida

(Address of principal executive offices)

33134

(Zip code)

(305) 894-2200

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.005 par value	ACIW	Nasdaq Global Select Market

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

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 Company's voting common stock held by non-affiliates on June 30, 2022 (the last business day of the registrant's most recently completed second fiscal quarter), based upon the last sale price of the common stock on that date of \$25.89 was \$2,597,031,703. For purposes of this calculation, executive officers, directors, and holders of 10% or more of the outstanding shares of the registrant's common stock are deemed to be affiliates of the registrant and are excluded from the calculation.

As of February 27, 2023, there were 108,111,525 shares of the registrant's common stock outstanding.

Documents Incorporated by Reference – Portions of the registrant's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on or about June 1, 2023, are incorporated by reference in Part III of this report. This registrant's Proxy Statement will be filed with the Securities and Exchange

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Forward-Looking Statements

For purposes of this Annual Report on Form 10-K, the terms “ACI”, “ACI Worldwide”, the “Company,” “we,” “us,” and “our” refer to ACI Worldwide, Inc. and its consolidated subsidiaries. This report contains forward-looking statements based on current expectations that involve a number of risks and uncertainties. Generally, forward-looking statements do not relate strictly to historical or current facts and may include words or phrases such as “believes,” “will,” “expects,” “anticipates,” “intends,” and words and phrases of similar impact. The forward-looking statements are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended.

Forward-looking statements in this report include, but are not limited to, statements regarding future operations, business strategy, business environment, key trends, and, in each case, statements related to expected financial and other benefits. Many of these factors will be important in determining our actual future results. Any or all of the forward-looking statements in this report may turn out to be incorrect. They may be based on inaccurate assumptions or may not account for known or unknown risks and uncertainties. Consequently, no forward-looking statement can be guaranteed. Actual future results may vary materially from those expressed or implied in any forward-looking statements, and our business, financial condition and results of operations could be materially and adversely affected. In addition, we disclaim any obligation to update any forward-looking statements after the date of this report, except as required by law.

All forward-looking statements in this report are expressly qualified by the risk factors discussed in our filings with the Securities and Exchange Commission (“SEC”). The cautionary statements in this report expressly qualify all of our forward-looking statements. Factors that could cause actual results to differ from those expressed or implied in the forward-looking statements include, but are not limited to, those discussed in our *Risk Factors* in Part I, Item 1A of this Form 10-K.

Trademarks and Service Marks

ACI, ACI Worldwide, ACI Payments, Inc., ACI Pay, Speedpay, and all ACI product/solution names are trademarks or registered trademarks of ACI Worldwide, Inc., or one of its subsidiaries, in the United States, other countries or both. Other parties' trademarks referenced are the property of their respective owners.

Global Economy and Inflation

During the year ended December 31, 2022, the global economy has experienced high inflation, increased interest rates, and pressures on gross domestic product. While we believe our business is resilient and can generally weather unusually high levels of inflation, inflationary pressures have had some impact on our 2022 financial performance. Specifically, inflation has impacted our interchange costs associated with the Biller segment.

COVID-19 Pandemic

Since early 2020, the world has been, and continues to be impacted by the COVID-19 pandemic. The COVID-19 pandemic, and the measures imposed by the governments of various countries, states, cities and other geographic regions to prevent its spread, have negatively impacted, and may continue to negatively impact, global economic and market conditions, including levels of consumer and business spending. The environment surrounding COVID-19 and countermeasures taken to reduce its spread have impacted our business operations and financial results, although some of the effects have lessened over time. It may continue to impact our business operations and financial operating results, and there is uncertainty in the nature and degree of its continued effects.

PART I

ITEM 1. BUSINESS

General

ACI develops, markets, installs, and supports a broad line of software products and solutions primarily focused on facilitating real-time digital payments. ACI's enterprise payments capabilities target any channel, any network, and any payment type and our solutions empower customers to regain control, choice, and flexibility in today's complex payments environment, get to market more quickly, and reduce operational costs.

ACI's solutions and services are used globally by banks, intermediaries, merchants and billers, such as third-party digital payment processors, payment associations, switch interchanges and a wide range of transaction-generating endpoints, including automated teller machines ("ATM"), merchant point-of-sale ("POS") terminals, bank branches, mobile phones, tablets, corporations, and internet commerce sites. The authentication, authorization, switching, settlement, fraud-checking, and reconciliation of digital payments is a complex activity due to the large number of locations and variety of sources from which transactions can be generated, the large number of participants in the market, high transaction volumes, geographically dispersed networks, differing types of authorization, and varied reporting requirements. These activities are typically performed online and are conducted 24 hours a day, seven days a week.

ACI combines a global perspective with local presence to tailor digital payment solutions for our customers. We believe that we have one of the most diverse and robust digital payment solution portfolios in the industry with application software spanning the entire payments value chain. We also believe that our financial performance has been attributable to our ability to design and deliver quality products and solutions coupled with our ability to identify and successfully complete and integrate strategic acquisitions.

ACI is a Delaware corporation incorporated in November 1993 under the name ACI Holding, Inc. We are largely the successor to Applied Communications, Inc. and Applied Communications Inc. Limited, acquired from Tandem Computers Incorporated on December 31, 1993. On July 24, 2007, we changed our corporate name from "Transaction Systems Architects, Inc." to "ACI Worldwide, Inc." We have been marketing our products and services under the ACI Worldwide brand since 1993 and have gained significant market recognition under this brand name.

Fiscal 2022 Divestiture

Corporate Online Banking Solutions

On September 1, 2022, we sold our corporate online banking solutions related assets and liabilities to One Equity Partners for \$100.1 million, including a preliminary net working capital adjustment. The sale included employees and customer contracts as well as technology assets and intellectual property.

Target Markets

ACI's comprehensive digital payment solutions serve three key markets:

Banks

ACI provides payment solutions to large and mid-size banks globally for both retail banking, digital, and other payment services. Our solutions transform banks' complex payment environments to speed time to market, reduce costs, and deliver a consistent experience to customers across channels while enabling them to prevent and rapidly react to fraudulent activity. In addition, we enable banks to meet the requirements of different real-time payment schemes and to quickly create differentiated products to meet consumer, business, and merchant demands.

ACI's payment solutions support intermediaries, such as processors, networks, payment service providers ("PSPs"), and new financial technology ("fintech") entrants. We offer these customers scalable solutions that strategically position them to innovate and achieve growth and cost efficiency, while protecting them against fraud. Our solutions also allow new entrants in the digital marketplace to access innovative payment schemes, such as the U.K. Faster Payments New Access Model, Singapore FAST, India Unified Payments Interface ("UPI"), the Payments Network Malaysia ("PayNet"), Real-time Retail Payments Platform ("RPP"), and others.

Merchants

ACI's support of merchants globally includes Tier 1 and Tier 2 merchants, online-only merchants and the PSPs, independent selling organizations ("ISOs"), value-added resellers ("VARs"), and acquirers who service them. These customers operate in a variety of verticals, including general merchandise, grocery, hospitality, dining, transportation, and others. Our solutions provide merchants with a secure, omni-channel payments platform that gives them independence from third-party payment providers. We also offer secure solutions to online-only merchants that provide consumers with a convenient and seamless way to shop.

Billers

Within the biller segment, ACI provides electronic bill presentment and payment ("EBPP") services to companies operating in the consumer finance, insurance, healthcare, higher education, utility, government, mortgage, subscription providers, and telecommunications categories. Our solutions enable these customers to support a wide range of payment options and provide a convenient consumer payments experience that drives consumer loyalty and increases revenue.

Solutions

ACI is a global leader in mission-critical, real-time payments software. Our proven, secure, and scalable software solutions enable corporations, fintechs, and financial disruptors to process and manage digital payments, power omni-commerce payments, present and process bill payments, and manage fraud and risk. We combine our global footprint with a local presence to drive the real-time digital transformation of payments and commerce. Our strategic solution areas include the following:

Issuing and Acquiring

ACI offers comprehensive consumer payment solutions ranging from core payment engines to back-office support that enable banks and intermediaries to compete effectively in today's real-time, open payments ecosystem.

ACI® Acquiring™ is a merchant management system that helps acquirers offer merchants capabilities to deliver digital innovation, handle new payment methods, and maximize margins.

ACI Issuing™ is a digital payments issuing solution that helps issuers accelerate innovation, give customers new payment offerings and enable channels, services, endpoints, and integrations from a single cloud-based or on-premise solution.

ACI Enterprise Payments Platform™ is a market-leading technology that provides payment players global payment processing and orchestration capabilities for all digital payments, including high- and low-value payments, real-time and alternative payments, and cards.

Real-Time Payments

ACI supports both low- and high-value real-time payment processing for banks and intermediaries globally, ensuring multi-bank, multi-currency and 24x7 payment processing capabilities, as well as complete and ongoing regulatory compliance.

ACI Low Value Real-Time Payments™ is a platform with a complete range of capabilities for processing real-time payments, including origination, processing, orchestration, clearing and settlement, fraud detection and connectivity.

ACI High Value Real-Time Payments™ is a global payments engine that offers multi-bank, multi-currency, and 24x7 payment processing capabilities, as well as SWIFT messaging with seamless integrations to multiple clearing and settlement mechanisms.

Omni-Commerce and eCommerce Payments

ACI provides real-time, any-to-any payment capabilities globally in both card-present and card-not-present environments.

ACI Omni Commerce™ offers merchants a scalable, omnichannel payment processing platform with the flexibility to support in-store, online, and mobile payments, protected by advanced P2P encryption, tokenization, and fraud management capabilities.

ACI Secure eCommerce™ is a holistic platform that combines a powerful payments gateway, sophisticated real-time fraud prevention capabilities, advanced business intelligence tools, and access to an extensive global network of acquirers and alternative payment methods.

Fraud and Risk Management

ACI Fraud Management™ enables merchants, banks, and financial institutions to turn fraud and financial crime prevention into a competitive differentiator with a secure and seamless solution that protects customers' digital channels and payments anytime, anywhere and maximizes business growth.

ACI Fraud Management for banking is powered by state-of-the-art machine learning and enables financial institutions to fight fraud and money laundering across the enterprise while meeting increasing regulatory and customer demand. The solution offers flexible deployment, unprecedented transaction processing and contextual risk analysis for authorized and unauthorized transactions.

ACI Fraud Management for merchants is a real-time, cloud-based managed service that uses advanced artificial intelligence (AI), machine learning and behavioral analytics to identify and assess inconsistent and unexpected patterns and behaviors. The solution automatically advises and alerts enterprises and merchants about potential threats or anomalies.

Bill Payments

ACI meets the bill payment needs of corporate customers across myriad industries through a range of electronic bill payment offerings that help companies raise consumer satisfaction while reducing costs.

ACI Speedpay® is an integrated suite of digital billing, payment, disbursement, and communication services that lowers the cost of presenting and accepting bill payments while delivering industry-leading security.

On Premise, On Demand, or Hybrid Software Delivery Options

Our software solutions are offered to customers through either a traditional term software license arrangement where the software is installed and operated on the customer premises or in a cloud environment, through an on-demand arrangement where the solution is maintained and delivered through the public cloud or ACI's private cloud via our global data centers, or a combination of the two based upon customers' unique needs. Solutions delivered through ACI's on-demand cloud are available in either a single-tenant environment, known as a Software-as-a-Service ("SaaS") offering, or in a multi-tenant environment, known as a Platform-as-a-Service ("PaaS") offering. Pricing and payment terms depend on which solutions the customer requires and their transaction volumes. Generally, customers are required to commit to a minimum contract of five years, or three years in the case of certain acquired SaaS and PaaS contracts.

Partnerships and Industry Participation

We have two major types of third-party product partners: 1) technology partners, or industry leaders with whom we work closely that drive key industry trends and mandates, and 2) business partners, with whom we embed the partners' technology in ACI products, host the partners' software in ACI's cloud as a part of our cloud offerings, or jointly market solutions that include the products of the other company.

Technology partners help us add value to our solutions and stay abreast of current market conditions and industry developments such as standards. Technology partners include organizations such as Diebold Nixdorf ("Diebold"), NCR Corporation ("NCR"), Visa, Mastercard, and SWIFT. In addition, ACI has membership in or participates in the relevant committees of several industry associations, such as the International Organization for Standardization ("ISO"), Accredited Standards Committee ("ASC") X9, ATM Industry Association ("ATMIA"), Financial Services, Nexo Standards, U.K. Cards Association, U.S. Payments Forum, and the PCI Security Standards Council. These partnerships provide direction as it relates to the specifications that are used in real-time payment standards, by card schemes, and, in some cases, by hardware vendors. These organizations typically look to ACI as a source of knowledge and experience that can inform their work to create and enhance standards. The partnerships provide us the opportunity to influence these standards with concepts and ideas that will benefit the market, our customers, and ACI.

Business partner relationships extend our product portfolio, improve our ability to get our solutions to market, and enhance our ability to deliver market-leading solutions. We share revenues with these business partners based on several factors related to overall value contribution in the delivery of the joint solution or payment type. The agreements with business partners include referral, resale, traditional original equipment manufacturer ("OEM") relationships, and transaction fee-based payment-enablement partnerships. These agreements generally grant ACI the right to create an integrated solution that we host or distribute, or provide ACI access to established payment networks or capabilities. The agreements are generally worldwide in scope and have a term of several years.

We have alliances with our technology partners Amazon, HPE, IBM, Microsoft Corporation, and Oracle USA, Inc. (“Oracle”), whose industry-leading hardware, software, and cloud-based infrastructure services are utilized by and in delivery of ACI’s products. These partnerships allow us to understand developments in the partners’ technology and to utilize their expertise in topics like sizing, scalability, and performance testing.

Services

We offer our customers a wide range of professional services, including consultation, analysis, design, development, implementation, integration, testing, and project management. Our service professionals generally perform the majority of the work associated with implementing and integrating our software solutions. In addition, we work with a number of trained global and regional systems integration and services partners for staff augmentation and coordinated co-prime delivery where appropriate.

Product support services are available to customers after a solution has been installed and are based on the relevant product support category. An extensive team of support analysts are available to assist customers.

In addition, we provide education services to ACI customers to enhance and improve their understanding of our products. This learning is made available through the ACI Training Academy, which offers flexible, powerful training in multiple formats: self-paced eLearning, instructor-led courses and hands-on virtual training. Our interactive, self-paced eLearning is available on demand via our online learning management system. ACI instructor-led courses include both theory and practical sessions to allow students to work through real business scenarios and put their newly learned skills to use. This hands-on approach ensures that the knowledge is retained, and the student is more productive upon their return to the workplace. ACI also provides further, more in-depth technical courses that allow students to use practical labs to enhance what they have learned in the classroom. Training services are frequently a blended part of implementation services, enabling learning to occur in the right phase of the project lifecycle. Training from ACI Training Academy is available throughout the customer lifecycle to address ongoing or changing business needs. Depending on the products owned and course selected, training is conducted either at a dedicated education facility at one of ACI’s offices, online, on demand or at the customer site.

Customer Support

ACI provides our customers with product support that is available 24 hours a day, seven days a week. We offer our customers two support options:

Standard Customer Support. After implementation completion, we provide maintenance services to customers for a monthly product support fee. Maintenance services include:

- New product releases (major, minor and patches) for active products
- 24-hour hotline for priority one (“P1”) problem resolutions
- Access to our online support portal (eSupport)
- Vendor-required mandates and updates
- Product documentation

Premium Customer Support. Under the premium customer support option, referred to as the Premium Customer Support Program and available at additional cost, customers are provided support beyond the standard offering. The services available may differ by product and are defined in the customer contract.

We provide new releases of our products on a periodic basis. New releases of our products, which often contain minor product enhancements, are typically provided at no additional fee for customers under standard customer support agreements. Agreements with our customers permit us to charge for substantial product enhancements that are not provided as part of the standard or premium customer support agreement.

Competition

The digital payments market is highly competitive and subject to rapid change. Competitive factors affecting the market for our solutions, products, and services include product features, price, availability of customer support, ease of implementation, product and company reputation, and a commitment to continued investment in research and development.

Our competitors vary by solution, geography, and market segment. Generally, our most significant competition comes from in-house information technology departments of existing and potential customers, as well as third-party digital payment processors (some of whom are our customers). Many of these companies are significantly larger than us and have significantly greater financial, technical, and marketing resources.

Key competitors by solution area include the following:

Issuing, Acquiring, and Real-Time Payments

The third-party software competitors for ACI's Issuing, Acquiring, and Real-Time Payments solutions are Computer Sciences Corporation, Fidelity National Information Service, Inc. ("FIS"), Finastra, Fiserv, Inc. ("Fiserv"), NCR, OpenWay Group, and TSYS (Global Payments), as well as small, regionally-focused companies such as BPC Banking Technologies, CR2, Financial Software and Systems, Form3, HPS, Icon Solution, Lusion Payments Ltd., Opus Software Solutions Private Limited, PayEx Solutions AS, Renovite, RS2, and Volante Technologies. Primary digital payment processing competitors in this area include global entities such as Atos Origin S.A., Fiserv, Mastercard, SiNSYS, and Visa, as well as regional or country-specific processors.

Omni-Commerce Payments

Competitors for our ACI Omni-Commerce solution come from both third-party software and service providers as well as service organizations run by major banks. Third-party software and service competitors include Adyen, Aurus, Cybersource (Visa), First Data (Fiserv), FreedomPay, Ingenico Group, Modo Payments, NCR, Square, Inc., VeriFone Systems, Inc., Worldline, and Worldpay Inc. (FIS).

eCommerce Payments

Competitors for our ACI Secure eCommerce solution come from both third-party software and service providers, as well as service organizations run by major banks. Third-party software and service competitors include Adyen, Braintree (PayPal), Cybersource (Visa), First Data (Fiserv), GlobalCollect, Ingenico Group, NCR, Square, Inc., Tender Retail Inc., PPRO, StripeVeriFone Systems, Inc., and Worldpay Inc. (FIS).

Fraud Management

Principal competitors for our ACI Fraud Management solution are Accertify (American Express), BAE Systems, Cybersource (Visa), Fair Isaac Corporation (FICO), Featurespace, Feedzai, FIS, Fiserv, Forter, Fraugster, IBM, Kount, NICE LTD, Actimize LTD, Oracle, Riskified, SAS Institute, Inc., and Signifyd, as well as dozens of smaller companies focused on niches of this segment such as anti-money laundering.

Bill Payments

The principal competitors for our ACI Speedpay solution are Aliaswire Inc., CSG Systems International, Inc., FIS, Fiserv, Invoice Cloud, Inc., Jack Henry & Associates, Inc., Kubra Customer Interaction Management, Nelnet, Inc. and Affiliates, NIC, Paymentus Corp., PayNearMe, Repay, TouchNet Information Systems, Inc., Transact and Worldpay Inc. (FIS), as well as smaller vertical-specific providers.

Research and Development

Our product development efforts focus on new products and improved versions of existing products. We facilitate user group meetings to help us determine our product and solution strategy, development plans, and aspects of customer support. The user groups are generally organized geographically or by product lines. We believe that the timely development of new applications and enhancements is essential to maintaining our competitive position in the market.

During the development of new products and solutions, we work closely with our customers and industry leaders to determine requirements. We work with device manufacturers, such as Diebold, NCR, and Wincor-Nixdorf, to ensure compatibility with the latest ATM technology. We work with network vendors, such as Mastercard, SWIFT, and Visa, to ensure compliance with new regulations or processing mandates. We work with computer hardware and software manufacturers, such as HPE, IBM, Microsoft Corporation, and Oracle, to ensure compatibility with new operating system releases and generations of hardware. Customers often provide additional information on requirements and serve as beta-test partners.

We have a continuous process to encourage and capture innovative product ideas. Such ideas include features, as well as entirely new products or service offerings. A proof of concept ("POC") may be conducted to validate the idea. If determined to be viable, the innovation is scheduled into a product roadmap for development and release.

Customers

We provide software products and solutions to our banks, intermediary, and merchants customers worldwide. Our biller products and solutions are sold in the United States. As of December 31, 2022, we serve more than 6,000 organizations, including 9 of the top 10 banks worldwide and 80,000+ merchants directly and through payment service providers, as measured by revenue, in 95+ countries on six continents. No single customer accounted for more than 10% of our consolidated revenues for the years ended December 31, 2022, 2021, and 2020. One customer accounted for 10.1% and 13.8% of the Company's consolidated receivables balance as of December 31, 2022 and December 31, 2021, respectively.

Selling and Implementation

Our products are sold and supported directly and through distribution networks covering three geographic regions – the Americas, Europe/Middle East/Africa ("EMEA") and Asia Pacific. Each region has its own globally coordinated sales force, supplemented with local independent reseller and/or distributor networks. Our primary method of distribution is direct sales by employees assigned to specific target customer segments. We use distributors and referral partners to supplement our direct sales force in countries where it is more efficient and economical to do so.

Headquartered in Coral Gables, Florida, we have sales and services personnel in offices throughout the United States. Outside of the United States, our international subsidiaries sell, support, and service our products and solutions in their local countries.

ACI's distributors, resellers, and system integration partners are enabled to provide supplemental or complete product implementation and customization services directly to our customers or in a joint delivery model. Our broad geographic footprint allows us to leverage the business and technical expertise of a global workforce.

We distribute the products of other vendors where they complement our existing product lines. We are typically responsible for the sales and marketing of the vendor's products, and agreements with these vendors generally provide for revenue sharing based on relative responsibilities.

Proprietary Rights and Licenses

We rely on a combination of trade secret and copyright laws, license agreements, contractual provisions, and confidentiality agreements to protect our proprietary rights. We distribute our software products under software license agreements that typically grant customers nonexclusive licenses to use our products. Use of our software products is usually restricted to designated computers, specified locations and/or specified capacity, and is subject to terms and conditions prohibiting unauthorized reproduction or transfer of our software products. We also seek to protect the source code of our software as a trade secret and as a copyrighted work. Despite these precautions, there can be no assurance that misappropriation of our software products and technology will not occur.

In addition to our own products, we distribute, or act as a sales agent for, software developed by third parties. However, we typically are not involved in the development process used by these third parties. Our rights to those third-party products and the associated intellectual property rights are limited by the terms of the contractual agreement between us and the respective third party.

Although we believe that our owned and licensed intellectual property rights do not infringe upon the proprietary rights of third parties, there can be no assurance that third parties will not assert infringement claims against us. Further, there can be no assurance that intellectual property protection will be available for our products in all foreign countries.

Government Regulation

Certain of our solutions are subject to federal, state, and foreign regulations and requirements.

Oversight by Banking Regulators. As a provider of payment services to banks and intermediaries, we are subject to regulatory oversight and examination by the Federal Financial Institutions Examination Council ("FFIEC"), an interagency body of the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the National Credit Union Administration and various state regulatory authorities as part of the Multi-Region Data Processing Servicer Program ("MDPS"). The MDPS program includes technology suppliers who provide mission critical applications for a large number of financial institutions that are regulated by multiple regulatory agencies. Periodic information technology examination assessments are performed using FFIEC interagency guidelines to identify potential risks that could adversely affect serviced financial institutions, determine compliance with applicable laws and regulations that affect the services provided to financial institutions and ensure the services we provide to financial institutions do not create systemic risk to the banking system or impact the safe and sound operation of the financial institutions we serve. In addition, independent

auditors annually review several of our operations to provide reports on internal controls for our clients' auditors and regulators. We are also subject to review under state and foreign laws and rules that regulate many of the same activities that are described above, including electronic data processing and back-office services for financial institutions and the use of consumer information.

Money Transfer. ACI Payments, Inc., our EBPP affiliate, is registered as a Money Services Business. Accordingly, we are subject to the USA Patriot Act and reporting requirements of the Bank Secrecy Act and United States ("U.S."). Treasury Regulations. These businesses may also be subject to certain state and local licensing requirements. The Financial Crimes Enforcement Network ("FinCEN"), state attorneys general, and other agencies have enforcement responsibility over laws relating to money laundering, currency transmission, and licensing. In addition, most states have enacted statutes that require entities engaged in money transmission to register as a money transmitter with that jurisdiction's banking department. We have implemented policies, procedures, and internal controls that are designed to comply with all applicable anti-money laundering laws and regulations. ACI has also implemented policies, procedures, and internal controls that are designed to comply with the regulations and economic sanctions programs administered by the U.S. Treasury's Office of Foreign Assets Control ("OFAC"), which enforces economic and trade sanctions against targeted foreign countries, entities and individuals based on external threats to the U.S. foreign policy, national security, or economy; by other governments; or by global or regional multilateral organizations, such as the United Nations Security Council and the European Union as applicable.

Human Capital

As of December 31, 2022, we had 3,349 employees worldwide, with 1,516 employees in the Americas, 952 employees in Europe, the Middle East, and Africa ("EMEA"), and 881 employees in Asia Pacific. ACI emphasizes a diverse and inclusive workplace, with approximately 40 sites in over 30 countries. Globally, 34% of our employees are women. We are committed to ensuring employees feel safe and respected, regardless of race, color, age, gender, disability, minority, sexual orientation, or any other protected class. Employees have the ability to challenge themselves and continue to grow through various assignments, projects, and development programs. We strive to offer competitive salaries and benefits to all employees, and we continuously monitor salary ranges in our market areas.

Retention

Our voluntary regrettable turnover, or our turnover of high performers, through December 31, 2022 was 12%, which compares favorably to industry turnover rates. We are pleased with our retention and will continue to employ strategies to retain and engage our global employees.

Benefits

We provide our global employees with competitive and comprehensive benefits to meet their needs and the needs of their dependents.

In the United States, nearly all of our employees participate in our employee benefits programs that include:

- Comprehensive health coverage for medical, vision, and dental care
- Short term, long term, accident and disability insurance coverage
- Flexible spending accounts for medical and dependent care expenses
- Commuter expense reimbursement accounts
- Retirement savings plans including 401(K) and deferred compensation plans
- Access to 529 Plans for college savings
- Adoption assistance
- Employee discounts programs

Some of these benefits are available to our employees outside the United States where applicable and permissible by law in addition to locally provided benefits.

Globally, all employees have access to an employee assistance program which offers support to employees and their immediate family to address a range of personal needs and concerns in support of their well-being and mental health.

To foster a stronger sense of ownership and align with the interests of our shareholders, participation in the employee stock purchase plan is available for eligible employees.

Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the “Exchange Act”), are available free of charge on our website at www.aciworldwide.com as soon as reasonably practicable after we file such information electronically with the SEC. The information found on our website is not part of this or any other report we file with or furnish to the SEC. The public may read and copy any materials that we file with the SEC at the SEC’s Public Reference Room at 100 F Street, Room 1580, NW, Washington DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

Executive Officers of the Registrant

As of March 1, 2023, our executive officers, their ages, and their positions were as follows:

Name	Age	Position
Thomas W. Warsop, III	56	Interim President and Chief Executive Officer
Scott W. Behrens	51	Chief Financial Officer
Alessandro Silva	46	Chief Revenue Officer
Debbie Guerra	59	Chief Product Officer
Ram Puppala	53	Chief Technology and Operations Officer

Mr. Warsop was appointed Interim President and Chief Executive Officer on November 8, 2022. Mr. Warsop joined the ACI Board of Directors in June 2015 and became non-executive Chairman in June 2022. He has led various portfolio companies for several leading private equity firms since 2012, including One Call Care Management, York Risk Services Group, and The Warranty Group. He served as Group President at Fiserv, Inc., a provider of technology solutions to the financial industry, from 2007 to 2012. He served in various capacities at Electronic Data Systems for 17 years, including President of its Business Process Outsourcing unit in Asia Pacific, Vice President in the United Kingdom, and Vice President of Global Financial Services. He currently serves as President of the North Florida Chapter of the Juvenile Diabetes Research Foundation.

Mr. Behrens serves as Executive Vice President and Chief Financial Officer. Mr. Behrens joined ACI in June 2007 as our Corporate Controller and was appointed as Chief Accounting Officer in October 2007. Mr. Behrens was appointed Chief Financial Officer in December 2009 and ceased serving as our Corporate Controller in December 2010. Mr. Behrens was appointed Executive Vice President in March 2011. Prior to joining ACI, Mr. Behrens served as Senior Vice President, Corporate Controller and Chief Accounting Officer at SITEL Corporation from January 2005 to June 2007. He also served as Vice President of Financial Reporting at SITEL Corporation from April 2003 to January 2005. From 1993 to 2003, Mr. Behrens was with Deloitte & Touche, LLP, including two years as a Senior Audit Manager. Mr. Behrens holds a Bachelor of Science from the University of Nebraska – Lincoln.

Mr. Silva was appointed as Executive Vice President and Chief Revenue Officer on May 6, 2022. Since joining ACI in 2021, Mr. Silva served as head of international markets and was responsible for driving commercial strategy and strengthening ACI’s sales and customer success capabilities in Latin America, Europe, Asia Pacific, Middle East and Africa. Prior to joining ACI, Mr. Silva held various sales and general manager roles in the U.S, Canada, Latin America and Europe, while working for Western Union, GE Capital, The Carlyle Group and Credicard. Mr. Silva is fluent in English, Spanish and Portuguese. He holds a bachelor’s degree in business administration from Universidade Mackenzie in São Paulo and a Master of Business Administration from USP-Universidade de São Paulo. He extended his education at INSEAD, the Harvard Business School and the University of Chicago Booth School of Business.

Ms. Guerra was appointed as Executive Vice President and Chief Product Officer on July 5, 2022. Ms. Guerra joined ACI in 2019 and is a seasoned payments industry executive with over three decades of experience spanning payments, fintech, consulting and IT services. Prior to joining ACI, Ms. Guerra led First Data’s small and midsize direct business and merchant portfolios in Brazil and the U.S. while also managing financial institution referral relationships. She also held senior leadership roles at Unisys and spent time as a management consultant with PricewaterhouseCoopers. Ms. Guerra is fluent in English, Portuguese and Spanish. She was one of the early female graduates of the United States Military Academy at West Point and holds a Bachelor of Science degree in engineering.

Mr. Puppala serves as Executive Vice President and Chief Technology Officer. Prior to joining ACI, Mr. Puppala served as Chief Digital Officer of Metropolitan Commercial Bank, where he led the digital payment product portfolio. Prior to that he served as Chief Technology Officer at State Street Global Exchange. He also served as Chief Information Officer for Technology and Customer Operations at Fiserv Investment Services and as Chief Technology Officer for Fiserv Global Payment Solutions. Earlier in his career, Mr. Puppala held technology leadership roles at FNSTAR, a company he helped found, and E*TRADE Financial Group. He began his career at Goldman Sachs before becoming a developer at AT&T. Mr. Puppala holds his Bachelor of Engineering, Computer Science and Technology, from the University of Pune and is completing his Executive MBA at the MIT Sloan School of Management.

ITEM 1A. RISK FACTORS

We operate in a rapidly changing technological and economic environment that presents numerous risks. Many of these risks are beyond our control and are driven by factors that often cannot be predicted. The following discussion highlights some of these risks.

Risks Related to Our Business and Operations

The markets in which we compete are rapidly changing and highly competitive, and we may not be able to compete effectively.

The markets in which we compete are characterized by rapid change, frequent introduction of new products and services, evolving technologies and industry standards, intense competition, and increasing client expectations. We may not be successful in developing, marketing, or selling new products and services that meet these demands or achieve market acceptance. We must anticipate and respond to these changes in order to remain competitive within our relevant markets. There is no assurance that we will be able to maintain our current market share or customer base. We face intense competition in our businesses and we expect competition to remain intense in the future. We have many competitors that are significantly larger than us and have significantly greater financial, technical and marketing resources, have well-established relationships with our current or potential customers, advertise aggressively or beat us to the market with new products and services. In addition, some of our clients have chosen to develop key products in-house. As a result, we may compete against our existing and potential clients' in-house capabilities. Additionally, we expect that the markets in which we compete will continue to attract new competitors and new technologies. Increased competition in our markets could lead to price reductions, reduced profits, or loss of market share.

To compete successfully, we need to maintain a successful research and development effort. If we fail to enhance our current products and develop new products in response to changes in technology and industry standards, bring product enhancements or new product developments to market quickly enough, or accurately predict future changes in our customers' needs and our competitors develop new technologies or products, our products could become less competitive or obsolete. In addition, the success of certain of our products and services rely, in part, on financial institutions, corporate, and other third parties to promote the use of our products and services by their customers. If we are unsuccessful in offering products or services that gain market acceptance and compete effectively, or if third parties insufficiently promote our products and services, it would likely have a material adverse effect on our ability to retain existing clients, to attract new ones, and to grow profitably.

If we experience business interruptions or failure of our information technology and communication systems, the availability of our products and services could be interrupted which could adversely affect our reputation, business and financial condition.

Our ability to provide reliable service in a number of our businesses depends on the efficient and uninterrupted operation of our data centers, information technology and communication systems, and those of our external service providers. As we continue to grow our private and public cloud offerings, our dependency on the continuing operation and availability of these systems increases. Our systems and data centers, and those of our external service providers, could be exposed to damage or interruption from fire, natural disasters, constraints within our workforce due to pandemics such as outbreaks of COVID-19, power loss, telecommunications failure, unauthorized entry and computer viruses. Although we have taken steps to prevent system failures and we have installed back-up systems and procedures to prevent or reduce disruption, such steps may not be sufficient to prevent an interruption of services and our disaster recovery planning may not account for all eventualities. Further, our property and business interruption insurance may not be adequate to compensate us for all losses or failures that may occur.

An operational failure or outage in any of these systems, or damage to or destruction of these systems, which causes disruptions in our services, could result in loss of customers, damage to customer relationships, reduced revenues and profits, refunds of customer charges and damage to our brand and reputation and may require us to incur substantial additional expense to repair or replace damaged equipment and recover data loss caused by the interruption. Any one or more of the foregoing occurrences could have a material adverse effect on our reputation, business, financial condition, cash flows and results of operations.

If our security measures are breached or become infected with a computer virus, or if our services are subject to attacks that degrade or deny the ability of users to access our products or services, our business may be harmed by disrupting delivery of services and damaging our reputation.

As part of our business, we electronically receive, process, store, and transmit sensitive business information of our customers. Unauthorized access to our computer systems or databases could result in the theft or publication of confidential information or the deletion or modification of records or could otherwise cause interruptions in our operations. These concerns about security are increased when we transmit information over the Internet. Security breaches in connection with the delivery of our products and services, including products and services utilizing the Internet, or well-publicized security breaches, and the trend toward broad consumer and general public notification of such incidents, could significantly harm our business, financial condition, cash flows and/or results of operations. We cannot be certain that advances in criminal capabilities, discovery of new vulnerabilities, attempts to exploit vulnerabilities in our systems, data thefts, physical system or network break-ins or inappropriate access, or other developments will not compromise or breach the technology protecting our networks and confidential information. Computer viruses have also been distributed and have rapidly spread over the Internet. Computer viruses could infiltrate our systems, disrupting our delivery of services and making our applications unavailable. Any inability to prevent security breaches or computer viruses could also cause existing customers to lose confidence in our systems and terminate their agreements with us, and could inhibit our ability to attract new customers.

Failure to attract and retain senior management personnel and skilled technical employees could harm our ability to grow.

Our senior management team has significant experience in the financial services industry. The loss of this leadership could have an adverse effect on our business, operating results and financial condition. Further, the loss of this leadership may have an adverse impact on senior management's ability to provide effective oversight and strategic direction for all key functions within our company, which could impact our future business, operating results and financial condition.

Our future success also depends upon our ability to attract and retain highly-skilled technical personnel. Because the development of our solutions and services requires knowledge of computer hardware, operating system software, system management software, and application software, our technical personnel must be proficient in a number of disciplines. Competition for such technical personnel is intense, and our failure to hire and retain talented personnel could have a material adverse effect on our business, operating results and financial condition.

Our future growth will also require sales and marketing, financial and administrative personnel to develop and support new solutions and services, to enhance and support current solutions and services and to expand operational and financial systems. There can be no assurance that we will be able to attract and retain the necessary personnel to accomplish our growth strategies and we may experience constraints that could adversely affect our ability to satisfy client demand in a timely fashion.

Our ability to maintain compliance with applicable laws, rules and regulations and to manage and monitor the risks facing our business relies upon the ability to maintain skilled compliance, security, risk and audit professionals. Competition for such skillsets is intense, and our failure to hire and retain talented personnel could have an adverse effect on our internal control environment and impact our operating results.

During the global COVID-19 pandemic, a significant portion of our workforce worked mostly in a remote environment. While our employees have begun to transition back to the office, this remote environment has continued after the pandemic for some of our workforce in part or in full, and could impact the quality of our corporate culture. Failure to attract, hire, develop, motivate and retain highly qualified and diverse employee talent, or to maintain a corporate culture that fosters innovation, creativity, and teamwork could harm our overall business and results of operations.

If we engage in acquisitions, strategic partnerships or significant investments in new business, we will be exposed to risks which could materially adversely affect our business.

As part of our business strategy, we anticipate that we may acquire new products and services or enhance existing products and services through acquisitions of other companies, product lines, technologies and personnel, or through investments in, or strategic partnerships with, other companies. Any acquisition, investment or partnership, is subject to a number of risks. Such risks include the diversion of management time and resources, disruption of our ongoing business, potential overpayment for the acquired company or assets, dilution to existing stockholders if our common stock is issued in consideration for an acquisition or investment, incurring or assuming indebtedness or other liabilities in connection with an acquisition which may increase our interest expense and leverage significantly, lack of familiarity with new markets, and difficulties in supporting new product lines.

Further, even if we successfully complete acquisitions, we may encounter issues not discovered during our due diligence process, including product or service quality issues, intellectual property issues and legal contingencies, the internal control environment of the acquired entity may not be consistent with our standards and may require significant time and resources to improve and we may impair relationships with employees and customers as a result of migrating a business or product line to a new owner. We may also face challenges in integrating any acquired business. These challenges may include eliminating redundant operations, facilities and systems, coordinating management and personnel, retaining key employees, customers and business partners, managing different corporate cultures, and achieving cost reductions and cross-selling opportunities. There can be no assurance that we will be able to fully integrate all aspects of acquired businesses successfully, realize synergies expected to result from the acquisition, advance our business strategy or fully realize the potential benefits of bringing the businesses together, and the process of integrating these acquisitions may further disrupt our business and divert our resources.

Our failure to successfully manage acquisitions or investments, or successfully integrate acquisitions could have a material adverse effect on our business, financial condition, cash flows and/or results of operations. Correspondingly, our expectations related to the benefits related to our recent acquisitions, prior acquisitions or any other future acquisition or investment could be inaccurate.

Failure to successfully complete divestitures or other restructuring activities could negatively affect our operations.

From time to time, we may divest of all or a portion of certain businesses. Divestitures involve risk, including, potential increased expense associated with the divestitures, and potential issues with the acquirers, customers or suppliers of the divested business, or products. Occasionally, we may wind down certain business activities and perform other organizational restructuring projects in an effort to reduce costs and streamline operations. For example, we divested our corporate online banking solutions related assets and liabilities to One Equity Partners on September 1, 2022. Divestiture activities involve risks as they may divert management's attention from our core businesses, increase expenses on a short-term basis and lead to potential issues with employees or customers. If we do not complete these activities in a timely manner, or do not realize anticipated cost savings, synergies and efficiencies, business disruption occurs during or following such activities, or we incur unanticipated charges, this may negatively impact our business, financial condition, operating results, and cash flows.

We may experience difficulties implementing our strategy, and the strategy could prove unsuccessful in growing our business.

Our strategy focuses on investments in real-time payments, large sophisticated global merchants, and fast-growing emerging markets. Successfully implementing our strategy may present organizational and infrastructure challenges, and we may not be able to fully implement or realize the intended benefits of our strategy. Moving to a new business strategy may result in a loss of established efficiency, which may have a negative impact on our business. As we adjust, we also may need to bring on additional talent, which could prove difficult in a competitive job market, especially as remote working continues. The increased focus on opportunities for strategic mergers and acquisitions and research and development could result in financial difficulties and may not always be fruitful. We may also face an increased amount of competition as we attempt to expand and grow our business, which may negatively impact our financial results. In order for us to be successful as we enter and invest in emerging markets, these markets must continue to grow. However, this growth depends on a variety of factors that we are not always able to predict.

To the extent that we convert some or all of our on-premise licenses from a fixed-term to a subscription model, our future financial results will be affected by the frequency at which our customers adopt our subscription model, which carries with it certain risks.

Our on-premise licenses currently have a five-year fixed term model. In the future, we may transition some or all of these licenses to a subscription model. A transition to a subscription model would reflect a significant shift from a fixed-term license. In addition, a subscription model presents a number of risks to us including the following:

- arrangements entered into on a subscription basis generally delay the timing of revenue recognition and can require the incurrence of up-front costs, which may be significant;
- subscription models make it difficult to rapidly increase revenues through additional bookings in any period, as revenues are recognized ratably over the subscription period;
- customers in a subscription arrangement may elect not to renew their contract upon expiration or they may attempt to renegotiate pricing or other contractual terms at the point of (or prior to) renewal on terms that are less favorable to us; and
- there is no assurance that our customers will broadly accept a subscription model for our on-premise licenses.

Certain anti-takeover provisions contained in our charter and under Delaware law could hinder a takeover attempt.

We are subject to the provisions of Section 203 of the General Corporation Law of the State of Delaware prohibiting, under some circumstances, publicly held Delaware corporations from engaging in business combinations with some stockholders for a specified period of time without the approval of the holders of substantially all of our outstanding voting stock. Such provisions could delay or impede the removal of incumbent directors and could make more difficult a merger, tender offer, or proxy contest involving us, even if such events could be beneficial, in the short term, to the interests of our stockholders. In addition, such provisions could limit the price that some investors might be willing to pay in the future for shares of our common stock. Our certificate of incorporation and bylaws contain provisions relating to the limitation of liability and indemnification of our directors and officers, dividing our board of directors into three classes of directors serving three-year terms and providing that our stockholders can take action only at a duly called annual or special meeting of stockholders.

Risks Related to Our Customers

Certain payment funding methods expose us to the credit and/or operating risk of our clients.

When we process an automated clearing house or ATM network payment transaction for certain clients, we occasionally transfer funds from our settlement account to the intended destination account before we receive funds from a client's source account. The vast majority of these occurrences are resolved quickly through normal processes. However, if they are not resolved and we are then unable to reverse the transaction that sent funds to the intended destination, a shortfall in our settlement account will be created. Although we have legal recourse against our clients for the amount of the shortfall, timing of recovery may be delayed by litigation or the amount of any recovery may be less than the shortfall. In either case, we would have to fund the shortfall in our settlement account from our corporate funds.

Potential customers may be reluctant to switch to a new vendor, which may adversely affect our growth, both in the United States and internationally.

For banks, intermediaries, and other potential customers of our products, switching from one vendor of core financial services software (or from an internally developed legacy system) to a new vendor is a significant endeavor. Many potential customers believe switching vendors involves too many potential disadvantages such as disruption of business operations, loss of accustomed functionality, and increased costs (including conversion and transition costs). As a result, potential customers may resist change. We seek to overcome this resistance through value enhancing strategies such as a defined conversion/migration process, continued investment in the enhanced functionality of our software and system integration expertise. However, there can be no assurance that our strategies for overcoming potential customers' reluctance to change vendors will be successful, and this resistance may adversely affect our growth, both in the United States and internationally.

Risks Related to Our Intellectual Property

We may be unable to protect our intellectual property and technology.

To protect our proprietary rights in our intellectual property, we rely on a combination of contractual provisions, including customer licenses that restrict use of our products, confidentiality agreements and procedures, and trade secret and copyright laws. Despite such efforts, we may not be able to adequately protect our proprietary rights, or our competitors may independently develop similar technology, duplicate products, or design around any rights we believe to be proprietary. This may be particularly true in countries other than the United States because some foreign laws do not protect proprietary rights to the same extent as certain laws of the United States. Any failure or inability to protect our proprietary rights could materially adversely affect our business.

We also use a limited amount of software licensed by its authors or other third parties under so-called "open source" licenses and may continue to use such software in the future. Some of these licenses contain requirements that we make available source code for modifications or derivative works we create based upon the open source software, and that we license such modifications or derivative works under the terms of a particular open source license or other license granting third parties certain rights of further use. By the terms of certain open source licenses, we could be required to release the source code of our proprietary software if we combine our proprietary software with open source software in a certain manner. Additionally, the terms of many open source licenses have not been interpreted by United States or other courts, and there is a risk that these licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our solutions. In addition to risks related to license requirements, usage of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or controls on origin of the software.

Our exposure to risks associated with the use of intellectual property may be increased for third-party products distributed by us or as a result of acquisitions since we have a lower level of visibility, if any, into the development process with respect to such third-party products and acquired technology or the care taken to safeguard against infringement risks.

We may be subject to increasing litigation over our intellectual property rights.

There has been a substantial amount of litigation in the software industry regarding intellectual property rights. Third parties have in the past, and may in the future, assert claims or initiate litigation related to exclusive patent, copyright, trademark or other intellectual property rights to business processes, technologies and related standards that are relevant to us and our customers. These assertions have increased over time as a result of the general increase in patent claims assertions, particularly in the United States. Because of the existence of a large number of patents in the electronic commerce field, the secrecy of some pending patents and the rapid issuance of new patents, it is not economical or even possible to determine in advance whether a product or any of its components infringes or will infringe on the patent rights of others. Any claim against us, with or without merit, could be time-consuming, result in costly litigation, cause product delivery delays, require us to enter into royalty or licensing agreements or pay amounts in settlement, or require us to develop alternative non-infringing technology.

We anticipate that software product developers and providers of electronic commerce solutions could increasingly be subject to infringement claims, and third parties may claim that our present and future products infringe upon their intellectual property rights. Third parties may also claim, and we are aware that at least two parties have claimed on several occasions, that our customers' use of a business process method which utilizes our products in conjunction with other products infringe on the third-party's intellectual property rights. These third-party claims could lead to indemnification claims against us by our customers. Claims against our customers related to our products, whether or not meritorious, could harm our reputation and reduce demand for our products. Where indemnification claims are made by customers, resistance even to unmeritorious claims could damage the customer relationship. A successful claim by a third-party of intellectual property infringement by us or one of our customers could compel us to enter into costly royalty or license agreements, pay significant damages, or stop selling certain products and incur additional costs to develop alternative non-infringing technology. Royalty or licensing agreements, if required, may not be available on terms acceptable to us or at all, which could adversely affect our business.

We are engaged in offshore software development activities, which may not be successful and which may put our intellectual property at risk.

As part of our globalization strategy and to optimize available research and development resources, we utilize our Irish subsidiary to serve as the focal point for certain international product development and commercialization efforts. This subsidiary oversees remote software development operations in Romania and elsewhere, as well as manages certain of our intellectual property rights. In addition, we manage certain offshore development activities in India. While our experience to date with our offshore development centers has been positive, there is no assurance that this will continue. Specifically, there are a number of risks associated with this activity, including but not limited to the following:

- communications and information flow may be less efficient and accurate as a consequence of the time, distance and language differences between our primary development organization and the foreign based activities, resulting in delays in development or errors in the software developed;
- in addition to the risk of misappropriation of intellectual property from departing personnel, there is a general risk of the potential for misappropriation of our intellectual property that might not be readily discoverable;
- the quality of the development efforts undertaken offshore may not meet our requirements because of language, cultural and experiential differences, resulting in potential product errors and/or delays;
- potential disruption from the involvement of the United States in political and military conflicts around the world; and
- currency exchange rates could fluctuate and adversely impact the cost advantages intended from maintaining these facilities.

Risks Related to Our International Operations

There are a number of risks associated with our international operations that could have a material impact on our operations and financial condition.

We derive a significant portion of our revenues from international operations and anticipate continuing to do so. As a result, we are subject to risks of conducting international operations. One of the principal risks associated with international operations is potentially adverse movements of foreign currency exchange rates. Revenues and profit generated by international operations will increase or decrease compared to prior periods as a result of changes in foreign currency exchange rates. Our exposures resulting from fluctuations in foreign currency exchange rates may change over time as our business evolves and could have an adverse impact on our financial condition, cash flows and/or results of operations. We have not entered into any derivative instruments or hedging contracts to reduce exposure to adverse foreign currency changes.

Other potential risks include difficulties associated with staffing and management, competing with more established companies in international markets, reliance on independent distributors, longer payment cycles, potentially unfavorable changes to foreign tax rules, unfavorable trade treaties or tariffs, compliance with foreign regulatory requirements, effects of a variety of foreign laws and regulations, including restrictions on access to personal information, reduced protection of intellectual property rights, variability of foreign economic conditions, governmental currency controls, difficulties in enforcing our contracts in foreign jurisdictions, and general economic and political conditions in the countries where we sell our products and services. Some of our products may contain encrypted technology, the export of which is regulated by the United States government. Changes in U.S. and other applicable export laws and regulations restricting the export of software or encryption technology could result in delays or reductions in our shipments of products internationally. There can be no assurance that we will be able to successfully address these challenges.

Political, military, and other international developments can undermine bilateral cooperation in key policy areas, significantly disrupt trade, and otherwise adversely affect economic conditions.

Recent events in eastern Europe present challenges and risks to us, and no assurances can be given that current or future developments would not have a material adverse effect on our business, results of operations and financial condition.

The crisis in eastern Europe continues to be a challenge to global companies, including us. We have an office with 57 employees in Russia and a customer in Russia. The U.S. and other global governments have placed restrictions on how companies may transact with, and provide services or solutions to, parties in these regions, particularly Russia, Belarus and restricted areas in Ukraine. Because of these restrictions, we have augmented the services and solutions we provide to our customer in Russia and the manner in which we support our employees in Russia. These decisions, which we believe are in line with the approach of other companies in our industry, help us comply with our obligations under the various requirements in the U.S. and around the world. While it is difficult to estimate the impact on our business and financial position of our augmented operations with respect to businesses in Russia, Belarus and the restricted areas in Ukraine and the current or future sanctions, such changes could have adverse impacts on us in future periods. In addition, no assurances can be given that additional developments in the impacted regions, and responses thereto from the U.S. and other global governments, would not have a material adverse effect on our business, results of operations and financial condition.

Risks Related to Our Products and Services

Global economic conditions could reduce the demand for our products and services or otherwise adversely impact our cash flows, operating results and financial condition.

For the foreseeable future, we expect to derive most of our revenue from products and services we provide to the banking and financial services industries. Given this focus, we are exposed to global economic conditions, and adverse economic trends that may accelerate the timing, or increase the impact of, risks to our financial performance.

The global electronic payments industry and the banking and financial services industries depend heavily upon the overall levels of consumer, business and government spending. Adverse economic conditions such as those caused by the global economic downturn, the Russia-Ukraine conflict, the COVID-19 pandemic, and the potential for disruptions in these industries as well as the general software sector could result in a decrease in consumers' use of banking services and financial service providers resulting in significant decreases in the demand for our products and services which could adversely affect our business and operating results. A lessening demand in either the overall economy, the banking and financial services industry or the software sector could also result in the implementation by banks and related financial service providers of cost reduction measures or reduced capital spending resulting in longer sales cycles, deferral or delay of purchase commitments for our products and increased price competition which could lead to a material decrease in our future revenues and earnings.

Our business may be negatively affected by domestic and global economic and credit conditions.

Our business is sensitive to the strength of domestic and global economic and credit conditions, particularly as they affect, either directly or indirectly, the banking and financial services industries. Economic and credit conditions are influenced by a number of factors, including political conditions, consumer confidence, unemployment levels, interest rates, tax rates, commodity prices, and government actions to stimulate economic growth. The imposition or threat of protectionist trade policies or import or export tariffs, global and regional market conditions and spending trends in the financial, retail and hospitality industries, new tax legislation across multiple jurisdictions, modified or new global or regional trade agreements, uncertainty over further potential changes in Eurozone participation and fluctuations in oil and commodity prices, among other things, have created a challenging and unpredictable environment in which to market our products and services across our different geographies and industries. A negative or unpredictable economic climate could create uncertainty or financial pressures that impact the ability or willingness of our customers to make capital expenditures, thereby affecting their decision to purchase or roll out our products or services or to pay accounts receivable owed to us. Additionally, if customers respond to a negative or unpredictable economic climate by consolidation, it could reduce our base of potential customers.

If our products and services fail to comply with legislation, government regulations, and industry standards to which our customers are subject, it could result in a loss of customers and decreased revenue.

Legislation, governmental regulation, and industry standards affect how our business is conducted, and in some cases, could subject us to the possibility of future lawsuits arising from our products and services. Globally, legislation, governmental regulation and industry standards may directly or indirectly impact our current and prospective customers' activities, as well as their expectations and needs in relation to our products and services. For example, our products are affected by VISA, Mastercard and other major payment brand electronic payment standards that are generally updated twice annually. Beyond this, our products are affected by PCI Security Standards. As a provider of electronic data processing to financial institutions, we must comply with FFIEC regulations and are subject to FFIEC examinations.

Legislation and regulation related to credit availability, data usage, privacy, or other related regulatory developments could have an adverse effect on our customers or us. Laws and regulations concerning the handling of personal information are expanding and becoming more complex. Our failure, or perceived failure, to comply with these and other laws and regulations could adversely affect our business and harm our reputation.

Our software products may contain undetected errors or other defects, which could damage our reputation with customers, decrease profitability, and expose us to liability.

Our software products are complex. Software may contain bugs or defects that could unexpectedly interfere with the operation of the software products when first introduced or as new versions are released. Additionally, errors could occur during our provision of services, including processing services such as our bill payment services and other services delivered through public or private cloud. Software defects or service errors may result in the loss of, or delay in, market acceptance of our products and services and a corresponding loss of sales or revenues.

Customers depend upon our products and services for mission-critical applications, and product defects or service errors may hurt our reputation with customers. In addition, software product defects or errors could subject us to liability for damages, performance and warranty claims, and fines or penalties from governmental authorities, which could be material.

Risks Related to Legal, Regulatory, and Tax Matters

If we fail to comply with the complex regulations applicable to our payments business, we could be subject to liability or our revenues may be reduced.

ACI Payments, Inc. is licensed as a money transmitter in those states where such licensure is required. These licenses require us to demonstrate and maintain certain levels of net worth and liquidity, require us to file periodic reports and subject us to inspections by state regulatory agencies. In addition, our payment business is generally subject to federal regulation in the United States, including anti-money laundering regulations and certain restrictions on transactions to or from certain individuals or entities. The complexity of these regulations will continue to increase our cost of doing business. Any violations of these laws may also result in civil or criminal penalties against us and our officers or the prohibition against us providing money transmitter services in particular jurisdictions. We could also be forced to change our business practices or be required to obtain additional licenses or regulatory approvals that could cause us to incur substantial costs.

In addition, our customers must ensure that our services comply with the government regulations, including the EU GDPR, and industry standards that apply to their businesses. Federal, state, foreign or industry authorities could adopt laws, rules, or regulations affecting our customers' businesses that could lead to increased operating costs that may lead to reduced market acceptance. In addition, action by regulatory authorities relating to credit availability, data usage, privacy, or other related regulatory developments could have an adverse effect on our customers and, therefore, could have a material adverse effect on our business, financial condition, and results of operations.

Our business could be harmed if we fail to comply with privacy and cybersecurity regulations imposed on providers of services to financial institutions.

As a provider of services to financial institutions, we may be bound by the same limitations on disclosure of the information we receive from our customers as apply to the financial institutions themselves. If we fail to comply with applicable regulations, including the EU GDPR, CCPA, and other laws, we could be exposed to suits for breach of contract or to governmental or consumer claims, our customer relationships and reputation could be harmed, and we could be inhibited in our ability to obtain new customers. Compliance with these and new laws could involve substantial expenses and divert resources from other initiatives and projects. More restrictive privacy laws adopted in the future could have an adverse impact on our business.

U.S. and other banking agencies have adopted or proposed enhanced cyber risk management standards that would apply to us and our financial institution clients and that would address cyber risk governance and management, management of internal and external dependencies, and incident response, cyber resilience, and situational awareness. Several states in the U.S. have adopted or proposed new privacy and cybersecurity laws targeting these issues. Legislation and regulations on cybersecurity, data privacy and data localization may compel us to need to modify our systems, invest in new systems or alter our business practices or our policies on data governance and privacy. These actions could significantly increase our operational costs.

Our risk management and information security programs are subject to oversight and periodic reviews by governmental agencies that regulate our business. In the event an examination of our information security and risk management functions results in adverse findings, such findings could be made public or communicated to our regulated financial institution customers, which could have a material adverse effect on us.

We are involved in investigations, lawsuits and other proceedings that are expensive, time-consuming and could seriously harm to our business.

We are involved in lawsuits, including class-action lawsuits, and government investigations relating to the conduct of our business. For example, in April 2021, ACH files associated with one of our mortgage servicing customers were inadvertently transmitted into the ACH network during a test of our payment processing system. We took immediate corrective action and issued reversing ACH files, restoring affected accounts. This incident gave rise to class action litigation as to which we reached a settlement with the lead plaintiff that is subject to final court approval. It also gave rise to state and federal investigations that are ongoing. See *Legal Proceedings* in Note 13, *Commitments and Contingencies*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K for a discussion of these matters.

Damage claims in lawsuits, and fines and penalties imposed by governmental agencies, can be substantial, and injunctive or other remedies imposed by governmental agencies can be costly to implement. Any litigation may result in an onerous or unfavorable judgment that might not be reversed on appeal, or we may decide to settle lawsuits or resolve government investigations on adverse terms. Any such negative outcomes could result in the payment of substantial monetary damages or penalties or require changes to our products or business practices that materially affect us. Even where the ultimate outcome of any such litigation or regulatory proceeding may be favorable, defending against claims and responding to regulatory proceedings is costly and can impose a significant burden on us.

The existence of lawsuits and investigations, and any adverse outcome, may create negative publicity for the Company and undermine the Company's goodwill with customers. Competitors may use these lawsuits and investigations against us in the marketplace, making it difficult for us to attract new customers and retain our existing customers.

We may face exposure to unknown tax liabilities, which could adversely affect our financial condition, cash flows and/or results of operations.

We are subject to income and non-income based taxes in the United States and in various foreign jurisdictions. Significant judgment is required in determining our worldwide income tax liabilities and other tax liabilities. We believe that these tax-saving strategies comply with applicable tax law. If the governing tax authorities have a different interpretation of the applicable law and successfully challenge any of our tax positions, our financial condition, cash flows and/or results of operations could be adversely affected.

Our U.S. companies are the subject of an examination by several state tax departments. Some of our foreign subsidiaries are currently the subject of a tax examination by the local taxing authorities. Other foreign subsidiaries could face challenges from various foreign tax authorities. It is not certain that the local authorities will accept our tax positions. We believe our tax positions comply with applicable tax law and intend to vigorously defend our positions. However, differing positions on certain issues could be upheld by foreign tax authorities, which could adversely affect our financial condition and/or results of operations.

Changes in tax laws and regulations could adversely affect our results of operations and cash flows from operations.

Our operations are subject to tax by federal, state, local, and international taxing jurisdictions. Changes in tax laws or their interpretations in our significant tax jurisdictions could materially increase the amount of taxes we owe, thereby negatively impacting our results of operations as well as our cash flows from operations. Additionally, future tax laws, regulations or guidance from the Internal Revenue Service, the Securities and Exchange Commission, or the Financial Accounting Standards Board could cause us to adjust current estimates in future periods, which could impact our earnings and have an adverse effect on our results of operations and cash flow.

The U.S. Congress, the Organization for Economic Co-operation and Development (the “OECD”) and other government agencies in jurisdictions in which we do business remain focused on the taxation of multinational corporations. The OECD, which represents a coalition of member countries, including the U.S., is contemplating changes to numerous longstanding tax principles, including ensuring all companies pay a global minimum tax and expanding taxing rights of market countries. Because the timing of implementation and the specific measures adopted will vary among participating countries, significant uncertainty remains regarding the impact of these initiatives and their implementation could adversely affect our business or financial results.

Furthermore, our implementation of new practices and processes designed to comply with changing tax laws and regulations could require us to make substantial changes to our business practices, allocate additional resources, and increase our costs, which could negatively affect our business, results of operations, and financial condition.

Risks Related to Our Industry

Consolidations and failures in the financial services industry may adversely impact the number of customers and our revenues in the future.

Mergers, acquisitions, and personnel changes at key financial services organizations have the potential to adversely affect our business, financial condition, cash flows, and results of operations. Our business is concentrated in the financial services industry, making us susceptible to consolidation in, or contraction of, the number of participating institutions within that industry.

Our stock price may be volatile.

No assurance can be given that operating results will not vary from quarter to quarter, and past performance may not accurately predict future performance. Any fluctuations in quarterly operating results may result in volatility in our stock price. Our stock price may also be volatile, in part, due to external factors such as speculation regarding potential transactions, announcements by third parties or competitors, inherent volatility in the technology sector, variability in demand from our existing customers, failure to meet the expectations of market analysts, the level of our operating expenses, changing market conditions in the software industry, and the global economic downturn. In addition, the financial markets have experienced significant price and volume fluctuations that have particularly affected the stock prices of many technology companies and financial services companies, and these fluctuations sometimes are unrelated to the operating performance of these companies. Broad market fluctuations, as well as industry-specific and general economic conditions may adversely affect the market price of our common stock.

Risks Related to Our Financial Performance

Our future profitability depends on demand for our products.

Our revenue and profitability depend on the overall demand for our products and services. A significant portion of our total revenues result from licensing our Issuing and Acquiring solutions, including our BASE24 product line and providing related services and maintenance. Any reduction in demand for, or increase in competition with respect to, our Issuing and Acquiring solutions could have a material adverse effect on our financial condition, cash flows and/or results of operations.

Failure to obtain renewals of customer contracts or obtain such renewals on favorable terms could adversely affect our results of operations and financial condition.

Failure to achieve favorable renewals of customer contracts could negatively impact our business. Our contracts with our customers generally run for a period of five years, or three years in the case of certain acquired SaaS and PaaS contracts. At the end of the contract term, customers have the opportunity to renegotiate their contracts with us and to consider whether to engage one of our competitors to provide products and services. Failure to achieve high renewal rates on commercially favorable terms could adversely affect our results of operations and financial condition.

The delay or cancellation of a customer project or inaccurate project completion estimates may adversely affect our operating results and financial performance.

Any unanticipated delays in a customer project, changes in customer requirements or priorities during the project implementation period, or a customer's decision to cancel a project, may adversely impact our operating results and financial performance. In addition, during the project implementation period, we perform ongoing estimates of the progress being made on complex and difficult projects and documenting this progress is subject to potential inaccuracies. Changes in project completion estimates are heavily dependent on the accuracy of our initial project completion estimates and our ability to evaluate project profits and losses. Any inaccuracies or changes in estimates resulting from changes in customer requirements, delays or inaccurate initial project completion estimates may result in increased project costs and adversely impact our operating results and financial performance.

Our balance sheet includes significant amounts of goodwill and intangible assets. The impairment of a significant portion of these assets could negatively affect our financial results.

Our balance sheet includes goodwill and intangible assets that represent a significant portion of our total assets at December 31, 2022. On at least an annual basis, we assess whether there have been impairments in the carrying value of goodwill and intangible assets. If the carrying value of the asset is determined to be impaired, then it is written down to fair value by a charge to operating earnings. An impairment of a significant portion of goodwill or intangible assets could materially negatively affect our results of operations.

Management's backlog estimate may not be accurate and may not generate the predicted revenues.

Estimates of future financial results are inherently unreliable. Our backlog estimates require substantial judgment and are based on a number of assumptions, including management's current assessment of customer and third-party contracts that exist as of the date the estimates are made, as well as revenues from assumed contract renewals, to the extent that we believe that recognition of the related revenue will occur within the corresponding backlog period. A number of factors could result in actual revenues being less than the amounts reflected in backlog. Our customers or third-party partners may attempt to renegotiate or terminate their contracts for a number of reasons, including mergers, changes in their financial condition, or general changes in economic conditions within their industries or geographic locations, or we may experience delays in the development or delivery of products or services specified in customer contracts. Actual renewal rates and amounts may differ from historical experience used to estimate backlog amounts. Changes in foreign currency exchange rates may also impact the amount of revenue actually recognized in future periods. Accordingly, there can be no assurance that contracts included in backlog will actually generate the specified revenues or that the actual revenues will be generated within a 12-month or 60-month period. Additionally, because backlog estimates are operating metrics, the estimates are not required to be subject to the same level of internal review or controls as a U.S. generally accepted accounting principles ("GAAP") financial measure.

Our revenue and earnings are highly cyclical, our quarterly results fluctuate significantly, and we have revenue-generating transactions concentrated in the final weeks of a quarter which may prevent accurate forecasting of our financial results and cause our stock price to decline.

Our revenue and earnings are highly cyclical causing significant quarterly fluctuations in our financial results. Revenue and operating results are usually strongest during the third and fourth fiscal quarters ending September 30 and December 31, primarily due to the sales and budgetary cycles of our customers. We experience lower revenues, and possible operating losses, in the first and second quarters ending March 31 and June 30. Our financial results may also fluctuate from quarter to quarter and year to year due to a variety of factors, including changes in product sales mix that affect average selling prices, and the timing of customer renewals (any of which may impact the pattern of revenue recognition).

In addition, large portions of our customer contracts are executed in the final weeks of each quarter. Before these contracts are executed, we create and rely on forecasted revenues for planning, modeling and earnings guidance. Forecasts, however, are only estimates and actual results may vary for a particular quarter or longer periods of time. Consequently, significant discrepancies between actual and forecasted results could limit our ability to plan, budget or provide accurate guidance, which could adversely affect our stock price. Any publicly-stated revenue or earnings projections are subject to this risk.

Risks Related to Financing

Our outstanding debt contains restrictions and other financial covenants that limit our flexibility in operating our business.

Our credit facility and the indenture governing our 5.750% Senior Notes due 2026 (“2026 Notes”) contain customary affirmative and negative covenants for debt of these types that limit our ability to engage in specified types of transactions. If an event of default occurs, the lenders, trustee, or holders of the 2026 Notes will be entitled to take various actions, including, but not limited to, demanding payment for all amounts outstanding. If adverse global economic conditions persist or worsen, we could experience decreased revenues from our operations attributable to reduced demand for our products and services and as a result, we could fail to satisfy the financial and other restrictive covenants to which we are subject under our existing debt, resulting in an event of default. If we are unable to cure the default or obtain a waiver, we will not be able to access our credit facility and there can be no assurance that we would be able to obtain alternative financing. See Note 4, *Debt*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K for additional information.

Our existing levels of debt and debt service requirements may adversely affect our financial condition or operational flexibility and prevent us from fulfilling our obligations under our outstanding indebtedness.

Our level of debt could have adverse consequences for our business, financial condition, operating results and operational flexibility, including the following: (i) the debt level may cause us to have difficulty borrowing money in the future for working capital, capital expenditures, acquisitions or other purposes; (ii) our debt level may limit operational flexibility and our ability to pursue business opportunities and implement certain business strategies; (iii) we use a large portion of our operating cash flow to pay principal and interest on our credit facility and the 2026 Notes, which reduces the amount of money available to finance operations, acquisitions and other business activities; (iv) we have a higher level of debt than some of our competitors or potential competitors, which may cause a competitive disadvantage and may reduce flexibility in responding to changing business and economic conditions, including increased competition and vulnerability to general adverse economic and industry conditions; (v) some of our debt has a variable rate of interest, which exposes us to the risk of increased interest rates; (vi) there are significant maturities on our debt that we may not be able to fulfill or that may be refinanced at higher rates; and (vii) if we fail to satisfy our obligations under our outstanding debt or fail to comply with the financial or other restrictive covenants required under our credit facility and the 2026 Notes, an event of default could result that could cause all of our debt to become due and payable and could permit the lenders under our credit facility to foreclose on the assets securing such debt.

Despite our current levels of debt, we may still incur substantially more debt, including secured debt, and similar liabilities, which would increase the risks described in these risk factors relating to indebtedness.

Although the agreements governing our credit facility and our 2026 Notes include restrictions on our ability to incur additional debt, those agreements do not prohibit us from incurring additional debt or pursuing other financing arrangements. As a result, the amount of additional debt and other obligations that we could incur could be substantial. Accordingly, to the extent permitted under our credit agreement or indenture, we could incur significant additional debt, liabilities or similar obligations in the future. In addition, if we form or acquire any subsidiaries in the future, those subsidiaries also could incur debt or similar liabilities. If new debt or similar liabilities are added to our current debt levels, the related risks that we now face could increase.

We may, from time to time, seek to opportunistically refinance, amend, reprice and/or otherwise replace any of our debt, obtain additional debt financing or enter into other financing arrangements, reduce or extend our debt, lower our interest payments or the cost of capital available to us under certain types of financing arrangements, or otherwise seek to improve our financial position or the terms of our debt or other financing agreements. These actions may include open market debt repurchases, negotiated repurchases, or other repayments, redemptions or retirements of our debt or other financing arrangements. The amount of debt that may be borrowed or issued, refinanced, and/or repurchased, repaid, redeemed or otherwise retired, if any, will depend on market conditions, trading levels of our debt, our cash position, compliance with our debt covenants and other considerations. Any such actions could impact our financial condition or results of operations.

General Risk Factors

Our business and operating results could be adversely affected by events outside of our control, including natural disasters, wars and outbreaks of disease or other adverse public health developments.

We may be impacted by natural disasters, wars, and outbreaks of disease or other adverse public health developments such as the COVID-19 coronavirus outbreak. These events could cause disruptions or restrictions on us, our partners and customers, including restrictions on travel, temporary closure of facilities, and other restrictions. Such disruptions or restrictions may result in delays or losses of sales and delays in the development or implementation of our products. These events could also result in a decrease in consumers' use of our customers' services, further adversely affecting our business and operating results.

If our revenues or mix of revenues are below anticipated levels or if our operating results are below analyst or investor expectations, the market price of our common stock could be adversely affected.

A significant percentage of our expenses, particularly personnel and facilities costs, are relatively fixed and based in part on anticipated revenue levels which can be difficult to predict. A decline in revenues without a corresponding and timely slowdown in expense growth could adversely affect our business. Significant revenue shortfalls in any quarter may cause significant declines in operating results since we may be unable to reduce spending in a timely manner.

Quarterly or annual operating results that are below the expectations of public market analysts could adversely affect the market price of our common stock. Factors that could cause fluctuations in our operating results include:

- a change in customer demand for our products, which is highly dependent on our ability to continue to offer innovative technology solutions in very competitive markets;
- the timing of customer orders;
- the timing of product implementations, which are highly dependent on customers' resources and discretion;
- overall economic conditions, which may affect our customers' and potential customers' budgets for information technology expenditures;
- foreign exchange rate volatility, which can have a significant effect on our total revenues and costs when our foreign operations are translated to U.S. dollars;
- the incurrence of costs relating to the integration of software products and operations in connection with acquisitions of technologies or businesses; and
- the timing and market acceptance of new products or product enhancements by either us or our competitors.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease office space in Coral Gables, Florida, for our principal executive headquarters. As of the end of 2022, we owned and leased a total of approximately 323,000 square feet of office and data center space in the United States and leased approximately 389,000 square feet of office and data center space outside the United States, primarily in India, the United Kingdom, Ireland, South Africa, Romania, and Singapore.

We believe our current facilities are adequate for our present and short-term foreseeable needs and that additional suitable space will be available as required. We also believe we will be able to renew leases as they expire or secure alternate suitable space.

See Note 12, *Leases*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K for additional information regarding our obligations under our facilities leases.

ITEM 3. LEGAL PROCEEDINGS

For a description of our material pending legal proceedings, please refer to Note 13, *Commitments and Contingencies*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

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 common stock trades on The NASDAQ Global Select Market under the symbol ACIW.

As of February 27, 2023, there were 245 holders of record of our common stock. A substantially greater number of shareholders hold our common stock in "street name", or as beneficial holders whose shares are held in the name of banks, brokers, or other financial institutions.

For equity compensation plan information, please refer to Item 12 in Part III of this Annual Report.

Dividends

We have never declared nor paid cash dividends on our common stock. We do not presently anticipate paying cash dividends. However, any future determination relating to our dividend policy will be made at the discretion of our board of directors (the "board") and will depend upon our financial condition, capital requirements, and earnings, as well as other factors the board may deem relevant. The terms of our current Credit Facility may restrict the payment of dividends subject to us meeting certain financial metrics and being in compliance with the events of default provisions of the agreement.

Issuer Purchases of Equity Securities

The following table provides information regarding our repurchases of common stock during the three months ended December 31, 2022:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program
October 1, 2022 through October 31, 2022	935,736	\$ 22.46	935,736	\$ 104,357,000
November 1, 2022 through November 30, 2022	2,021,322	20.93	2,008,645	62,317,000
December 1, 2022 through December 31, 2022 (1) (2)	2,612,636	21.29	2,469,544	9,771,000
Total	5,569,694	\$ 21.36	5,413,925	

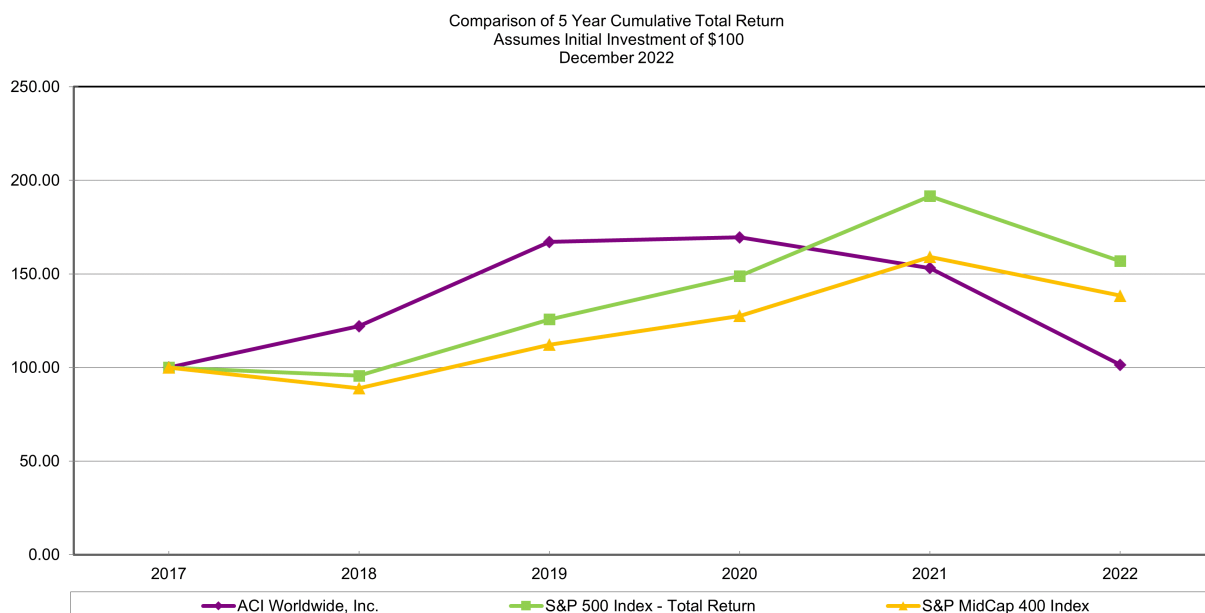
- (1) Pursuant to our 2016 and 2020 Equity and Performance Incentive Plans, (the "2016 Incentive Plan" and "2020 Incentive Plan"), we granted RSUs. Under each arrangement, shares are issued without direct cost to the employee. During the three months ended December 31, 2022, 91,877 shares of RSUs vested. We withheld 32,146 of these RSUs to pay the employees' portion of the applicable minimum payroll withholding taxes.
- (2) Pursuant to our 2005 Equity and Performance Incentive Plan, as amended (the "2005 Incentive Plan"), we granted stock options. These awards have a term that may not exceed ten years and vesting is determined by the administrator of the plan. During the three months ended December 31, 2022, 152,691 stock options were exercised by means of net settlement. We withheld 123,623 of these stock options to pay the employees' portion of the applicable minimum payroll withholding taxes and cover the respective exercise price.

In 2005, our board approved a stock repurchase program authorizing us, as market and business conditions warrant, to acquire our common stock and periodically authorizes additional funds for the program, with the intention of using existing cash and cash equivalents to fund these repurchases. On December 1, 2021, the board approved the repurchase of the Company's common stock for up to \$250.0 million, in place of the remaining purchase amounts previously authorized. As of December 31, 2022, the maximum remaining amount authorized for purchase under the stock repurchase program was approximately \$9.8 million.

There is no guarantee as to the exact number of shares we will repurchase. Repurchased shares are returned to the status of authorized but unissued shares of common stock. In March 2005, our board approved a plan under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of shares of common stock under the existing stock repurchase program. Under our Rule 10b5-1 plan, we have delegated authority over the timing and amount of repurchases to an independent broker who does not have access to inside information about the Company. Rule 10b5-1 allows us, through the independent broker, to purchase shares at times when we ordinarily would not be in the market because of self-imposed trading blackout periods, such as the time immediately preceding the end of the fiscal quarter through a period of three business days following our quarterly earnings release.

Stock Performance Graph and Cumulative Total Return

The following table shows a line-graph presentation comparing cumulative stockholder return on an indexed basis with a broad equity market index and either a nationally-recognized industry standard or an index of peer companies selected by us. We selected the S&P 500 Index and the S&P MidCap 400 Index for comparison.



The graph above compares ACI Worldwide, Inc.'s annual percentage change in cumulative total return on common shares over the past five years with the cumulative total return of companies comprising the S&P 500 Index and the S&P MidCap 400 Index. This presentation assumes that \$100 was invested in shares of the relevant issuers on December 31, 2017, and that dividends received were immediately invested in additional shares. The graph plots the value of the initial \$100 investment at one-year intervals for the fiscal years shown. This information was provided by Zacks Investment Research, Inc. of Chicago, Illinois.

The stock performance graph disclosure above is not considered "filed" with the SEC under the Securities and Exchange Act of 1934, as amended, and is not incorporated by reference in any past or future filing by us under the Securities Exchange Act of 1934, as amended, or the Securities Act of 1933, as amended, unless specifically referenced.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

ACI Worldwide powers digital payments for more than 6,000 organizations around the world. More than 1,000 of the largest banks and intermediaries, as well as thousands of global merchants, rely on ACI to execute \$14 trillion each day in payments and securities. In addition, myriad organizations utilize our electronic bill presentment and payment services. Through our comprehensive suite of software solutions delivered on customers' premises, through the public cloud or through ACI's private cloud, we provide real-time, immediate payments capabilities and enable the industry's most complete omni-channel payments experience.

Our products are sold and supported directly and through distribution networks covering three geographic regions – the Americas, EMEA, and Asia Pacific. Each region has its own globally coordinated sales force, supplemented with local independent reseller and/or distributor networks. Our products and solutions are marketed under the ACI Worldwide brand and used globally by banks and intermediaries, merchants, and billers, such as third-party electronic payment processors, payment associations, switch interchanges and a wide range of transaction-generating endpoints, including ATMs, merchant POS terminals, bank branches, mobile phones, tablets, corporations, and internet commerce sites.

We derive a majority of our revenues from domestic operations and believe we have large opportunities for growth in international markets, as well as continued expansion domestically in the United States. We also continue to maintain centers of expertise in Timisoara, Romania, and Pune and Bangalore in India, as well as key operational centers such as in Cape Town, South Africa and in multiple locations in the United States.

Our business and operating results are influenced by trends such as information technology spending levels, the growth rate of digital payments, mandated regulatory changes, and changes in the number and type of customers in the financial services industry, as well as economic growth and purchasing habits.

Key trends that currently impact our strategies and operations include:

Increasing digital payment transaction volumes. The adoption of digital payments continues to accelerate, propelled by the digitization of cash, financial inclusion efforts of countries throughout the world, the Internet of Things, rapid growth of eCommerce and the adoption of real-time payments. COVID-19 further accelerated this growth as more people, governments, and businesses embraced digital payments - a change likely to continue. We leverage the growth in transaction volumes through the licensing of new systems to customers whose older systems cannot handle increased volume, through the sale of capacity upgrades to existing customers, and through the scalability of our platform-based solutions.

Adoption of real-time payments. Expectations from both consumers and businesses are continuing to drive the payments world to more real-time delivery. This is bolstered by the new data-rich ISO 20022 messaging format, which is delivering greater value to banks and their customers. We are seeing global players with existing schemes working to expand capacity in anticipation of volume growth and new payment types. Mature markets, including India, the United Kingdom, Australia, Malaysia, Singapore, Thailand, and the Nordics, continue to accelerate innovation, especially in terms of overlay services and cross-border connectivity. The United States is driving real-time payments adoption through Zelle, TCH Real-Time Payments, and the planned FedNow service. We are seeing success with real-time payments in the Middle East as well, as they have started to renovate their payment systems from legacy payment types to the modern digital and real-time world. ACI's broad software portfolio, experience, and strategic partnerships with Mastercard, Microsoft, and Mindgate Solutions continue to position us as a leader in real-time payments, helping to drive seamless connectivity, increased security, and end-to-end modernization for organizations throughout the world.

Adoption of cloud technology. ACI has recognized the industry's technical inflection point in the transition from traditional on-premise infrastructure to the public cloud, and we are supporting our customers' cloud strategies. Public and private cloud technology innovations allow the financial services ecosystem to accelerate innovation and ensure scalability and resiliency while improving operating economics over time. As banks and intermediaries, merchants, and billers seek to transition their systems to make use of cloud technology, our investments and partnerships, as demonstrated by our product enablement and initial optimization onto Microsoft Azure, enable us to leverage those cloud technology benefits today and for the future while preserving ACI's fundamental base of performance, resiliency, and scalability.

Payments intelligence, fraud, and compliance. The accelerated adoption of real-time payments increases the urgency for industry-wide collaboration against fraud. As the threat of scams becomes a greater concern for emitting and receiving institutions, consumers are challenged with increased friction to prevent account take-over and criminals successfully persuading consumers to push transactions themselves, inadvertently, to mule accounts they have full control of, created with

fake or synthetic identity, or simply "borrowed" with or without consent of the legit account holders. Regulators are beginning to litigate between consumers and financial institutions on the losses, and between emitting and receiving banks on the accountability for reimbursement. Banks and intermediaries, merchants, and billers are pursuing solutions to mitigate their risks while improving their customer experience, protecting their margins, and securing their revenue streams, especially with their new products and offerings. We continue to see opportunity for our advanced machine learning and network intelligence capabilities to stop criminals and enable frictionless legitimate business.

Omni-commerce. Shoppers are increasingly browsing, buying, and returning items across channels, including in-store, online, and mobile. COVID-19 accelerated this trend, leading to an increase in contactless payments, click and collect, and curbside collection. Merchants from all industries, including grocers, fuel and convenience stores, are being tasked with delivering seamless experiences that include pay-in-aisle, kiosks, mobile app payments, QR code payments, eCommerce, traditional and mobile POS, buy online pickup in-store (BOPIS) and buy online return in-store (BORIS). We believe there is significant opportunity to provide merchants with the tools to deliver a seamless, secure, personalized experience that creates loyalty and satisfaction, and drives conversion rates while protecting consumer data and preventing fraud.

Request for Payment (RfP). Markets across the world are introducing an innovative payments service called Request for Payment (RfP). This technology is known by different names in different markets: Collect payments in India, Request 2 Pay in Europe, Request To Pay (RTP) in the United Kingdom, or Request for Payment (RfP) in the United States. RfP offers secure messaging between consumers and billers or merchants, wherein a biller or merchant can request a payment from a consumer through the use of a trusted app, most likely a banking app. RfP is primarily being implemented on top of real-time payments, which are continuing to grow and flourish as countries around the world develop and launch their real-time schemes as noted above. ACI is in a unique position to deliver this overlay service given our real-time payments software, our relationships with banks, merchants and billers, and global real-time connectivity.

Several other factors related to our business may have a significant impact on our operating results from year to year. For example, the accounting rules governing the timing of revenue recognition are complex, and it can be difficult to estimate when we will recognize revenue generated by a given transaction. Factors such as creditworthiness of the customer and timing of transfer of control or acceptance of our products may cause revenues related to sales generated in one period to be deferred and recognized in later periods. For arrangements in which services revenue is deferred, related direct and incremental costs may also be deferred. Additionally, while the majority of our contracts are denominated in the U.S. dollar, a substantial portion of our sales are made, and some of our expenses are incurred, in the local currency of countries other than the United States. Fluctuations in currency exchange rates in a given period may result in the recognition of gains or losses for that period.

We continue to seek ways to grow through organic sources, partnerships, alliances, and acquisitions. We continually look for potential acquisitions designed to improve our solutions' breadth or provide access to new markets. As part of our acquisition strategy, we seek acquisition candidates that are strategic, capable of being integrated into our operating environment, and accretive to our financial performance.

Divestiture

On September 1, 2022, we sold our corporate online banking solutions related assets and liabilities to One Equity Partners ("OEP") for \$100.1 million, including a preliminary net working capital adjustment. The sale included employees and customer contracts as well as technology assets and intellectual property.

For the year ended December 31, 2022, we recognized a gain of \$38.5 million on the sale, which is recorded in other, net in the accompanying consolidated statements of operations. This gain is preliminary subject to finalization of post-closing adjustments pursuant to the definitive transaction agreement.

The Company and OEP have also entered into a Transition Services Agreement ("TSA"), whereby the Company will continue to perform certain functions on OEP's behalf during a migration period not expected to exceed 18 months. The TSA is meant to reimburse the Company for direct costs in order to provide such functions, which are no longer generating revenue for the Company.

Backlog

Backlog is comprised of:

- Committed Backlog, which includes (1) contracted revenue that will be recognized in future periods (contracted but not recognized) from software license fees, maintenance fees, service fees, and SaaS and PaaS fees specified in executed contracts (including estimates of variable consideration if required under ASC 606) and included in the transaction price for those contracts, which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods and (2) estimated future revenues from software license fees, maintenance fees, services fees, and SaaS and PaaS fees specified in executed contracts.
- Renewal Backlog, which includes estimated future revenues from assumed contract renewals to the extent we believe recognition of the related revenue will occur within the corresponding backlog period.

We have historically included assumed renewals in backlog estimates based upon automatic renewal provisions in the executed contract and our historic experience with customer renewal rates.

Our 60-month backlog estimates are derived using the following key assumptions:

- License arrangements are assumed to renew at the end of their committed term or under the renewal option stated in the contract at a rate consistent with historical experience. If the license arrangement includes extended payment terms, the renewal estimate is adjusted for the effects of a significant financing component.
- Maintenance fees are assumed to exist for the duration of the license term for those contracts in which the committed maintenance term is less than the committed license term.
- SaaS and PaaS arrangements are assumed to renew at the end of their committed term at a rate consistent with our historical experiences.
- Foreign currency exchange rates are assumed to remain constant over the 60-month backlog period for those contracts stated in currencies other than the U.S. dollar.
- Our pricing policies and practices are assumed to remain constant over the 60-month backlog period.

In computing our 60-month backlog estimate, the following items are specifically not taken into account:

- Anticipated increases in transaction, account, or processing volumes by our customers.
- Optional annual uplifts or inflationary increases in recurring fees.
- Services engagements, other than SaaS and PaaS arrangements, are not assumed to renew over the 60-month backlog period.
- The potential impact of consolidation activity within our markets and/or customers.

We review our customer renewal experience on an annual basis. The impact of this review and subsequent updates may result in a revision to the renewal assumptions used in computing the 60-month backlog estimates. In the event a significant revision to renewal assumptions is determined to be necessary, prior periods will be adjusted for comparability purposes.

The following table sets forth our 60-month backlog estimate, by reportable segment, as of December 31, 2022; September 30, 2022; June 30, 2022; March 31, 2022; and December 31, 2021 (in millions). As a result of the divestiture, 60-month backlog decreased \$170.1 million during the period ended September 30, 2022. Dollar amounts reflect foreign currency exchange rates as of each period end. This is a non-GAAP financial measure being presented to provide comparability across accounting periods. We believe this measure provides useful information to investors and others in understanding and evaluating our financial performance.

	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022	December 31, 2021
Banks	\$ 2,095	\$ 2,038	\$ 2,231	\$ 2,282	\$ 2,272
Merchants	810	772	762	772	754
Billers	3,390	3,267	3,179	3,128	3,084
Total	<u>\$ 6,295</u>	<u>\$ 6,077</u>	<u>\$ 6,172</u>	<u>\$ 6,182</u>	<u>\$ 6,110</u>
	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022	December 31, 2021
Committed	\$ 2,338	\$ 2,051	\$ 2,089	\$ 2,038	\$ 2,095
Renewal	3,957	4,026	4,083	4,144	4,015
Total	<u>\$ 6,295</u>	<u>\$ 6,077</u>	<u>\$ 6,172</u>	<u>\$ 6,182</u>	<u>\$ 6,110</u>

Estimates of future financial results require substantial judgment and are based on several assumptions, as described above. These assumptions may turn out to be inaccurate or wrong for reasons outside of management's control. For example, our customers may attempt to renegotiate or terminate their contracts for many reasons, including mergers, changes in their financial condition, or general changes in economic conditions (e.g., economic declines resulting from COVID-19) in the customer's industry or geographic location. We may also experience delays in the development or delivery of products or services specified in customer contracts, which may cause the actual renewal rates and amounts to differ from historical experiences. Changes in foreign currency exchange rates may also impact the amount of revenue recognized in future periods. Accordingly, there can be no assurance that amounts included in backlog estimates will generate the specified revenues or that the actual revenues will be generated within the corresponding 60-month period. Additionally, because certain components of Committed Backlog and all of Renewal Backlog estimates are operating metrics, the estimates are not required to be subject to the same level of internal review or controls as contracted but not recognized Committed Backlog.

Results of Operations

The following tables present the consolidated statements of operations, as well as the percentage relationship to total revenues of items included in our consolidated statements of operations (in thousands):

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

	2022				2021	
	Amount	% of Total Revenue	\$ Change vs 2021	% Change vs 2021	Amount	% of Total Revenue
Revenues:						
Software as a service and platform as a service	\$ 802,880	57 %	\$ 28,538	4 %	\$ 774,342	57 %
License	348,134	24 %	28,267	9 %	319,867	23 %
Maintenance	200,045	14 %	(10,454)	(5)%	210,499	15 %
Services	70,842	5 %	4,952	8 %	65,890	5 %
Total revenues	1,421,901	100 %	51,303	4 %	1,370,598	100 %
Operating expenses:						
Cost of revenue	696,071	49 %	57,200	9 %	638,871	47 %
Research and development	146,311	10 %	2,001	1 %	144,310	11 %
Selling and marketing	134,812	9 %	8,273	7 %	126,539	9 %
General and administrative	114,194	8 %	(9,607)	(8)%	123,801	9 %
Depreciation and amortization	126,678	9 %	(502)	— %	127,180	9 %
Total operating expenses	1,218,066	85 %	57,365	5 %	1,160,701	85 %
Operating income	203,835	15 %	(6,062)	(3)%	209,897	15 %
Other income (expense):						
Interest expense	(53,193)	(4)%	(8,133)	18 %	(45,060)	(3)%
Interest income	12,547	1 %	1,025	9 %	11,522	1 %
Other, net	43,446	3 %	44,740	(3,457)%	(1,294)	— %
Total other income (expense)	2,800	— %	37,632	(108)%	(34,832)	(2)%
Income before income taxes	206,635	15 %	31,570	18 %	175,065	13 %
Income tax expense	64,458	5 %	17,184	36 %	47,274	3 %
Net income	\$ 142,177	10 %	\$ 14,386	11 %	\$ 127,791	10 %

Revenues

Total revenue for the year ended December 31, 2022, increased \$51.3 million, or 4%, as compared to the same period in 2021.

- The divestiture resulted in a \$17.6 million decrease in total revenue for the year ended December 31, 2022.
- The impact of certain foreign currencies weakening against the U.S. dollar resulted in a \$19.1 million decrease in total revenue during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture and foreign currency, total revenue for the year ended December 31, 2022, increased \$88.0 million, or 7%, as compared to the same period in 2021.

Software as a Service (“SaaS”) and Platform as a Service (“PaaS”) Revenue

The Company’s SaaS arrangements allow customers to use certain software solutions (without taking possession of the software) in a single-tenant cloud environment on a subscription basis. The Company’s PaaS arrangements allow customers to use certain software solutions (without taking possession of the software) in a multi-tenant cloud environment on a subscription or consumption basis. Included in SaaS and PaaS revenue are fees paid by our customers for use of our Biller solutions. Biller-related fees may be paid by our clients or directly by their customers and may be a percentage of the underlying transaction amount, a fixed fee per executed transaction or a monthly fee for each customer enrolled. SaaS and PaaS costs include payment card interchange fees, the amounts payable to banks and payment card processing fees, which are included in cost of revenue in the accompanying consolidated statements of operations. All revenue from SaaS and PaaS arrangements that does not qualify for treatment as a distinct performance obligation, which includes set-up fees, implementation or customization services, and product support services, are included in SaaS and PaaS revenue.

SaaS and PaaS revenue increased \$28.5 million, or 4%, during the year ended December 31, 2022, as compared to the same period in 2021.

- The divestiture resulted in a \$10.6 million decrease in SaaS and PaaS revenue for the year ended December 31, 2022.
- The impact of certain foreign currencies weakening against the U.S. dollar resulted in a \$6.5 million decrease in SaaS and PaaS revenue during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture and foreign currency, SaaS and PaaS revenue for the year ended December 31, 2022, increased \$45.6 million, or 6%, as compared to the same period in 2021.
- The increase was primarily due to new customer go-lives and higher transaction volumes during the year ended December 31, 2022, as compared to the same period in 2021.

License Revenue

Customers purchase the right to license ACI software under multi-year, time-based software license arrangements that vary in length but are generally five years. Under these arrangements the software is installed at the customer’s location (i.e. on-premise). Within these agreements are specified capacity limits typically based on customer transaction volume. ACI employs measurement tools that monitor the number of transactions processed by customers and if contractually specified limits are exceeded, additional fees are charged for the overage. Capacity overages may occur at varying times throughout the term of the agreement depending on the product, the size of the customer, and the significance of customer transaction volume growth. Depending on specific circumstances, multiple overages or no overages may occur during the term of the agreement.

Included in license revenue are license and capacity fees that are payable at the inception of the agreement or annually (initial license fees). License revenue also includes license and capacity fees payable quarterly or monthly due to negotiated customer payment terms (monthly license fees). The Company recognizes revenue in advance of billings for software license arrangements with extended payment terms and adjusts for the effects of the financing component, if significant.

License revenue increased \$28.3 million, or 9%, during the year ended December 31, 2022, as compared to the same period in 2021.

- The impact of certain foreign currencies weakening against the U.S. dollar resulted in a \$4.1 million decrease in license revenue during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of foreign currency, license revenue for the year ended December 31, 2022, increased \$32.5 million, or 10%, as compared to the same period in 2021.
- The increase in license revenue was primarily driven by renewal timing and relative size of license and capacity events during the year ended December 31, 2022, as compared to the same period in 2021.

Maintenance Revenue

Maintenance revenue includes standard, enhanced, and premium customer support and any post contract support fees received from customers for the provision of product support services.

Maintenance revenue decreased \$10.5 million, or 5%, during the year ended December 31, 2022, as compared to the same period in 2021.

- The divestiture resulted in a \$3.5 million decrease in maintenance revenue for the year ended December 31, 2022.
- The impact of foreign currencies weakening against the U.S. dollar resulted in a \$6.8 million decrease in maintenance revenue during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture and foreign currency, maintenance revenue for the year ended December 31, 2022, decreased \$0.2 million as compared to the same period in 2021.

Services Revenue

Services revenue includes fees earned through implementation services and other professional services. Implementation services include product installations, product configurations, and custom software modifications (“CSMs”). Other professional services include business consultancy, technical consultancy, on-site support services, product education, and testing services. These services include new customer implementations as well as existing customer migrations to new products or new releases of existing products.

Services revenue increased \$5.0 million, or 8%, during the year ended December 31, 2022, as compared to the same period in 2021.

- The divestiture resulted in a \$3.5 million decrease in services revenue for the year ended December 31, 2022.
- The impact of foreign currencies weakening against the U.S. dollar resulted in a \$1.6 million decrease in services revenue during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture and foreign currency, services revenue for the year ended December 31, 2022, increased \$10.1 million, or 17%, as compared to the same period in 2021.
- The increase was primarily driven by the timing and magnitude of project-related work during the year ended December 31, 2022, as compared to the same period in 2021.

Operating Expenses

Total operating expenses for the year ended December 31, 2022, increased \$57.4 million, or 5%, as compared to the same period in 2021.

- During the year ended December 31, 2022, there was a \$8.8 million reduction in operating expenses related to the divestiture.
- Total operating expenses for the year ended December 31, 2022, included \$5.8 million of European data center migration expenses, \$3.0 million of divestiture transaction-related expenses, and \$3.6 million of CEO transition expenses during the period. Total operating expenses for the year ended December 31, 2021, included \$13.4 million of expense related to significant transactions and cost reduction strategies implemented during the period.
- The impact of foreign currencies weakening against the U.S. dollar resulted in a \$17.9 million decrease in total operating expenses for the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture, significant transaction-related expenses, and foreign currency, total operating expenses for the year ended December 31, 2022, increased \$84.9 million, or 8%, as compared to the same period in 2021.

Cost of Revenue

Cost of revenue includes costs to provide SaaS and PaaS, third-party royalties, amortization of purchased and developed software for resale, the costs of maintaining our software products, as well as the costs required to deliver, install, and support software at customer sites. SaaS and PaaS service costs include payment card interchange fees, amounts payable to banks, and payment card processing fees. Maintenance costs include the efforts associated with providing the customer with upgrades, 24-hour help desk, post go-live (remote) support, and production-type support for software that was previously installed at a customer location. Service costs include human resource costs and other incidental costs such as travel and training required for both pre go-live and post go-live support. Such efforts include project management, delivery, product customization and implementation, installation support, consulting, configuration, and on-site support.

Cost of revenue increased \$57.2 million, or 9%, during the year ended December 31, 2022, as compared to the same period in 2021.

- During the year ended December 31, 2022, there was a \$8.0 million reduction in cost of revenue related to the divestiture.
- The impact of foreign currencies weakening against the U.S. dollar resulted in a \$7.0 million decrease in cost of revenue during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture and foreign currency, cost of revenue increased \$72.2 million, or 12%, for the year ended December 31, 2022, as compared to the same period in 2021.
- The increase was primarily due to higher payment card interchange and processing fees and personnel and related expenses of \$53.9 million and \$23.8 million, respectively, partially offset by a decrease in software amortization expense of \$5.5 million.

Research and Development

Research and development (“R&D”) expenses are primarily human resource costs related to the creation of new products, improvements made to existing products as well as compatibility with new operating system releases and generations of hardware.

R&D expense increased \$2.0 million, or 1%, during the year ended December 31, 2022, as compared to the same period in 2021.

- During the year ended December 31, 2022, there was a \$0.6 million reduction in R&D expense related to the divestiture.
- Total R&D expense for the year ended December 31, 2021 included \$2.4 million of expense related to significant transactions and cost reduction strategies implemented during the period.
- The impact of foreign currencies weakening against the U.S. dollar resulted in a \$3.5 million decrease in R&D expense during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture, significant transaction-related expenses, and foreign currency, R&D expense increased \$8.4 million, or 6%, during the year ended December 31, 2022, as compared to the same period in 2021.
- The increase was primarily due to higher professional fees and personnel and related expenses of \$6.8 million and \$1.6 million, respectively.

Selling and Marketing

Selling and marketing includes both the costs related to selling our products to current and prospective customers as well as the costs related to promoting the Company, its products and the research efforts required to measure customers’ future needs and satisfaction levels. Selling costs are primarily the human resource and travel costs related to the effort expended to license our products and services to current and potential clients within defined territories and/or industries as well as the management of the overall relationship with customer accounts. Selling costs also include the costs associated with assisting distributors in their efforts to sell our products and services in their respective local markets. Marketing costs include costs incurred to promote the Company and its products, perform or acquire market research to help the Company better understand impending changes in customer demand for and of our products, and the costs associated with measuring customers’ opinions toward the Company, our products and personnel.

Selling and marketing expense increased \$8.3 million, or 7%, during the year ended December 31, 2022, as compared to the same period in 2021.

- During the year ended December 31, 2022, there was a \$0.2 million reduction in selling and marketing expense related to the divestiture.
- The impact of foreign currencies weakening against the U.S. dollar resulted in a \$3.8 million decrease in selling and marketing expense during the year ended December 31, 2022, as compared to the same period in 2021.
- Adjusted for the impact of the divestiture and foreign currency, selling and marketing expense increased \$12.3 million, or 10%, for the year ended December 31, 2022, as compared to the same period in 2021.
- The increase was primarily due to higher personnel and related expenses and travel and entertainment expenses of \$12.8 million and \$2.7 million, respectively, partially offset by lower advertising and professional fees of \$3.2 million.

General and Administrative

General and administrative expenses are primarily human resource costs including executive salaries and benefits, personnel administration costs, and the costs of corporate support functions such as legal, administrative, human resources, and finance and accounting.

General and administrative expense decreased \$9.6 million, or 8%, during the year ended December 31, 2022, as compared to the same period in 2021.

- General and administrative expenses for the year ended December 31, 2022 included \$5.8 million of European data center migration expenses, \$3.0 million of divestiture transaction-related expenses, and \$3.6 million of CEO transition expenses during the period. General and administrative expense for the year ended December 31, 2021 included \$11.0 million of significant transaction-related expenses associated with cost reduction strategies implemented during the period.
- The impact of foreign currencies weakening against the U.S. dollar resulted in a \$2.3 million decrease in general and administrative expense during the year ended December 31, 2022, as compared to the same period in 2021.

- Adjusted for the impact of significant transaction-related expenses and foreign currency, general and administrative expense decreased \$8.7 million, or 8%, for the year ended December 31, 2022, as compared to the same period in 2021.
- The decrease was primarily due to lower professional and other legal fees and personnel and other related expenses of \$8.2 million and \$0.5 million, respectively.

Depreciation and Amortization

Depreciation and amortization decreased \$0.5 million, during the year ended December 31, 2022, as compared to the same period in 2021.

Other Income and Expense

Interest expense for the year ended December 31, 2022, increased \$8.1 million, or 18%, as compared to the same period in 2021, primarily due to higher interest rates.

Interest income includes the portion of software license fees paid by customers under extended payment terms that is attributed to the significant financing component. Interest income for the year ended December 31, 2022, increased \$1.0 million, or 9%, as compared to the same period in 2021.

Other, net is primarily comprised of foreign currency transaction gains and losses. During the year ended December 31, 2022, other, net also included a \$38.5 million gain from the divestiture. Other, net was \$43.4 million of income and \$1.3 million of expense for the years ended December 31, 2022 and 2021, respectively.

Income Taxes

The effective tax rates for the years ended December 31, 2022 and 2021, were approximately 31% and 27%, respectively. Our effective tax rates vary from our federal statutory rates due to operating in multiple foreign countries where we apply foreign tax laws and rates which differ from those we apply to the income generated from our domestic operations. Of the foreign jurisdictions in which we operate, our December 31, 2022, effective rate was most impacted by our operations in Ireland and our December 31, 2021, effective tax rate was most impacted by our operations in Colombia, Ireland and Singapore.

Refer to Note 11, *Income Taxes*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K for additional information.

Prior Year Results

For discussion of the year ended December 31, 2021, compared to the year ended December 31, 2020, see *Results of Operations* in Part II, Item 7 of our annual report on Form 10-K for the year ended December 31, 2021.

Segment Results

The Company reports financial performance based on its operating segments, Banks, Merchants, and Billers, and analyzes Segment Adjusted EBITDA as a measure of segment profitability.

Our Chief Executive Officer is also our CODM. The CODM, together with other senior management personnel, focus their review on consolidated financial information and the allocation of resources based on operating results, including revenues and Segment Adjusted EBITDA, for each segment, separate from the corporate operations. No operating segments have been aggregated to form the reportable segments.

Banks. ACI provides payment solutions to large and mid-size banks globally for retail banking, real time, digital, and other payment services. These solutions transform banks' complex payment environments to speed time to market, reduce costs, and deliver a consistent experience to customers across channels while enabling them to prevent and rapidly react to fraudulent activity. In addition, they enable banks to meet the requirements of different real-time payments schemes and to quickly create differentiated products to meet consumer, business, and merchant demands.

Merchants. ACI’s support of merchants globally includes Tier 1 and Tier 2 merchants, online-only merchants and the payment service providers, independent selling organizations, value-added resellers, and acquirers who service them. These customers operate in a variety of verticals, including general merchandise, grocery, hospitality, dining, transportation, and others. Our solutions provide merchants with a secure, omni-channel payments platform that gives them independence from third-party payment providers. They also offer secure solutions to online-only merchants that provide consumers with a convenient and seamless way to shop.

Billers. Within the biller segment, ACI provides electronic bill presentment and payment (“EBPP”) services to companies operating in the consumer finance, insurance, healthcare, higher education, utility, government, and mortgage categories. The solutions enable these customers to support a wide range of payment options and provide a convenient consumer payments experience that drives consumer loyalty and increases revenue.

Revenue is attributed to the reportable segments based upon the customer. Expenses are attributed to the reportable segments in one of three methods, (1) direct costs of the segment, (2) labor costs that can be attributed based upon time tracking for individual projects, or (3) costs that are allocated. Allocated costs are generally marketing and sales related activities.

Segment Adjusted EBITDA is the measure reported to the CODM for purposes of making decisions on allocating resources and assessing the performance of our segments and, therefore, Segment Adjusted EBITDA is presented in conformity with ASC 280, *Segment Reporting*. Segment Adjusted EBITDA is defined as earnings (loss) from operations before interest, income tax expense (benefit), depreciation and amortization (“EBITDA”) adjusted to exclude net other income (expense).

Corporate and unallocated expenses includes global facilities and information technology costs and long-term product roadmap expenses in addition to the corporate overhead costs that are not allocated to reportable segments. The overhead costs relate to human resources, finance, legal, accounting, and merger and acquisition activity. These costs along with depreciation and amortization and stock-based compensation are not considered when management evaluates segment performance.

The following is selected financial data for our reportable segments for the periods indicated (in thousands):

	Years Ended December 31,	
	2022	2021
Revenues		
Banks	\$ 638,585	\$ 625,125
Merchants	153,905	152,988
Billers	629,411	592,485
Total revenue	<u>\$ 1,421,901</u>	<u>\$ 1,370,598</u>
Segment Adjusted EBITDA		
Banks	\$ 371,017	\$ 372,949
Merchants	49,029	54,266
Billers	107,371	129,048
Depreciation and amortization	(127,328)	(133,393)
Stock-based compensation expense	(29,753)	(27,242)
Corporate and unallocated expenses	(166,501)	(185,731)
Interest, net	(40,646)	(33,538)
Other, net	43,446	(1,294)
Income before income taxes	<u>\$ 206,635</u>	<u>\$ 175,065</u>

The Banks Segments Adjusted EBITDA decreased \$8.9 million due to the divestiture. Excluding the divestiture, Banks Segment Adjusted EBITDA increased \$7.0 million for the year ended December 31, 2022, compared to the same period in 2021, primarily due to a \$31.1 million increase in revenue, partially offset by a \$24.2 million increase in cash operating expense.

Merchants Segment Adjusted EBITDA decreased \$5.2 million for the year ended December 31, 2022, compared to the same period in 2021, primarily due to a \$6.1 million increase in cash operating expenses, partially offset by a \$0.9 million increase in revenue.

Billers Segment Adjusted EBITDA decreased \$21.7 million for the year ended December 31, 2022, compared to the same period in 2021, primarily due to a \$53.9 million increase in interchange and processing fees, partially offset by a \$36.9 million increase in revenue.

Prior Year Results

For discussion of 2021 compared to 2020, see *Segment Results* in Part II, Item 7 of our annual report on Form 10-K for the year ended December 31, 2021.

Liquidity and Capital Resources

General

Our primary liquidity needs are: (i) to fund normal operating expenses; (ii) to meet the interest and principal requirements of our outstanding indebtedness; and (iii) to fund acquisitions, capital expenditures, and lease payments. We believe these needs will be satisfied using cash flow generated by our operations, cash and cash equivalents, and available borrowings under our revolving credit facility over the next 12 months and beyond.

Cash and cash equivalents consist of highly liquid investments with original maturities of three months or less. As of December 31, 2022, we had \$125.0 million of cash and cash equivalents, of which \$38.9 million was held by our foreign subsidiaries. If these funds were needed for our operations in the United States, we may potentially be required to accrue and pay foreign and U.S. state income taxes to repatriate these funds. As of December 31, 2022, only the earnings in our Indian foreign subsidiaries are indefinitely reinvested. The earnings of all other foreign entities are no longer indefinitely reinvested. We are also permanently reinvested for outside book/tax basis differences related to foreign subsidiaries. These outside basis differences could reverse through sales of the foreign subsidiaries, as well as various other events, none of which are considered probable as of December 31, 2022.

Available Liquidity

The following table sets forth our available liquidity for the periods indicated (in thousands):

	December 31,	
	2022	2021
Cash and cash equivalents	\$ 124,981	\$ 122,059
Availability under revolving credit facility	393,500	498,500
Total liquidity	\$ 518,481	\$ 620,559

The decrease in total liquidity is primarily attributable to \$206.5 million of payments related to stock repurchases, partially offset by proceeds of \$100.1 million from the divestiture.

The Company and ACI Payments, Inc., a wholly owned subsidiary, maintain a \$75.0 million uncommitted overdraft facility with Bank of America, N.A. The overdraft facility acts as a secured loan under the terms of the Credit Agreement to provide an additional funding mechanism for timing differences that can occur in the bill payment settlement process. As of December 31, 2022, the full \$75.0 million was available.

Stock Repurchase Program

Our board approved a stock repurchase program authorizing the Company, as market and business conditions warrant, to acquire its common stock and periodically authorizes additional funds for the program. In December 2021, the board approved the repurchase of the Company's common stock of up to \$250.0 million, in place of the remaining purchase amounts previously authorized.

We repurchased 8,624,238 shares for \$206.5 million under our stock repurchase program during the year ended December 31, 2022. Under the program to date, we have repurchased 57,981,733 shares for approximately \$926.2 million. As of December 31, 2022, the maximum remaining amount authorized for purchase under the stock repurchase program was approximately \$9.8 million.

On February 24, 2023, the Board of Directors approved \$200.0 million for the stock repurchase program in place of the remaining purchase amounts previously authorized.

Our stock repurchase authorization does not have an expiration date and the pace of our repurchase activity will depend on factors such as our working capital needs, cash requirements for acquisitions, debt repayment obligations, our stock price, and global economic and market conditions. Our stock repurchases may be affected from time to time through open market purchases and pursuant to a Rule 10b5-1 plan and they may be accelerated, suspended, delayed or discontinued at any time. See Note 7, *Common Stock and Treasury Stock*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K for additional information.

Cash Flows

The following table sets forth summary cash flow data for the periods indicated (in thousands).

	Years Ended December 31,	
	2022	2021
Net cash provided by (used in):		
Operating activities	\$ 143,381	\$ 220,473
Investing activities	60,246	(45,368)
Financing activities	(171,060)	(256,878)

Cash Flows from Operating Activities

The primary source of operating cash flows is cash collections from our customers for purchase and renewal of licensed software products and various services including software and platform as a service, maintenance, and other professional services. Our primary uses of operating cash flows includes employee expenditures, taxes, interest payments, and leased facilities.

Cash flows provided by operating activities were \$77.1 million lower for the year ended December 31, 2022, compared to the same period in 2021, due to the timing of working capital. Our current policy is to use our operating cash flow primarily for funding capital expenditures, lease payments, stock repurchases, and acquisitions.

Cash Flows from Investing Activities

The changes in cash flows from investing activities primarily relate to the timing of our purchases and investments in capital and other assets, including strategic acquisitions, that support our growth.

During the year ended December 31, 2022, we received net proceeds of \$100.1 million from the divestiture. In addition, we used cash of \$39.9 million to purchase software, property, and equipment, as compared to \$45.4 million during the same period in 2021.

Cash Flows from Financing Activities

The changes in cash flows from financing activities primarily relate to borrowings and repayments related to our debt instruments and other debt, stock repurchases, and net proceeds related to employee stock programs.

During 2022, we used the proceeds from the divestiture to partially fund repayments of \$85.4 million on the Term Loans and \$12.1 million of other debt payments. In addition, we used \$206.5 million to repurchase common stock and \$7.0 million for the repurchase of stock-based compensation awards for tax withholdings. We received net proceeds of \$105.0 million on the Revolving Credit Facility, proceeds of \$8.2 million from the exercise of stock options and the issuance of common stock under our 2017 Employee Stock Purchase Plan, as amended, and \$26.8 million from settlement assets and liabilities due to processing timing. During 2021, we repaid a net \$55.0 million on the Revolving Credit Facility, \$39.0 million on the Term Loans and \$15.2 million of other debt payments. In addition, we used \$107.4 million to repurchase common stock, and we received proceeds of \$12.3 million from the exercise of stock options and the issuance of common stock under our 2017 Employee Stock Purchase Plan, as amended. We also used \$14.8 million for the repurchase of stock-based compensation awards for tax withholdings and \$37.8 million for settlement assets and liabilities due to processing timing.

Prior Year Results

For discussion of 2021 compared to 2020, see *Liquidity and Capital Resources* in Part II, Item 7 of our annual report on Form 10-K for the year ended December 31, 2021.

Contractual Obligations

Our largest contractual obligations as of December 31, 2022, include the following:

- principal payments related to our Credit Agreement that are included in our consolidated balance sheet and the related periodic interest payments;
- semi-annual interest payments on our 2026 Notes and the ultimate principal payment that is included in our consolidated balance sheet;
- scheduled payments related to liabilities for certain multi-year license agreements for internal-use software that are included in our consolidated balance sheet;
- operating lease obligations that are included in our consolidated balance sheet; and
- other contractual commitments associated with agreements that are enforceable and legally binding.

In addition, we have gross unrecognized income tax benefits, including related interest and penalties, recorded on our consolidated balance sheet, the nature of which is uncertain with respect to settlement or release with the relevant tax authorities. See Note 11, *Income Taxes*, of our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

Notes 4, *Debt*, 12, *Leases*, and 13, *Commitments and Contingencies*, of our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K provide additional information regarding our contractual obligations and contingencies.

Critical Accounting Policies and Estimates

The preparation of the consolidated financial statements requires that we make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We base our estimates on historical experience and other assumptions that we believe to be proper and reasonable under the circumstances. We continually evaluate the appropriateness of estimates and assumptions used in the preparation of our consolidated financial statements. Actual results could differ from those estimates.

The following key accounting policies are impacted significantly by judgments, assumptions, and estimates used in the preparation of the consolidated financial statements. See Note 1, *Nature of Business and Summary of Significant Accounting Policies*, and Note 2, *Revenue*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K for a further discussion of significant accounting policies and revenue recognition.

Revenue Recognition

In accordance with ASC 606, *Revenue From Contracts with Customers*, revenue is recognized upon transfer of control of promised products and/or services to customers in an amount that reflects the consideration we expect to be entitled to receive in exchange for those products and services.

Our software license arrangements provide the customer with the right to use functional intellectual property for the duration of the contract term. Implementation, support, and other services are typically considered distinct performance obligations when sold with a software license. Significant judgment is required to determine the stand-alone selling price (“SSP”) for each performance obligation, the amount allocated to each performance obligation and whether it depicts the amount that we expect to be entitled to receive in exchange for the related product and/or service. As the selling prices of our software licenses are highly variable, we estimate SSP of our software licenses using the residual approach when the software license is sold with other services and observable SSPs exist for the other services. We use a range of amounts to estimate SSP for maintenance and services. These ranges are based on stand-alone sales and vary based on the type of service and geographic region. If the SSP of a performance obligation is not directly observable, we will maximize observable inputs to determine its SSP.

When a software license arrangement contains payment terms that are extended beyond one year, a significant financing component may exist. The significant financing component is calculated as the difference between the stated value and present value of the software license fees and is recognized as interest income over the extended payment period. Judgment is used in determining: (1) whether the financing component in a software license agreement is significant and, if so, (2) the discount rate used in calculating the significant financing component.

We assess the significance of the financing component based on the ratio of license fees paid over time to total license fees. If determined to be significant, the financing component is calculated using a rate that discounts the license fees to the cash selling price.

Our SaaS-based and PaaS-based arrangements represent a single promise to provide continuous access to our software solutions and their processing capabilities in the form of a service through one of our data centers. These arrangements may include fixed and/or variable consideration. Fixed consideration is recognized over the term of the arrangement and variable consideration, which is a function of transaction volume or another usage-based measure, generally meets the allocation objective and revenue is recognized as the usage occurs.

We apply judgment in determining the customer's ability and intention to pay, which is based on a variety of factors including the creditworthiness of the customer, economic conditions in the customer's industry and geographic location, and general economic conditions.

Certain of our arrangements are through unrelated distributors or sales agents. For software license arrangements in which we act as a distributor of another company's product, and in certain circumstances, modify or enhance the product, revenues are recorded on a gross basis. These include arrangements in which we take control of the products and are responsible for providing the product or service. For software license arrangements in which we act as a sales agent for another company's product, revenues are recorded on a net basis. Judgment is required in evaluating the facts and circumstances of our relationship with the distributor or sales agent as well as our operating history and practices that can impact the timing of revenue recognition related to these arrangements. For software license arrangements in which we utilize a third-party distributor or sales agent, we recognize revenue upon transfer of control of the software license(s) to the third-party distributor or sales agent.

We may execute more than one contract or agreement with a single customer at or near the same time. The separate contracts or agreements may be viewed as one combined arrangement or separate agreements for revenue recognition purposes. We evaluate whether the agreements were negotiated as a package with a single commercial objective, whether the products or services promised in the agreements represent a single performance obligation, or whether the amount of consideration to be paid in one agreement depends on the price and/or performance of another agreement to reach appropriate conclusions regarding whether such arrangements are related or separate. The conclusions reached can impact the allocation of the transaction price to each performance obligation and the timing of revenue recognition related to those arrangements.

Intangible Assets and Goodwill

Our business acquisitions typically result in the recording of intangible assets. As of December 31, 2022 and 2021, our intangible assets, excluding goodwill, net of accumulated amortization, were \$228.7 million and \$283.0 million, respectively. The determination of the value of such intangible assets requires management to make estimates and assumptions that affect the consolidated financial statements. We assess potential impairments to intangible assets when there is evidence that events or changes in circumstances indicate the carrying amount of an asset may not be recovered. Judgments regarding the existence of impairment indicators and future cash flows related to intangible assets are based on operational performance of our businesses, market conditions, and other factors. Although there are inherent uncertainties in this assessment process, the estimates and assumptions used, including estimates of future cash flows, volumes, market penetration and discount rates, are consistent with our internal planning. If these estimates or their related assumptions change in the future, we may be required to record an impairment charge on all or a portion of our intangible assets. Furthermore, we cannot predict the occurrence of future impairment-triggering events nor the impact such events might have on our reported asset values. Future events could cause us to conclude that impairment indicators exist and that intangible assets associated with acquired businesses are impaired. Any resulting impairment loss could have an impact on our results of operations.

Other intangible assets are amortized using the straight-line method over periods ranging from four to 20 years.

As of December 31, 2022 and 2021, our goodwill was \$1.2 billion and \$1.3 billion, respectively. In accordance with ASC 350, *Intangibles – Goodwill and Other*, we assess goodwill for impairment annually during the fourth quarter of our fiscal year using October 1 balances, or when there is evidence that events or changes in circumstances indicate that the carrying amount of the asset may not be recovered. We evaluate goodwill at the reporting unit level and have identified our reportable segments, Banks, Merchants, and Billers, as our reporting units. Recoverability of goodwill is measured using a discounted cash flow valuation model incorporating discount rates commensurate with the risks involved. Use of a discounted cash flow valuation model is common practice in impairment testing in the absence of available transactional market evidence to determine the fair value.

The key assumptions used in the discounted cash flow valuation model include discount rates, growth rates, cash flow projections, and terminal value rates. Discount rates, growth rates, and cash flow projections are the most sensitive and susceptible to change, as they require significant management judgment. Discount rates are determined by using a weighted average cost of capital (“WACC”). The WACC considers market and industry data, as well as Company-specific risk factors. Operational management, considering industry and Company-specific historical and projected data, develops growth rates and cash flow projections for each reporting unit. Terminal value rate determination follows common methodology of capturing the present value of perpetual cash flow estimates beyond the last projected period assuming a constant WACC and low long-term growth rates. If the calculated fair value is less than the current carrying value, impairment of the reporting unit may exist. The implied fair value of goodwill is determined in a manner similar to how goodwill is calculated in a business combination. If the implied fair value of goodwill exceeds the carrying value of goodwill assigned to the reporting unit, there is no impairment. If the carrying value of goodwill assigned to the reporting unit exceeds the implied fair value of the goodwill, an impairment charge is recorded to write down the carrying value. The calculated fair value substantially exceeds the current carrying value for all reporting units. No reporting units were deemed to be at risk of failing Step 1 of the goodwill impairment test under ASC 350.

Business Combinations

We apply the provisions of ASC 805, *Business Combinations*, in the accounting for our acquisitions. It requires us to recognize the assets acquired and the liabilities assumed at their acquisition date fair values, separately from goodwill. Goodwill as of the acquisition date is measured as the excess of consideration transferred and the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While we use our best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations.

Critical estimates in valuing certain intangible assets include but are not limited to future expected cash flows from customer relationships, covenants not to compete, and acquired developed technologies; brand awareness and market position, as well as assumptions about the period of time the brand will continue to be used in our product portfolio; and discount rates. Management’s estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

Other estimates associated with the accounting for acquisitions may change as additional information becomes available regarding the assets acquired and liabilities assumed.

Stock-Based Compensation

On June 9, 2020, upon recommendation of our board, stockholders approved the ACI Worldwide, Inc. 2020 Equity and Incentive Compensation Plan (the “2020 Plan”). The 2020 Plan authorizes the board to provide for equity-based compensation in the form of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, dividend equivalents, and certain other awards, including those denominated or payable in, or otherwise based on, our common stock (“awards”). The purpose of the 2020 Plan is to provide incentives and rewards for service and/or performance by providing awards to non-employee directors, officers, other employees, and certain consultants and other service providers of us and our subsidiaries. Following the approval of the 2020 Plan, the 2016 Incentive Plan was terminated. Termination of the 2016 Incentive Plan did not affect any equity awards outstanding under the 2016 Incentive Plan or 2005 Incentive Plan.

Total shareholder return awards (“TSRs”) are performance shares that are earned, if at all, based upon our total shareholder return as compared to a group of peer companies over a three-year performance period. The award payout can range from 0% to 200%. To determine the grant date fair value of TSRs, a Monte Carlo simulation model is used. We recognize compensation expense for the TSRs over a three-year performance period based on the grant date fair value.

Restricted share unit awards (“RSUs”) generally have requisite service periods of three years and may vest 100% upon the three-year anniversary or in equal increments quarterly or annually. Under each arrangement, RSUs are issued without direct cost to the employee on the vesting date. We estimate the fair value of RSUs based upon the market price of our stock on the date of grant. We recognize compensation expense for RSUs on a straight-line basis over the requisite service period.

The assumptions utilized in the Monte Carlo simulation models, as well as the description of the plans the stock-based awards are granted under are described in further detail in Note 6, *Stock-Based Compensation Plans*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

Accounting for Income Taxes

Accounting for income taxes requires significant judgments in the development of estimates used in income tax calculations. Such judgments include, but are not limited to, the likelihood we would realize the benefits of net operating loss carryforwards and/or foreign tax credit carryforwards, the adequacy of valuation allowances, and the rates used to measure transactions with foreign subsidiaries. As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. The judgments and estimates used are subject to challenge by domestic and foreign taxing authorities.

We account for income taxes in accordance with ASC 740, *Income Taxes*. As part of our process of determining current tax liability, we exercise judgment in evaluating positions we have taken in our tax returns. We periodically assess our tax exposures and establish, or adjust, estimated unrecognized benefits for probable assessments by taxing authorities, including the Internal Revenue Service, and various foreign and state authorities. Such unrecognized tax benefits represent the estimated provision for income taxes expected to ultimately be paid. It is possible that either domestic or foreign taxing authorities could challenge those judgments or positions and draw conclusions that would cause us to incur tax liabilities in excess of, or realize benefits less than, those currently recorded. In addition, changes in the geographical mix or estimated amount of annual pretax income could impact our overall effective tax rate.

To the extent recovery of deferred tax assets is not more likely than not, we record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. Although we have considered future taxable income along with prudent and feasible tax planning strategies in assessing the need for a valuation allowance, if we should determine that we would not be able to realize all or part of our deferred tax assets in the future, an adjustment to deferred tax assets would be charged to income in the period any such determination was made. Likewise, in the event we are able to realize our deferred tax assets in the future in excess of the net recorded amount, an adjustment to deferred tax assets would increase income in the period any such determination was made.

New Accounting Standards Recently Adopted

For information related to recent accounting pronouncements and the impact of these pronouncements on our consolidated financial statements, see Note 1, *Nature of Business and Summary of Significant Accounting Policies*, to our Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Excluding the impact of changes in interest rates, inflationary pressures, and the uncertainty in the global financial markets, there have been no material changes to our market risk for the year ended December 31, 2022. We conduct business in all parts of the world and are thereby exposed to market risks related to fluctuations in foreign currency exchange rates. The U.S. dollar is the single largest currency in which our revenue contracts are denominated. Any decline in the value of local foreign currencies against the U.S. dollar results in our products and services being more expensive to a potential foreign customer. In those instances where our goods and services have already been sold, receivables may be more difficult to collect. Additionally, in jurisdictions where the revenue contracts are denominated in U.S. dollars and operating expenses are incurred in the local currency, any decline in the value of the U.S. dollar will have an unfavorable impact to operating margins. At times, we enter into revenue contracts that are denominated in the country's local currency, primarily in Australia, Canada, the United Kingdom, other European countries, Brazil, India, and Singapore. This practice serves as a natural hedge to finance the local currency expenses incurred in those locations. We have not entered into any foreign currency hedging transactions. We do not purchase or hold any derivative financial instruments for speculation or arbitrage.

The primary objective of our cash investment policy is to preserve principal without significantly increasing risk. If we maintained similar cash investments for a period of one year based on our cash investments and interest rates at December 31, 2022, a hypothetical ten percent increase or decrease in effective interest rates would increase or decrease interest income by less than \$0.1 million annually.

We had approximately \$1.1 billion of debt outstanding at December 31, 2022, with \$697.7 million outstanding under our Credit Facility and \$400.0 million in 2026 Notes. Our Credit Facility has a floating rate, which was 6.20% at December 31, 2022. Our 2026 Notes are fixed-rate long-term debt obligations with a 5.750% interest rate. A hypothetical ten percent increase or decrease in effective interest rates would increase or decrease interest expense related to the Credit Facility by approximately \$4.3 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The required consolidated financial statements and notes thereto are included in this annual report and are listed in Part IV, Item 15.

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 the Chief Executive Officer and Chief Financial Officer, performed an evaluation of 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 (the “Exchange Act”)) as of the end of the period covered by this report, December 31, 2022.

In connection with our evaluation of disclosure controls and procedures, we have concluded that our disclosure controls and procedures are effective as of December 31, 2022.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with U.S. GAAP. Under the supervision of, and with the participation of our Chief Executive Officer and Chief Financial Officer, management assessed the effectiveness of internal control over financial reporting as of December 31, 2022.

Management based its assessment on criteria established in “Internal Control Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022, has been audited by Deloitte & Touche, LLP, an independent registered public accounting firm, and Deloitte & Touche, LLP has issued an attestation report on our internal control over financial reporting.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) during the quarter ended December 31, 2022, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of ACI Worldwide, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of ACI Worldwide, Inc. and subsidiaries (the “Company”) 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 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 COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022, of the Company and our report dated March 1, 2023, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

/s/ Deloitte & Touche LLP

Omaha, Nebraska
March 1, 2023

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information under the heading “Executive Officers of the Registrant” in Part 1, Item 1 of this Form 10-K is incorporated herein by reference.

The other information required by this Item 10 is incorporated by reference from our Proxy Statement for the Annual Meeting of Stockholders to be held on or about June 1, 2023 (the “2023 Proxy Statement”), under the sections entitled “Proposal 1 – Election of Directors,” “Information Regarding Security Ownership – Section 16(a) Beneficial Ownership Reporting Compliance,” Corporate Governance – Code of Business Conduct and Ethics,” and “Corporate Governance – Board Committees.”

ITEM 11. EXECUTIVE COMPENSATION

Information included in the sections entitled “Director Compensation,” “Compensation Discussion and Analysis,” “Compensation Committee Report,” “Executive Compensation,” and “Compensation Committee Interlocks and Insider Participation” in our 2023 Proxy Statement is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information included in the sections entitled “Information Regarding Security Ownership” in our 2023 Proxy Statement is incorporated herein by reference.

Information included in the section entitled “Equity Compensation Plan Information” in our 2023 Proxy Statement is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information included in the section entitled “Certain Relationships and Related Transactions” in our 2023 Proxy Statement is incorporated herein by reference.

Information included in the sections entitled “Director Independence” and “Board Committees and Committee Meetings” in the “Corporate Governance” section of our 2023 Proxy Statement is incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information included in the sections entitled “Independent Registered Public Accounting Firm Fees” and “Pre-Approval of Audit and Non-Audit Services” under “Proposal 2 – Ratification of Appointment of the Company’s Independent Registered Public Accounting Firm” in our 2023 Proxy Statement is incorporated herein by reference.

PART IV**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES****Documents filed as part of this annual report on Form 10-K:**

(1) Financial Statements. The following index lists consolidated financial statements and notes thereto filed as part of this annual report on Form 10-K:

	Page
Report of Independent Registered Public Accounting Firm – Deloitte & Touche LLP (PCAOB ID No. 34)	45
Consolidated Balance Sheets as of December 31, 2022 and 2021	47
Consolidated Statements of Operations for each of the three years in the period ended December 31, 2022	48
Consolidated Statements of Comprehensive Income for each of the three years in the period ended December 31, 2022	49
Consolidated Statements of Stockholders' Equity for each of the three years in the period ended December 31, 2022	50
Consolidated Statements of Cash Flows for each of the three years in the period ended December 31, 2022	51
Notes to Consolidated Financial Statements	52

(2) Financial Statement Schedules. All schedules have been omitted because they are not applicable or the required information is included in the consolidated financial statements or notes thereto.

(3) Exhibits. A list of exhibits filed or furnished with this report on Form 10-K (or incorporated by reference to exhibits previously filed by ACI) is provided in the accompanying Exhibit Index.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of ACI Worldwide, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of ACI Worldwide, Inc. and subsidiaries (the “Company”) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income, stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), 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 and our report dated March 1, 2023, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the 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 - Refer to Note 2 to the financial statements

Critical Audit Matter Description

The Company recognizes revenue upon transfer of control of promised products and/or services to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those products or services. The Company’s software license arrangements provide the customer with the right to use functional intellectual property (as it exists at the point in time at which the license is granted) for the duration of the contract term. Implementation, support, and other services are typically considered distinct performance obligations when sold with a software license.

Significant judgment is exercised by the Company in determining revenue recognition for these customer arrangements, and includes the following:

- Determination of the term of a software license arrangement when early termination rights are provided to the customer.
- Determination of whether products and/or services are considered distinct performance obligations that should be accounted for separately.
- Determination of whether the financing component in a software licensing arrangement is significant and, if so, the discount rate used in calculating the significant financing component.
- Assessment of whether the extension of payment terms in a software licensing arrangement results in variable consideration and, if so, the amount to be included in the transaction price.
- Determination of the standalone selling price for each performance obligation, the amount allocated to each performance obligation and whether it depicts the amount that the Company expects to be entitled to in exchange for the related product and/or service. As the selling prices of the Company's software licenses are highly variable, the Company estimates standalone selling prices of its software licenses using the residual approach when the software license is sold with other services and observable standalone selling prices exist for the other services.

Given these factors, the related audit effort in evaluating management's judgments in determining revenue recognition for software license arrangements was extensive and required a high degree of auditor judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company's accounting for software license arrangements included the following, among others:

- We tested the effectiveness of controls over the review of software license arrangements, including, among others, the determination of the contract term, identification of performance obligations, determination of significant financing component, estimation of variable consideration, and determination of standalone selling prices, including those controls over the determination that software license pricing is highly variable.
- We selected a sample of software license arrangements and performed the following, among others:
 - Obtained contract source documents for each selection, including separate contracts or agreements that should be combined with the selected arrangement, and other documents that were part of the arrangement.
 - Tested management's determination of the contract term, identification of performance obligations, determination of significant financing component, estimation of variable consideration, and determination of standalone selling prices.
 - Evaluated the reasonableness of the methodology and estimates used by management and the appropriateness of its revenue recognition conclusions for these key judgment areas.
 - Tested the mathematical accuracy of management's calculations of revenue and the associated timing of revenue recognized in the financial statements.
- We evaluated management's determination that software license pricing is highly variable by obtaining management's highly variable analysis and performing the following:
 - Testing the completeness of management's analysis by tracing a selection of known data points from an independent internal source into the highly variable analysis.
 - Testing the accuracy of management's analysis by selecting a sample of contracts from the highly variable analysis, obtaining the contract and price detail, and evaluating whether discounts were appropriately included in the analysis.
 - Testing the mathematical accuracy of management's calculations.

/s/ Deloitte & Touche LLP

Omaha, Nebraska
March 1, 2023

We have served as the Company's auditor since 2009.

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31,	
	2022	2021
ASSETS		
Current assets		
Cash and cash equivalents	\$ 124,981	\$ 122,059
Receivables, net of allowances of \$3,779 and \$2,861, respectively	403,781	320,405
Settlement assets	540,667	452,396
Prepaid expenses	28,010	24,698
Other current assets	17,366	17,876
Total current assets	1,114,805	937,434
Noncurrent assets		
Accrued receivables, net	297,818	276,164
Property and equipment, net	52,499	63,050
Operating lease right-of-use assets	40,031	47,825
Software, net	129,109	157,782
Goodwill	1,226,026	1,280,226
Intangible assets, net	228,698	283,004
Deferred income taxes, net	53,738	50,778
Other noncurrent assets	67,171	62,478
TOTAL ASSETS	\$ 3,209,895	\$ 3,158,741
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 47,997	\$ 41,312
Settlement liabilities	539,087	451,575
Employee compensation	45,289	51,379
Current portion of long-term debt	65,521	45,870
Deferred revenue	58,303	84,425
Other current liabilities	102,645	79,594
Total current liabilities	858,842	754,155
Noncurrent liabilities		
Deferred revenue	23,233	25,925
Long-term debt	1,024,351	1,019,872
Deferred income taxes, net	40,371	36,122
Operating lease liabilities	33,910	43,346
Other noncurrent liabilities	36,001	34,544
Total liabilities	2,016,708	1,913,964
Commitments and contingencies (Note 13)		
Stockholders' equity		
Preferred stock; \$0.01 par value; 5,000,000 shares authorized; no shares issued at December 31, 2022 and 2021	—	—
Common stock; \$0.005 par value; 280,000,000 shares authorized; 140,525,055 shares issued at December 31, 2022 and 2021	702	702
Additional paid-in capital	702,458	688,313
Retained earnings	1,273,458	1,131,281
Treasury stock, at cost, 32,456,227 and 24,795,009 shares at December 31, 2022 and 2021, respectively	(665,771)	(475,972)
Accumulated other comprehensive loss	(117,660)	(99,547)
Total stockholders' equity	1,193,187	1,244,777
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 3,209,895	\$ 3,158,741

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

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Years Ended December 31,		
	2022	2021	2020
Revenues			
Software as a service and platform as a service	\$ 802,880	\$ 774,342	\$ 769,180
License	348,134	319,867	246,896
Maintenance	200,045	210,499	211,697
Services	70,842	65,890	66,549
Total revenues	1,421,901	1,370,598	1,294,322
Operating expenses			
Cost of revenue (1)	696,071	638,871	622,459
Research and development	146,311	144,310	139,293
Selling and marketing	134,812	126,539	103,567
General and administrative	114,194	123,801	152,468
Depreciation and amortization	126,678	127,180	131,791
Total operating expenses	1,218,066	1,160,701	1,149,578
Operating income	203,835	209,897	144,744
Other income (expense)			
Interest expense	(53,193)	(45,060)	(56,630)
Interest income	12,547	11,522	11,628
Other, net	43,446	(1,294)	(1,116)
Total other income (expense)	2,800	(34,832)	(46,118)
Income before income taxes	206,635	175,065	98,626
Income tax expense	64,458	47,274	25,966
Net income	\$ 142,177	\$ 127,791	\$ 72,660
Income per common share			
Basic	\$ 1.25	\$ 1.09	\$ 0.62
Diluted	\$ 1.24	\$ 1.08	\$ 0.62
Weighted average common shares outstanding			
Basic	113,700	117,407	116,397
Diluted	114,238	118,647	118,079

(1) The cost of revenue excludes charges for depreciation but includes amortization of purchased and developed software for resale.

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

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Net income	\$ 142,177	\$ 127,791	\$ 72,660
Other comprehensive loss:			
Foreign currency translation adjustments	(18,113)	(7,102)	(862)
Total other comprehensive loss	(18,113)	(7,102)	(862)
Comprehensive income	\$ 124,064	\$ 120,689	\$ 71,798

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

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance as of December 31, 2019	\$ 702	\$ 667,658	\$ 930,830	\$ (377,639)	\$ (91,583)	\$ 1,129,968
Net income	—	—	72,660	—	—	72,660
Other comprehensive loss	—	—	—	—	(862)	(862)
Stock-based compensation	—	29,602	—	—	—	29,602
Shares issued and forfeited, net, under stock plans	—	(14,829)	—	30,507	—	15,678
Repurchase of 1,000,000 shares of common stock	—	—	—	(28,881)	—	(28,881)
Repurchase of stock-based compensation awards for tax withholdings	—	—	—	(11,568)	—	(11,568)
Balance as of December 31, 2020	702	682,431	1,003,490	(387,581)	(92,445)	1,206,597
Net income	—	—	127,791	—	—	127,791
Other comprehensive loss	—	—	—	—	(7,102)	(7,102)
Stock-based compensation	—	27,242	—	—	—	27,242
Shares issued and forfeited, net, under stock plans	—	(21,360)	—	33,820	—	12,460
Repurchase of 3,000,000 shares of common stock	—	—	—	(107,378)	—	(107,378)
Repurchase of stock-based compensation awards for tax withholdings	—	—	—	(14,833)	—	(14,833)
Balance as of December 31, 2021	702	688,313	1,131,281	(475,972)	(99,547)	1,244,777
Net income	—	—	142,177	—	—	142,177
Other comprehensive loss	—	—	—	—	(18,113)	(18,113)
Stock-based compensation	—	29,753	—	—	—	29,753
Shares issued and forfeited, net, under stock plans	—	(15,608)	—	23,721	—	8,113
Repurchase of 8,624,238 shares of common stock	—	—	—	(206,537)	—	(206,537)
Repurchase of stock-based compensation awards for tax withholdings	—	—	—	(6,983)	—	(6,983)
Balance as of December 31, 2022	<u>\$ 702</u>	<u>\$ 702,458</u>	<u>\$ 1,273,458</u>	<u>\$ (665,771)</u>	<u>\$ (117,660)</u>	<u>\$ 1,193,187</u>

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

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income	\$ 142,177	\$ 127,791	\$ 72,660
Adjustments to reconcile net income to net cash flows from operating activities:			
Depreciation	23,181	20,900	24,728
Amortization	104,147	112,493	115,588
Amortization of operating lease right-of-use assets	11,036	10,515	23,448
Amortization of deferred debt issuance costs	4,561	4,685	4,802
Deferred income taxes	1,603	3,733	3,349
Stock-based compensation expense	29,753	27,242	29,602
Gain on divestiture	(38,452)	—	—
Other	3,028	855	6,017
Changes in operating assets and liabilities, net of impact of acquisitions:			
Receivables	(132,194)	(43,830)	8,793
Accounts payable	7,730	1,408	2,484
Accrued employee compensation	(3,161)	3,674	18,491
Deferred revenue	(2,977)	(17,332)	9,421
Other current and noncurrent assets and liabilities	(7,051)	(31,661)	(4,488)
Net cash flows from operating activities	<u>143,381</u>	<u>220,473</u>	<u>314,895</u>
Cash flows from investing activities:			
Purchases of property and equipment	(13,103)	(20,582)	(17,804)
Purchases of software and distribution rights	(26,790)	(24,786)	(28,829)
Proceeds from divestiture	100,139	—	—
Other	—	—	15,934
Net cash flows from investing activities	<u>60,246</u>	<u>(45,368)</u>	<u>(30,699)</u>
Cash flows from financing activities:			
Proceeds from issuance of common stock	3,581	3,440	3,759
Proceeds from exercises of stock options	4,584	8,862	11,924
Repurchase of stock-based compensation awards for tax withholdings	(6,983)	(14,833)	(11,568)
Repurchase of common stock	(206,537)	(107,378)	(28,881)
Proceeds from revolving credit facility	180,000	35,000	30,000
Repayments of revolving credit facility	(75,000)	(90,000)	(214,000)
Repayments of term portion of credit agreement	(85,431)	(38,950)	(38,950)
Payments on or proceeds from other debt, net	(12,123)	(15,185)	(13,854)
Net increase (decrease) in settlement assets and liabilities	26,849	(37,834)	101,681
Net cash flows from financing activities	<u>(171,060)</u>	<u>(256,878)</u>	<u>(159,889)</u>
Effect of exchange rate fluctuations on cash	(2,037)	533	(57)
Net increase (decrease) in cash and cash equivalents	30,530	(81,240)	124,250
Cash and cash equivalents, including settlement deposits, beginning of period	184,142	265,382	141,132
Cash and cash equivalents, including settlement deposits, end of period	<u>\$ 214,672</u>	<u>\$ 184,142</u>	<u>\$ 265,382</u>
Reconciliation of cash and cash equivalents to the Consolidated Balance Sheets			
Cash and cash equivalents	\$ 124,981	\$ 122,059	\$ 165,374
Settlement deposits	89,691	62,083	100,008
Total cash and cash equivalents, including settlement deposits	<u>\$ 214,672</u>	<u>\$ 184,142</u>	<u>\$ 265,382</u>
Supplemental cash flow information			
Income taxes paid, net	\$ 43,553	\$ 46,166	\$ 27,760
Interest paid	\$ 48,526	\$ 40,071	\$ 51,991

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**1. Nature of Business and Summary of Significant Accounting Policies***Nature of Business*

ACI Worldwide, Inc., a Delaware corporation, and its subsidiaries (collectively referred to as “ACI” or the “Company”) develop, market, install, and support a broad line of software products and services primarily focused on facilitating electronic payments. In addition to its own products, the Company distributes or acts as a sales agent for software developed by third parties. These products and services are used principally by banks and intermediaries, merchants, and billers, both in domestic and international markets.

Consolidated Financial Statements

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated.

Capital Stock

The Company’s outstanding capital stock consists of a single class of common stock. Each share of common stock is entitled to one vote for each matter subject to a stockholder’s vote and to dividends, if and when declared by the board of directors (the “board”).

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates and assumptions are affected by management’s application of accounting policies, as well as uncertainty in the current economic environment. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. The Company’s cash and cash equivalents includes holdings in checking, savings, money market, and overnight sweep accounts, all of which have daily maturities, as well as time deposits with maturities of three months or less at the date of purchase.

Other Current Liabilities

Other current liabilities include the following (in thousands):

	December 31,	
	2022	2021
Vendor financed licenses	\$ 13,525	\$ 12,521
Operating lease liabilities	11,218	11,518
Accrued interest	9,067	8,776
Royalties payable	3,726	4,102
Other	65,109	42,677
Total other current liabilities	<u>\$ 102,645</u>	<u>\$ 79,594</u>

Settlement Assets and Liabilities

Individuals and businesses settle their obligations to the Company’s various Biller clients using credit or debit cards or via automated clearing house (“ACH”) payments. The Company creates a receivable for the amount due from the credit or debit card processor and an offsetting payable to the client. Upon confirmation that the funds have been received, the Company settles the obligation to the client. Due to timing, in some instances, the Company may (1) receive the funds into bank accounts controlled by and in the Company’s name that are not disbursed to its clients by the end of the day, resulting in a settlement deposit on the Company’s books and (2) disburse funds to its clients in advance of receiving funds from the credit or debit card processor, resulting in a net settlement receivable position.

Off Balance Sheet Settlement Accounts

The Company also enters into agreements with certain Biller clients to process payment funds on their behalf. When an ACH or automated teller machine network payment transaction is processed, a transaction is initiated to withdraw funds from the designated source account and deposit them into a settlement account, which is a trust account maintained for the benefit of the Company's clients. A simultaneous transaction is initiated to transfer funds from the settlement account to the intended destination account. These "back to back" transactions are designed to settle at the same time, usually overnight, such that the Company receives the funds from the source at the same time as it sends the funds to their destination. However, due to the transactions being with various financial institutions there may be timing differences that result in float balances. These funds are maintained in accounts for the benefit of the client which is separate from the Company's corporate assets. As the Company does not take ownership of the funds, these settlement accounts are not included in the Company's balance sheet. The Company is entitled to interest earned on the fund balances. The collection of interest on these settlement accounts is considered in the Company's determination of its fee structure for clients and represents a portion of the payment for services performed by the Company. The amount of settlement funds as of December 31, 2022 and 2021, were \$328.7 million and \$272.8 million, respectively.

Property and Equipment

Property and equipment are stated at cost. Depreciation of these assets is generally computed using the straight-line method over their estimated useful lives based on asset class. As of December 31, 2022 and 2021, net property and equipment consisted of the following (in thousands):

	Useful Lives	December 31,	
		2022	2021
Computer and office equipment	3 - 5 years	\$ 132,133	\$ 127,352
Leasehold improvements	Lesser of useful life of improvement or remaining life of lease	34,159	34,460
Building and improvements	7 - 30 years	15,061	14,853
Furniture and fixtures	7 years	10,200	9,733
Land	Non-depreciable	1,785	1,785
Property and equipment, gross		193,338	188,183
Less: accumulated depreciation		(140,839)	(125,133)
Property and equipment, net		\$ 52,499	\$ 63,050

Software

Software may be for internal use or for resale. Costs related to certain software, which is for resale, are capitalized in accordance with Accounting Standards Codification ("ASC") 985-20, *Costs of Software to be Sold, Leased, or Marketed*, when the resulting product reaches technological feasibility. The Company generally determines technological feasibility when it has a detailed program design that takes product function, feature and technical requirements to their most detailed, logical form and is ready for coding. The Company does not typically capitalize costs related to software for resale as technological feasibility generally coincides with general availability of the software. The Company capitalizes the costs of software developed or obtained for internal use in accordance with ASC 350-40, *Internal Use Software*. The Company expenses all costs incurred during the preliminary project stage of its development and capitalizes the costs incurred during the application development stage. Costs incurred relating to upgrades and enhancements to the software are capitalized if it is determined that these upgrades or enhancements add additional functionality to the software. Costs incurred during the application development stage include purchased software licenses, implementation costs, consulting costs, and payroll-related costs for projects that qualify for capitalization. All other costs, primarily related to maintenance and minor software fixes, are expensed as incurred.

Amortization of software for resale is determined on a product-by-product basis and begins when the product is available for licensing to customers. The annual amortization is computed using the greater of (a) the ratio of current gross revenues to the total of current and future gross revenues expected to be derived from the software or (b) the straight-line method over the remaining estimated useful life of generally five to ten years, including the period being reported on. Due to competitive pressures, it may be possible that the estimates of future gross revenue or remaining estimated useful life of the software will be reduced significantly. As a result, the carrying amount of the software may be reduced accordingly. Amortization of internal-use software is generally computed using the straight-line method over estimated useful lives of three to eight years.

Business Combinations

The Company applies the provisions of ASC 805, *Business Combinations*, in the accounting for its acquisitions. It requires the Company to recognize separately from goodwill the assets acquired and the liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred and the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While the Company uses its best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, its estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, it records adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations.

Critical estimates in valuing certain intangible assets include but are not limited to future expected cash flows from customer relationships, covenants not to compete and acquired developed technologies, brand awareness and market position, as well as assumptions about the period of time the brand will continue to be used in our product portfolio, and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

Other estimates associated with the accounting for acquisitions may change as additional information becomes available regarding the assets acquired and liabilities assumed.

Fair Value

ASC 820, *Fair Value Measurements and Disclosures*, ("ASC 820") defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. ASC 820 establishes a fair value hierarchy for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

- Level 1 Inputs – Unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- Level 2 Inputs – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, volatilities, prepayment speeds, credit risks, etc.) or inputs that are derived principally from or corroborated by market data by correlation or other means.
- Level 3 Inputs – Unobservable inputs for determining the fair values of assets or liabilities that reflect an entity's own assumptions about the assumptions that market participants would use in pricing the assets or liabilities.

The fair value of the Company's Credit Agreement approximates the carrying value due to the floating interest rate (Level 2 of the fair value hierarchy). The Company measures the fair value of its Senior Notes based on Level 2 inputs, which include quoted market prices and interest rate spreads of similar securities. The fair value of the Company's 5.750% Senior Notes due 2026 ("2026 Notes") was \$390.0 million and \$419.0 million as of December 31, 2022 and 2021, respectively.

The fair values of cash and cash equivalents approximate the carrying values due to the short period of time to maturity (Level 2 of the fair value hierarchy).

Goodwill and Other Intangibles

In accordance with ASC 350, *Intangibles – Goodwill and Other*, the Company assesses goodwill for impairment annually during the fourth quarter of its fiscal year using October 1 balances or when there is evidence that events or changes in circumstances indicate that the carrying amount of the asset may not be recovered. The Company evaluates goodwill at the reporting unit level using the discounted cash flow valuation model and allocates goodwill to these reporting units using a relative fair value approach. During this assessment, management relies on a number of factors, including operating results, business plans, and anticipated future cash flows. The Company has identified its reportable segments, Banks, Merchants, and Billers, as the reporting units.

The key assumptions used in the discounted cash flow valuation model include discount rates, growth rates, cash flow projections and terminal value rates. Discount rates, growth rates, and cash flow projections are the most sensitive and susceptible to change, as they require significant management judgment. Discount rates are determined by using a weighted average cost of capital ("WACC"). The WACC considers market and industry data as well as company-specific risk factors.

Operational management, considering industry and company-specific historical and projected data, develops growth rates and cash flow projections for each reporting unit. Terminal value rate determination follows common methodology of capturing the present value of perpetual cash flow estimates beyond the last projected period, assuming a constant WACC and low, long-term growth rates. If, as per the quantitative test, the estimated fair value of the reporting unit is less than the carrying amount of the reporting unit, impairment is recognized for the difference, limited to the amount of goodwill recognized for the reporting unit. The calculated fair value substantially exceeded the current carrying value for all reporting units for all periods.

Changes in the carrying amount of goodwill attributable to each reporting unit during the year ended December 31, 2022 were as follows (in thousands):

	Banks	Merchants	Billers	Total
Balance, December 31, 2021	\$ 725,903	\$ 137,289	\$ 417,034	\$ 1,280,226
Divestiture (1)	(54,200)	—	—	(54,200)
Balance, December 31, 2022	<u>\$ 671,703</u>	<u>\$ 137,289</u>	<u>\$ 417,034</u>	<u>\$ 1,226,026</u>

(1) In connection with the divestiture, \$54.2 million of goodwill from the Banks segment was allocated to the net assets sold. See Note 3, *Divestiture*, for further information on the divestiture.

Other intangible assets, which include customer relationships and trademarks and trade names, are amortized using the straight-line method over periods ranging from four to 20 years. The Company reviews its other intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

Equity Method Investment

In July 2019, the Company invested \$18.3 million for a 30% non-controlling financial interest in a payment technology and services company in India. The Company accounted for this investment using the equity method in accordance with ASC 323, *Investments - Equity Method and Joint Ventures*. The Company records its share of earnings and losses in the investment on a one-quarter lag basis. Accordingly, the Company recorded an investment of \$17.9 million and \$19.3 million, which is included in other noncurrent assets in the consolidated balance sheet as of December 31, 2022 and 2021, respectively.

Impairment of Long-Lived Assets

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of a long-lived asset group may not be recoverable. An impairment loss is recorded if the sum of the future cash flows expected to result from the use of the asset (undiscounted and without interest charges) is less than the carrying amount of the asset. The amount of the impairment charge is measured based upon the fair value of the asset group.

Treasury Stock

The Company accounts for shares of its common stock that are repurchased without intent to retire as treasury stock. Such shares are recorded at cost and reflected separately on the consolidated balance sheets as a reduction of stockholders' equity. The Company issues shares of treasury stock upon exercise of stock options, issuance of restricted share units, payment of earned performance shares, and for issuances of common stock pursuant to the Company's employee stock purchase plan. For purposes of determining the cost of the treasury shares re-issued, the Company uses the average cost method.

Stock-Based Compensation Plans

In accordance with ASC 718, *Compensation - Stock Compensation*, ("ASC 718") the Company recognizes stock-based compensation expense for awards that are probable of vesting on a straight-line basis over the requisite service period of the award, which is generally the vesting term. Stock-based compensation expense is recorded in operating expenses depending on where the respective individual's compensation is recorded. To determine the grant date fair value of total shareholder return awards ("TSRs"), a Monte Carlo simulation model was used. The assumptions utilized in the Monte Carlo simulation models, as well as the description of the plans the stock-based awards are granted under, are described in further detail in Note 6, *Stock-Based Compensation Plans*.

Translation of Foreign Currencies

The Company's foreign subsidiaries typically use the local currency of the countries in which they are located as their functional currency. Their assets and liabilities are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Revenues and expenses are translated at the average exchange rates during the period. Translation gains and losses are reflected in the consolidated financial statements as a component of accumulated other comprehensive income (loss). Transaction gains and losses, including those related to intercompany accounts, that are not considered to be of a long-term investment nature are included in the determination of net income. Transaction gains and losses, including those related to intercompany accounts, that are considered to be of a long-term investment nature are reflected in the consolidated financial statements as a component of accumulated other comprehensive income (loss).

Income Taxes

The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company periodically assesses its tax exposures and establishes, or adjusts, estimated unrecognized tax benefits for probable assessments by taxing authorities, including the Internal Revenue Service, and various foreign and state authorities. Such unrecognized tax benefits represent the estimated provision for income taxes expected to ultimately be paid.

2. Revenue

Revenue Recognition

In accordance with ASC 606, *Revenue From Contracts With Customers*, revenue is recognized upon transfer of control of promised products and/or services to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those products and services. Revenue is recognized net of any taxes collected from customers and subsequently remitted to governmental authorities.

Contract Combination. The Company may execute more than one contract or agreement with a single customer at or near the same time. The separate contracts or agreements may be viewed as one combined arrangement or separate agreements for revenue recognition purposes. In order to reach appropriate conclusions regarding whether such agreements should be combined, the Company evaluates whether the agreements were negotiated as a package with a single commercial objective, whether the amount of consideration to be paid in one agreement depends on the price and/or performance of another agreement, or whether the product(s) or services promised in the agreements represent a single performance obligation. The conclusions reached can impact the allocation of the transaction price to each performance obligation and the timing of revenue recognition related to those arrangements.

Software as a Service ("SaaS") and Platform as a Service ("PaaS") Arrangements. The Company's SaaS-based and PaaS-based arrangements, including implementation, support and other services, represent a single promise to provide continuous access (i.e. a stand-ready performance obligation) to its software solutions and their processing capabilities in the form of a service through one of the Company's data centers. As each day of providing access to the software solution(s) is substantially the same and the customer simultaneously receives and consumes the benefits as access is provided, the Company's single promise under its SaaS-based and PaaS-based arrangements is comprised of a series of distinct service periods. The Company's SaaS-based and PaaS-based arrangements may include fixed consideration, variable consideration, or a combination of the two. Fixed consideration is recognized over the term of the arrangement or longer if the fixed consideration relates to a material right. A material right would be a separate performance obligation. The Company estimates the stand-alone selling price for a material right by reference to the services expected to be provided and the corresponding expected consideration. Variable consideration in these arrangements is typically a function of transaction volume or another usage-based measure. Depending upon the structure of a particular arrangement, the Company: (1) allocates the variable amount to each distinct service period within the series and recognizes revenue as each distinct service period is performed, (2) estimates total variable consideration at contract inception (giving consideration to any constraints that may apply and updating the estimates as new information becomes available) and recognizes the total transaction price over the period to which it relates, or (3) applies the 'right to invoice' practical expedient and recognizes revenue based on the amount invoiced to the customer during the period.

License Arrangements. The Company's software license arrangements provide the customer with the right to use functional intellectual property (as it exists at the point in time at which the license is granted) for the duration of the contract term. Implementation, support, and other services are typically considered distinct performance obligations when sold with a software license.

Payment terms for the Company's software license arrangements generally include fixed license and capacity fees that are payable up front or over time. These arrangements may also include incremental usage-based fees that are payable when the customer exceeds its contracted license capacity limits. The Company accounts for capacity overages as a usage-based royalty that is recognized when the usage occurs.

When a software license arrangement contains payment terms that are extended beyond one year, a significant financing component may exist. The significant financing component is calculated as the difference between the stated value and present value of the software license fees and is recognized as interest income over the extended payment period. The total fixed software license fee net of the significant financing component is recognized as revenue at the point in time when the software is transferred to the customer.

For those software license arrangements that include customer-specific acceptance provisions, such provisions are generally presumed to be substantive and the Company does not recognize revenue until the earlier of the receipt of a written customer acceptance, objective demonstration that the delivered product meets the customer-specific acceptance criteria, or the expiration of the acceptance period. The Company recognizes revenues on such arrangements upon the earlier of receipt of written acceptance or the first production use of the software by the customer.

For software license arrangements in which the Company acts as a distributor of another company's product, and in certain circumstances, modifies or enhances the product, revenues are recorded on a gross basis. These include arrangements in which the Company takes control of the products and is responsible for providing the product or service. For software license arrangements in which the Company acts as a sales agent for another company's product, revenues are recorded on a net basis. These include arrangements in which the Company does not take control of products and is not responsible for providing the product or service.

For software license arrangements in which the Company utilizes a third-party distributor or sales agent, the Company recognizes revenue upon transfer of control of the software license(s) to the third-party distributor or sales agent.

The Company's software license arrangements typically provide the customer with a standard 90-day assurance-type warranty. These warranties do not represent an additional performance obligation as services beyond assuring that the software license complies with agreed-upon specifications are not provided.

Software license arrangements typically include an initial post contract customer support (maintenance or "PCS") term of one year with subsequent renewals for additional years within the initial license period. The Company's promise to those customers who elect to purchase PCS represents a stand-ready performance obligation that is distinct from the license performance obligation and recognized over the PCS term.

The Company also provides various professional services to customers with software licenses. These include project management, software implementation, and software modification services. Revenues from arrangements to provide professional services are generally distinct from the other promises in the contract(s) and are recognized as the related services are performed. Consideration received under these arrangements is either fixed fee or on a time-and-materials basis, which represents variable consideration that must be estimated using the most likely amount based on the range of hours expected to be incurred in providing the services.

The Company estimates the stand-alone selling price ("SSP") for maintenance and professional services based on observable stand-alone sales. The Company applies the residual approach to estimate the SSP for software licenses.

Refer to Note 10, *Segment Information*, for further details, including disaggregation of revenue based on primary solution category and geographic location.

Significant Judgments

The Company applies judgment in determining the customer's ability and intention to pay, which is based on a variety of factors including the customer's historical payment experience or, in the case of a new customer, published credit and financial information.

The Company also applies judgment in determining the term of an arrangement when early termination rights are provided to the customer.

The Company's software license arrangements with its customers often include multiple promises to transfer licensed software products and services. Determining whether the products and/or services are distinct performance obligations that should be accounted for separately may require significant judgment.

The Company's SaaS and PaaS arrangements may include variable consideration in the form of usage-based fees. If the arrangement that includes variable consideration in the form of usage-based fees does not meet the allocation exception for variable consideration, the Company estimates the amount of variable consideration at the outset of the arrangement using either the expected value or most likely amount method, depending on the specifics of each arrangement. These estimates are constrained to the extent that it is probable that a significant reversal of incremental revenue will not occur and are updated each reporting period as additional information becomes available.

Judgment is used in determining: (1) whether the financing component in a software license agreement is significant and, if so, (2) the discount rate used in calculating the significant financing component. The Company assesses the significance of the financing component based on the ratio of license fees paid over time to total license fees. If determined to be significant, the financing component is calculated using a rate that discounts the license fees to the cash selling price.

Judgment is also used in assessing whether the extension of payment terms in a software license arrangement results in variable consideration and, if so, the amount to be included in the transaction price. The Company applies the portfolio approach to estimate the amount of variable consideration in these arrangements using the most likely amount method that is based on the Company's historical collection experience under similar arrangements.

Significant judgment is required to determine the SSP for each performance obligation, the amount allocated to each performance obligation and whether it depicts the amount that the Company expects to be entitled to in exchange for the related product and/or service. As the selling prices of the Company's software licenses are highly variable, the Company estimates SSP of its software licenses using the residual approach when the software license is sold with other services and observable SSPs exist for the other services. The Company uses a range of amounts to estimate SSP for maintenance and services. These ranges are based on stand-alone sales and vary based on the type of service and geographic region. If the SSP of a performance obligation is not directly observable, the Company will maximize observable inputs to determine its SSP.

Contract Balances

Timing of revenue recognition may differ from the timing of invoicing to customers. The Company records an accrued receivable when revenue is recognized prior to invoicing and the Company's right to consideration only requires the passage of time, or deferred revenue when revenue is recognized subsequent to invoicing.

Total receivables represent amounts billed and amounts earned that are to be billed in the future (i.e., accrued receivables). Included in accrued receivables are services and SaaS and PaaS revenues earned in the current period but billed in the following period and amounts due under multi-year software license arrangements with extended payment terms for which the Company has an unconditional right to invoice and receive payment subsequent to invoicing.

Total receivables, net is comprised of the following (in thousands):

	December 31,	
	2022	2021
Billed receivables	\$ 218,611	\$ 162,479
Allowance for doubtful accounts	(3,779)	(2,861)
Billed receivables, net	214,832	159,618
Current accrued receivables, net	188,949	160,787
Long-term accrued receivables, net	297,818	276,164
Total accrued receivables, net	486,767	436,951
Total receivables, net	\$ 701,599	\$ 596,569

One customer accounted for 10.1% and 13.8% of the Company's consolidated receivables balance as of December 31, 2022 and 2021, respectively.

The Company maintains an allowance for doubtful accounts for expected future credit losses that is calculated based on historical experience, current economic trends, and expectations of near term economic trends. The Company regularly monitors its credit risk exposures in consolidated receivables.

The following reflects activity in the Company's allowance for doubtful accounts receivable for the periods indicated (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Balance, beginning of period	\$ (2,861)	\$ (3,912)	\$ (5,149)
Provision (increase) decrease	(1,496)	1,125	374
Amounts written off, net of recoveries	389	(82)	941
Foreign currency translation adjustments and other	189	8	(78)
Balance, end of period	<u>\$ (3,779)</u>	<u>\$ (2,861)</u>	<u>\$ (3,912)</u>

Provision increases recorded in general and administrative expense during the years ended December 31, 2022, and provision decreases recorded in general and administrative expense during the years ended December 31, 2021, and 2020, reflect adjustments in the allowance for doubtful accounts based upon collection experience, net of collection of customer-specific receivables that were previously reserved for as doubtful of collection.

Deferred revenue includes amounts due or received from customers for software licenses, maintenance, services, and/or SaaS and PaaS services in advance of recording the related revenue.

Changes in deferred revenue were as follows (in thousands):

Balance, December 31, 2020	\$ 129,413
Deferral of revenue	154,419
Recognition of deferred revenue	(171,530)
Foreign currency translation	(1,952)
Balance, December 31, 2021	<u>110,350</u>
Deferral of revenue	125,865
Recognition of deferred revenue	(128,700)
Divestiture	(21,581)
Foreign currency translation	(4,398)
Balance, December 31, 2022	<u>\$ 81,536</u>

Revenue allocated to remaining performance obligations represents contracted revenue that will be recognized in future periods, which is comprised of deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. This does not include:

- Revenue that will be recognized in future periods from capacity overages that are accounted for as a usage-based royalty.
- SaaS and PaaS revenue from variable consideration that will be recognized in accordance with the 'right to invoice' practical expedient or meets the allocation objective.

Revenue allocated to remaining performance obligations was \$664.0 million as of December 31, 2022, of which the Company expects to recognize approximately 49% over the next 12 months and the remainder thereafter.

During the year ended December 31, 2022, the revenue recognized by the Company from performance obligations satisfied in previous periods was \$39.1 million.

Costs to Obtain and Fulfill a Contract

The Company accounts for costs to obtain and fulfill its contracts in accordance with ASC 340-40.

The Company capitalizes certain of its sales commissions that meet the definition of incremental costs of obtaining a contract and for which the amortization period is greater than one year. The costs associated with those sales commissions are capitalized during the period in which the Company becomes obligated to pay the commissions and are amortized over the period in which the related products or services are transferred to the customer. As of December 31, 2022 and 2021, \$1.5 million and \$3.0 million of these costs are included in other current assets, respectively, and \$14.5 million and \$11.0 million of these costs are included in other noncurrent assets, respectively, on the consolidated balance sheets. During the years ended December 31, 2022 and 2021, the Company recognized \$8.3 million and \$5.2 million of sales commission expense, respectively, related to the amortization of these costs, which is included in selling and marketing expense on the consolidated statements of operations.

The Company capitalizes costs incurred to fulfill its contracts that: (1) relate directly to the arrangement, (2) are expected to generate resources that will be used to satisfy the Company's performance obligation under the arrangement, and (3) are expected to be recovered through revenue generated under the arrangement. Contract fulfillment costs are expensed as the Company transfers the related services to the customer. As of December 31, 2022 and 2021, less than \$0.1 million and \$0.2 million of these costs are included in other current assets, and \$9.7 million and \$10.1 million of these costs are included in other noncurrent assets, respectively, on the consolidated balance sheets. The amounts capitalized primarily relate to direct costs that enhance resources under the Company's SaaS and PaaS arrangements. During the years ended December 31, 2022 and 2021, the Company recognized \$3.1 million and \$4.5 million of expense, respectively, related to the amortization of these costs, which is included in cost of revenue on the consolidated statements of operations.

3. Divestiture

Corporate Online Banking Solutions

On June 7, 2022, the Company announced a definitive agreement to divest its corporate online banking solutions related assets and liabilities to One Equity Partners ("OEP") for \$100.1 million, including a preliminary net working capital adjustment. The sale included employees and customer contracts as well as technology assets and intellectual property and closed on September 1, 2022.

For the year ended December 31, 2022, the Company recognized a gain of \$38.5 million on the sale, which is recorded in other, net on the consolidated statements of operations. This gain is preliminary subject to finalization of post-closing adjustments pursuant to the definitive transaction agreement.

The Company and OEP have also entered into a Transition Services Agreement ("TSA"), whereby the Company will continue to perform certain functions on OEP's behalf during a migration period not expected to exceed 18 months. The TSA is meant to reimburse the Company for direct costs in order to provide such functions, which are no longer generating revenue for the Company.

4. Debt

As of December 31, 2022, the Company had \$105.0 million, \$592.7 million and \$400.0 million outstanding under its Revolving Credit Facility, Term Loans, and Senior Notes, respectively, with up to \$393.5 million of unused borrowings under the Revolving Credit Facility portion of the Credit Agreement, as amended, and up to \$1.5 million of unused borrowings under the Letter of Credit agreement. The amount of unused borrowings actually available varies in accordance with the terms of the agreement.

Credit Agreement

On April 5, 2019, the Company (and its wholly-owned subsidiaries, ACI Worldwide Corp. and ACI Payments, Inc. entered into the Second Amended and Restated Credit Agreement (the "Credit Agreement"), with the lenders, and Bank of America, N.A., as administrative agent for the lenders, to amend and restate the Company's existing agreement, as amended, dated February 24, 2017. The amended Credit Agreement permitted the Company to borrow up to \$500.0 million in the form of an additional senior secured term loan; extended the revolver and the existing term loan maturity date from February 24, 2022, to April 5, 2024; increased the maximum consolidated senior secured net leverage ratio covenant from 3.50:1.00 to 3.75:1.00; and increased the maximum consolidated total net leverage ratio covenant from 4.25:1.00 to 5.00:1.00, with subsequent decreases occurring every three quarters thereafter for a specified period of time; among other things.

On May 5, 2022, the Company and Bank of America entered into the LIBOR Transition Amendment (the "Amendment") that replaced the LIBOR reference rate with the Secured Overnight Financing Rate ("SOFR") reference rate. No other terms or conditions of the Credit Agreement were changed as a result of the Amendment.

The Credit Agreement consists of (a) a five-year \$500.0 million senior secured revolving credit facility (the "Revolving Credit Facility"), which includes sublimits for (1) the issuance of standby letters of credit and (2) swingline loans, (b) a five-year \$279.0 million senior secured term loan facility (the "Initial Term Loan") and (c) a five-year \$500.0 million Delayed Draw Term Loan (together with the Initial Term Loan, the "Term Loans", and together with the Initial Term Loan and the Revolving Credit Facility, the "Credit Facility"). The Credit Agreement also allows the Company to request optional incremental term loans and increases in the revolving commitment.

At the Company's option, borrowings under the Credit Facility bear interest at an annual rate equal to either (a) a base rate determined by reference to the highest of (1) the annual interest rate publicly announced by the administrative agent as its Prime Rate, (2) the federal funds effective rate plus 1/2 of 1% or (3) SOFR rate determined by reference to the costs of funds for U.S. dollar deposits for a one-month interest period, adjusted for certain additional costs plus 1% or (b) SOFR rate determined by reference to the costs of funds for U.S. dollar deposits for the interest period relevant to such borrowings, adjusted for certain additional costs plus an applicable margin. Based on the calculation of the applicable consolidated total leverage ratio, the applicable margin for borrowings under the Credit Facility is between 0.25% to 1.25% with respect to base rate borrowings and between 1.25% and 2.25% with respect to SOFR rate borrowings. Interest is due and payable monthly. The interest rate in effect for the Credit Facility as of December 31, 2022, was 6.20%.

The Company is also required to pay (a) a commitment fee related to the unutilized commitments under the Revolving Credit Facility, payable quarterly in arrears, (b) letter of credit fees on the maximum amount available to be drawn under all outstanding letters of credit in an amount equal to the applicable margin on SOFR rate borrowings under the Revolving Credit Facility on an annual basis, payable quarterly in arrears, and (c) customary fronting fees for the issuance of letters of credit fees and agency fees.

The Company's obligations under the Credit Facility and cash management arrangements entered into with lenders under the Credit Facility (or affiliates thereof) and the obligations of the subsidiary guarantors are secured by first-priority security interests in substantially all assets of the Company and any guarantor, including 100% of the capital stock of ACI Worldwide Corp. and each domestic subsidiary of the Company, each domestic subsidiary of any guarantor, and 65% of the voting capital stock of each foreign subsidiary of the Company that is directly owned by the Company or a guarantor, in each case subject to certain exclusions set forth in the credit documentation governing the Credit Facility. The collateral agreement of the Credit Agreement, as amended, released the lien on certain assets of ACI Payments, Inc., our electronic bill presentment and payment affiliate, to allow ACI Payments, Inc. to comply with certain eligible securities and unencumbered asset requirements related to money transmitter or transfer license rules and regulations.

The Credit Agreement contains a number of covenants that, among other things and subject to certain exceptions, restrict the Company's and its subsidiaries' ability to: create, incur, assume or suffer to exist any additional indebtedness; create, incur, assume or suffer to exist any liens; enter into agreements and other arrangements that include negative pledge clauses; pay dividends on capital stock or redeem, repurchase or retire capital stock or subordinated indebtedness; create restrictions on the payment of dividends or other distributions by subsidiaries; make investments, loans, advances and acquisitions; merge, consolidate or enter into any similar combination or sell assets, including equity interests of the subsidiaries; enter into sale and leaseback transactions; directly or indirectly engage in transactions with affiliates; alter in any material respect the character or conduct of the business; enter into amendments of or waivers under subordinated indebtedness, organizational documents and certain other material agreements; and hold certain assets and incur certain liabilities.

Letter of Credit

On August 12, 2020, the Company and ACI Payments, Inc. entered into a standby letter of credit (the "Letter of Credit"), under the terms of the Credit Agreement, for \$1.5 million. The Letter of Credit, currently effective through July 31, 2023, will automatically renew for successive one-year renewal terms unless Bank of America, N.A. provides written notice of its intent to terminate the agreement at least 90 days prior to the end of the remaining renewal term. The Letter of Credit reduces the maximum available borrowings under the Revolving Credit Facility to \$498.5 million. Upon expiration of the Letter of Credit, maximum borrowings would return to \$500.0 million.

Senior Notes

On August 21, 2018, the Company completed a \$400.0 million offering of the 2026 Notes at an issue price of 100% of the principal amount in a private placement for resale to qualified institutional buyers. The 2026 Notes bear interest at an annual rate of 5.750%, payable semi-annually in arrears on February 15 and August 15 of each year, which commenced on February 15, 2019. The 2026 Notes will mature on August 15, 2026.

Maturities on debt outstanding at December 31, 2022, are as follows (in thousands):

Fiscal Year Ending December 31,

2023	\$	69,906
2024		627,823
2025		—
2026		400,000
2027		—
Thereafter		—
Total	\$	<u>1,097,729</u>

The Revolving Credit Facility and 2026 Notes do not amortize. The Term Loans do amortize, with principal payable in consecutive quarterly installments.

The Credit Agreement and 2026 Notes contain certain customary affirmative covenants and negative covenants that limit or restrict, subject to certain exceptions, the incurrence of liens, indebtedness of subsidiaries, mergers, advances, investments, acquisitions, transactions with affiliates, change in nature of business, and the sale of the assets. In addition, the Credit Agreement and 2026 Notes contain certain customary mandatory prepayment provisions. The Company is also required to maintain a consolidated leverage ratio at or below a specified amount and an interest coverage ratio at or above a specified amount. As specified in the Credit Agreement and 2026 Notes agreement, if certain events occur and continue, the Company may be required to repay all amounts outstanding under the Credit Facility and 2026 Notes. As of December 31, 2022, and at all times during the period, the Company was in compliance with its financial debt covenants.

Total debt is comprised of the following (in thousands):

	December 31,	
	2022	2021
Term loans	\$ 592,729	\$ 678,160
Revolving credit facility	105,000	—
5.750% Senior Notes, due August 2026	400,000	400,000
Debt issuance costs	(7,857)	(12,418)
Total debt	<u>1,089,872</u>	<u>1,065,742</u>
Less: current portion of term loans	69,906	50,431
Less: current portion of debt issuance costs	(4,385)	(4,561)
Total long-term debt	<u>\$ 1,024,351</u>	<u>\$ 1,019,872</u>

Overdraft Facility

In 2019, the Company and ACI Payments, Inc. entered in to an uncommitted overdraft facility with Bank of America, N.A. The overdraft facility bears interest at the federal funds effective rate plus 2.25% based on the Company's average outstanding balance and the frequency in which overdrafts occur. The overdraft facility acts as a secured loan under the terms of the Credit Agreement to provide an additional funding mechanism for timing differences that can occur in the bill payment settlement process. Amounts outstanding on the overdraft facility are included in other current liabilities in the consolidated balance sheet. As of December 31, 2022, there was \$75.0 million available and no amount outstanding on the overdraft facility. As of December 31, 2021, there was no amount outstanding on the overdraft facility.

Other

The Company finances certain multi-year license agreements for internal-use software. Upon execution, these arrangements are treated as a non-cash investing and financing activity for purposes of the consolidated statements of cash flows. During the year ended December 31, 2022, the Company financed certain multi-year license agreements for internal-use software for \$10.7 million, with annual payments through April 2024. As of December 31, 2022, \$9.3 million was outstanding under these and other license agreements previously entered into, of which \$5.8 million and \$3.5 million is included in other current liabilities and other noncurrent liabilities, respectively, in the consolidated balance sheet. As of December 31, 2021, \$2.9 million was outstanding, all of which is included in other current liabilities in the consolidated balance sheet.

5. Software and Other Intangible Assets

The carrying amount and accumulated amortization of the Company's software assets subject to amortization at each balance sheet date are as follows (in thousands):

	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Balance	Gross Carrying Amount	Accumulated Amortization	Net Balance
Software for internal use	\$ 454,171	\$ (325,062)	\$ 129,109	\$ 440,242	\$ (283,109)	\$ 157,133
Software for resale	124,257	(124,257)	—	127,904	(127,255)	649
Total software	\$ 578,428	\$ (449,319)	\$ 129,109	\$ 568,146	\$ (410,364)	\$ 157,782

Software for internal use amortization expense recorded during the years ended December 31, 2022, 2021, and 2020, totaled \$68.0 million, \$69.3 million, and \$70.0 million, respectively. These software amortization expense amounts are reflected in depreciation and amortization in the consolidated statements of operations.

Software for resale amortization expense recorded during the years ended December 31, 2022, 2021, and 2020, totaled \$0.7 million, \$6.2 million, and \$8.5 million, respectively. These software amortization expense amounts are reflected in cost of revenue in the consolidated statements of operations.

The carrying amount and accumulated amortization of the Company's other intangible assets subject to amortization at each balance sheet date are as follows (in thousands):

	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Balance	Gross Carrying Amount	Accumulated Amortization	Net Balance
Customer relationships	\$ 444,749	\$ (219,057)	\$ 225,692	\$ 507,962	\$ (230,152)	\$ 277,810
Trademarks and trade names	21,678	(18,672)	3,006	23,839	(18,645)	5,194
Total other intangible assets	\$ 466,427	\$ (237,729)	\$ 228,698	\$ 531,801	\$ (248,797)	\$ 283,004

Other intangible assets amortization expense recorded during the years ended December 31, 2022, 2021, and 2020, totaled \$35.5 million, \$37.0 million, and \$37.1 million, respectively.

Based on capitalized intangible assets as of December 31, 2022, estimated amortization expense amounts in future fiscal years are as follows (in thousands):

Fiscal Year Ending December 31,	Software Amortization	Other Intangible Assets Amortization
2023	\$ 55,003	\$ 33,710
2024	36,258	29,318
2025	25,014	20,938
2026	9,859	20,938
2027	1,638	20,696
Thereafter	1,337	103,098
Total	<u>\$ 129,109</u>	<u>\$ 228,698</u>

6. Stock-Based Compensation Plans

Employee Stock Purchase Plan

On April 6, 2017, the board approved the 2017 Employee Stock Purchase Plan ("2017 ESPP"), which was approved by shareholders at the 2017 Annual Shareholder meeting. The 2017 ESPP provides employees with an opportunity to purchase shares of the Company's common stock. Under the Company's 2017 ESPP, a total of 3,000,000 shares of the Company's common stock have been reserved for issuance to eligible employees. Participating employees are permitted to designate up to the lesser of \$25,000 or 10% of their annual base compensation for the purchase of common stock under the ESPP. Purchases under the ESPP are made one calendar month after the end of each fiscal quarter. The price for shares of common stock purchased under the ESPP is 85% of the stock's fair market value on the last business day of the three-month participation period.

Additionally, the discount offered pursuant to the Company's ESPP discussed above is 15%, which exceeds the 5% non-compensatory guideline in ASC 718 and exceeds the Company's estimated cost of raising capital. Consequently, the entire 15% discount to employees is deemed to be compensatory for purposes of calculating expense using a fair value method. Compensation expense related to the ESPP for the years ended December 31, 2022, 2021, and 2020, was approximately \$0.6 million, \$0.6 million, and \$0.7 million, respectively.

Stock Incentive Plans – Active Plans

2020 Equity and Incentive Compensation Plan

On June 9, 2020, upon recommendation of the board, stockholders approved the ACI Worldwide, Inc. 2020 Equity and Incentive Compensation Plan (the "2020 Plan"). The 2020 Plan authorizes the board to provide for equity-based compensation in the form of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, dividend equivalents, and certain other awards, including those denominated or payable in, or otherwise based on, the Company's common stock ("awards"). The purpose of the 2020 Plan is to provide incentives and rewards for service and/or performance by providing awards to non-employee directors, officers, other employees, and certain consultants and other service providers of the Company and its subsidiaries. Following the approval of the 2020 Plan, the 2016 Equity and Performance Incentive Plan (the "2016 Incentive Plan") was terminated. Termination of the 2016 Incentive Plan did not affect any equity awards outstanding under the 2016 Incentive Plan.

Subject to adjustment and share counting rules as described in the 2020 Plan, a total of 6,658,754 shares of common stock are available for awards granted under the 2020 Plan. Shares underlying certain awards under the 2020 Plan, the Company's 2005 Equity and Performance Incentive Plan (the "2005 Incentive Plan"), and the 2016 Incentive Plan (each including as amended or amended and restated) that are cancelled or forfeited, expire, are settled for cash, or are unearned after June 9, 2020, will again be available under the 2020 Plan.

The board generally will be able to amend the 2020 Plan, subject to stockholder approval in certain circumstances, as described in the 2020 Plan.

2016 Equity and Performance Incentive Plan

The Company's 2016 Incentive Plan provided for the grant of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, performance awards, and other awards. The 2016 Incentive Plan was adopted by the stockholders on June 14, 2016. Following the adoption of the 2016 Incentive Plan, the 2005 Incentive Plan was terminated. Subject to adjustment in certain circumstances, the maximum number of shares of common stock that was issued or transferred in connection with awards granted under the 2016 Incentive Plan was the sum of (i) 8,000,000 shares of common stock and (ii) any shares of common stock that were represented by options previously granted under the 2005 Incentive Plan which were subsequently forfeited, expired, or cancelled without delivery of common stock or which resulted in the forfeiture or relinquishment of common stock back to the Company.

2005 Equity and Performance Incentive Plan

The Company's 2005 Incentive Plan, as amended, under which shares of the Company's common stock were reserved for issuance to eligible employees or non-employee directors of the Company. The 2005 Incentive Plan provided for the grant of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, performance awards, and other awards. The maximum number of shares of the Company's common stock that was issued or transferred in connection with awards granted under the 2005 Incentive Plan was the sum of (i) 23,250,000 shares and (ii) any shares represented by outstanding options that had been granted under designated terminated stock option plans that were subsequently forfeited, expired, or are cancelled without delivery of the Company's common stock.

Stock Options

Stock options granted pursuant to the Company's incentive plans were granted at an exercise price not less than the market value per share of the Company's common stock on the date of grant. The term of the outstanding options may not exceed ten years nor be less than one year. Vesting of options is determined by the compensation committee of the board and the administrator of the respective plan and can vary based upon the individual award agreements. In addition, outstanding options do not have dividend equivalent rights associated with them.

A summary of stock option activity is as follows:

	Number of Shares	Weighted Average Exercise Price (\$)	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value of In-the-Money Options (\$)
Outstanding, December 31, 2021	1,640,319	\$ 18.42		
Exercised	(406,230)	16.65		
Expired	(12,870)	20.07		
Outstanding, December 31, 2022	1,221,219	\$ 19.00	2.69	\$ 4,887,760
Exercisable, December 31, 2022	1,221,219	\$ 19.00	2.69	\$ 4,887,760

The Company did not grant stock options during the years ended December 31, 2022, 2021, and 2020. The total intrinsic value of stock options exercised during the years ended December 31, 2022, 2021, and 2020, was \$2.9 million, \$11.4 million, and \$19.5 million, respectively.

Long-term Incentive Program Performance Share Awards

During the year ended December 31, 2017, pursuant to the Company's 2016 Incentive Plan, the Company granted long-term incentive program performance share awards ("LTIP performance shares"). These LTIP performance shares were earned based upon the achievement, over a specified period that must not be less than one year and was typically a three-year performance period, of performance goals related to (i) the compound annual growth over the performance period in the sales for the Company as determined by the Company, and (ii) the cumulative operating income or EBITDA over the performance period as determined by the Company. Up to 200% of the LTIP performance shares could be earned upon achievement of performance goals equal to or exceeding the maximum target levels for the performance goals over the performance period. On a quarterly basis, management evaluated the probability that the threshold performance goals would be achieved, if at all, and the anticipated level of attainment to determine the amount of compensation expense to record in the consolidated financial statements.

During the year ended December 31, 2021, the Company modified the performance target for the remaining outstanding long-term incentive program performance shares in consideration of the impact of the COVID-19 pandemic, resulting in additional stock-based compensation expense of approximately \$0.4 million. There are no LTIP performance shares outstanding as of December 31, 2022.

Total Shareholder Return Awards

During the years ended December 31, 2022, 2021, and 2020, pursuant to the 2020 Plan and 2016 Incentive Plan, the Company granted total shareholder return awards (“TSRs”). TSRs are performance shares that are earned, if at all, based upon the Company’s total shareholder return as compared to a group of peer companies over a three-year performance period. The award payout can range from 0% to 200%. To determine the grant date fair value of the TSRs, a Monte Carlo simulation model is used. The Company recognizes compensation expense for the TSRs over a three-year performance period based on the grant date fair value.

A summary of nonvested TSRs is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Nonvested as of December 31, 2021	1,154,721	\$ 40.10
Granted	520,020	42.99
Vested	(212,210)	45.86
Forfeited	(336,295)	41.62
Change in payout rate	(114,355)	45.92
Nonvested as of December 31, 2022	<u>1,011,881</u>	<u>\$ 39.21</u>

During the year ended December 31, 2022, a total of 212,210 TSRs awards granted in fiscal 2019 vested and achieved a payout rate of 65% based on the Company's total shareholder return as compared to a group of peer companies over a three-year performance period. The Company withheld 47,612 of those shares to pay the employees’ portion of the minimum payroll withholding taxes.

The fair value of TSRs granted during the years ended December 31, 2022, 2021, and 2020, were estimated on the date of grant using the Monte Carlo simulation model, acceptable under ASC 718, using the following weighted-average assumptions:

	Years Ended December 31,		
	2022	2021	2020
Expected life (years)	3.1	2.8	2.8
Risk-free interest rate	1.5 %	0.3 %	0.5 %
Volatility	40.0 %	41.2 %	31.4 %
Expected dividend yield	—	—	—

Restricted Share Units

During the years ended December 31, 2022, 2021, and 2020, pursuant to the 2020 Plan and the 2016 Incentive Plan, the Company granted restricted share unit awards (“RSUs”). RSUs generally have requisite service periods of three years and may vest 100% upon the three-year anniversary or in equal increments quarterly or annually. RSUs granted to the board vest one year from grant or as of the next annual shareholders meeting, whichever is earlier. Under each arrangement, RSUs are issued without direct cost to the employee on the vesting date. The Company estimates the fair value of the RSUs based upon the market price of the Company’s stock on the date of grant. The Company recognizes compensation expense for RSUs on a straight-line basis over the requisite service period.

A summary of nonvested RSUs is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Nonvested as of December 31, 2021	946,151	\$ 33.57
Granted	1,095,699	29.77
Vested	(534,759)	32.57
Forfeited	(323,067)	32.71
Nonvested as of December 31, 2022	1,184,024	\$ 30.73

During the year ended December 31, 2022, a total of 534,759 RSUs vested. The Company withheld 164,853 of those shares to pay the employees’ portion of the minimum payroll withholding taxes.

As of December 31, 2022, there was unrecognized compensation expense of \$24.9 million related to RSUs and \$13.9 million related to TSRs, which the Company expects to recognize over a weighted average period of 2.0 years and 1.9 years, respectively.

The Company recorded stock-based compensation expense recognized under ASC 718 during the years ended December 31, 2022, 2021, and 2020, of \$29.8 million, \$27.2 million, and \$29.6 million, respectively, with corresponding tax benefits of \$4.5 million, \$3.9 million, and \$5.4 million, respectively.

7. Common Stock and Treasury Stock

In 2005, the board approved a stock repurchase program authorizing the Company, as market and business conditions warrant, to acquire its common stock and periodically authorizes additional funds for the program. In December 2021, the board approved the repurchase of the Company’s common stock of up to \$250.0 million, in place of the remaining purchase amounts previously authorized.

The Company repurchased 8,624,238 shares for \$206.5 million under the program for the year ended December 31, 2022. Under the program to date, the Company has repurchased 57,981,733 shares for approximately \$926.2 million. As of December 31, 2022, the maximum remaining amount authorized for purchase under the stock repurchase program was \$9.8 million.

On February 24, 2023, the Board of Directors approved \$200.0 million for the stock repurchase program in place of the remaining purchase amounts previously authorized.

In 2006, the Company began to issue shares of treasury stock upon exercise of stock options, payment of earned performance shares (LTIP performance shares and TSRs), vesting of RSUs, and for issuances of common stock pursuant to the Company's ESPP. Treasury shares issued by award type are as follows:

	Years Ended December 31,		
	2022	2021	2020
Stock options	406,230	546,192	1,756,471
LTIP performance shares	—	10,457	668,240
TSRs	212,210	782,588	199,413
RSUs	534,759	522,618	431,504
ESPP	145,909	120,937	151,542
Total treasury shares issued	<u>1,299,108</u>	<u>1,982,792</u>	<u>3,207,170</u>

8. Earnings Per Share

Basic earnings per share is computed in accordance with ASC 260, *Earnings per Share*, based on weighted average outstanding common shares. Diluted earnings per share is computed based on basic weighted average outstanding common shares adjusted for the dilutive effect of stock options, RSUs, and certain contingently issuable shares for which performance targets have been achieved.

The following table reconciles the weighted average share amounts used to compute both basic and diluted earnings per share (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Weighted average shares outstanding:			
Basic weighted average shares outstanding	113,700	117,407	116,397
Add: Dilutive effect of stock options, RSUs, and contingently issuable shares	<u>538</u>	<u>1,240</u>	<u>1,682</u>
Diluted weighted average shares outstanding	<u>114,238</u>	<u>118,647</u>	<u>118,079</u>

The diluted earnings per share computation excludes 1.9 million, 1.3 million, and 1.5 million options to purchase shares, RSUs, and contingently issuable shares during the years ended December 31, 2022, 2021, and 2020, respectively, as their effect would be anti-dilutive.

Common stock outstanding as of December 31, 2022 and 2021, was 108,068,828 and 115,730,046, respectively.

9. Other, Net

Other, net is primarily comprised of foreign currency transaction gains and losses and, for the year ended December 31, 2022, the \$38.5 million gain on the divestiture. Other, net was \$43.4 million of income for the year ended December 31, 2022. Other, net was \$1.3 million and \$1.1 million of expense for the years ended December 31, 2021, and 2020, respectively.

10. Segment Information

The Company reports financial performance based on its operating segments, Banks, Merchants, and Billers, and analyzes Segment Adjusted EBITDA as a measure of segment profitability.

The Company's Chief Executive Officer is also CODM. The CODM, together with other senior management personnel, focus their review on consolidated financial information and the allocation of resources based on operating results, including revenues and Segment Adjusted EBITDA, for each segment, separate from corporate operations. No operating segments have been aggregated to form the reportable segments.

Banks. ACI provides payment solutions to large and mid-size banks globally for retail banking, real time, digital, and other payment services. These solutions transform banks' complex payment environments to speed time to market, reduce costs, and deliver a consistent experience to customers across channels while enabling them to prevent and rapidly react to fraudulent activity. In addition, they enable banks to meet the requirements of different real-time payments schemes and to quickly create differentiated products to meet consumer, business, and merchant demands.

Merchants. ACI’s support of merchants globally includes Tier 1 and Tier 2 merchants, online-only merchants and the payment service providers, independent selling organizations, value-added resellers, and acquirers who service them. These customers operate in a variety of verticals, including general merchandise, grocery, hospitality, dining, transportation, and others. The Company’s solutions provide merchants with a secure, omni-channel payments platform that gives them independence from third-party payment providers. They also offer secure solutions to online-only merchants that provide consumers with a convenient and seamless way to shop.

Billers. Within the billers segment, ACI provides electronic bill presentment and payment (“EBPP”) services to companies operating in the consumer finance, insurance, healthcare, higher education, utility, government, and mortgage categories. The solutions enable these customers to support a wide range of payment options and provide a convenient consumer payments experience that drives consumer loyalty and increases revenue.

Revenue is attributed to the reportable segments based upon customer. Expenses are attributed to the reportable segments in one of three methods, (1) direct costs of the segment, (2) labor costs that can be attributed based upon time tracking for individual projects, or (3) costs that are allocated. Allocated costs are generally marketing and sales related activities.

Segment Adjusted EBITDA is the measure reported to the CODM for purposes of making decisions on allocating resources and assessing the performance of the Company’s segments, and therefore, Segment Adjusted EBITDA is presented in conformity with ASC 280, *Segment Reporting*. Segment Adjusted EBITDA is defined as earnings (loss) from operations before interest, income tax expense (benefit), depreciation and amortization (“EBITDA”) adjusted to exclude net other income (expense).

Corporate and unallocated expenses includes global facilities and information technology costs and long-term product roadmap expenses in addition to corporate overhead costs that are not allocated to reportable segments. The overhead costs relate to human resources, finance, legal, accounting, and merger and acquisition activity. These costs along with depreciation and amortization and stock-based compensation are not considered when management evaluates segment performance.

The following is selected financial data for the Company’s reportable segments for the periods indicated (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Revenues			
Banks	\$ 638,585	\$ 625,125	\$ 558,498
Merchants	153,905	152,988	149,342
Billers	629,411	592,485	586,482
Total revenue	\$ 1,421,901	\$ 1,370,598	\$ 1,294,322
Segment Adjusted EBITDA			
Banks	\$ 371,017	\$ 372,949	\$ 331,445
Merchants	49,029	54,266	53,383
Billers	107,371	129,048	135,144
Depreciation and amortization	(127,328)	(133,393)	(140,316)
Stock-based compensation expense	(29,753)	(27,242)	(29,602)
Corporate and unallocated expenses	(166,501)	(185,731)	(205,310)
Interest, net	(40,646)	(33,538)	(45,002)
Other, net	43,446	(1,294)	(1,116)
Income before income taxes	\$ 206,635	\$ 175,065	\$ 98,626

Assets are not allocated to segments, and the Company’s CODM does not evaluate operating segments using discrete asset information.

The following is revenue by primary solution category for the Company's reportable segments for the periods indicated (in thousands):

	Year Ended December 31, 2022			
	Banks	Merchants	Billers	Total
Primary Solution Categories				
Bill Payments	\$ —	\$ —	\$ 629,411	\$ 629,411
Digital Business Banking	35,504	—	—	35,504
Merchant Payments	—	153,905	—	153,905
Fraud Management	47,421	—	—	47,421
Real-Time Payments	104,777	—	—	104,777
Issuing and Acquiring	450,883	—	—	450,883
Total	\$ 638,585	\$ 153,905	\$ 629,411	\$ 1,421,901

	Year Ended December 31, 2021			
	Banks	Merchants	Billers	Total
Primary Solution Categories				
Bill Payments	\$ —	\$ —	\$ 592,485	\$ 592,485
Digital Business Banking	60,398	—	—	60,398
Merchant Payments	—	152,988	—	152,988
Fraud Management	43,704	—	—	43,704
Real-Time Payments	77,922	—	—	77,922
Issuing and Acquiring	443,101	—	—	443,101
Total	\$ 625,125	\$ 152,988	\$ 592,485	\$ 1,370,598

	Year Ended December 31, 2020			
	Banks	Merchants	Billers	Total
Primary Solution Categories				
Bill Payments	\$ —	\$ —	\$ 586,482	\$ 586,482
Digital Business Banking	75,475	—	—	75,475
Merchant Payments	—	149,342	—	149,342
Fraud Management	32,942	—	—	32,942
Real-Time Payments	80,654	—	—	80,654
Issuing and Acquiring	369,427	—	—	369,427
Total	\$ 558,498	\$ 149,342	\$ 586,482	\$ 1,294,322

As discussed in Note 3, *Divestiture*, the Company divested its corporate online banking solution assets, which were included in the Digital Business Banking solution category.

The following is revenue by the Company's reportable segments for the periods indicated (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Banks			
Software as a service and platform as a service	\$ 48,932	\$ 57,339	\$ 69,254
License	336,028	310,758	232,143
Maintenance	184,017	193,332	194,400
Services	69,608	63,696	62,701
Total	<u>\$ 638,585</u>	<u>\$ 625,125</u>	<u>\$ 558,498</u>
Merchants			
Software as a service and platform as a service	\$ 124,631	\$ 124,933	\$ 113,854
License	12,106	9,015	14,659
Maintenance	15,934	16,846	16,981
Services	1,234	2,194	3,848
Total	<u>\$ 153,905</u>	<u>\$ 152,988</u>	<u>\$ 149,342</u>
Billers			
Software as a service and platform as a service	\$ 629,317	\$ 592,070	\$ 586,072
License	—	94	94
Maintenance	94	321	316
Services	—	—	—
Total	<u>\$ 629,411</u>	<u>\$ 592,485</u>	<u>\$ 586,482</u>

The following is the Company's revenue by geographic location for the periods indicated (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Revenue			
United States	\$ 851,712	\$ 869,081	\$ 830,511
Other	570,189	501,517	463,811
Total	<u>\$ 1,421,901</u>	<u>\$ 1,370,598</u>	<u>\$ 1,294,322</u>

The following is the Company's long-lived assets by geographic location for the periods indicated (in thousands):

	December 31,	
	2022	2021
Long-lived Assets		
United States	\$ 1,286,505	\$ 1,425,391
Other	754,847	745,138
Total	<u>\$ 2,041,352</u>	<u>\$ 2,170,529</u>

No single customer accounted for more than 10% of the Company's consolidated revenues during the years ended December 31, 2022, 2021, and 2020. No other country outside the United States accounted for more than 10% of the Company's consolidated revenues during the years ended December 31, 2022, 2021, and 2020.

11. Income Taxes

For financial reporting purposes, income (loss) before income taxes includes the following components (in thousands):

	Years Ended December 31,		
	2022	2021	2020
United States	\$ (11,751)	\$ 69,817	\$ 19,405
Foreign	218,386	105,248	79,221
Total	\$ 206,635	\$ 175,065	\$ 98,626

The expense (benefit) for income taxes consists of the following (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Federal			
Current	\$ 7,064	\$ 3,994	\$ (2,683)
Deferred	(353)	6,067	(3,477)
Total	6,711	10,061	(6,160)
State			
Current	7,993	7,592	2,514
Deferred	(3,500)	(1,498)	(1,758)
Total	4,493	6,094	756
Foreign			
Current	47,798	31,955	22,786
Deferred	5,456	(836)	8,584
Total	53,254	31,119	31,370
Total	\$ 64,458	\$ 47,274	\$ 25,966

Differences between the income tax expense computed at the statutory federal income tax rate and per the consolidated statements of operations are summarized as follows (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Tax expense at federal rate of 21%	\$ 43,393	\$ 36,764	\$ 20,711
State income taxes, net of federal benefit	2,351	4,816	321
Change in valuation allowance	71	1,228	2,459
Foreign tax rate differential	(12,949)	(5,376)	(1,809)
Unrecognized tax benefit increase (decrease)	2,039	858	(4,405)
Tax effect of foreign operations	15,336	16,151	11,373
Tax benefit of research & development	(3,365)	(4,123)	(2,173)
Performance-based compensation	2,266	(1,887)	(2,624)
Tax effect of divestiture	14,522	—	—
Other	794	(1,157)	2,113
Income tax provision	\$ 64,458	\$ 47,274	\$ 25,966

The countries having the greatest impact on the tax rate adjustment line shown in the above table as “Foreign tax rate differential” for the three years reported are Ireland, Singapore, and the United Kingdom.

The deferred tax assets and liabilities result from differences in the timing of the recognition of certain income and expense items for tax and financial accounting purposes. The sources of these differences at each balance sheet date are as follows (in thousands):

	December 31,	
	2022	2021
Deferred income tax assets:		
Net operating loss carryforwards	\$ 16,763	\$ 18,826
Tax credits	18,497	37,672
Compensation	15,272	17,133
Deferred revenue	10,168	16,333
Operating lease	10,202	10,236
Capitalized research and development	23,891	—
Other	9,533	9,988
Gross deferred income tax assets	104,326	110,188
Less: valuation allowance	(11,384)	(11,324)
Net deferred income tax assets	<u>\$ 92,942</u>	<u>\$ 98,864</u>
Deferred income tax liabilities:		
Depreciation and amortization	\$ (33,692)	\$ (41,465)
Operating lease right-of-use asset	(8,885)	(8,791)
Unbilled revenue	(9,566)	(15,596)
Withholding tax liability	(27,432)	(18,356)
Total deferred income tax liabilities	(79,575)	(84,208)
Net deferred income taxes	<u>\$ 13,367</u>	<u>\$ 14,656</u>
Deferred income taxes / liabilities included in the balance sheet are:		
Deferred income tax asset – noncurrent	\$ 53,738	\$ 50,778
Deferred income tax liability – noncurrent	(40,371)	(36,122)
Net deferred income taxes	<u>\$ 13,367</u>	<u>\$ 14,656</u>

The deferred tax asset and liabilities disclosure above reflects a \$18.4 million withholding tax liability reclass for the year ended December 31, 2021. Prior year reported \$18.4 million related to withholding tax liability as Tax credits within the deferred tax asset section. This amount is now reported separately within the deferred tax liability section.

In assessing the realizability of deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The Company considers projected future taxable income, carryback opportunities, and tax planning strategies in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods which the deferred tax assets are deductible, the Company believes it is more likely than not that it will realize the benefits of these deductible differences, net of the valuation allowances recorded.

At December 31, 2022, the Company had domestic federal tax net operating losses (“NOLs”) of \$53.2 million, of which \$2.9 million may be utilized over an indefinite life, with the remainder beginning to expire in 2023. The Company had deferred tax assets equal to \$0.7 million related to domestic state tax NOLs which will begin to expire in 2023. The Company does not have any valuation allowance against the federal tax NOLs but has provided a \$0.6 million valuation allowance against the deferred tax asset associated with the state NOLs. The Company had foreign tax NOLs of \$17.3 million, of which \$17.0 million may be utilized over an indefinite life, with the remainder expiring over the next seven years. The Company has provided a \$0.1 million valuation allowance against the deferred tax asset associated with the foreign NOLs.

The Company had U.S. foreign tax credit carryforwards at December 31, 2022, of \$2.1 million, for which a \$2.1 million valuation allowance has been provided. The U.S. foreign tax credits will begin to expire in 2027. The Company had foreign tax credit carryforwards in other foreign jurisdictions at December 31, 2022, of \$2.3 million, of which \$1.2 million may be utilized over an indefinite life, with the remainder expiring over the next seven years. The Company has provided a \$1.2 million valuation allowance against the tax benefit associated with these foreign credits. The Company also has domestic federal and state general business tax credit carryforwards at December 31, 2022, of \$20.5 million and \$0.7 million, respectively, which will begin to expire in 2023.

The Company has not provided deferred taxes on \$37.8 million of unremitted earnings of its Indian subsidiaries that are considered permanently reinvested. The company has not estimated the deferred tax liability on these earnings as such estimation is not practicable to determine or is immaterial to the financial statements. As of December 31, 2022, deferred taxes for non-United States withholding and other taxes were provided on \$26.1 million of unremitted earnings of non-United States subsidiaries that may be remitted to the United States. As of December 31, 2022 and 2021, we have recorded a deferred tax liability of \$1.3 million and \$1.5 million, respectively, related to these non-United States earnings that may be remitted.

The unrecognized tax benefit at December 31, 2022 and 2021, was \$26.4 million and \$24.5 million, respectively, of which \$19.9 million and \$16.9 million, respectively, are included in other noncurrent liabilities in the consolidated balance sheets. Of the total unrecognized tax benefit amounts at December 31, 2022 and 2021, \$25.0 million and \$23.5 million, respectively, represent the net unrecognized tax benefits that, if recognized, would favorably impact the effective income tax rate in the respective years.

A reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31 is as follows (in thousands):

	2022	2021	2020
Balance of unrecognized tax benefits at beginning of year	\$ 24,510	\$ 24,310	\$ 29,000
Increases for tax positions of prior years	2,349	1,533	4,219
Decreases for tax positions of prior years	(3,659)	(65)	—
Increases for tax positions established for the current period	9,320	2,272	3,912
Decreases for settlements with taxing authorities	(63)	(620)	(285)
Reductions resulting from lapse of applicable statute of limitation	(5,833)	(2,876)	(12,630)
Adjustment resulting from foreign currency translation	(216)	(44)	94
Balance of unrecognized tax benefits at end of year	<u>\$ 26,408</u>	<u>\$ 24,510</u>	<u>\$ 24,310</u>

The Company files income tax returns in the U.S. federal jurisdiction, various state and local jurisdictions, and many foreign jurisdictions. The United States, Ireland, and the United Kingdom are the main taxing jurisdictions in which the Company operates. The years open for audit vary depending on the tax jurisdiction. In the United States, the Company's federal tax return for years following 2018 are open for audit. In the foreign jurisdictions, the tax returns open for audit generally vary by jurisdiction between 2005 and 2021.

The Company's Indian income tax returns covering fiscal years ended March 31, 2005, 2014, 2016 through 2018, and 2020 are under audit by the Indian tax authority. Other foreign subsidiaries could face challenges from various foreign tax authorities. It is not certain that the local authorities will accept the Company's tax positions. The Company believes its tax positions comply with applicable tax law and intends to vigorously defend its positions. However, differing positions on certain issues could be upheld by tax authorities, which could adversely affect the Company's financial condition and results of operations.

The Company believes it is reasonably possible that the total amount of unrecognized tax benefits will decrease within the next 12 months by approximately \$4.6 million due to the settlement of various audits and the expiration of statutes of limitations. The Company accrues interest related to uncertain tax positions in interest expense or interest income and recognizes penalties related to uncertain tax positions in other income or other expense. As of December 31, 2022 and 2021, \$0.6 million and \$1.1 million, respectively, is accrued for the payment of interest and penalties related to income tax liabilities. The aggregate amount of interest and penalties expense (benefit) recorded in the statements of operations for the years ended December 31, 2022, 2021, and 2020, was \$(0.5) million, \$(0.1) million, and \$0.1 million, respectively.

12. Leases

The Company has operating leases primarily for corporate offices and data centers. Excluding office leases, leases with an initial term of 12-months or less that do not include an option to purchase the underlying asset are not recorded on the consolidated balance sheet and are expensed on a straight-line basis over the lease term.

The Company's leases typically include certain renewal options to extend the leases for up to 25 years, some of which include options to terminate the leases within one year. The exercise of lease renewal options is at the Company's sole discretion. The Company combines lease and non-lease components of its leases and currently has no leases with options to purchase the leased property. Payments of maintenance and property tax costs paid by the Company are accounted for as variable lease cost, which are expensed as incurred.

The components of lease cost are as follows (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Operating lease cost	\$ 12,506	\$ 12,369	\$ 25,148
Variable lease cost	2,771	3,140	3,588
Sublease income	—	—	(134)
Total lease cost	\$ 15,277	\$ 15,509	\$ 28,602

Supplemental cash flow information related to leases is as follows (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 14,020	\$ 19,623	\$ 18,827
Right-of-use assets obtained in exchange for new lease obligations:			
Operating leases	\$ 7,693	\$ 20,944	\$ 11,431

Supplemental balance sheet information related to leases is as follows (in thousands, except lease term and discount rate):

	December 31,	
	2022	2021
Assets:		
Operating lease right-of-use assets	\$ 40,031	\$ 47,825
Liabilities:		
Other current liabilities	\$ 11,218	\$ 11,518
Operating lease liabilities	33,910	43,346
Total operating lease liabilities	\$ 45,128	\$ 54,864
Weighted average remaining operating lease term (years)	5.53	7.04
Weighted average operating lease discount rate	3.21 %	3.22 %

The Company uses its incremental borrowing rate as the discount rate. As the Company enters into operating leases in multiple jurisdictions and denominated in currencies other than the U.S. dollar, judgment is used to determine the Company's incremental borrowing rate including (1) conversion of its subordinated borrowing rate (using published yield curves) to an unsubordinated and collateralized rate, (2) adjusting the rate to align with the term of each lease, and (3) adjusting the rate to incorporate the effects of the currency in which the lease is denominated.

Maturities on lease liabilities as of December 31, 2022, are as follows (in thousands):

Fiscal Year Ending December 31,

2023	\$	12,565
2024		9,460
2025		7,333
2026		5,450
2027		4,586
Thereafter		9,645
Total lease payments		49,039
Less: imputed interest		3,911
Total lease liability	\$	45,128

As of December 31, 2022, the Company has additional operating leases for office facilities that have not yet commenced with minimum lease payments of \$0.6 million. These operating leases will commence in fiscal year 2023 with lease terms of one year to three years.

13. Commitments and Contingencies

In accordance with ASC 460, *Guarantees*, the Company recognizes the fair value for guarantee and indemnification arrangements it issues or modifies if these arrangements are within the scope of the interpretation. In addition, the Company must continue to monitor the conditions that are subject to the guarantees and indemnifications, as required under the previously existing generally accepted accounting principles, to identify if a loss has occurred. If the Company determines it is probable a loss has occurred, then any estimable loss would be recognized under those guarantees and indemnifications. Under its customer agreements, the Company may agree to indemnify, defend, and hold harmless its customers from and against certain losses, damages, and costs arising from claims alleging that the use of its software infringes the intellectual property of a third-party. Historically, the Company has not been required to pay material amounts in connection with claims asserted under these provisions, and accordingly, the Company has not recorded a liability relating to such provisions.

Under its customer agreements, the Company also may represent and warrant to customers that its software will operate substantially in conformance with its documentation, and that the services the Company performs will be performed in a workmanlike manner by personnel reasonably qualified by experience and expertise to perform their assigned tasks. Historically, only minimal costs have been incurred relating to the satisfaction of warranty claims. In addition, from time to time, the Company may guarantee the performance of a contract on behalf of one or more of its subsidiaries, or a subsidiary may guarantee the performance of a contract on behalf of another subsidiary.

Other guarantees include promises to indemnify, defend, and hold harmless the Company's executive officers, directors, and certain other key officers. The Company's certificate of incorporation provides that it will indemnify and advance expenses to its directors and officers to the maximum extent permitted by Delaware law. The indemnification covers any expenses and liabilities reasonably incurred by a person, by reason of the fact that such person is, was, or has agreed to be a director or officer, in connection with the investigation, defense, and settlement of any threatened, pending, or completed action, suit, proceeding, or claim. The Company's certificate of incorporation authorizes the use of indemnification agreements, and the Company enters into such agreements with its directors and certain officers from time to time. These indemnification agreements typically provide for a broader scope of the Company's obligation to indemnify the directors and officers than set forth in the certificate of incorporation. The Company's contractual indemnification obligations under these agreements are in addition to the respective directors' and officers' rights under the certificate of incorporation or under Delaware law.

Pending and Threatened Legal Proceedings

In April 2021, ACH files associated with one of the Company's mortgage servicing customers were inadvertently transmitted into the ACH network during a test of the Company's payment processing system. The Company took immediate correction action and issued reversing ACH files, restoring affected accounts.

The Company was named as a defendant in seven class action lawsuits filed in various federal courts purportedly on behalf of consumers whose mortgage accounts were affected by the inadvertent ACH file transmission. The Company entered into an agreement, which is subject to final court approval and other conditions, to settle these lawsuits for the Company's establishment of a \$5.0 million fund out of which payments would be made to class members and the Company's payment of attorneys' fees and administrative costs, plus additional funds totaling \$1.5 million that could be required to be established under certain circumstances. There can be no assurance that the conditions to settlement will be satisfied, in which event the class action litigation could proceed.

The inadvertent ACH file transmission also gave rise to investigations by the U.S. Consumer Financial Protection Bureau (the "CFPB") and state attorneys general in 49 states, the District of Columbia, and certain U.S. territories as well as money transmission regulators in 46 states, the District of Columbia, and certain U.S. territories. A lead group of attorneys general and regulatory representatives of nine states have led the state investigations of the matter. The Company has cooperated with the CFPB and state authorities, including furnishing documents and information to them. There can be no assurance that the matters will be resolved without litigation, and the matters could result in the impositions of material penalties and damages as well as burdensome and costly remedies.

The Company has asserted claims for insurance coverage with respect to potential losses associated with the inadvertent ACH file transmission. There is no assurance as to the amount of insurance that may be available or its effect on the availability or cost of insurance in the future.

The Company is from time to time subject to other claims, litigation and investigations. While we believe that none of the currently pending matters is reasonably likely to have material adverse effect on us, there can be no assurance with respect thereto or future matters.

14. Employee Benefit Plans

The Company offers various defined contribution plans for our U.S. and non-U.S. employees. Total defined contribution plan expense was \$13.4 million, \$13.0 million, and \$13.5 million during the years ended December 31, 2022, 2021, and 2020, respectively.

ACI 401(k) Plan

The ACI 401(k) Plan is a defined contribution plan covering all domestic employees of the Company. Participants may contribute up to 75% of their annual eligible compensation up to a maximum of \$20,500 (for employees who are under the age of 50 on December 31, 2022) or a maximum of \$27,000 (for employees aged 50 or older on December 31, 2022). After one year of service, the Company matches 100% of the first 4% of eligible participant contributions and 50% of the next 4% of eligible participant contributions, not to exceed \$5,000 per employee annually. Company contributions charged to expense were \$6.2 million, \$6.0 million, and \$6.3 million during the years ended December 31, 2022, 2021, and 2020, respectively.

ACI Worldwide EMEA Group Personal Pension Scheme

The ACI Worldwide EMEA Group Personal Pension Scheme is a defined contribution plan covering substantially all ACI Worldwide (EMEA) Limited ("ACI-EMEA") employees. For those ACI-EMEA employees who elect to participate in the plan, the Company contributes a minimum of 8.5% of eligible compensation to the plan for employees employed at December 1, 2000 or from 6% to 10% of eligible compensation for employees employed subsequent to December 1, 2000. ACI-EMEA contributions charged to expense were \$1.6 million, \$1.6 million, and \$1.5 million, during the years ended December 31, 2022, 2021, and 2020, respectively.

EXHIBIT INDEX

Exhibit No.	Description
3.01	(1) 2013 Amended and Restated Certificate of Incorporation of the Company
3.02	(2) Amended and Restated Bylaws of the Company
4.01	(3) Form of Common Stock Certificate (P)
4.02	(4) Indenture, dated as of August 21, 2018, among ACI Worldwide, Inc., the guarantors listed therein, and Wilmington Trust, National Association, as trustee
4.03	Form of 5.750% Senior Notes due 2026 (Included as Exhibit A to Exhibit 4.02)
4.04	Description of Securities
10.01	(5)* ACI Worldwide, Inc. 2017 Employee Stock Purchase Plan
10.02	(6)* ACI Worldwide, Inc. 2005 Equity and Performance Incentive Plan, as amended
10.03	(7)* Form of Indemnification Agreement between the Company and certain officers, including executive officers
10.04	(8)* ACI Worldwide, Inc. 2013 Executive Management Incentive Compensation Plan
10.05	(9)* Amended and Restated Deferred Compensation Plan
10.06	(10) Amended and Restated Credit Agreement, dated February 24, 2017, by and among ACI Worldwide, Inc., Bank of America, N.A. and the lenders that are party thereto
10.07	(11)* ACI Worldwide, Inc. 2016 Equity and Performance Incentive Plan
10.08	(12)* Form of 2016 Restricted Share Unit Award Agreement for the Company's 2016 Equity and Performance Incentive Plan
10.09	(13)* Form of 2016 Performance Share Award Agreement (rTSR Performance Share Awards)
10.10	(14) Amendment Agreement to the Amended and Restated Credit Agreement, dated April 5, 2019
10.11	(15)* Form of Change in Control Employment Agreement between ACI Worldwide, Inc. and certain officers, including executive officers
10.12	(16)* Form of 2015 Nonqualified Stock Option Agreement - Employee for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.13	(17)* Form of 2016 Nonqualified Stock Option Agreement for the Company's 2016 Equity and Performance Incentive Plan, as amended
10.14	(18)* ACI Worldwide, Inc. 2020 Equity and Incentive Compensation Plan
10.15	(19)* Form of Restricted Share Unit Award Agreement for the Company's 2020 Equity and Incentive Compensation Plan
10.16	(20)* Form of Performance Share Award Agreement for the Company's 2020 Equity and Incentive Compensation Plan
10.17	(21)* Form of Director Restricted Share Unit Award Agreement for the Company's 2020 Equity and Incentive Compensation Plan
10.18	(22)* Severance Agreement between the Company and Odilon Almeida*
10.19	Transition Services Agreement between the Company and Odilon Almeida*
10.20	Interim CEO Letter Agreement*
10.21	Special Advisor Assignment Letter between the Company and Jeremy Wilmot*
21.01	Subsidiaries of the Registrant (filed herewith)
23.01	Consent of Independent Registered Public Accounting Firm (filed herewith) – Deloitte & Touche LLP
31.01	Certification of Chief Executive Officer pursuant to S.E.C. Rule 13a-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.02	Certification of Chief Financial Officer pursuant to S.E.C. Rule 13a-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.01	** Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith)
32.02	** Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith)
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.

101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

- (1) Incorporated herein by reference to Exhibit 3.1 to the registrant's current report on Form 8-K filed August 17, 2017.
- (2) Incorporated herein by reference to Exhibit 3.1 to the registrant's current report on Form 8-K/A filed April 1, 2022.
- (3) Incorporated herein by reference to Exhibit 4.01 to the registrant's Registration Statement No. 33-88292 on Form S-1.
- (4) Incorporated herein by reference to Exhibit 4.1 to the registrant's current report on Form 8-K filed August 21, 2018.
- (5) Incorporated herein by reference to Annex A to the registrant's Proxy Statement filed on April 27, 2017.
- (6) Incorporated herein by reference to Exhibit 10.07 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2014.
- (7) Incorporated herein by reference to Exhibit 10.10 to the registrant's annual report on Form 10-K for the year ended December 31, 2009.
- (8) Incorporated herein by reference to Annex A to the registrant's Proxy Statement for its 2013 Annual Meeting (File No. 000-25346) filed on April 29, 2013.
- (9) Incorporated herein by reference to Exhibit 4.3 to the registrant's Registration Statement No. 333-169293 on Form S-8 filed September 9, 2010
- (10) Incorporated herein by reference to Exhibit 10.1 to the registrant's current report on Form 8-K filed February 27, 2017.
- (11) Incorporated herein by reference to Exhibit 10.1 to the registrant's current report on Form 8-K filed June 20, 2016.
- (12) Incorporated herein by reference to Exhibit 10.26 to the registrant's annual report on Form 10-K for the year ended December 31, 2017.
- (13) Incorporated herein by reference to Exhibit 10.4 to the registrant's current report on Form 8-K filed March 8, 2019.
- (14) Incorporated herein by reference to Exhibit 10.1 to the registrant's current report on Form 8-K filed April 11, 2019.
- (15) Incorporated herein by reference to Exhibit 10.2 to the registrant's current report on Form 8-K filed February 20, 2020.
- (16) Incorporated herein by reference to Exhibit 10.03 to the registrant's quarterly report on Form 10-Q for the period ended March 31, 2020.
- (17) Incorporated herein by reference to Exhibit 10.04 to the registrant's quarterly report on Form 10-Q for the period ended March 31, 2020.
- (18) Incorporated herein by reference to Appendix A to the registrant's definitive proxy statement on Schedule 14A (Commission File No. 000-25346) filed April 24, 2020.
- (19) Incorporated herein by reference to Exhibit 10.06 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2020.
- (20) Incorporated herein by reference to Exhibit 10.07 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2020.
- (21) Incorporated herein by reference to Exhibit 10.01 to the registrant's current report on Form 8-K filed June 8, 2021.
- (22) Incorporated herein by reference to Exhibit 10.01 to the registrant's current report on Form 8-K filed April 19, 2022.

* Denotes exhibit that constitutes a management contract, or compensatory plan or arrangement.

** This certification is not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the Company specifically incorporates it by reference.

DESCRIPTION OF REGISTRANT'S SECURITIES

General

The following is a brief description of the capital stock of ACI Worldwide, Inc. ("us", "our", "we", or the "Company"). This description is not complete and is subject to and qualified in its entirety by reference to the complete text of our 2013 Amended and Restated Certificate of Incorporation, as amended and restated from time to time ("Certificate of Incorporation"), and our Amended and Restated Bylaws, as amended and restated from time to time ("Bylaws"), both of which were previously filed with the U.S. Securities and Exchange Commission and incorporated by reference as an exhibit to this Annual Report on Form 10-K of which this Exhibit 4.[04] is a part. We encourage you to read our Certificate of Incorporation, our Bylaws and the applicable provisions of the Delaware General Corporation Law carefully.

The Company's Certificate of Incorporation provides that it may issue 280,000,000 shares of common stock, par value \$0.005 per share ("Common Stock"), and 5,000,000 shares of preferred stock, par value \$0.01 per share ("Preferred Stock").

Listing and Transfer Agent

Our Common Stock is listed on The Nasdaq Global Select Market under the symbol "ACIW." EQ Shareowners Services is our transfer agent.

Common Stock

Subject to the rights of the holders of any series of Preferred Stock, holders of Common Stock are entitled to one vote per share of record on each matter submitted to a vote of stockholders and to vote together as a single class for the election of directors and in respect of other corporate matters. At a meeting of stockholders at which a quorum is present, the affirmative vote of the holders of a majority of the stock present in person or represented by proxy and entitled to vote on the subject matter and which has actually been voted will be the act of the stockholders, unless otherwise provided in the Certificate of Incorporation, the Bylaws, a Preferred Stock Designation (as defined in the Certificate of Incorporation) or by law. The election of directors is determined by a plurality vote. Holders of Common Stock do not have cumulative voting rights, dividend rights, preemptive rights, liquidation rights or conversion rights. The rights, preferences and privileges of holders of Common stock are subject to, and may be adversely affected by, the rights of the holders of any series of Preferred Stock.

Preferred Stock

The Board of Directors of the Company (the "Board") has the authority to issue Preferred Stock from time to time in one or more series. The Board has the authority to determine the terms of each series of Preferred Stock, within the limits of the Certificate of Incorporation and the Delaware General Corporation Law, including the number of shares in a series, dividend rights, preemptive rights, sinking fund provisions, liquidation rights, redemption rights, conversion rights and voting rights. The rights, preferences and privileges of holders of Common Stock are subject to the rights of the holders of Preferred Stock.

Anti-takeover Effects of Certain Provisions of the Certificate of Incorporation, Bylaws and the Delaware General Corporation Law

The provisions of the Company's Certificate of Incorporation and Bylaws and the Delaware General Corporation Law summarized below may have an anti-takeover effect and may delay, defer or prevent a tender offer or takeover attempt.

Authorized but Unissued Common Stock and Preferred Stock

The Company's shares of authorized and unissued Common Stock will be available for future issuance without additional stockholder approval. The existence of authorized but unissued shares of Common Stock may enable our Board to render more difficult or to discourage an attempt to obtain control of the Company by means of a merger, tender offer or otherwise. Additionally, our Certificate of Incorporation also authorizes our Board, without further stockholder approval, to issue one or more series of Preferred Stock, which could have voting and conversion rights that adversely affect or dilute the voting power of the holders of our Common Stock.

Special Meetings of the Stockholders

Special meetings of the stockholders may only be called by the Company's (i) Chairman, (ii) President, or (iii) Secretary within ten calendar days after a written request of a majority of the total number of directors of the Board that the Company would have if there were no vacancies. Requests for a special meeting must be sent to the Company's Chairman and Secretary and must state the purpose of the proposed meeting.

Notice Provisions Relating to Stockholder Proposals and Nominees

The Company's Bylaws contain provisions requiring stockholders to give advance written notice to the Company of a director nomination in order to have the nominee considered at an annual meeting of stockholders. The notice for a shareholder proposal must be received not less than 90 days prior nor more than 120 days prior to the first anniversary of the date of the immediately preceding year's annual meeting of stockholders.

Board of Directors

The Bylaws provide that the authorized number of directors of the Board will be determined from time to time only by a vote of a majority of the entire Board, but which authorized number will be no less than three and no more than ten.

Our Certificate of Incorporation and Bylaws provide that, subject to the rights of the holders of any series of Preferred Stock, vacancies on the Board, whether resulting from newly created directorships or from death, resignation, disqualification or removal, will be filled solely by the affirmative vote of a majority of the remaining Directors then in office, even if less than a quorum of the Board, or by a sole remaining director.

Delaware Anti-takeover Law

The Company is subject to Section 203 of the Delaware General Corporation Law ("Section 203"), an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date such person became an interested stockholder, unless the business combination or the transaction in which such person became an interested stockholder is approved in a prescribed manner. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. Generally, an "interested stockholder" is a person that, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the Board, including discouraging attempts that might result in a premium over the market price for the shares of Common Stock.

Transition Services Agreement

THIS TRANSITION SERVICES AGREEMENT (the “**Agreement**”) is entered into as of November 28, 2022 (the “**Effective Date**”) by and between ACI Worldwide, Inc., a Delaware corporation (the “**Company**”), and Odilon Almeida (“**Consultant**”) (together, the “**Parties**”).

1. Retention as a Consultant. The Company hereby retains Consultant to serve as an independent consultant to the Company, on the terms and conditions set forth in this Agreement.
2. Transition Period. The term of this Agreement shall commence on November 8, 2022 and shall terminate on November 30, 2022 (the “**Transition Period**”).
3. Transition Services. During the Transition Period, Consultant will be reasonably available to consult and cooperate with, answer questions from and provide advice and counseling to, the Company’s Interim Chief Executive Officer (“**Interim CEO**”) with respect to matters as requested by the Interim CEO on an as-needed basis (the “**Transition Services**”). Any Transition Services will be provided remotely and the Company will not be providing an office or other support services to Consultant. If any access to any Company facilities will be necessary, the Interim CEO will arrange for the Consultant to have such access. Transition Services will not involve any communication with third parties on behalf of the Company.
4. Independent Contractor Status. The Parties acknowledge and agree that Consultant shall serve as an independent contractor and not as an employee of the Company. The Parties hereby covenant with one another to treat the engagement of Consultant as that of an independent contractor, and not that of an employee of the Company, for all purposes including, but not limited to, (a) U.S. and non-U.S. Federal, state and local income, business and employment taxes in any jurisdiction, (b) statutory and fringe benefits and (c) insurance. Consultant agrees that he is not, and will not claim or represent him to be, an employee or agent of the Company, that Consultant has no authority to enter into any contracts or agreements on behalf of the Company or to otherwise bind the Company in any manner, and that Consultant will not represent to any person or entity that he/it has any such authority. The Company will not be responsible for withholding or paying any income, payroll, Social Security, or other federal, state or local taxes, making any insurance contributions, including for unemployment or disability, or obtaining workers’ compensation insurance with respect to the Transition Services rendered hereunder. Consultant acknowledges and agrees that, during the Transition Period, Consultant shall not be eligible to participate in, and waives any claims he may have to, any type of benefits offered to employees of the Company or any of its Affiliates (other than those to which he might be entitled as a former employee of the Company).
5. Consulting Fee and Related Matters. In exchange for the Transition Services and Consultant’s continued compliance with the provisions of this Agreement, during the Transition Period, the Company shall pay Consultant a consulting fee in an aggregate amount equal to \$44,000, payable in December 2022. During the Transition Period, Consultant shall be reimbursed, upon receipt by the Company of suitable documentation, for reasonable and necessary travel or other out-of-pocket expenses incurred with prior, written approval by the

Interim CEO and subject to the Company's travel reimbursement policy as in effect from time to time.

6. Taxes. Consultant agrees and understands that Consultant will fully assume any and all tax obligations on any payment or consideration paid to Consultant pursuant to this Agreement, and that Consultant shall be exclusively responsible for the reporting, withholding and payment of any and all Federal, state and local income, business or self-employment taxes in any jurisdiction which may be determined to be due as a result of any payment pursuant to this Agreement. The Company makes no representations concerning the tax consequences of the consulting fee paid pursuant to this Agreement. Consultant shall indemnify, defend, and hold harmless the Company, its officers, directors, employees, and agents, and its successors, heirs, and assigns, from and against any and all claims, damages and losses (including interest, penalties and defense costs) related to Consultant's reporting, payment or non-payment of taxes with respect to the Transition Services.

7. CONTINUING OBLIGATIONS AND COVENANTS.

(a) Consultant hereby acknowledges that Consultant will continue to be bound by the surviving terms of that certain Severance Agreement between Consultant and the Company, dated April 15, 2022 (the "**Severance Agreement**"), including the terms in Section 5 therein (Confidential Information; Other Restrictive Covenants).

(b) Consultant is hereby provided notice that under the Defend Trade Secrets Act of 2016 ("**DTSA**"): (a) no individual will be held criminally or civilly liable under federal or state trade secrets law for the disclosure of a trade secret (as defined in the Economic Espionage Act) that (i) is made in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney, and made solely for the purpose of reporting or investigating a suspected violation of law, or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal so that it is not made public; and (b) an individual who pursues a lawsuit for retaliation by an employer for reporting a suspected violation of the law may disclose the trade secret to such individual's attorney and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except as permitted by court order. Nothing in this Agreement is intended to conflict with the DTSA or create liability for disclosures of trade secrets that are expressly allowed by such section. Further, it shall not be a violation of this Agreement for Consultant to (i) provide testimony or access to confidential information in response to a valid subpoena, court order, regulatory request, or other legal process; provided, however, before making any such disclosure, other than to any governmental agency or regulatory authority or any self-regulatory organization, Consultant shall (unless legally prohibited from doing so) give the Company written notice of Consultant's intended disclosure and afford the Company a reasonable opportunity to protect the Company's interests, or (ii) voluntarily communicate with, or voluntarily participate in, any investigation or proceeding that may be conducted by, any governmental agency, regulatory authority or self-regulatory organization concerning possible violations of law, including providing documents or other information in that connection to any governmental agency, regulatory authority or self-

regulatory organization, in each case without notice to the Company or any other Company Released Party. Notwithstanding any other provision in this Agreement, it will not be a breach of any confidentiality provisions referenced in this Agreement for either Party to give truthful testimony and evidence, or otherwise defend itself, in response to a subpoena or other process of law or in connection with any court or arbitration proceeding or for either Party to exercise protected rights, to the extent that such rights cannot be waived by agreement or from complying with any applicable law or regulation or a valid order of a court of competent jurisdiction or an authorized government agency, provided that such compliance does not exceed that required by the law, regulation or order.

8. GOVERNING LAW. This Agreement will be governed by and construed in accordance with the laws of the State of Delaware without giving effect to any principles of conflict of laws that would lead to the application of the laws of another jurisdiction.

9. SUCCESSORS AND ASSIGNS. Consultant agrees that this Agreement (in whole or in part) will be binding upon, and pass to the benefit of, the successors and assigns of the Company. Consultant may not assign this agreement in whole or in part. Any purported assignment by Consultant shall be null and void from the initial date of the purported assignment.

10. AMENDMENTS. This Agreement may not be amended or modified other than by a written instrument signed by an authorized representative of both Parties.

11. COUNTERPARTS. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. Facsimile and .pdf signatures will suffice as original signatures.

12. SEVERABILITY. If any provision of this Agreement is invalid, illegal or unenforceable in any respect, such provision will be enforced to the maximum extent possible, given the fundamental intentions of the Parties when entering into this Agreement. To the extent such provision cannot be so enforced, it will be stricken from this Agreement and the remainder of this Agreement will be enforced as if such invalid, illegal or unenforceable provision had never been contained in this Agreement.

13. ENTIRE AGREEMENT. Except as otherwise provided herein, this Agreement sets forth the entire agreement and understanding of the Parties relating to Consultant's Transition Services.

[Signatures appear on the following page]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the last date set forth below.

ACI WORLDWIDE, INC. ODILON ALMEIDA

By: /s/ ANTHONY D. DINKINS /s/ ODILON ALMEIDA

Name:

Title: CHRO

Date: November 28, 2022

Date: November 28, 2022

November 7, 2022

RE: Interim Chief Executive Officer

Dear Mr. Warsop:

This letter summarizes the terms of your employment as interim President and Chief Executive Officer of ACI Worldwide, Inc ("ACI").

Term. This is an at-will employment arrangement and either you or ACI may terminate your employment at any time with or without cause. You shall not be entitled to, and ACI shall not owe, any severance or other termination benefits upon termination of your employment for any reason.

Compensation: You will be compensated at the rate of \$325,000 per month (pro-rated for any partial month served), payable pursuant to ACI's normal payroll cycle and subject to withholdings as required by law and other deductions for benefits provided. You will be entitled to a bonus of up to \$325,000 at the completion of service, which bonus shall be in the sole discretion of ACI's board of directors (the "Board") based upon achievement of objectives established by the Board, as determined by the Board in its discretion.

You will not be compensated for board service.

Benefits: You will be eligible to receive health and welfare and retirement benefits offered through employee benefit plans as are available to other eligible members of senior management, excluding any severance benefits. This provision does not include any long-term incentive or equity incentive awards.

Board Service. You will continue to serve as a member of the Board for the current annual period for which you were elected. Thereafter, your service is subject to nomination by the Board. You will no longer be compensated for Board service.

This letter agreement will be governed by the laws of Delaware, without regard to the conflict of laws principles thereof. Both you and ACI irrevocably and unconditionally submit to the sole and exclusive jurisdiction of any court in Delaware in respect of any action or proceeding arising out of this letter agreement.

Sincerely,

ACI Worldwide, Inc.

By: /s/ ANTHONY D. DINKINS

Name: Anthony Dinkins

Title: CHRO

Accepted and agreed:

Thomas W. Warsop, III

Signature: /s/ THOMAS W. WARSOP, III

Date: November 8, 2022

June 2, 2022

Mr. Jeremy Wilmot

Dear Jeremy,

We are pleased to appoint you as Special Advisor to the CEO of ACI Worldwide. You will report to Odilon Almeida. Your assignment will begin on September 1, 2022, and will continue for a minimum period of seven months.

Your monthly base salary will be \$7,600 based on working 40 hours per month. You will receive an additional \$190 per hour worked in excess of 40 hours monthly. You will continue to be eligible to participate in all benefits available for part-time employees. You will be eligible to elect COBRA benefits effective September 1, 2022. The COBRA benefits available for election include medical, dental and vision benefits. The company will reimburse you for eighty-nine (89%) of COBRA payments.

You will be eligible to participate in ACI's Short-Term Incentive Plan (STI) program with an annual target of 100% of base salary actually earned in 2022. The details of the STI Plan will be outlined in separate documents. You will continue to participate in the Long-Term Incentive Plan (LTIP), during your tenure in the new assignment including normal vesting of Restricted Share Units, Performance Share Units and Stock Options based on the respective plans. The CIC severance will remain in effect unless and until that agreement is terminated in accordance with its terms.

Prior to the commencement of your new assignment, you will take Paid Time Off (PTO) and unpaid time off from July 5, 2022, through August 31, 2022. During this period, you will continue to be eligible for employee benefits. Our benefits include medical, dental, and vision coverage and 401(k).

Welcome to a new chapter with the ACI Worldwide team!

Sincerely,
/s/ ANTHONY D. DINKINS
Anthony D. Dinkins
Chief Human Resources Officer

Agreements:

This is an at-will employment relationship and either you or ACI Worldwide may terminate the relationship for any reason, with or without cause, and with or without advance notice. ACI Worldwide may also terminate the relationship, without prior notice, for unsatisfactory job performance, misconduct, or failure to abide by company policies.

/s/ JEREMY WILMOT

I accept the new assignment.
Jeremy Wilmot

SUBSIDIARIES OF THE REGISTRANT

The following is a list of subsidiaries of ACI Worldwide, Inc., omitting subsidiaries which, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary as of December 31, 2022:

ACI Worldwide (Pacific) Pty. Ltd.	Australia
ACI Payments, Inc.	Delaware
Applied Communications Holding GmbH	Germany
ACI Worldwide Solutions Private Limited	India
Applied Communications GPC Limited	Ireland
Applied Communications (Ireland) Limited	Ireland
ACI Worldwide (Mexico) S.A. de C.V.	Mexico
ACI Worldwide Corp.	Nebraska
ACI Worldwide B.V.	Netherlands
ACI Worldwide (Asia) Pte. Ltd.	Singapore
ACI South Africa (Proprietary) Ltd.	South Africa
Applied Communications Inc. U.K. Holding Limited	United Kingdom
ACI Worldwide (EMEA) Limited	United Kingdom

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-123263, 333-146794, 333-182584, 333-212948, 333-169293, 333-219608, and 333-239054 on Form S-8 of our reports dated March 1, 2023, relating to the financial statements of ACI Worldwide, Inc. and the effectiveness of ACI Worldwide, Inc.'s internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ DELOITTE & TOUCHE LLP

Omaha, Nebraska
March 1, 2023

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Thomas Warsop, certify that:

1. I have reviewed this annual report on Form 10-K of ACI Worldwide, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2023

/s/ THOMAS W. WARSOP, III

Thomas W. Warsop, III
Interim President, Interim Chief Executive Officer, and Director (Principal Executive Officer)

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Scott W. Behrens, certify that:

1. I have reviewed this annual report on Form 10-K of ACI Worldwide, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2023

/s/ SCOTT W. BEHRENS

Scott W. Behrens
*Executive Vice President, Chief Financial Officer, and Chief Accounting
Officer
(Principal Financial Officer)*

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report of ACI Worldwide, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Thomas Warsop, Interim Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- 1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- 2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2023

/s/ THOMAS W. WARSOP, III

Thomas W. Warsop, III

Interim President, Interim Chief Executive Officer, and Director (Principal Executive Officer)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report of ACI Worldwide, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Scott W. Behrens, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- 1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- 2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2023

/s/ SCOTT W. BEHRENS

Scott W. Behrens
*Executive Vice President, Chief Financial Officer, and Chief Accounting
Officer
(Principal Financial Officer)*