

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, 2021**

Commission file number: 1-7945

deluxe

DELUXE CORPORATION

(Exact name of registrant as specified in its charter)

MN
(State or other jurisdiction of incorporation or organization)
801 S. Marquette Ave. Minneapolis **MN**
(Address of principal executive offices)

41-0216800
(I.R.S. Employer Identification No.)
55402-2807
(Zip Code)

Registrant's telephone number, including area code: **(651) 483-7111**

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, par value \$1.00 per share	DLX	NYSE

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

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

Large Accelerated Filer ☒
Non-accelerated Filer ☐

Accelerated Filer ☐
Smaller Reporting Company ☐
Emerging Growth Company ☐

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

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

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 voting stock held by non-affiliates of the registrant is \$2,015,934,270 based on the last sales price of the registrant's common stock on the New York Stock Exchange on June 30, 2021. The number of outstanding shares of the registrant's common stock as of February 9, 2022 was 42,790,216.

Documents Incorporated by Reference: Portions of our definitive proxy statement to be filed within 120 days after our fiscal year-end are incorporated by reference in Part III.

DELUXE CORPORATION
FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2021

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PART I

Please note that this Annual Report on Form 10-K contains statements that may constitute “forward-looking statements” under the Private Securities Litigation Reform Act of 1995 (the “Reform Act”). Forward-looking statements include information concerning future strategic objectives, business prospects, anticipated savings, financial results (including earnings, liquidity, cash flow and capital expenditures), industry or market conditions, demand for our products and services, acquisitions and divestitures, anticipated results of litigation, regulatory developments or general economic conditions. Part I, Item 1A of this report outlines known material risks and important information to consider when evaluating our forward-looking statements. The Reform Act provides a “safe harbor” for forward-looking statements to encourage companies to provide prospective information. When we use the words or phrases “should result,” “believe,” “intend,” “plan,” “are expected to,” “targeted,” “will continue,” “will approximate,” “is anticipated,” “estimate,” “project,” “outlook,” “forecast” or similar expressions in this Annual Report on Form 10-K, in future filings with the Securities and Exchange Commission, in our press releases, investor presentations and in oral statements made by our representatives, they indicate forward-looking statements within the meaning of the Reform Act.

ITEM 1. BUSINESS

OUR BUSINESS

Over 105 years ago, Deluxe Corporation began providing payment solutions. Our longevity is a testament to our innovation, our ability to evolve with our customers and the trust they place in us. We are transforming from a check printing company to a Trusted Payments and Business Technology™ company that champions business so communities thrive. Our solutions help businesses pay and get paid, accelerate growth and operate more efficiently. We support millions of small businesses, thousands of financial institutions and hundreds of the world's largest consumer brands, while processing approximately \$3 trillion in annual payment volume. We operate primarily in the U.S., but we also sell our products and services in Canada, Australia and portions of Europe and South America. We operate 4 business segments that are generally organized by product type. These segments provide the following products and services:

Business Segment	Category	Percentage of 2021 consolidated revenue	Description
Payments	Merchant services and other payment solutions	13.6 %	Merchant in-store, online and mobile payment solutions; payables as a service, including eChecks, Medical Payment Exchange and Deluxe Payment Exchange; payroll and human resources services; fraud and security services
	Treasury management solutions	11.6 %	Receivables as a service, including remittance and lockbox processing, remote deposit capture, receivables management, payment acceptance
	Total	25.2 %	
Cloud Solutions	Data-driven marketing solutions	7.5 %	Solutions for marketing business-to-business and business-to-consumer
	Web and hosted solutions	5.5 %	Web hosting and software-as-a-service (SaaS) solutions, including web design, logo design, financial institution profitability reporting, business incorporation services
	Total	13.0 %	
Promotional Solutions	Forms and other products	14.7 %	Business forms and accessories, including envelopes, labels, stationery and more
	Marketing and promotional solutions	12.3 %	Advertising specialties, promotional apparel, retail packaging
	Total	27.0 %	
Checks	Checks	34.8 %	Printed business and personal checks

OUR STRATEGY

Our vision is to be a trusted leader in payments and data. To realize this vision, we will continue to leverage our strengths:

- **Our customers** – our products and services are utilized by customers of all sizes and maturities. We continue to benefit from a long heritage of offering trusted service to our customers, which in turn, fuels meaningful cash flow that is redeployed to invest in other areas of the company.
- **World class payments and data products and platforms** – we continue to make investments to build market-leading payments and data products and platforms that are proprietary to Deluxe, encouraging our customers to build their businesses on our platforms for the long-term.
- **Scale** – we believe our volumes for many of our service offerings enable us to offer per-unit costs and reliability superior to our competitors. We continue to focus on scaling our technology and product management capabilities.
- **Recurring and reoccurring revenue** – we will continue to focus on offering products and integrated platforms that generate recurring and reoccurring revenue streams.
- **Sales and distribution channels** – we have extensive market reach, with millions of small business and consumer customers and thousands of financial institution clients. We plan to continue to deploy our resources, including our sales force and our various strategic relationships, to cost-effectively reach customers.

Over the past 3 years, we made significant progress in the implementation of our "One Deluxe" strategy, moving from a traditional manufacturing "company of companies" to a more technologically-focused "company of products." We continued to integrate the numerous technology platforms we acquired over the years through our various acquisitions, working toward a common, modern technology platform. Particularly, we have focused on employing world-class sales technology that provides a unified view of our customers, enabling us to bring the best of Deluxe to all of our customers. We also developed an enterprise-class sales organization, assembled a talented management team and built an organization focused on developing new and improved products. As a result, we have realized the benefit of significant new client wins in all of our segments, and we determined that we are well positioned to augment our business through meaningful acquisitions. In June 2021, we completed the acquisition of First American Payment Systems, L.P. (First American), a large-scale payments technology company that provides partners and merchants with comprehensive in-store, online and mobile payment solutions. This acquisition enables us to expand significantly in the fast-growing payments sector, a sector known for generating significant recurring revenues and cash flows, and revenue from our Payments segment now rivals that of our Checks segment. Since the acquisition, the First American business has been growing faster than its historical pace, as we have leveraged our strong sales organization and trusted client relationships. We now have an even stronger foundation from which to pursue future acquisitions that will allow us to potentially realize significant revenue synergies, and we believe that our combined scaled back-end processing will readily support incremental volume.

At the same time that we have been investing in our business, we continued efforts to lower costs and simplify and eliminate duplicative processes. During 2021, we continued to review our real estate footprint and we closed 16 facilities, in addition to the 24 facilities we closed during 2020. We are continually refining our operating model to match expected customer needs and anticipated volumes, as well as to gain efficiencies.

IMPACT OF THE COVID-19 PANDEMIC

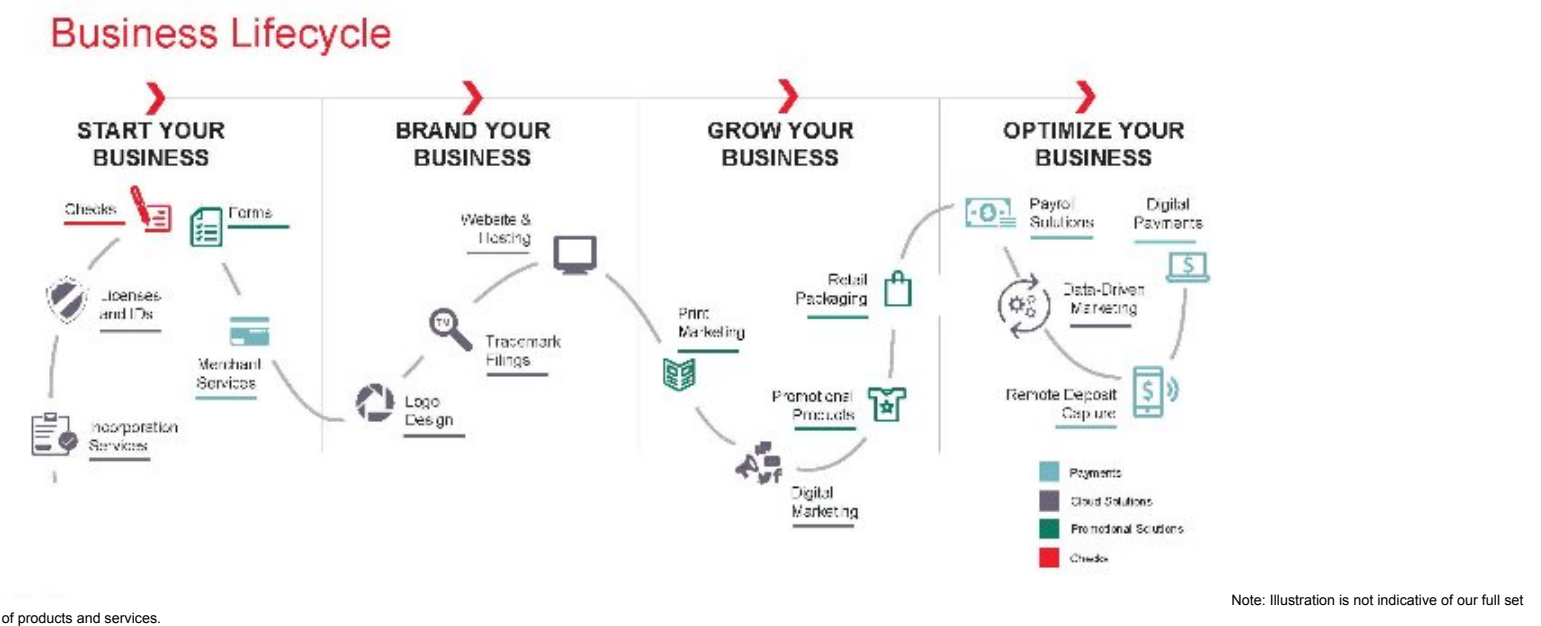
Since early 2020, the world has been, and continues to be, impacted by the coronavirus (COVID-19) and its variants. The pandemic has had widespread, rapidly-evolving and unpredictable impacts on global society, economies, financial markets and business practices. Measures to prevent its spread have impacted us in a number of ways, including an initial reduction in revenues in all of our segments while our customers limited certain of their activities, limited in-person contact with current and potential clients and the shifting of conferences and other sales and marketing events to virtual events. We are continually reviewing our policies and procedures as we navigate through the pandemic. Certain of our employees have continued to work from our facilities throughout the pandemic, where we adopted health screening, implemented social distancing and personal protective equipment requirements, enhanced cleaning and sanitation procedures, and modified workspaces to reduce the potential for disease transmission. For those employees who were working from home, we have reopened our facilities and are encouraging employees to work in a hybrid environment, where employees have the flexibility to work when and where they are comfortable and most productive, while encouraging a collaborative environment.

Our revenue began to recover in the second half of 2021, as our customers began to resume a more normal level of activity. We believe that the COVID-19 pandemic will continue to impact our business operations, including our employees, customers, partners and communities, and there is substantial ongoing uncertainty as to the nature and degree of its continued effects over time. The extent of additional adverse impacts on our financial condition and results of operations will be dictated by

the currently unknowable duration and severity of COVID-19 and its variants, the impact of governmental actions imposed in response to the pandemic, and individuals' and companies' risk tolerance regarding health matters going forward. Please refer to the *Risk Factors* discussion appearing in Part I, Item 1A of this report for a discussion of these factors and other risks affecting our business, financial position, results of operations and prospects.

SALES AND MARKETING

Everyone sells at Deluxe. We employ a comprehensive "One Deluxe" go-to-market approach, deploying a unified sales team with a complete view of our customer relationships, with the goal of bringing the best of Deluxe to every customer. Our customers rely on our solutions and platforms at all stages of their lifecycle, from start-up to maturity (as illustrated below), allowing our business segments to help each other deliver greater value for our customers and enabling our customers to build their businesses on our platforms for the long-term.



We employ a multi-channel, demand-generation sales and marketing approach. This includes our enterprise account model, under which our sales force sells directly to financial institutions and major global brands. We also sell our products and services through scalable partnerships, enabling us to cost-effectively reach customers, specifically leveraging our financial institution partnerships, our e-commerce assets and other strategic partnerships. In addition, millions of in-bound customer contacts buying or re-ordering our products and services provide extensive cross-sell opportunities.

INDUSTRY TRENDS AND OUR COMPETITION

Payment solutions, including checks

The payments industry continues to expand and evolve, with digital payment vehicles and transaction volumes growing around the world. The industry is continuously changing, highly innovative and increasingly subject to regulatory scrutiny and oversight. The challenge for payment providers is to continually modernize their infrastructure to support new service offerings and to identify new revenue streams, as well as to invest in cloud computing and other digital technologies to more rapidly address evolving customer preferences. This pace of change puts pressure on payment providers to transform and adapt in order to remain competitive.

Competition in the payments industry is intense. We are competing against numerous financial technology (Fintech) companies, including independent payment processors, credit card processing firms and treasury management service providers, as well as financial institution in-house capabilities. Volume is the key to staying cost-competitive, as it allows us to drive scale in our operations, and breadth of services is critical to staying relevant to customers. We believe our competitive advantages are: our scalable platform, extensive distribution channels, superior end-customer experience, frictionless payments (i.e., non-disruptive for payer, and payment choices for payee), automated receivables management, strong balance sheet and trusted and respected brand. We also believe there is growth potential for our Medical Payments Exchange (MPX) and Deluxe Payments Exchange (DPX) platforms, which convert paper checks to digital payments.

Our Checks business remains an important part of our strategy. We believe there will continue to be demand for personal and business checks for the foreseeable future. However, the total number of checks written in the U.S. has been in decline since the mid-1990s. The cash flow generated by our Checks business partially self-funds our growth investments. Our check programs are also an important source of lead generation for cost-effective cross-selling of other products and services.

Our Checks business faces significant competition from another large check printer in our traditional financial institution sales channel, direct mail and internet-based sellers of personal and business checks, check printing software vendors and certain significant retailers. Pricing continues to be competitive in our financial institution sales channel, as financial institutions seek to maintain their previous levels of profitability, even as check usage declines. We believe our competitive advantages come from our design and customization options, our quality and service, the trust our customers have in us and our strong financial position. In addition, we are implementing new digital and print-on-demand technology that we believe will allow us to implement new customer requirements faster and expand our premium check and overall print design options.

Cloud Solutions

Data-driven marketing – With increased competition among businesses to target and engage new and existing customers, the use of data-driven marketing has continued to increase and evolve. Competition in this industry is intense, with a wide variety of companies in the data solutions space, including advertising agencies, marketing technology firms, data aggregators and brokers, and source data providers. Adapting to new technology is a key challenge in this industry, along with hiring and retaining the right people. We must continually adapt to the changing needs of our customers and expand our offerings to provide a greater breadth of services.

We believe we have significant growth opportunity in this market. We continue to simplify and integrate our separate businesses operating in this market, monetize the significant amount of data we process across the company, invest in technologies, such as artificial intelligence and machine learning, and consolidate our data infrastructure to reduce costs. We also believe that our pay-for-performance offerings provide us a competitive advantage.

Web and hosted solutions – The market for web hosting services is highly competitive and commoditized. As such, significant spending on product development and customer acquisition is required to compete in this space, and value-added services differentiate the competition. The markets for our hosted SaaS solutions, including web design, logo design and business incorporation services, are also large, dynamic and highly competitive, with dominant integrated players, as well as niche providers. We believe that it is easy to find our service offerings online, they are simple to use and they are competitively priced. We also believe that we will better compete in these markets as we continue to optimize our suite of solutions to deliver more integrated offerings.

Promotional Solutions

The market for business forms and certain business accessories has been declining for several years, as continual technological improvements have provided businesses with alternative means to execute and record business transactions. Greater acceptance of electronic signatures has also contributed to the overall decline in printed products. The markets for business forms and promotional products are highly competitive and fragmented. Current and potential competitors include traditional storefront printing companies, office superstores, wholesale printers, online printing companies, small business product resellers and providers of custom apparel and gifts. We believe that our competitive advantages include our multi-channel experience, ease of use, deep sources of supply and branded merchandise. We also believe that, by expanding our product set and driving integration of physical and digital solutions, we will transition this segment to a technology-driven business that can respond quickly to market opportunities and differentiate us from our competitors.

OUR OPERATIONS / SUSTAINABLE PRACTICES

We continue our focus on improving the customer experience by providing excellent service and quality, while increasing our productivity and reducing our costs. We accomplish this by embedding lean operating principles into our processes, while emphasizing a culture of continuous improvement. We have a shared services approach, which allows our businesses to leverage shared facilities to optimize capacity utilization and to enhance operational excellence. We continue to reduce costs by utilizing our assets and technologies more efficiently and by enabling employees to better leverage their capabilities and talents.

We take our commitment to sustainability seriously, focusing on 5 specific areas:

- **Energy** – We were an early adopter of energy savings, and energy use in our facilities has declined 48% since 2007. We purchase green power for use in our facilities and we now produce all checks for financial institution customers using renewable energy. Over the years, we have dedicated capital to various projects in our facilities, including humidification, lighting and HVAC and control system retrofits, which have decreased our North American energy use and carbon footprint significantly. We implemented many of these same concepts during the recent construction of our

new facilities in Atlanta and Minneapolis, including LED lighting, daylight harvesting strategies, optimized HVAC systems and material selections that reduce carbon input and increase recycled content.

- **Transportation** – We have taken steps to reduce the miles we transport our products and we have converted from truck to rail where possible to reduce carbon emissions. We changed the vehicles in our car fleet to a more fuel-efficient model, which saves approximately 27,000 gallons of fuel and reduces our CO₂ emissions by approximately 525,000 pounds in one year.
- **Waste** – We are focused on understanding the waste stream in each of our facilities, with the goal of reducing the amount of waste we generate and recycling as much of our waste stream as possible. We have moved from volume inventories of custom inks to mixing systems. This has greatly reduced waste stream processing, with better response times for customers. We plan to eliminate 100 conventional and digital presses and move to 6 large-scale variable, digital presses by 2023. We have already eliminated 60 of those 100 conventional presses in the last five years and have migrated more work to digital presses.
- **Materials** – Over 90% of our check and forms paper is purchased from Forest Stewardship Council-certified supplier mills. In addition, our vinyl checkbook covers are produced using a minimum of 45% post-industrial recycled material. We also employ rigorous recycling efforts, and we now remove on average over 4,800 tons of paper, 440 tons of cardboard, 65 tons of metal, and 53 tons of plastic out of landfills each year by being diligent through the segregation of our waste streams.
- **Carbon** – We continue to review every aspect of our business, from the materials we use in products to how we manage facilities, to the role we play in communities, to ensure our growth stems from sustainable practices. For several years, we have purchased wind energy credits to help support and enable the renewable energy industry and offset 80% of our U.S. electricity consumption.

Protecting the environment and our shared future is key to our business and to delivering the products our customers need. Our focus on sustainability also saves money for us and our clients as our operations continue to make ongoing efficiency gains.

CYBERSECURITY

We are a trusted partner to enterprises of all sizes, and this is a responsibility we take seriously. The secure and uninterrupted operation of our networks and systems, as well as the processing, maintenance and confidentiality of the sensitive information that resides on our systems, is critical to our business operations and strategy. Each year, we process hundreds of millions of records containing data related to individuals and businesses. In addition, many of our products are hosted solutions, and the amount of data we store for our customers on our servers, including personal, important business and other potentially sensitive information, has been increasing. Technology-based organizations such as ours are vulnerable to targeted attacks aimed at exploiting network and system applications or weaknesses. A successful cyberattack could result in the disclosure or misuse of sensitive business and personal information and data, cause interruptions in our operations, damage our reputation and deter clients and consumers from ordering our products and services. It could also result in litigation, the termination of client contracts, government inquiries and/or enforcement actions.

We have implemented a risk-based information/cybersecurity program dedicated to protecting our data and solutions. Our privacy policies, together with associated controls and procedures, provide a comprehensive framework to inform and guide the handling of data. These programs dovetail with our information security program in a manner designed to ensure that any data we handle remains protected. We employ an in-depth defensive strategy, utilizing the concept of security layers and the CIA (confidential, integrity and availability) triad model. Our information security program is led by our Chief Information Security Officer and the Information Security department, which establishes the policies, standards and strategies to manage security risk. We devote significant resources to addressing security vulnerabilities through enhancing security and reliability features in our products and services, reviewing and auditing our systems against independent security control frameworks, such as ISO 27001, and performing regular segment and company-wide risk assessments that include company and industry threat data and security maturity assessments, and which inform our annual and multi-year cybersecurity strategies and our product security plans.

We have an Enterprise Risk Management Committee that is led by our Assurance and Risk Advisory Services group, our Chief Financial Officer and our Chief Administrative Officer, with participation from our executive leadership team and senior-level staff, including our Chief Compliance Officer and our Chief Information Security Officer. This committee assesses and monitors our top enterprise risks, including cybersecurity, and provides quarterly updates to our board of directors. Our Chief Information Security Officer also provides periodic updates to our board of directors, which is responsible for ensuring we have implemented appropriate risk mitigation strategies, systems, processes and controls.

In the event a cybersecurity incident is identified, our Cyber Security Incident Response team will act in accordance with our Incident and Crisis Management Program to ensure communication to our executive leadership team and to coordinate the

response to any incident. Our Chief Executive Officer, Chief Financial Officer, General Counsel, Chief Information Security Officer and Chief Compliance Officer are responsible for assessing such incidents for materiality, ensuring that any required notification or communication occurs and determining, among other things, whether any prohibition on the trading of our common stock by insiders should be imposed prior to the disclosure of information about a material cybersecurity event. We maintain cybersecurity insurance coverage that insures us for costs resulting from cyber attacks, although this coverage may not reimburse us for all losses.

For more information on risks related to data security, see Item 1A, "Operational Risks – *Security breaches, computer malware or other cyberattacks involving the confidential information of our customers, employees or business partners could substantially damage our reputation, subject us to litigation and enforcement actions, and substantially harm our business and results of operations.*"

OUR MATERIALS, SUPPLIES AND SERVICE PROVIDERS

The principal materials used in producing our main products are paper, plastics, ink, corrugated packaging and printing plate material, which we purchase from various sources. We also purchase stock business forms and promotional apparel produced by third parties. In addition, we have entered into agreements with third-party providers for delivery services and information technology services, including telecommunications, network server and transaction processing services, as well as various other services. We also rely on third parties to provide a portion of the data used to maintain our proprietary and non-proprietary databases, including credit and non-credit data from the national credit bureaus and other data brokers.

During 2021, we engaged a third-party global sourcing group to help manage our supply chain. We believe that in the event one of our vendors fails to perform, we would be able to obtain an alternative source of supply. However, with recent stresses on the global supply chain and labor market, we are taking steps to secure multiple sources of supply for certain of the materials and services we utilize. We can provide no assurance that we would be able to obtain an alternative source of supply, or that such supply could be obtained at current prices.

OUR HUMAN CAPITAL

Our most valuable asset is our employee-owners. As of December 31, 2021, we had 6,313 employees. Approximately 98% of our team is full-time employees, with 58% representing non-exempt roles working in production, processing or call center functions. We employ 5,645 employees in the United States, 551 employees in Canada and 117 employees in Australia and Europe. We are proud of our strong history of positive, productive employee relations. None of our employees are currently represented by labor unions.

The foundation of our continuing success as a Trusted Payments and Business Technology™ company is our ability to attract and retain diverse, exceptional and motivated talent. We accomplish this by providing a culture of inclusion, diversity, equity, development, opportunity and empowerment.

Results-Driven, Community-Focused, Collaborative Culture

We focus on creating an environment where our employee-owners, also known as Deluxers, feel respected and valued, and where they can contribute to their full potential. To this end, an important component of our strategy is that all North American employees are granted restricted stock unit awards. The heritage of the company also reflects deep-seated roots in community support and volunteerism, which is reflected in our purpose statement: "Champions for business so communities thrive." Additionally, our values focus on delivering results:

- Customers First
- Earn Trust
- Innovation
- Grit and Perseverance
- Power of One

In an effort to continue to improve our culture and engagement, we provide learning and development at all levels of the organization on a variety of topics, including, leadership development, mentoring and inclusion, diversity and equity (ID&E). We also strive to drive high engagement and according to the last engagement survey conducted, 78% of employees believe Deluxe is a great place to work. We continue to focus on training and development programs and transparent communication channels through change pulse checks, surveys, senior leadership forums and employee resource groups.

Inclusion, Diversity and Equity

We embrace ID&E in our workforce, customers and partners, valuing their unique backgrounds, experiences, thoughts and talents. Our mission is to empower all employees to bring their full authentic selves to work and to foster an environment that

reflects the diverse communities we serve. We strive to cultivate a culture and vision that supports and enhances our ability to recruit, develop and retain diverse talent at every level. We provide our customers, partners, and shareholders information about our ID&E program and our activities supporting social justice within the communities we serve. In addition, we are focused on furthering our ID&E initiatives throughout our business and have, among other things, created an ID&E council that is sponsored by our Chief Communications and Human Resources Officer and our Chief Revenue Officer. This council is comprised of employee-owners across multiple functions and business segments. Its top priorities include implementing a comprehensive ID&E learning and development plan to build awareness and drive inclusive behaviors; further developing our diversity pipeline through hiring, mentoring and coaching; and establishing goals and metrics to ensure progress.

As of December 31, 2021, our total workforce was approximately 56% female and 44% male. Our team members located in the United States were comprised of approximately 56% white, 16% Black or African American, 11% Hispanic or Latino, 10% Asian American and 7% other. We continue to focus our development and ID&E programs on growing the number of female and minorities represented in leadership roles.

Health, Wellness and Safety

Creating a culture where all employee-owners feel supported and valued is paramount to our strategy. We continue to monitor developments with the ongoing COVID-19 pandemic and its variants, and we continue to take steps to ensure the safety of our employees and business partners. We also continue to provide a competitive benefits package focused on fostering work/life integration. These benefits range from standard medical, dental, life and disability insurance to programs that provide additional support for our employees' mental, physical, financial and social wellbeing. We provide various time-off programs, including volunteer time-off, paid parental leave and paid sabbaticals. These are just a few of the benefits we offer our full- and part-time employees.

Community Engagement

Our employee-owners believe in the power of connection, of activity and of giving back to the communities we serve. That is why we have created multiple initiatives that focus on supporting our communities, both financially and with time and talent, including providing 3 paid days off to employees each year so that they can volunteer in their communities. We also continue to support the Deluxe Corporation Foundation, which focuses on long-term solutions that help people, businesses and communities thrive and grow, and we have long-term partnerships with United Way®, Junior Achievement USA®, National Urban League, Inc., the National Civil Rights Museum, and other organizations. We continue to deliver on our promise to invest time, talent and financial resources to improve ID&E in the communities we serve, as it is essential to be invested and involved to attract and retain employees of the highest caliber.

SEASONALITY

Historically, we have experienced seasonal trends with some of our products and services. For example, Promotional Solutions holiday card and retail packaging sales and revenues from certain marketing services in Cloud Solutions are typically stronger in the fourth quarter of the year due to the holiday season, while sales of Promotional Solutions tax forms are stronger in the first and fourth quarters of the year. Our customers' marketing campaign cycles may also result in some revenue fluctuations for these segments. Additionally, there is a seasonal aspect to our employee benefit costs, as employees typically do not utilize as much paid time off in the first quarter of the year as they do later in the year, which negatively impacts our margins for the first quarter of the year.

GOVERNMENT REGULATION

We are subject to numerous international, federal, state and local laws and regulations that affect our business activities in several areas, including, but not limited to, labor, advertising, taxation, data privacy and security, digital content, consumer reports, consumer protection, merchant processing, online payment services, real estate, e-commerce, intellectual property, health care, environmental matters, and workplace health and safety. Additionally, in response to the COVID-19 pandemic, local, state, national and international governments and health authorities have, at times, established myriad new laws, rules, regulations and orders applicable to us, many of which are required to be implemented within a very short timeframe. The complexity of complying with existing and new laws and regulations is significant, and regulators may adopt new laws or regulations at any time.

For more specific information about the effects of government regulation on our business, see Item 1A, "Legal and Compliance Risks – *Governmental regulation is continuously evolving and could limit or harm our business.*" We believe that the impact on our capital expenditures and earnings of complying with government regulations will not be materially different in the upcoming year than it was in 2021.

AVAILABLE INFORMATION

We make available, without charge, through our investor relations website, www.deluxe.com/investor-relations, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports filed or furnished pursuant to section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after these items are electronically filed with or furnished to the SEC. These reports can also be accessed via the SEC website, www.sec.gov.

A printed copy of this report may be obtained without charge by calling 651-787-1068, by sending a written request to the attention of Investor Relations, Deluxe Corporation, P.O. Box 419061, Rancho Cordova, California 95741, or by sending an email request to investor.relations@deluxe.com.

Further information about Deluxe Corporation is also available at www.deluxe.com, www.facebook.com/deluxecorp, www.linkedin.com/company/deluxe and www.twitter.com/deluxe. The content of these websites is not incorporated by reference in this Annual Report on Form 10-K or in any other report or document we file with the Securities and Exchange Commission.

OUR CODE OF ETHICS AND CORPORATE GOVERNANCE GUIDELINES

We have adopted a Code of Business Ethics that applies to all of our employees and our board of directors. The Code of Business Ethics is available on our investor relations website, www.deluxe.com/investor-relations, and also can be obtained free of charge upon written request to the attention of Investor Relations, Deluxe Corporation, P.O. Box 419061, Rancho Cordova, California 95741. Any changes or waivers of the Code of Business Ethics will be disclosed on our website. In addition, our Corporate Governance Guidelines and the charters of the Audit, Compensation, Corporate Governance and Finance Committees of our board of directors are available on our website, www.deluxe.com/investor-relations, or upon written request.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Our executive officers are appointed by the board of directors each year. The following summarizes our executive officers and their positions.

Name	Age	Present Position	Executive Officer Since
Barry McCarthy	58	President and Chief Executive Officer	2018
Scott Bomar	50	Senior Vice President, Chief Financial Officer	2021
Garry Capers, Jr.	45	Senior Vice President, Division President, Cloud Solutions and Promotional Solutions	2019
Jeffrey Cotter	54	Senior Vice President, Chief Administrative Officer and General Counsel	2018
Jane Elliott	55	Senior Vice President, Chief Communications and Human Resources Officer	2019
Tracey Engelhardt	57	Senior Vice President, Division President, Checks	2012
Michael Mathews	49	Senior Vice President, Chief Information Officer	2013
Amanda Parrilli	43	Senior Vice President, Strategy, Transformation and Business Development	2019
Michael Reed	50	Senior Vice President, Division President, Payments	2019
Thomas Riccio	48	Senior Vice President, Chief Delivery and Supply Chain Officer	2019
Christopher Thomas	53	Senior Vice President, Chief Revenue Officer	2019

[Barry McCarthy](#) joined us in November 2018 as President and Chief Executive Officer. Prior to joining us, Mr. McCarthy served in various senior executive positions, most recently, from November 2014 to November 2018, as Executive Vice President and Head of Network and Security Solutions, a segment of publicly traded First Data Corporation, a financial services company, now part of Fiserv, Inc.

[Scott Bomar](#) joined us in June 2021 as Senior Vice President, Chief Financial Officer. Prior to joining us, Mr. Bomar held several positions with The Home Depot, Inc., including Senior Vice President, Home Services from December 2018 to June 2021 and Vice President and Treasurer from November 2016 to December 2018.

[Garry Capers, Jr.](#) joined us in September 2019 as Senior Vice President, Division President, Cloud Solutions, and in November 2021, added the Promotional Solutions segment to his responsibilities. Prior to joining us, Mr. Capers was employed

by Automatic Data Processing, Inc., a provider of human resources management software and services, from January 2017 to September 2019, most recently as Senior Vice President, General Manager, National Account Services Comprehensive Outsourcing Services and Operations.

[Jeffrey Cotter](#) was named Chief Administrative Officer in January 2019. Mr. Cotter joined us in June 2018 as Senior Vice President, General Counsel. Prior to joining us, Mr. Cotter served as Senior Vice President and General Counsel for Tennant Company, a provider of cleaning products and solutions, from September 2017 to June 2018. From June 2008 to April 2017, Mr. Cotter served as Vice President, General Counsel for G&K Services, Inc., a provider of branded uniform and facility services programs.

[Jane Elliott](#) joined us in April 2019 as Senior Vice President, Chief Human Resources Officer, and in June 2020, was named Chief Communications and Human Resources Officer. Prior to joining us, Ms. Elliott was employed by Global Payments Inc., a financial technology services provider, where she served as Executive Vice President and Chief Administrative Officer from January 2016 to March 2018.

[Tracey Engelhardt](#) was named Senior Vice President, Division President, Checks in October 2019. From March 2017 to October 2019, Ms. Engelhardt served as Senior Vice President, Direct-to-Consumer, and from July 2012 to March 2017, she served as Vice President, Direct-to-Consumer.

[Michael Mathews](#) was named Senior Vice President, Chief Information Officer in March 2017. Mr. Mathews joined us in May 2013 as Vice President, Chief Information Officer.

[Amanda Parrilli](#) was named Senior Vice President, New Business Development and Strategy in October 2019, and in June 2020, she added Transformation to her responsibilities. Ms. Parrilli joined us in February 2019 as Vice President, Strategy. Prior to joining us, Ms. Parrilli held several positions at The Home Depot, Inc. from July 2014 to February 2019, including Senior Director, Services Lead Generation; Director, Home Decorators Strategy; and Director, Strategic Business Development.

[Michael Reed](#) joined us in November 2019 as Senior Vice President, Division President, Payments. Prior to joining us, Mr. Reed served as Managing Director, Global Payments and Product for Barclays Bank Plc in London from September 2018 to November 2019. From January 2015 to August 2018, Mr. Reed served as Managing Director at BofA Merrill Lynch Merchant Services (Europe) Limited, the European subsidiary of Banc of America Merchant Services, LLC.

[Thomas Riccio](#) was named Chief Delivery and Supply Chain Officer in November 2021. Mr. Riccio joined us in September 2019 and served as Senior Vice President, Division President, Promotional Solutions until November 2021. Prior to joining us, Mr. Riccio was employed by Office Depot, Inc., a provider of business services and supplies, serving as Senior Vice President, Business Solutions Division from July 2017 to July 2019 and as Vice President, Sales and Strategic Initiatives, Business Solutions Division from December 2013 to July 2017.

[Christopher Thomas](#) joined us in July 2019 as Senior Vice President, Chief Revenue Officer. Prior to joining us, Mr. Thomas served as Senior Vice President, Solutioning and Commercial Functions for DXC Technology Company, an information technology solutions provider, from April 2017 to July 2019. From September 2014 to April 2017, Mr. Thomas served as Senior Vice President, Solutioning and Sales Support for HP Inc., a global technology company.

ITEM 1A. RISK FACTORS

We routinely encounter and address risks, many of which could cause our future results to be materially different than we currently anticipate. These risks include, but are not limited to, the principal factors listed below and the other matters set forth in this Annual Report on Form 10-K. We place no priority or likelihood based on these descriptions or order of presentation. We are also subject to general risks and uncertainties that affect many other companies, including overall economic, industry and market conditions. Additional risks not presently known to us, or that we currently believe are immaterial, may also adversely affect us. You should carefully consider all of these risks and uncertainties before investing in our common stock.

RISKS RELATED TO THE COVID-19 PANDEMIC

The impact of the COVID-19 pandemic has adversely affected, and may continue to adversely affect, our business, financial condition and results of operations.

The COVID-19 pandemic began to impact our operations late in the first quarter of 2020. The impact of lost revenue was primarily driven by decreased demand in our Promotional Solutions, Checks and Cloud Solutions segments, and later in 2020 and 2021, our Payments segment experienced delays in new client implementations because of the impacts of the pandemic. Our revenue began to recover in the second half of 2021, as our customers began to resume a more normal level of activity. We

believe that the pandemic will continue to impact our business operations, including our employees, customers, partners and communities, but there is substantial uncertainty as to the nature and degree of its continued effects over time.

Beginning in March 2020, all of our employees who had the ability to work from home did so. The success of our work-from-home model allowed us to accelerate certain site closures. Although our facilities re-opened in late 2021, a portion of our employees now work remotely on a permanent basis and many others work remotely for portions of each work week, which increases our cybersecurity and data security risk. Changes in the scope and severity of the pandemic may cause us to once again close certain of our facilities to protect the health of our employees, as a result of disruptions in the operation of our supply chain, or in response to a prolonged decrease in demand for our products and services. Disruptions caused by future facility closures, along with the subsequent reintroduction of employees back into the workplace, could introduce operational risks, negatively impact productivity or result in claims by employees.

The continued spread of COVID-19 has resulted in significant economic uncertainty and the global macroeconomic effects of the pandemic may persist for an indefinite period. We cannot predict the pace at which economic factors will improve or the impact a prolonged downturn in the economy would have on our business, financial condition and results of operations. In addition, in response to the pandemic, local, state, national and international governments and health authorities have, at times, established myriad new laws, rules, regulations and orders applicable to us. These emergency enactments evolve rapidly and the complexity of complying with COVID-19 specific regulations is significant.

The sweeping nature of the pandemic makes it extremely difficult to predict how our business and operations will be affected in the longer term. The extent to which the COVID-19 pandemic impacts our business depends on future developments, many of which are unknown, such as: the severity and duration of the pandemic, including the impact of COVID-19 variants; governmental, business and individuals' actions in response to the pandemic; vaccination rates; and the resulting impact on economic activity and the financial markets. Even after the COVID-19 pandemic has subsided, we may experience material and adverse impacts to our business as a result of the virus's global economic impact, including a potential shift in our revenue mix as demand may change in a post-COVID environment, the availability of credit, bankruptcies or insolvencies of customers, and recession or economic downturn. There are no comparable recent events that provide guidance as to the effect the COVID-19 pandemic may have, and, as a result, the ultimate impact of the pandemic is highly uncertain and subject to change.

Other cascading effects of the COVID-19 pandemic that are not currently foreseeable could materially increase our costs, negatively impact our revenue and adversely impact our results of operations and liquidity, possibly to a significant degree. We cannot predict the severity or duration of any such impacts. The pandemic could have the effect of heightening or exacerbating many of the other risks described in this *Risk Factors* discussion. COVID-19-related impacts on the preparation of our consolidated financial statements are addressed under the caption: "Note 19: Risks and Uncertainties" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

STRATEGIC RISKS

If our long-term growth strategy is not successful, our business and financial results would be adversely impacted.

Our vision is to be a trusted leader in payments and data. Further information about our strategy can be found under the caption "Our Strategy" appearing in Part I, Item 1 of this report. We may not achieve our long-term objectives, and investments in our business may fail to impact our financial results as anticipated. Our strategic plan could fall short of our expectations for many reasons, including, among others:

- our failure to generate profitable revenue growth;
- our inability to acquire new customers, retain our current customers and sell more products and services to current and new customers;
- our failure to fully utilize new sales technology that enables a single view of our customers;
- our inability to implement additional improvements to our technology infrastructure, our digital services offerings and other key assets to increase efficiency, enhance our competitive advantage and scale our operations;
- our failure to develop new products and services;
- our failure to effectively manage the growth, expanding complexity and pace of change of our business and operations;
- our inability to effectively operate, integrate or leverage businesses we acquire;
- the failure of new products and services to achieve widespread customer acceptance;
- our inability to promote, strengthen and protect our brand;
- an unfavorable change in demand for checks or other products;
- our failure to attract and retain skilled talent to execute our strategy and sustain our growth;
- unanticipated changes in our business, markets, industry or the competitive landscape; and
- general economic conditions.

We can provide no assurance that our strategy will be successful, either in the short term or in the long term, that it will generate a positive return on our investment or that it will not materially reduce our adjusted earnings before interest, taxes,

depreciation and amortization (adjusted EBITDA) margins. If our strategy is not successful, or if there is market perception that our strategy is not successful, our reputation and brand may be damaged and our stock price may fall.

If we are unable to attract and retain customers in a cost-effective manner or effectively operate a multichannel customer experience, our business and results of operations would be adversely affected.

Our success depends on our ability to attract new and returning customers in a cost-effective manner. We use a variety of methods to promote our products and services, including a direct sales force, partner referrals, email marketing, purchased search results from online search engines, direct mail advertising, broadcast media, advertising banners, social media and other online links. Certain of these methods may become less effective or more expensive. For example, our response rates for direct mail advertising have been decreasing for some time, internet search engines could modify their algorithms or increase prices for purchased search results or certain partner referrals could decline. Because we offer a diverse portfolio of products and services, we may also face challenges in increasing customer awareness of all of our offerings. Efforts to expand customer awareness of our diverse range of products and services may result in increased marketing expense and may fail to generate additional revenue.

We continually evaluate and modify our marketing and sales efforts to achieve the most effective mix of promotional methods. Competitive pressure may inhibit our ability to reflect increased costs in the prices of our products and services and/or new marketing strategies may not be successful. Either of these occurrences would have an adverse impact on our ability to compete and our results of operations would be adversely affected. In addition, when our check supply contracts expire, customers have the ability to renegotiate their contracts with us or to consider changing suppliers. Failure to achieve favorable contract renewals and/or to obtain new check supply customers would result in decreased revenue.

Additionally, we believe we must maintain a relevant, multichannel experience in order to attract and retain customers. Customers expect to have the ability to choose their method of ordering, whether via the mail, computer, phone or mobile device. Although we are constantly making investments to update our technology, we cannot predict the success of these investments. Multichannel marketing is rapidly evolving and we must keep pace with the changing expectations of our customers and new developments by our competitors. If we are unable to implement improvements to our customer-facing technology in a timely manner, or if our customer-facing technology does not function as designed, we could find it increasingly difficult to attract new and returning visitors, which would result in decreased revenue.

We face intense competition from other business enterprises, and we expect that competition will continue to increase.

Competition in the payments industry is intense. We are competing against numerous financial technology (Fintech) companies, including independent payment processors, credit card processing firms and treasury management service providers, as well as financial institution in-house capabilities. Volume is the key to staying cost-competitive, and breadth of services is critical to staying relevant to customers. In addition, although we are a leading check printer in the U.S., we face considerable competition in the check printing portion of the payments industry from another large check printer in our traditional financial institution sales channel, from direct mail and internet-based sellers of personal and business checks, from check printing software vendors and from certain significant retailers. Pricing continues to be competitive in our financial institution sales channel, as financial institutions seek to maintain their previous levels of profitability, even as check usage declines.

Within our Cloud Solutions segment, competition for our data-driven marketing services is intense, with a wide variety of companies in the data solutions space, including advertising agencies, marketing technology firms, data aggregators and brokers, and source data providers. Adapting to new technology is a key challenge in this business, along with hiring and retaining the right people. The market for our web hosting services is also highly competitive and commoditized. As such, significant spending on product development and customer acquisition is required to compete in this space, and value-added services differentiate the competition. The markets for our hosted software-as-a-service (SaaS) solutions, including web design, logo design and business incorporation services, are also large, dynamic and highly competitive, with dominant integrated players, as well as niche providers.

Within our Promotional Solutions segment, the markets for business forms and promotional products are intensely competitive and highly fragmented. Current and potential competitors include traditional storefront printing companies, office superstores, wholesale printers, online printing companies, small business product resellers and providers of custom apparel and gifts. The competitive landscape for online suppliers continues to be challenging as new internet businesses are introduced.

We can provide no assurance that we will be able to compete effectively against current and future competitors. Our competitors may develop better products or technologies and may be able to adapt more quickly to new or emerging technologies and changes in customer requirements. Continued competition could result in price reductions, reduced profit margins and/or loss of customers, all of which would have an adverse effect on our results of operations and cash flows.

If we do not adapt to changes in technology in a timely and cost-effective manner, our ability to sustain and grow our business could be adversely affected.

Rapid, significant, and disruptive technological changes impact the industries in which we operate, including changes in payment and internet browser technologies and the use of artificial intelligence and machine learning, as well as developments in technologies supporting our regulatory and compliance obligations and in-store, digital, mobile and social commerce. The introduction of competing products and services using new technologies, the evolution of industry standards or the introduction of more attractive products or services, including continued increases in the digitization of payments, could make some of our products and services less desirable, or even obsolete. These potential changes are magnified by the intense competition we face. To be successful, our technology-based products and services must keep pace with technological developments and evolving industry standards, address the ever-changing and increasingly sophisticated needs of our customers, and achieve market acceptance. Additionally, we must differentiate our service offerings from those of our competitors and from the in-house capabilities of our customers. We could lose current and potential customers if we are unable to develop products and services that meet changing demands in a timely manner. Additionally, we must continue to develop our skills, tools and capabilities to capitalize on existing and emerging technologies, and this requires significant investment, takes considerable time and ultimately, may not be successful. Any of the foregoing risks could result in harm to our business and results of operations.

We may be unable to successfully integrate past and future acquisitions and realize the anticipated benefits of the transactions.

We have completed many acquisitions during the past several years, including the acquisition of First American in June 2021, which was the largest acquisition in our history. In addition, we purchased the operations of several small business distributors with the intention of growing revenue in our enterprise accounts and dealer channels. We are currently devoting significant management attention and resources to integrating the business practices and operations of First American and our previous acquisitions. The integration of any acquisition involves numerous risks, including, among others:

- the inability to successfully combine the businesses in a manner that permits us to achieve the revenue synergies and cost savings anticipated to result from the acquisition, which would result in the anticipated benefits of the acquisition not being realized in the anticipated timeframe or at all;
- difficulties and/or delays in assimilating operations and ensuring that a strong system of information security and controls is in place;
- the complexities of integrating a company with different products, services, markets and customers;
- performance shortfalls due to the diversion of management's attention from other business concerns;
- lost sales and customers as a result of certain customers, retail partners, financial institutions or other third parties deciding not to do business with us;
- unanticipated integration costs;
- complexities associated with implementing necessary controls for the acquired business activities to address our requirements as a public company;
- difficulties in identifying and eliminating redundant and underperforming functions and assets;
- the complexities of assimilating the acquired business into our corporate culture and management philosophies;
- unidentified issues not discovered during our due diligence process, including product or service quality issues, intellectual property issues and tax or legal contingencies;
- failure to address legacy distributor account protection rights; and
- loss of key employees.

One or more of these factors could impact our ability to successfully operate, integrate or leverage an acquisition and could materially and adversely affect our business and financial results.

We have indicated that we plan to supplement sales-driven revenue growth with strategically targeted acquisitions over time. The time and expense associated with finding suitable businesses, technologies or services to acquire can be disruptive to our ongoing business and may divert management's attention. We cannot predict whether suitable acquisition candidates can be identified or acquired on acceptable terms or whether any acquired products, technologies or businesses will contribute to our revenue or earnings to any material extent. We may need to seek additional financing for larger acquisitions, which would increase our debt obligations and may not be available on terms that are favorable to us. Additionally, acquisitions may result in additional contingent liabilities, additional amortization expense and/or future non-cash asset impairment charges related to acquired intangible assets and goodwill, and thus, could adversely affect our business, results of operations and financial condition.

The use of checks and forms is declining and we may be unable to offset the decline with profitable revenue growth.

Checks continue to be a significant portion of our business, accounting for 34.8% of our consolidated revenue in 2021, and providing a significant amount of the cash flows we invest in our growth businesses, although we anticipate that in 2022, our Payments segment will equal our Checks segment in terms of revenue. We sell checks for personal and business use and believe that there will continue to be demand for personal and business checks for the foreseeable future, although the total number of checks written in the U.S. has been in decline since the mid-1990s. We expect that the number of checks written will

continue to decline due to the digitization of payments, including debit cards, credit cards, direct deposit, wire transfers, and other payment solutions, such as PayPal®, Apple Pay®, Square®, Zelle®, Venmo®, as well as cryptocurrencies. In addition, the RTP® system run by The Clearing House Payments Company, LLC is a real-time payments system that currently reaches approximately 60% of U.S. bank accounts. The U.S. Federal Reserve has announced that it plans to develop its own real-time payments system, FedNowSM, with an expected launch in 2023.

The rate and the extent to which digital payments will replace checks, whether as a result of legislative developments, changing payment systems, personal preference or otherwise, cannot be predicted with certainty. Increased use of alternative payment methods, or our inability to successfully offset the secular decline in check usage with new check supply clients or other sources of revenue, would have an adverse effect on our business, cash flows and results of operations.

The use of business forms has also been declining. Continual technological improvements, including the lower price and higher performance capabilities of personal computers, printers and mobile devices, have provided small business customers with alternative means to execute and record business transactions. Additionally, electronic transaction systems, off-the-shelf business software applications, web-based solutions and mobile applications have been designed to replace preprinted business forms. Greater acceptance of electronic signatures also has contributed to the overall secular decline in printed products. It is difficult to predict the pace at which these alternative products and services will replace standardized business forms. If small business preferences change rapidly and we are unable to develop new products and services with comparable operating margins, our results of operations would be adversely affected.

Our business depends on our strong and trusted brand, and any failure to maintain, protect and enhance our brand would hurt our business.

We have developed a strong and trusted brand that has contributed significantly to the success of our business. We believe that maintaining and promoting our brand in a cost-effective manner is critical to achieving widespread acceptance of our products and services and expanding our base of customers. We believe that the importance of brand recognition and trust is particularly essential for the success of our various service offerings because of the level of competition for these services. Customer awareness of our brand, as well as the perceived value of our brand, depends largely on the success of our marketing efforts and on our ability to continue to provide useful, reliable, secure and innovative products and services, as well as our ability to maintain trust and be a technology leader. If we fail to successfully promote and maintain our brand or if we incur excessive expenses in this effort, our business could be materially and adversely affected. There is also the risk that adverse publicity, whether or not justified, could adversely affect our business. If our business partners or key employees are the subject of adverse news reports or negative publicity, our reputation may be tarnished and our results of operations could be adversely affected.

A component of our brand promotion strategy is building on our relationship of trust with our customers, which we believe can be achieved by providing a high-quality customer experience. We have invested, and will continue to invest, resources in website development, design and technology, and customer service and production operations. Our ability to provide a high-quality customer experience is also dependent on external factors, including the reliability and performance of our suppliers, telecommunications providers and third-party carriers. Our brand value also depends on our ability to protect and use our customers' data in a manner that meets expectations. The failure of our brand promotion activities to meet our expectations or our failure to provide a high-quality customer experience for any reason could adversely affect our ability to attract new customers and maintain customer relationships, which would adversely harm our business and results of operations.

Our cost reduction initiatives may not be successful.

Intense competition, secular declines in the use of checks and business forms and the commoditization of web services compels us to continually improve our operating efficiency in order to maintain or improve profitability. Cost reduction initiatives have required, and will continue to require, up-front expenditures related to various actions, such as redesigning and streamlining processes, consolidating information technology platforms, standardizing technology applications, further enhancing our strategic supplier sourcing arrangements, improving real estate utilization and funding employee severance benefits. We can provide no assurance that we will achieve future cost reductions or that we will do so without incurring unexpected or greater than anticipated expenditures. Moreover, we may find that we are unable to achieve business simplification and/or cost reduction goals without disrupting our business, negatively impacting efforts to grow our business or reducing the effectiveness of our sustainability practices. As a result, we may choose to delay or forgo certain cost reductions as business conditions require. Failure to continue to improve our operating efficiency and to generate adequate savings to fund necessary investments could adversely affect our business if we are unable to remain competitive.

OPERATIONAL RISKS

Security breaches, computer malware or other cyberattacks involving the confidential information of our customers, employees or business partners could substantially damage our reputation, subject us to litigation and enforcement actions, and substantially harm our business and results of operations.

Information security risks have increased in recent years, in part because of the proliferation of new technologies and an increase in remote work arrangements, as well as the increased sophistication and activities of hackers, terrorists and activists. In addition, our information security risks have increased with the acquisition of companies with their own technologies, which we continue to integrate into our systems and processes. We use internet-based channels that collect customers' financial account and payment information, as well as other sensitive information, including proprietary business information and personally identifiable information of our customers, employees, contractors, suppliers and business partners. Each year, we process hundreds of millions of records containing data related to individuals and businesses. We also provide services that are instrumental in supporting our customers and their businesses, such as website/email hosting and remittance processing. Cybersecurity is one of the top risks identified by our Enterprise Risk Management Committee, as technology-based organizations such as ours are vulnerable to targeted attacks aimed at exploiting network and system weaknesses.

The secure and uninterrupted operation of our networks and systems, as well as the processing, maintenance and confidentiality of the sensitive information that resides on our systems, is critical to our business operations and strategy. We have a risk-based information/cybersecurity program dedicated to protecting our data and solutions. We employ a defensive in-depth strategy, utilizing the concept of security layers and the CIA (confidential, integrity and availability) triad model. Computer systems and networks are, by nature, vulnerable to unauthorized access. An accidental or willful security breach could result in unauthorized access and/or use of customer information, including consumers' personally identifiable information or, in some cases, the protected health information of certain individuals. Our security measures could be breached by third-party action, computer viruses, accidents, employee or contractor error, or malfeasance by rogue employees. In addition, we depend on a number of third parties, including vendors, developers and partners, that are critical to our business and to which we may grant access to our customer or employee data. While we conduct due diligence on these third parties with respect to their security and business controls, we rely on them to effectively monitor and oversee these control measures. Individuals or third parties may be able to circumvent controls and/or exploit vulnerabilities that may exist, resulting in the disclosure or misuse of sensitive business and personal customer or employee information and data.

Because techniques used to obtain unauthorized access, disable or degrade service, or sabotage computer systems change frequently, may be difficult to detect immediately, and generally are not recognized until they are launched against a target, we may be unable to implement adequate preventive measures. Unauthorized parties may also attempt to gain access to our systems or facilities through various means, including hacking into our systems or facilities, fraud, trickery or other means of deceiving employees and contractors. We have experienced external internet-based attacks by threat actors aimed at disrupting internet traffic and/or attempting to place illegal or abusive content on our or our customers' websites. Additionally, our customers and employees have been and will continue to be targeted by threat actors using social engineering techniques to obtain confidential information or using fraudulent "phishing" emails to introduce malware into the environment. To-date, these various threats and incidents have not materially impacted our customers, our business or our financial results. However, our technologies, systems and networks are likely to be the target of future attacks due to the increasing threat landscape for all technology businesses, and we can provide no assurance that future incidents will not be material.

Despite our significant cybersecurity systems and processes, a party that is able to circumvent our security measures could misappropriate our, our customers' or our partners' personal and proprietary information, cause interruption in our operations, damage our computers or those of our users, or otherwise damage our reputation, all of which could deter clients and consumers from ordering our products and services and result in the termination of client contracts. Additionally, it is possible that there could be vulnerabilities that impact large segments of mobile, computer or server architecture. Any of these events would adversely affect our business, financial condition and results of operations.

In addition, if we were to experience a material information security breach, we may be required to expend significant amounts of management time and financial resources to remedy, protect against or mitigate the effects of the breach, and we may not be able to remedy the situation in a timely manner, or at all. Furthermore, under payment card association rules and our contracts with debit and credit card processors, if there is a breach of payment card information that we store or that is stored by third parties with which we do business, we could be liable to the payment card issuing banks for their cost of issuing new cards and other related expenses. We could also lose our ability to accept and process credit and debit card payments, which would likely result in the loss of customers and the inability to attract new customers. We could also be exposed to time-consuming and expensive litigation, government inquiries and/or enforcement actions. If we are unsuccessful in defending a claim regarding information security breaches, we may be forced to pay damages, penalties and fines, and our insurance coverage may not be adequate to compensate us fully for any losses that may occur. Contractual provisions with third parties, including cloud service providers, may limit our ability to recover losses resulting from the security breach of a business partner.

There are international, federal and state laws and regulations requiring companies to notify individuals of information security breaches involving their personal data, the cost of which would negatively affect our financial results. These mandatory disclosures regarding an information security breach often lead to widespread negative publicity. If we were required to make such a disclosure, it may cause our clients and customers to lose confidence in the effectiveness of our information security measures. Likewise, general publicity regarding information security breaches at other companies could lead to the perception among the general public that e-commerce is not secure. This could decrease traffic to our websites, negatively affect our financial results and limit future business opportunities.

Interruptions to our website operations or information technology systems, or failure to maintain our information technology platforms, could damage our reputation and harm our business.

The satisfactory performance, reliability and availability of our information technology systems, and those of our third-party service providers, is critical to our reputation and our ability to attract and retain customers. We could experience temporary interruptions in our websites, transaction and payment processing systems, network infrastructure, service technologies, printing production facilities or customer service operations for a variety of reasons, including, among others, human error, software errors or design faults, security breaches, power loss, telecommunications failures, equipment failures, electrical disruptions, labor issues, vandalism, fire, flood, extreme weather, terrorism and other events beyond our control.

One of the cornerstones of our growth strategy is investment in our information technology infrastructure. We have invested, and will continue to invest, significant resources to build out, maintain and improve our technology platforms and to integrate our various businesses. Any disruptions, delays or deficiencies in the design, implementation or operation of our systems, particularly any disruptions, delays or deficiencies that impact our operations, could adversely affect our ability to effectively run and manage our business. Frequent or persistent interruptions in our operations could cause customers to believe that our products and services are unreliable, leading them to switch to our competitors or to avoid our products and services.

In recent years, we shifted a substantial portion of our applications to a cloud-based environment. While we maintain redundant systems and backup databases and applications software to ensure continuous access to cloud services, it is possible that access to our software capabilities could be interrupted and our disaster recovery planning may not account for all eventualities. The failure of our systems could interfere with the delivery of products and services to our customers, impede our customers' ability to do business and result in the loss or corruption of critical data. In addition to the potential loss of customers, we may be required to incur additional development costs and divert technical and other resources, and we may be the subject of negative publicity and/or liability claims.

If any of our significant information technology systems suffer severe damage, disruption or shutdown, and our disaster recovery and business continuity plans do not effectively resolve the issue in a timely manner, our results of operations would be adversely affected, and our business interruption insurance coverage may not be adequate to compensate us fully for any losses we may incur. Moreover, to the extent that any system failure or similar event results in damages to our customers or contractual counterparties, these customers and contractual counterparties could seek compensation from us for their losses, and those claims, even if unsuccessful, would likely be time-consuming and costly for us to address.

We rely on third parties and their systems for a variety of services, including significant information technology services, and the failure of these third parties to provide these services could disrupt our business.

We have entered into agreements with third-party providers for information technology services, including telecommunications, network server, cloud computing and transaction processing services. In addition, we have agreements with companies to provide services related to our online payment solutions, including financial institutions that provide clearing services in connection with our merchant services settlement activities, and we have outsourced certain activities, including our sourcing and procurement function. A service provider's ability to provide services could be disrupted for a variety of reasons, including, among others, human error, software errors or design faults, security breaches, power loss, telecommunications failures, equipment failures, electrical disruptions, labor issues, vandalism, fire, flood, extreme weather, terrorism and other events beyond their control. In the event that one or more of our service providers is unable to provide adequate or timely services, our ability to deliver products and services to our customers could be adversely affected. Although we believe we have taken reasonable steps to protect our business through contractual arrangements with our service providers, we cannot completely eliminate the risk of disruption in service. Any significant disruption could harm our business, including damage to our brand and loss of customers. Additionally, although we believe that most of these services are available from numerous sources, a failure to perform by one or more of our service providers could cause a material disruption in our business while we obtain an alternative service provider. The use of substitute third-party providers could also result in increased expense. Additionally, while we have policies and procedures for managing these relationships, they inherently involve a lesser degree of control over business operations, governance and compliance, thereby potentially increasing our financial, legal, reputational and operational risk.

If we are unable to attract, motivate and retain key personnel and other qualified employees, our business and results of operations could be adversely impacted.

We operate in a rapidly changing technological environment that requires a wide ranging set of expertise and intellectual capital. To successfully compete and grow, we must recruit, develop, motivate and retain personnel who can provide the needed expertise across the organization. In addition, we must develop our personnel to fulfill succession plans capable of maintaining continuity in the midst of the inevitable unpredictability of human capital.

Competition for employees is intense, even more so in the current challenging labor market. We have implemented various human capital initiatives, including employee wellness initiatives, the introduction of employee resource groups and a revised performance management process, to make Deluxe an attractive place to work. However, as many of our employees have been working remotely for some time due to the COVID-19 pandemic and remote working arrangements have become more widely accepted, it is more challenging for us to maintain and enhance our corporate culture and to navigate the flexible working arrangements that employees may demand. Our work environment may not meet the needs or expectations of our employees or may be perceived as less favorable compared to other companies' policies, which could negatively impact our ability to hire and retain qualified personnel. We can provide no assurance that key personnel, including our executive officers, will continue to be employed, or that in the event we have to replace key employees, that labor costs will not increase. Failure to retain or attract key personnel could have a material adverse effect on our business, financial condition and results of operations.

Increases in prices and declines in the availability of materials and other services have adversely affected, and could continue to adversely affect, our operating results.

We are subject to risks associated with the cost and availability of paper, plastics, ink, retail packaging supplies, promotional materials, merchant services point-of-sale equipment and other raw materials, as well as various third-party services we utilize, including delivery services. In addition, from time-to-time, the card networks, including Visa® and Mastercard®, increase the fees that they charge processors. Increased levels of inflation during 2021 have resulted in cost increases for certain of the materials and services we utilize, and inflationary pressures could continue. Further, the COVID-19 pandemic and responses to it have affected the movement of goods and services worldwide, and the Russia-Ukraine dispute could cause further disruption. Although we have not experienced a material negative impact from supply chain issues to date, we are taking steps to secure multiple sources of supply for certain of the materials and services we utilize.

Paper costs represent a significant portion of our materials expense. Paper is a commodity and its price has been subject to volatility due to supply and demand in the marketplace, as well as volatility in the raw material and other costs incurred by paper suppliers. There are also relatively few paper suppliers and these suppliers are under financial pressure as paper use declines. As such, when our suppliers increase paper prices, we may not be able to obtain better pricing from alternative suppliers.

We depend upon third-party providers for delivery services and for certain outsourced products. Events resulting in the inability of these third parties to perform their obligations, such as work slowdowns, extended labor strikes, labor shortages or inclement weather, could adversely impact our results of operations by requiring us to secure alternate providers at higher costs. Postal rates are dependent on the operating efficiency of the U.S. Postal Service (USPS) and on legislative mandates imposed upon the USPS. Postal rates have increased in recent years and the USPS has incurred significant financial losses. This may result in continued changes to the breadth and/or frequency of USPS mail delivery services. In addition, fuel costs have fluctuated over the past several years and could increase as a result of the Russia-Ukraine dispute. Increased fuel costs increase the costs we incur to deliver products to our customers, as well as the price we pay for outsourced products.

Competitive pressures and/or contractual arrangements may inhibit our ability to reflect increased costs in the price of our products and services. Any of the foregoing risks could result in harm to our business and results of operations.

We are subject to customer payment-related risks and payment card network rules, which could adversely affect our business and financial results.

We may be liable for fraudulent transactions conducted on our websites, such as the use of stolen credit card numbers, and we have potential liability for fraudulent electronic payment transactions or credits initiated by merchants or others. While we do have safeguards in place, we cannot prevent all fraudulent transactions. To date, we have not incurred significant losses from payment-related fraud. However, such transactions negatively impact our results of operations and could subject us to penalties from payment card networks for inadequate fraud protection.

In addition, changes to the payment card networks' rules or how they are interpreted could have a significant impact on our business and financial results. For example, changes in the rules regarding chargebacks may affect our ability to dispute chargebacks and the amount of losses we incur from chargebacks. Changes in network rules may also increase the cost of, impose restrictions on, or otherwise impact the development of, our retail point-of-sale solutions, which may negatively affect their deployment and adoption. Any changes to or interpretations of the network rules that are inconsistent with the way we currently operate may require us to make changes to our business that could be costly or difficult to implement and that could adversely affect our results of operations.

Revenue from the sale of services to merchants that accept Visa and Mastercard are dependent upon our continued Visa and Mastercard registrations, financial institution sponsorship and, in some cases, continued membership in certain card networks.

In order to provide our Visa and Mastercard transaction processing services, we must be either a direct member or be registered as a merchant processor or service provider of Visa and Mastercard. Registration as a merchant processor or service provider is dependent upon our being sponsored by members of each organization in certain jurisdictions. If our sponsor financial institution in any market should stop providing sponsorship for us, we would need to find another financial institution to provide those services or we would need to attain direct membership with the card networks, either of which could prove to be difficult and expensive. If we are unable to find a replacement financial institution to provide sponsorship or attain direct membership, we may no longer be able to provide processing services to affected customers, which would negatively affect our business and results of operations. In addition, some agreements with our financial institution sponsors give them substantial discretion in approving certain aspects of our business practices, including our solicitation, application and qualification procedures for merchants and the terms of our agreements with merchants. Our sponsors' discretionary actions under these agreements could have a material adverse effect on our business and results of operations.

If we fail to comply with the applicable requirements of the card networks, the card networks could seek to fine us, suspend us or terminate our registrations or membership. The termination of our registrations or our membership or our status as a service provider or a merchant processor would have a material adverse effect on our business, financial condition and results of operations. If a merchant or an independent sales organization (ISO) customer fails to comply with the applicable requirements of the card associations and networks, we or the merchant or ISO could be subject to a variety of fines or penalties that may be levied by the card associations or networks. If we cannot collect or pursue collection of such amounts from the applicable merchant or ISO, we may have to bear the cost of such fines or penalties, negatively impacting our results of operations.

LEGAL AND COMPLIANCE RISKS

Governmental regulation is continuously evolving and could limit or harm our business.

We are subject to numerous international, federal, state and local laws and regulations that affect our business activities in several areas, including, but not limited to, labor, advertising, taxation, data privacy and security, digital content, consumer reports, consumer protection, merchant processing, online payment services, real estate, e-commerce, intellectual property, health care, environmental matters, and workplace health and safety. Additionally, in response to the COVID-19 pandemic, local, state, national and international governments and health authorities have, at times, established myriad new laws, rules, regulations and orders applicable to us, many of which are required to be implemented within a very short timeframe. The complexity of complying with existing and new laws and regulations is significant, and regulators may adopt new laws or regulations at any time.

The various regulatory requirements to which we are subject could impose significant limitations on our business activities, require changes to our business, restrict our use or storage of personal information, or cause changes in our customers' purchasing behavior, which may make our business more costly and/or less efficient and may require us to modify our current or future products, services, systems or processes. We cannot quantify or predict with any certainty the likely impact of such changes on our business, prospects, financial condition or results of operations.

Portions of our business operate within highly regulated industries and our business results could be significantly affected by the laws and regulations to which we are subject. For example, international, federal and state laws and regulations regarding the protection of certain consumer information require us to develop, implement and maintain policies and procedures to protect the security and confidentiality of consumers' nonpublic personal information. Portions of our business are subject to regulations affecting payment processing, including merchant processing, ACH, remote deposit capture and lockbox services. These laws and regulations require us to develop, implement, and maintain certain policies and procedures related to payments. We are also subject to additional requirements in certain of our contracts with financial institution clients and communications service providers, which are often more restrictive than the regulations, as well as confidentiality clauses in certain of our contracts related to small businesses' customer information. These regulations and agreements typically limit our ability to use or disclose nonpublic personal information for other than the purposes originally intended, which could limit business opportunities. Proposed privacy and cybersecurity regulations may also increase the cost of compliance for the protection of collected data. The complexity of compliance with these various regulations may increase our cost of doing business and may affect our clients, reducing their discretionary spending and thus, reducing their capacity to purchase our products and services.

Due to our increased use of the internet for sales and marketing, laws specifically governing digital commerce, the internet, mobile applications, search engine optimization, behavioral advertising, privacy and email marketing may have an impact on our business. Existing and future laws governing issues such as digital and social marketing, privacy, consumer protection or commercial email may limit our ability to market and provide our products and services. Changing data protection regulations may increase the cost of compliance in servicing domestic and international markets for our wholesale and retail

business services channels. More restrictive legislation, such as new privacy laws, search engine marketing restrictions, “anti-spam” regulations or email privacy rules, could decrease marketing opportunities, decrease traffic to our websites and/or increase the cost of obtaining new customers.

Because of additional regulatory costs, financial institutions may continue to put significant pricing pressure on their suppliers, including their check and service providers. The increase in cost and profit pressure may also lead to further consolidation of financial institutions. Additionally, some financial institutions do not permit offers of add-on services, such as bundled products, fraud/identity protection or expedited check delivery, to their customers. It would have an adverse impact on our results of operations if we were unable to market such services to consumers or small businesses through the majority of our financial institution clients. Additionally, as our product and service offerings become more technologically focused, and with expanded regulatory expectations for supervision of third-party service providers, additional portions of our business could become subject to direct federal regulation and/or examination. This would increase our cost of doing business and could slow our ability to introduce new products and services and otherwise adapt to a rapidly changing business environment.

Third-party claims could result in costly and distracting litigation and, in the event of an unfavorable outcome, could have an adverse effect on our business, financial condition and results of operations.

From time to time, we are involved in claims, litigation and other proceedings related to the conduct of our business, including purported class action litigation. Such legal proceedings may include claims related to our employment practices; claims alleging breach of contractual obligations; claims asserting deceptive, unfair or illegal business practices; claims alleging violations of consumer protection-oriented laws; claims related to legacy distributor account protection rights; or claims related to environmental matters. In addition, third parties may assert patent and other intellectual property infringement claims against us and/or our clients, which could include aggressive and opportunistic enforcement of patents by non-practicing entities. Any such claims could result in litigation against us and could also result in proceedings being brought against us by various federal and state agencies that regulate our businesses. The number and significance of these claims and proceedings has increased as our businesses have evolved and expanded in scope. These claims, whether successful or not, could divert management’s attention, result in costly and time-consuming litigation, or both. Accruals for identified claims or lawsuits are established based on our best estimates of the probable liability. However, we cannot accurately predict the ultimate outcome of any such proceedings due to the inherent uncertainties of litigation and other dispute resolution mechanisms. Any unfavorable outcome of a material claim or material litigation could require the payment of monetary damages or fines, attorneys’ fees or costly and undesirable changes to our products, features or business practices, which would result in a material adverse effect on our business, financial condition and results of operations.

A pending investigation by the Federal Trade Commission into certain business practices of First American could materially and adversely affect our business.

Three operating subsidiaries of First American received separate Civil Investigative Demands dated December 27, 2019 from the Federal Trade Commission (the FTC) requesting information and documents to determine whether the subsidiaries may have engaged in conduct prohibited by the Federal Trade Commission Act, the Fair Credit Reporting Act or the Duties of Furnishers of Information. The FTC has not yet made a final determination in this matter, and we are currently unable to predict the ultimate outcome of its investigation, or the eventual scope of damages, fines, restitution, or other equitable monetary relief that the FTC might seek to impose.

We are entitled to limited indemnification under the merger agreement related to the acquisition of First American for certain expenses and losses, if any, that may be incurred with respect to certain matters, including the FTC investigation. The right to indemnification for any such expenses and losses is limited to the amount of an indemnity holdback and, except in the case of fraud, is our sole recourse for such losses. There can be no assurance that such indemnification will be sufficient to address all losses that may arise from such matters, or that the FTC’s pending investigation will not result in findings or alleged violations of laws that could lead to enforcement actions, proceedings or litigation, whether by the FTC, injunctive relief, other state or federal agencies, or other parties. The imposition of damages, fines, restitution, other equitable monetary relief or changes required to our business practices or operations could materially and adversely affect our business, financial condition, results of operations or reputation.

We may be unable to protect our rights in intellectual property, which could harm our business and ability to compete.

We rely on a combination of trademark and copyright laws, trade secret and patent protection, and confidentiality and license agreements to protect our trademarks, software and other intellectual property. These protective measures afford only limited protection. Despite our efforts to protect our intellectual property, third parties may infringe or misappropriate our intellectual property or otherwise independently develop substantially equivalent products or services that do not infringe on our intellectual property rights. Policing unauthorized use of our intellectual property is difficult. We may be required to spend significant resources to protect our trade secrets and to monitor and police our intellectual property rights. The loss of intellectual property protection or the inability to secure or enforce intellectual property protection could harm our business and ability to compete.

Activities of our customers or the content of their websites could damage our reputation and/or adversely affect our financial results.

As a provider of domain name registration, web hosting services and customized business products, we may be subject to potential liability for the activities of our customers on or in connection with their domain names or websites, for the data they store on our servers, including information accessible through the "dark web," or for images or content that we produce on their behalf. Customers may also launch distributed denial of service attacks or malicious executables, such as viruses, worms or trojan horses, from our servers. Although our agreements with our customers prohibit illegal use of our products and services and permit us to take appropriate action for such use, customers may nonetheless engage in prohibited activities or upload or store content with us in violation of applicable law. Our reputation may be negatively impacted by the actions of customers that are deemed to be hostile, offensive or inappropriate, or that infringe the copyright or trademark of another party. The safeguards we have established may not be sufficient to avoid harm to our reputation, especially if the inappropriate activities are high profile.

Laws relating to the liability of online services companies for information, such as online content disseminated through their services, are subject to frequent challenges. Claims may be made against online services companies by parties who disagree with the content. Where the online content is accessed on the internet outside of the U.S., challenges may be brought under foreign laws that do not provide the same protections for online services companies as in the U.S. These challenges in either U.S. or foreign jurisdictions may give rise to legal claims alleging defamation, libel, invasion of privacy, negligence or copyright or trademark infringement, based on the nature and content of the materials disseminated through our services. Certain of our products and services include content generated by users of our online services. Although this content is not generated by us, claims of defamation or other injury may be made against us for that content. If such claims are successful, our financial results would be adversely affected. Even if the claims do not result in litigation or are resolved in our favor, the time and resources necessary to resolve them could divert management's attention and adversely affect our business and financial results.

FINANCIAL RISKS

Economic conditions, including continuing impacts of the COVID-19 pandemic, may adversely affect trends in business and consumer spending, which may adversely impact demand for our products and services.

Economic conditions have affected, and will continue to affect, our results of operations and financial position. Current and future economic conditions that affect inflation, business and consumer spending, including levels of business and consumer confidence, unemployment levels, consumer spending and the availability of credit, as well as uncertainty or volatility in our customers' businesses, may adversely affect our business and results of operations. A challenging economic environment could cause existing and potential customers to not purchase or to delay purchasing our products and services. Continued inflationary pressures could negatively impact our customers' ability to purchase our products and services, thereby negatively impacting our revenue and results of operations.

A significant portion of our business relies on small business spending. We believe that small businesses are more likely to be significantly affected by economic conditions than larger, more established companies. During a sluggish economy, it may be more difficult for small businesses to obtain credit and they may choose to spend their limited funds on items other than our products and services. As such, the level of small business confidence, the rate of small business formations and closures, and the availability of credit to small businesses all impact our business.

A significant portion of our business also relies upon the health of the financial services industry. As a result of global economic conditions in past years, a number of financial institutions sought additional capital, merged with other financial institutions and, in some cases, failed. The failure of one or more of our larger financial institution clients, or large portions of our customer base, could adversely affect our operating results. In addition to the possibility of losing a significant client, the inability to recover prepaid product discount payments made to one or more of our larger financial institution clients, or the inability to collect accounts receivable or contractually required contract termination payments, could have a significant negative impact on our results of operations.

There may also be an increase in financial institution mergers and acquisitions during periods of economic uncertainty or as a result of other factors affecting the financial services industry. Such an increase could adversely affect our operating results. Often the newly combined entity seeks to reduce costs by leveraging economies of scale in purchasing, including its check supply and business services contracts. This results in providers competing intensely on price in order to retain not only their previous business with one of the financial institutions, but also to gain the business of the other party in the combined entity. Although we devote considerable effort toward the development of a competitively-priced, high-quality selection of products and services for the financial services industry, there can be no assurance that significant financial institution clients will be retained or that the impact of the loss of a significant client can be offset through the addition of new clients or by expanded sales to our remaining clients.

Global events, such as the COVID-19 pandemic and the actions taken in response to it, as well as the Russia-Ukraine dispute, have significantly increased economic uncertainty. Given the ongoing and dynamic nature of these events, we cannot predict the impact on our business, financial position or results of operations. Even after such impacts subside, the U.S. economy may experience a recession, and our business could be adversely affected by a prolonged recession.

Asset impairment charges would have a negative impact on our results of operations.

Goodwill represented 46.5% of our total assets as of December 31, 2021. On at least an annual basis, we assess whether the carrying value of goodwill is impaired. This analysis considers several factors, including economic, market and industry conditions. Circumstances that could indicate a decline in the fair value of one or more of our reporting units include, but are not limited to, the following:

- a downturn in economic conditions that negatively affects our actual and forecasted operating results;
- changes in our business strategy, structure and/or the allocation of resources;
- the failure of our growth strategy;
- the inability of our acquisitions to achieve expected operating results;
- changes in market conditions, including increased competition;
- the loss of significant customers;
- a decline in our stock price for a sustained period; or
- a material acceleration of order volume declines for checks and business forms.

Such situations may require us to record an impairment charge for a portion of goodwill. We are also required to assess the carrying value of other long-lived assets, including intangible assets and assets held for sale. Information regarding our 2021 impairment analyses can be found under the caption "Note 8: Fair Value Measurements" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. We have, in the past, and may again in the future, be required to write-down the value of some of our assets, and these write-downs have been, and could in the future be, material to our results of operations. If we are required to record additional asset impairment charges for any reason, our consolidated results of operations would be adversely affected.

Our variable-rate indebtedness exposes us to interest rate risk.

The majority of the borrowings under our credit facility, including our secured term loan facility, are subject to variable rates of interest and expose us to interest rate risk. If interest rates were to increase, our interest expense would increase, negatively affecting earnings and reducing cash flows available for working capital, capital expenditures and other investments. As of December 31, 2021, we had \$1.0 billion of variable-rate debt outstanding.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2021, we occupied 50 facilities throughout the U.S., 6 facilities in Canada, 2 facilities in Europe and 1 facility in Australia, where we conduct printing and fulfillment, payment processing, call center, data center and administrative functions, including facilities obtained as part of the acquisition of First American Payment Systems, L.P. in June 2021. Because of our shared services approach to most of our business functions, many of our facilities are utilized for the benefit of more than one of our business segments. Approximately 15% of our facilities are owned, while the remaining 85% are leased. Our facilities have a combined floor space of approximately 2.3 million square feet. None of our owned properties are mortgaged or held subject to any significant encumbrance. We believe that existing leases will be renegotiated as they expire or that suitable alternative properties will be leased on acceptable terms. We also believe that our properties are sufficiently maintained and are adequate and suitable for our business needs as presently conducted. We closed 16 facilities during 2021, as we continued to assess our real estate footprint. A majority of the impacted employees transitioned to a work-from-home environment. Additionally, during 2021, the leases on new facilities in Minnesota and Georgia commenced, which house our corporate headquarters and our technology innovation center, respectively.

ITEM 3. LEGAL PROCEEDINGS

We record provisions with respect to identified claims or lawsuits when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Claims and lawsuits are reviewed quarterly and provisions are taken or adjusted to reflect the status of a particular matter. We believe the recorded reserves in our consolidated financial statements are

adequate in light of the probable and estimable outcomes. Recorded liabilities were not material to our financial position, results of operations or liquidity, and we do not believe that any of the currently identified claims or litigation will materially affect our financial position, results of operations or liquidity upon resolution. However, litigation is subject to inherent uncertainties, and unfavorable rulings could occur. If an unfavorable ruling were to occur, it may cause a material adverse impact on our financial position, results of operations or liquidity in the period in which the ruling occurs or in future periods.

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 is traded on the New York Stock Exchange under the symbol DLX. Dividends are declared by our board of directors on a quarterly basis, and therefore, are subject to change. As of December 31, 2021, the number of shareholders of record was 5,248, excluding shareholders whose shares are held in the name of various dealers, clearing agencies, banks, brokers and other fiduciaries.

The following table shows purchases of our common stock that were completed during the fourth quarter of 2021:

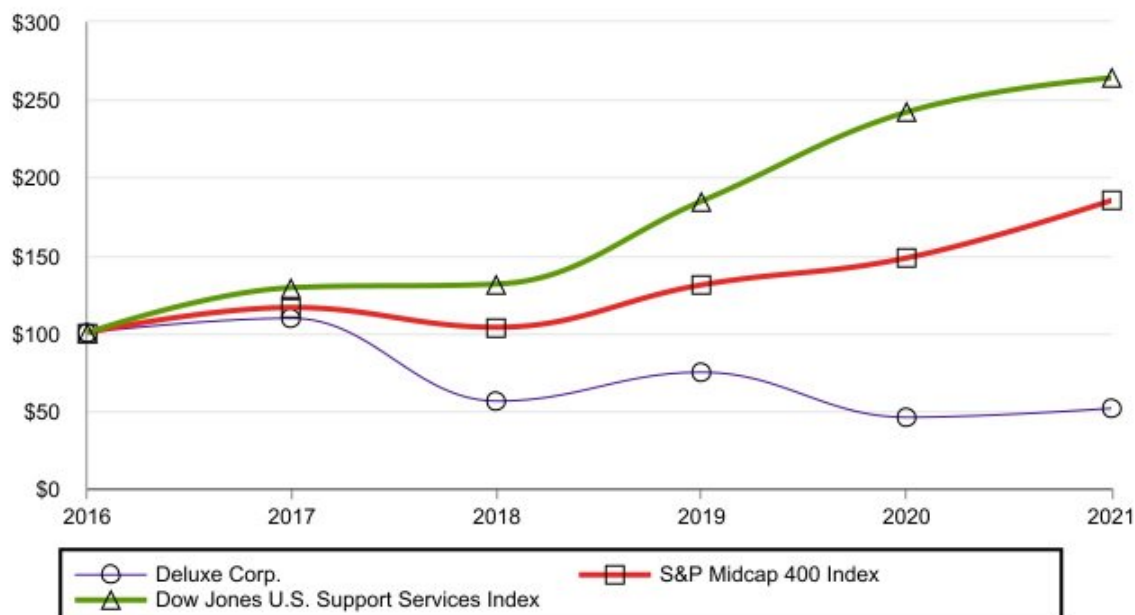
Period	Total number of shares purchased ⁽¹⁾	Average price paid per share ⁽¹⁾	Total number of shares purchased as part of publicly announced plans or programs	Maximum number (or approximate dollar value) of shares that may yet be purchased under the plans or programs ⁽²⁾
October 1, 2021 – October 31, 2021	2,502	\$ 37.28	—	287,452,394
November 1, 2021 – November 30, 2021	21,677	35.71	—	287,452,394
December 1, 2021 – December 31, 2021	14,575	32.11	—	287,452,394
Total	38,754	34.46	—	287,452,394

⁽¹⁾ Under the terms of our 2020 Long-Term Incentive Plan, as well as our previous long-term incentive plans, participants may surrender shares that would otherwise be issued under equity-based awards to cover the withholding taxes due as a result of the exercise or vesting of such awards. During the fourth quarter of 2021, we withheld 38,754 shares in conjunction with the vesting and exercise of equity-based awards.

⁽²⁾ In October 2018, our board of directors authorized the repurchase of up to \$500.0 million of our common stock. This authorization has no expiration date. No shares were repurchased under this authorization during the fourth quarter of 2021 and \$287.5 million remained available for repurchase as of December 31, 2021.

The table below compares the cumulative total shareholder return on our common stock for the last five fiscal years with the cumulative total return of the S&P MidCap 400 Index and the Dow Jones U.S. Support Services (DJUSIS) Index.

**COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN
ASSUMES INITIAL INVESTMENT OF \$100
DECEMBER 2021**



The graph assumes that \$100 was invested on December 31, 2016 in each of Deluxe common stock, the S&P MidCap 400 Index and the DJUSIS Index, and that all dividends were reinvested.

Note: Index Data: Copyright Standard and Poor's, Inc. Used with permission. All rights reserved.

Note: Index Data: Copyright Dow Jones, Inc. Used with permission. All rights reserved.

ITEM 6. [RESERVED]

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

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) includes the following sections:

- [Executive Overview](#) that discusses what we do, our operating results at a high level and our financial outlook for the upcoming year;
- [Consolidated Results of Operations; Restructuring, Integration and Other Costs; and Segment Results](#) that includes a more detailed discussion of our revenue and expenses;
- [Cash Flows and Liquidity, Capital Resources and Other Financial Position Information](#) that discusses key aspects of our cash flows, financial commitments, capital structure and financial position; and
- [Critical Accounting Estimates](#) that discusses the estimates that involve a significant level of uncertainty and have had or are reasonably likely to have a material impact on our financial condition or results of operations.

Please note that this MD&A discussion contains forward-looking statements that involve risks and uncertainties. Part I, Item 1A of this report outlines known material risks and important information to consider when evaluating our forward-looking statements. The Private Securities Litigation Reform Act of 1995 (the "Reform Act") provides a "safe harbor" for forward-looking

statements to encourage companies to provide prospective information. When we use the words or phrases “should result,” “believe,” “intend,” “plan,” “are expected to,” “targeted,” “will continue,” “will approximate,” “is anticipated,” “estimate,” “project,” “outlook,” “forecast” or similar expressions in this Annual Report on Form 10-K, in future filings with the Securities and Exchange Commission, in our press releases, investor presentations and in oral statements made by our representatives, they indicate forward-looking statements within the meaning of the Reform Act.

This MD&A includes financial information prepared in accordance with accounting principles generally accepted in the U.S. (“GAAP”). In addition, we discuss free cash flow, net debt, liquidity, adjusted diluted earnings per share (EPS) and consolidated adjusted earnings before interest, taxes, depreciation and amortization (EBITDA), all of which are non-GAAP financial measures. We believe that these non-GAAP financial measures, when reviewed in conjunction with GAAP financial measures, can provide useful information to assist investors in analyzing our current period operating performance and in assessing our future operating performance. For this reason, our internal management reporting also includes these financial measures, which should be considered in addition to, and not as superior to or as a substitute for, GAAP financial measures. We strongly encourage investors and shareholders to review our financial statements and publicly-filed reports in their entirety and not to rely on any single financial measure. Our non-GAAP financial measures may not be comparable to similarly titled measures used by other companies and therefore, may not result in useful comparisons. The reconciliation of our non-GAAP financial measures to the most directly comparable GAAP financial measures can be found in *Consolidated Results of Operations*.

Revision – During the second quarter of 2021, we identified errors in the calculations of the goodwill impairment charges recorded during the third quarter of 2019 and the first quarter of 2020, resulting in an understatement of the goodwill impairment charges and net losses and an overstatement of goodwill. The errors in our calculations resulted from the erroneous application of the simultaneous equation method, which effectively grosses up the goodwill impairment charge to account for the related income tax benefit, so that the resulting carrying value does not exceed the calculated fair value. We have corrected the errors by revising the consolidated financial statements presented herein. Further information regarding the errors can be found under the caption “Note 1: Significant Accounting Policies” of the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

EXECUTIVE OVERVIEW

Recent acquisition – On June 1, 2021, we acquired all of the equity of First American Payment Systems, L.P. (First American) in a cash transaction for \$958.5 million, net of cash, cash equivalents, restricted cash and restricted cash equivalents acquired, subject to customary adjustments under the terms of the acquisition agreement. First American is a large-scale payments technology company that provides partners and merchants with comprehensive in-store, online and mobile payment solutions. The results of First American are included in our Payments segment and included revenue of \$195.0 million and a contribution of \$39.1 million to Payments adjusted EBITDA for 2021. The acquisition was funded with cash on hand and proceeds from new debt. Further information regarding the acquisition can be found under the caption “Note 6: Acquisitions” and further information regarding our debt can be found under the caption “Note 14: Debt,” both of which appear in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

COVID-19 impact – The COVID-19 pandemic began to impact our operations late in the first quarter of 2020. While we believe revenue in 2020 benefited from sales-driven growth, it was not sufficient to overcome the impact of the pandemic, which negatively affected volumes for our Promotional Solutions promotional products, personal and business checks and Cloud Solutions data-driven marketing solutions. Despite the challenges of the pandemic, adjusted EBITDA margin for 2020 was 20.4%, in line with our annual expectations prior to the pandemic.

The impact of the pandemic continued in the first quarter of 2021 and was the main driver of the 9.3% decrease in revenue, as compared to the first quarter of 2020. During the remainder of 2021, we saw some recovery in revenue volumes as the impacts of the pandemic lessened and our customers resumed some of their marketing and promotional activities as government restrictions were lifted and vaccines became widely available. Also contributing to the increase in data-driven marketing revenue was the continuation of low interest rates and an improving credit risk environment, which drove increased marketing efforts by our banking and mortgage lending customers. Business check volumes also continued to recover and within Payments, we resumed many of our new customer implementations that had been delayed, in part, due to impacts of the pandemic. Despite the continuing challenges of the pandemic, net income improved for 2021, as compared to 2020, and adjusted EBITDA margin for 2021 remained strong at 20.2%. Future impacts of the pandemic on our results of operations remain uncertain, as increases in infection rates and/or new variants of the virus could impact our customers' activities and our revenue volumes. Impacts of the COVID-19 pandemic on our supply chain have not had a significant impact on our results of operations to-date. However, with recent stresses on the global supply change and labor market, we can provide no assurance that we would be able to obtain alternative sources of supply if one of our vendors was unable to perform or that an alternative source of supply could be obtained at current prices. During 2021, we experienced inflationary pressures on hourly wages, materials and delivery as a result of economic conditions. We implemented targeted price increases in all of our segments late in 2021 in response to the inflationary pressures.

Cash flows and liquidity – Cash provided by operations remained strong in 2021, decreasing only \$6.7 million, as compared to 2020, despite increased investments in software-as-a-service (SaaS) solutions we are utilizing throughout the company, including a new enterprise resource planning system, as well as a \$23.8 million increase in interest payments related to debt issued to complete the First American acquisition, \$18.9 million of transaction costs related to the acquisition, the continued secular decline in checks and business forms, and temporary actions taken in 2020 to maintain liquidity at the onset of the COVID-19 pandemic. We were able to substantially offset these impacts through the contribution of First American's operations, some recovery of the 2020 volume declines driven by the COVID-19 pandemic, numerous cost savings actions and a reduction in restructuring and integration costs. Free cash flow for 2021 decreased \$53.2 million, as compared to 2020, reflecting a \$46.5 million increase in purchases of capital assets, as we continued investments to support our long-term growth, including technology platform modernization initiatives. Total debt as of December 31, 2021 was \$1.68 billion, reflecting the additional debt we incurred in the second quarter of 2021 to complete the First American acquisition. During the second half of 2021, our strong cash flow and the repatriation of cash from our Canadian subsidiaries allowed us to complete net debt repayments of \$152.9 million. Net debt as of December 31, 2021 was \$1.64 billion. We held cash and cash equivalents of \$41.2 million as of December 31, 2021, and liquidity was \$403.9 million. Our capital allocation priorities are to responsibly invest in growth, pay our dividend, reduce debt and return value to our shareholders. We will continue to evaluate share repurchases on an opportunistic basis.

2021 results vs. 2020 – Numerous factors drove the increase in net income for 2021, as compared to 2020. The primary factor was a decrease in pretax asset impairment charges of \$101.7 million, as compared to 2020. Other factors that increased net income included:

- revenue growth from new business in all of our segments, reflecting the success of our One Deluxe strategy, as well as some recovery from the impacts of the COVID-19 pandemic;
- actions taken to reduce costs as we continually evaluate our cost structure;
- a \$21.7 million decrease in restructuring, integration and other costs;
- price increases in response to the current inflationary environment; and
- an \$11.4 million decrease in bad debt expense, primarily driven by allowances recorded in 2020 related to notes receivable from our Promotional Solutions distributors, as well as trade accounts receivable.

Partially offsetting these increases in net income were the following factors:

- the continuing secular decline in checks, business forms and some Promotional Solutions business accessories, as well as the 2020 decision to exit certain product lines within Cloud Solutions;
- a \$32.4 million increase in interest expense related to debt issued to complete the First American acquisition;
- increased investments in our growth, primarily costs related to sales and financial management tools;
- an increase in acquisition amortization of \$27.0 million, driven by the First American acquisition;
- acquisition transaction costs of \$18.9 million in 2021 related to the First American acquisition;
- a year-over-year impact of approximately \$15.0 million from temporary actions taken in response to the COVID-19 pandemic in 2020, including savings from a temporary salary reduction, furloughs and other actions, net of incremental costs we incurred in 2020 related to our response to the pandemic;
- inflationary pressures on hourly wages, materials and delivery; and
- additional income tax expense of \$4.6 million related to the repatriation of cash from our Canadian subsidiaries.

Diluted EPS of \$1.45 for 2021, as compared to \$0.11 for 2020, reflects the increase in net income as described in the preceding paragraphs, partially offset by higher average shares outstanding in 2021. Adjusted diluted EPS for 2021 was \$4.88, compared to \$5.08 for 2020, and excludes the impact of non-cash items or items that we believe are not indicative of our current period operating performance. The decrease in adjusted diluted EPS was driven primarily by the continuing secular decline in checks, business forms and some business accessories; the increase in interest expense resulting from debt issued to complete the First American acquisition; increased investments in our growth, primarily costs related to sales and financial management tools; the benefit in the prior year of temporary actions taken in response to the COVID-19 pandemic; inflationary pressures on hourly wages, materials and delivery; and tax expense related to the repatriation of cash from our Canadian subsidiaries. These decreases in adjusted EPS were partially offset by the contribution from First American, as adjusted diluted EPS excludes the associated acquisition amortization of \$29.5 million for 2021. In addition, adjusted diluted EPS benefited from the impact of new business in all of our segments, some recovery from the impacts of the COVID-19 pandemic, various cost savings actions across

functional areas, price increases in response to the current inflationary environment and lower bad debt expense for 2021. A reconciliation of diluted earnings (loss) per share to adjusted diluted EPS can be found in *Consolidated Results of Operations*.

Asset impairment charges – Net income for 2020 included asset impairment charges of \$101.7 million, or \$1.53 per diluted share. The impairment charges related primarily to the goodwill of our Promotional Solutions and Cloud Solutions Web Hosting reporting units, as well as certain intangibles in our Cloud Solutions Web Hosting reporting unit, and resulted primarily from the estimated impacts of the COVID-19 pandemic on our results of operations. Net loss for 2019 included asset impairment charges of \$421.1 million, or \$8.49 per diluted share. These impairment charges related to the goodwill of our former Small Business Services Web Services and Financial Services Data-Driven Marketing reporting units, as well as certain intangibles, primarily in our former Small Business Services Web Services reporting unit. Further information regarding these impairment charges can be found under the caption "Note 8: Fair Value Measurements" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report and in *Critical Accounting Policies*.

"One Deluxe" Strategy

A detailed discussion of our strategy can be found in Part I, Item 1 of this report. We continue to be encouraged by the success of our One Deluxe strategy. We have made significant progress in the integration of our various technology platforms, developed an enterprise-class sales organization, assembled a talented management team, and built an organization focused on developing new and improved products. As a result, we are seeing the positive impact of new client wins in all of our segments and we determined that we were positioned to augment our business through meaningful acquisitions. As such, we completed the acquisition of First American on June 1, 2021. We believe that First American's end-to-end payments technology platform is providing significant leverage that will continue to accelerate organic revenue growth.

Outlook for 2022

We expect revenue to increase 8% to 10% for 2022, including a full year of revenue from First American, as compared to 2021 revenue of \$2.02 billion, and we expect that adjusted EBITDA margin for 2022 will be approximately 20.0%, as compared to 20.2% for 2021. We expect that our adjusted EBITDA margin for the first quarter of the year will be lower, with improving margins as the year progresses, primarily driven by the timing of certain employee benefit costs and seasonality for some of our products and services. These estimates are subject to, among other things, the macroeconomic unknowns associated with the COVID-19 pandemic, including the Omicron variant, as well as anticipated continued supply chain constraints, labor supply issues and inflation.

As of December 31, 2021, we held cash and cash equivalents of \$41.2 million and \$362.6 million was available for borrowing under our revolving credit facility. We anticipate that capital expenditures will be approximately \$105.0 million in 2022, as compared to \$109.1 million for 2021, as we continue with important innovation investments and building scale across our product categories. We also expect that we will continue to pay our regular quarterly dividend. However, dividends are approved by our board of directors each quarter and thus, are subject to change. We anticipate that net cash generated by operations, along with cash and cash equivalents on hand and availability under our credit facility, will be sufficient to support our operations, including our contractual obligations and debt service requirements, for the next 12 months. We were in compliance with our debt covenants as of December 31, 2021, and we anticipate that we will remain in compliance with our debt covenants throughout 2022.

CONSOLIDATED RESULTS OF OPERATIONS

Consolidated Revenue

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Total revenue	\$ 2,022,197	\$ 1,790,781	\$ 2,008,715	12.9%	(10.8%)

The increase in total revenue for 2021, as compared to 2020, was driven, in part, by the First American acquisition, which contributed revenue of \$195.0 million for 2021. In addition, revenue benefited from new clients in all of our segments, reflecting the success of our One Deluxe strategy, and we experienced some recovery of volume declines resulting from the impact of the COVID-19 pandemic, as discussed in *Executive Overview*. Also contributing to the revenue increase was increased data-driven marketing revenue within Cloud Solutions, resulting in part, from the continuation of low interest rates and an improving credit risk environment, which drove increased marketing efforts by our banking and mortgage lending customers. Revenue also benefited from price increases in response to the current inflationary environment, primarily in our Checks and Promotional Solutions segments. Partially offsetting these increases in revenue was the continuing secular decline in order volume for checks, business forms and some business accessories, and sales of personal protective equipment (PPE) decreased

approximately \$22.0 million for 2021, as compared to 2020. Within Cloud Solutions' web and hosted solutions revenue, our 2020 decision to exit certain product lines resulted in a revenue decline of \$19.9 million for 2021, as compared to 2020.

The decrease in total revenue for 2020, as compared to 2019, was driven primarily by volume declines resulting from the impact of the COVID-19 pandemic, primarily in our Promotional Solutions, Checks and Cloud Solutions segments. In addition, revenue continued to be impacted by the secular decline in order volume for checks and business forms. Cloud Solutions web and hosted solutions revenue also declined, due to our decision in the third quarter of 2019 to exit certain customer contracts, the loss of certain large customers in the third quarter of 2019 as they elected to in-source certain of the services we provide, and more recent decisions to exit certain product lines. These decreases in revenue were partially offset by growth of 16.8% in treasury management revenue within our Payments segment, driven primarily by lockbox processing outsourcing deals signed in the fourth quarter of 2019 and new client wins. We also generated new revenue of \$31.0 million from sales of PPE in the Promotional Solutions segment in 2020. In addition, revenue benefited from new data-driven marketing campaigns and growth in pay-for-performance marketing campaigns in our Cloud Solutions segment prior to the commencement of the COVID-19 pandemic.

Service revenue represented 38.5% of total revenue in 2021, 31.3% in 2020 and 29.8% in 2019. We do not manage our business based on product versus service revenue. Instead, we analyze our revenue based on the product and service offerings shown under the caption "Note 18: Business Segment Information" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. Our revenue mix by business segment was follows:

	2021	2020	2019
Payments	25.2 %	16.9 %	13.4 %
Cloud Solutions	13.0 %	14.1 %	15.9 %
Promotional Solutions	27.0 %	29.6 %	31.9 %
Checks	34.8 %	39.4 %	38.8 %
Total revenue	100.0 %	100.0 %	100.0 %

Consolidated Cost of Revenue

	2021	2020	2019	Change	
(in thousands)				2021 vs. 2020	2020 vs. 2019
Total cost of revenue	\$ 884,270	\$ 730,771	\$ 812,935	21.0%	(10.1%)
Total cost of revenue as a percentage of total revenue	43.7 %	40.8 %	40.5 %	2.9 pt.	0.3 pt.

Cost of revenue consists primarily of raw materials used to manufacture our products, shipping and handling costs, third-party costs for outsourced products and services, payroll and related expenses, information technology costs, depreciation and amortization of assets used in the production process and in support of digital service offerings, and related overhead.

The increase in total cost of revenue for 2021, as compared to 2020, was driven, in part, by the additional costs resulting from the First American acquisition of \$116.3 million, including acquisition amortization, as well as the increase in revenue resulting from new client wins in all of our segments and some recovery of volume declines driven by the impact of the COVID-19 pandemic. In addition, we experienced inflationary pressures on hourly wages, materials and delivery, and the mix of data-driven marketing clients also impacted total cost of revenue. Partially offsetting these increases in total cost of revenue were reduced revenue volumes from the continuing secular decline in checks, business forms and some business accessories, as well as the decline in PPE revenue volume in 2021 and our 2020 decision to exit certain product lines within Cloud Solutions' web and hosted solutions. In addition, obsolete inventory expense decreased \$3.2 million in 2021, primarily in Promotional Solutions. Total cost of revenue as a percentage of total revenue increased, as compared to 2020, driven by the First American acquisition, including acquisition amortization, the inflationary pressures on our costs and client mix. These impacts were partially offset by price increases implemented in response to the current inflationary environment.

The decrease in total cost of revenue for 2020, as compared to 2019, was primarily attributable to the decrease in revenue volume resulting from the COVID-19 impact. In addition, cost of revenue decreased as a result of the continued secular decline in checks and business forms, as well as the decline in web and hosted solutions revenue driven by the events of the third quarter of 2019 outlined in our discussion of consolidated revenue. Benefits from cost reductions and efficiencies in our fulfillment area, unrelated to our response to the COVID-19 pandemic, reduced cost of revenue approximately \$7.5 million in 2020, while actions taken to reduce costs in response to COVID-19 reduced cost of revenue approximately \$6.0 million in 2020. Partially offsetting these decreases in cost of revenue were costs related to the new revenue from PPE sales in 2020, costs related to treasury management deals signed in the fourth quarter of 2019, incremental costs driven by our response to the COVID-19 pandemic of approximately \$6.0 million, and a \$4.9 million increase in obsolete inventory expense in 2020, primarily in Promotional Solutions. Total cost of revenue as a percentage of total revenue increased slightly, as compared to 2019, as

costs related to the new treasury management clients were partially offset by the loss of lower margin revenue driven by the impacts of COVID-19, as well as the benefits of our cost reduction initiatives.

Consolidated Selling, General & Administrative (SG&A) Expense

				Change	
(in thousands)	2021	2020	2019	2021 vs. 2020	2020 vs. 2019
SG&A expense	\$ 941,023	\$ 841,658	\$ 891,693	11.8%	(5.6%)
SG&A expense as a percentage of total revenue	46.5 %	47.0 %	44.4 %	(0.5) pt.	2.6 pt.

The increase in SG&A expense for 2021, as compared to 2020, was driven, in part, by the operating costs of First American of \$46.1 million for 2021, as well as related acquisition transaction costs of \$18.9 million. Additionally, expense for SaaS solutions that we are utilizing, primarily related to sales and financial management tools, increased as we continue to invest in our growth strategy, and commission expense increased as a result of some recovery of volume declines driven by the impact of the COVID-19 pandemic and revenue generated by new clients, primarily in our Checks segment. Also, SG&A expense increased due to a year-over-year impact of approximately \$15.0 million from temporary actions taken in response to the COVID-19 pandemic in 2020, including savings from a temporary salary reduction, furloughs and other actions, net of incremental costs we incurred in 2020 related to our response to the pandemic. Partially offsetting these increases in SG&A expense were various cost reduction actions, including efficiencies in sales, marketing and our corporate support functions. In addition, bad debt expense decreased \$11.4 million, primarily due to allowances recorded in 2020 related to notes receivable from our Promotional Solutions distributors, as well as trade accounts receivable. Commission expense related to sales of PPE also decreased along with the lower sales volume in 2021.

The decrease in SG&A expense for 2020, as compared to 2019, was driven by lower commissions on the lower order volume resulting from the impacts of the COVID-19 pandemic, as well as the benefit of organizational actions taken in response to COVID-19, including the temporary salary reductions and the suspension of the 401(k) plan employer matching contribution. These actions lowered SG&A expense approximately \$27.0 million in 2020. Also lowering SG&A expense were various cost reduction actions that were unrelated to our response to the COVID-19 pandemic, including advertising expense reductions and other efficiencies in sales, marketing and our corporate support functions. These decreases in SG&A expense were partially offset by investments of approximately \$50.0 million in 2020 in support of our One Deluxe strategy. These costs related to treasury management outsourcing deals signed in the fourth quarter of 2019 and various other expenses related to our initiatives, including transforming our brand and our website and expanding our sales capabilities, as well as ongoing new costs related to SaaS solutions we are employing throughout the company. In addition, we incurred commission expense related to new revenue from the sales of PPE during 2020. We also recorded bad debt expense of \$5.4 million in our Promotional Solutions segment related to notes receivable from our distributors, primarily one distributor that was underperforming prior to the commencement of the COVID-19 pandemic. Total SG&A expense as a percentage of revenue increased for 2020, as compared to 2019, as revenue declines and investments in our transformation more than offset the benefit of cost reductions.

In addition to the above factors, SG&A expense was also impacted by changes in the following items in each year:

				Change	
(in thousands)	2021	2020	2019	2021 vs. 2020	2020 vs. 2019
Acquisition amortization (SG&A portion)	\$ 67,498	\$ 42,955	\$ 59,108	\$ 24,543	\$ (16,153)
Share-based compensation (SG&A portion)	27,549	20,341	17,751	7,208	2,590
Legal-related costs (benefit)	2,443	(2,164)	6,420	4,607	(8,584)
CEO transition costs	—	(30)	9,390	30	(9,420)

Restructuring and Integration Expense

				Change	
(in thousands)	2021	2020	2019	2021 vs. 2020	2020 vs. 2019
Restructuring and integration expense	\$ 54,750	\$ 75,874	\$ 71,248	\$ (21,124)	\$ 4,626

Over the past 3 years, we have been pursuing several initiatives designed to focus our business behind our growth strategy and to increase our efficiency. Further information can be found under *Restructuring, Integration and Other Costs*.

Asset Impairment Charges

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Asset impairment charges	\$ —	\$ 101,749	\$ 421,090	\$ (101,749)	\$ (319,341)

We did not record any asset impairment charges during 2021. Further information regarding the asset impairment charges in 2020 and 2019 can be found under the caption "Note 8: Fair Value Measurements" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report and in *Critical Accounting Policies*.

During 2020, we recorded asset impairment charges of \$101.7 million, related primarily to the goodwill of our Promotional Solutions and Cloud Solutions Web Hosting reporting units and amortizable intangibles of our Cloud Solutions Web Hosting reporting unit, resulting primarily from the estimated impact of the COVID-19 pandemic on the operating results of these businesses.

During 2019, we recorded asset impairment charges of \$421.1 million related primarily to the goodwill of our former Financial Services Data-Driven Marketing and Small Business Services Web Hosting reporting units, as well as certain amortizable intangible assets of the Small Business Services Web Hosting reporting unit.

Interest Expense

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Interest expense	\$ 55,554	\$ 23,140	\$ 34,682	140.1%	(33.3%)
Weighted-average debt outstanding	1,402,970	1,016,896	925,715	38.0%	9.8%
Weighted-average interest rate	3.60 %	2.12 %	3.54 %	1.48 pt.	(1.42) pt.

The increase in interest expense for 2021, as compared to 2020, was driven primarily by the increase in our weighted-average interest rate in 2021, due in part to the \$500.0 million notes issued in June 2021 with an interest rate of 8.0%. The increase in the amount of debt outstanding driven by the issuance of debt to fund the First American acquisition also negatively impacted interest expense. Further information regarding our debt can be found under the caption "Note 14: Debt" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

The decrease in interest expense for 2020, as compared to 2019, was primarily driven by our lower weighted-average interest rate in 2020, partially offset by our higher weighted-average debt level in 2020, as we borrowed additional funds for a period of time at the outset of the COVID-19 pandemic to ensure liquidity.

Income Tax Provision

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Income tax provision	\$ 31,031	\$ 21,468	\$ 8,039	44.5%	167.0%
Effective tax rate	33.1 %	80.1 %	(3.7 %)	(47.0) pt.	83.8 pt.

The decrease in our effective income tax rate for 2021, as compared to 2020, was largely due to the impact of the nondeductible portion of the goodwill impairment charges in the first quarter of 2020, which lowered our 2021 effective income tax rate by 46.8 points, as compared to 2020. In addition, the tax impact of share-based compensation resulted in a 7.6 point decrease in our effective income tax rate. Partially offsetting these decreases in our effective income tax rate was a 4.9 point increase resulting from the repatriation of cash from our Canadian subsidiaries during the fourth quarter of 2021, as well as nondeductible acquisition costs related to the First American acquisition, which increased our effective tax rate by 1.5 points in 2021. Information regarding other factors that impacted our effective income tax rates can be found under the caption: "Note 10: Income Tax Provision" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

Our effective income tax rates in 2020 and 2019 were significantly impacted by the asset impairment charges in both periods, coupled with their impact on the amount of pretax income (loss) and the nondeductible portion of the impairment charges. The non-deductible portion of goodwill impairment charges drove a 72.4 point increase in our tax rate in 2020 and the tax impact of share-based compensation resulted in a 9.5 point increase, as compared to 2019. In addition, during the third quarter of 2019, we placed a full valuation allowance of \$8.4 million on the intangible-related deferred tax asset generated by the impairment of intangible assets located in Australia, which was the main driver of the 4.8 point increase in our tax rate in 2020.

attributable to changes in our valuation allowances. Partially offsetting these increases in our effective tax rate was a 2.6 decrease in our state income tax rate. Information regarding other factors that impacted our effective income tax rates can be found under the caption "Note 10: Income Tax Provision" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

Net Income (Loss) / Diluted Earnings (Loss) per Share

(in thousands, except per share amounts)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Net income (loss)	\$ 62,772	\$ 5,335	\$ (223,779)	1,076.6 %	102.4 %
Diluted earnings (loss) per share	1.45	0.11	(5.20)	1,218.2 %	102.1 %
Adjusted diluted EPS ⁽¹⁾	4.88	5.08	6.82	(3.9 %)	(25.5 %)

⁽¹⁾ Information regarding the calculation of adjusted diluted EPS can be found in the following section entitled *Reconciliation of Non-GAAP Financial Measures*.

The increases in net income and diluted EPS and the decrease in adjusted diluted EPS for 2021, as compared to 2020, were driven by the factors outlined in *Executive Overview – 2021 results vs. 2020*.

The increases in net income and diluted EPS for 2020, as compared to 2019, were driven by numerous factors, the largest of which was a decrease in pretax asset impairment charges of \$319.3 million, as compared to 2019. Other factors that increased net income included:

- actions taken to reduce costs in line with reduced revenue and the continuing evaluation of our cost structure, including savings of approximately \$33.0 million from the temporary salary reductions, suspension of the 401(k) plan employer matching contribution, discretionary spending reductions and furloughs;
- revenue growth in certain of our business lines, including increased treasury management revenue, increases in certain data-driven marketing campaigns in the first quarter of 2020 prior to the commencement of the impact of the COVID-19 pandemic, and new revenue from sales of PPE in 2020;
- a decrease in acquisition amortization of \$14.9 million, driven in part by previous asset impairment charges;
- a decrease in interest expense of \$11.5 million, driven by our lower weighted-average interest rate;
- a decrease in certain legal-related expenses of \$8.6 million; and
- the absence of non-recurring CEO transition costs in 2020, as compared to \$9.4 million in 2019.

Partially offsetting these increases in net income were the following factors:

- the loss of revenue resulting from the impact of the COVID-19 pandemic;
- various investments of approximately \$50.0 million, in the aggregate, to advance our One Deluxe strategy, including costs related to treasury management deals signed in the fourth quarter of 2019 and various information technology, sales, finance and human capital investments;
- the continuing secular decline in checks and business forms, the loss of web hosting revenue in the third quarter of 2019 and the decision to exit certain product lines within Cloud Solutions;
- incremental costs of approximately \$8.0 million resulting from our response to the COVID-19 pandemic, including a Hero Pay premium provided to employees working on-site during the second quarter of 2020, costs related to enabling employees to work from home and additional facility cleaning costs; and
- a \$5.4 million increase in bad debt expense in 2020 related to notes receivable from our Promotional Solutions distributors.

Diluted EPS of \$0.11 for 2020, as compared to diluted loss per share of \$5.20 for 2019, reflects the increase in net income described in the preceding paragraphs, as well as lower average shares outstanding in 2020. Adjusted diluted EPS for 2020 was \$5.08, compared to \$6.82 for 2019, and excludes the impact of non-cash items or items that we believe are not indicative of ongoing operations. The decrease in adjusted EPS for 2020, as compared to 2019, was driven, in large part, by the impact of the COVID-19 pandemic, as well as investments in our One Deluxe strategy and the continuing secular decline in checks and business forms. These decreases were partially offset by various cost savings initiatives, growth in treasury management

revenue and the decrease in interest expense in 2020. A reconciliation of diluted earnings (loss) per share to adjusted diluted EPS can be found in the following section entitled *Reconciliation of Non-GAAP Financial Measures*.

Adjusted EBITDA

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Adjusted EBITDA	\$ 407,765	\$ 364,542	\$ 480,866	11.9%	(24.2%)
Adjusted EBITDA as a percentage of total revenue (adjusted EBITDA margin)	20.2 %	20.4 %	23.9 %	(0.2) pt.	(3.5) pt.

Adjusted EBITDA margin was virtually unchanged for 2021, as compared to 2020. Adjusted EBITDA for 2021 benefited from the contribution from the First American acquisition of \$39.1 million, new client wins in all of our segments, the continuing revenue volume recovery from the impacts of the COVID-19 pandemic, actions taken to reduce costs as we continue to evaluate our cost structure, price increases in response to the current inflationary environment and the \$11.4 million reduction in bad debt expense. Partially offsetting these increases in adjusted EBITDA were increased expense for our SaaS solutions, primarily related to sales and financial management tools we are utilizing to advance our growth strategy, the continuing secular decline in checks, business forms and some business accessories, the net benefit in the prior year from temporary actions taken in response to the COVID-19 pandemic, the 2020 decision to exit certain product lines within Cloud Solutions and inflationary pressures on hourly wages, materials and delivery.

The decrease in adjusted EBITDA for 2020, as compared to 2019, was driven primarily by the impact of the COVID-19 pandemic. In addition, adjusted EBITDA was negatively impacted by mix changes resulting from the contraction of legacy products and services, primarily checks and business forms, and the loss of web and hosted solutions revenue driven by the events of the third quarter of 2019 outlined in our discussion of consolidated revenue. We also continued to advance our transformation in line with our One Deluxe strategy by investing in various activities such as transforming our brand and our website and expanding our sales capabilities, as well as incurring ongoing new costs related to SaaS solutions we are employing throughout the company. We also incurred expenses related to treasury management deals signed in the fourth quarter of 2019, as well as investments in our client operations area that included human capital investments and other costs related to on-boarding new clients. Additionally, during 2020, we incurred incremental costs resulting from our response to the COVID-19 pandemic of approximately \$8.0 million, and we recorded bad debt expense of \$5.4 million related to notes receivable from our distributors. These decreases in adjusted EBITDA were partially offset by actions taken to reduce costs in line with the reduced revenue, including savings of approximately \$33.0 million from the temporary salary reductions, suspension of the 401(k) plan employer matching contribution, furloughs and other actions. In addition, we realized the benefit of various cost reductions unrelated to our response to the COVID-19 pandemic, primarily in our sales, marketing and fulfillment organizations, as we continued to develop our post-COVID-19 operating model.

Reconciliation of Non-GAAP Financial Measures

Free cash flow – We define free cash flow as net cash provided by operating activities less purchases of capital assets. We believe that free cash flow is an important indicator of cash available for debt service and for shareholders, after making capital investments to maintain or expand our asset base. Free cash flow is limited and not all of our free cash flow is available for discretionary spending, as we may have mandatory debt payments and other cash requirements that must be deducted from our cash available for future use. We believe that the measure of free cash flow provides an additional metric to compare cash generated by operations on a consistent basis and to provide insight into the cash flow available to fund items such as dividends, mandatory and discretionary debt reduction, acquisitions or other strategic investments, and share repurchases.

Net cash provided by operating activities for the years ended December 31 reconciles to free cash flow as follows:

(in thousands)	2021	2020	2019
Net cash provided by operating activities	\$ 210,821	\$ 217,553	\$ 286,653
Purchases of capital assets	(109,140)	(62,638)	(66,595)
Free cash flow	<u>\$ 101,681</u>	<u>\$ 154,915</u>	<u>\$ 220,058</u>

Net debt – Management believes that net debt is an important measure to monitor leverage and to evaluate the balance sheet. In calculating net debt, cash and cash equivalents are subtracted from total debt because they could be used to reduce our debt obligations. A limitation associated with using net debt is that it subtracts cash and cash equivalents, and therefore, may imply that management intends to use cash and cash equivalents to reduce outstanding debt. In addition, net debt suggests that our debt obligations are less than the most comparable GAAP measure indicates.

Total debt reconciles to net debt as follows as of December 31:

<i>(in thousands)</i>	2021	2020
Total debt	\$ 1,682,949	\$ 840,000
Cash and cash equivalents	(41,231)	(123,122)
Net debt	<u>\$ 1,641,718</u>	<u>\$ 716,878</u>

Liquidity – We define liquidity as cash and cash equivalents plus the amount available for borrowing under our revolving credit facility. We consider liquidity to be an important metric for demonstrating the amount of cash that is available or that could be available on short notice. This financial measure is not a substitute for GAAP liquidity measures. Instead, we believe that this measurement enhances investors' understanding of the funds that are currently available. Liquidity was as follows as of December 31:

<i>(in thousands)</i>	2021	2020
Cash and cash equivalents	\$ 41,231	\$ 123,122
Amount available for borrowing under revolving credit facility	362,619	302,342
Liquidity	<u>\$ 403,850</u>	<u>\$ 425,464</u>

Adjusted diluted EPS – By excluding the impact of non-cash items or items that we believe are not indicative of current period operating performance, we believe that adjusted diluted EPS provides useful comparable information to assist in analyzing our current period operating performance and in assessing our future operating performance. As such, adjusted diluted EPS is one of the key financial performance metrics we use to assess the operating results and performance of the business and to identify strategies to improve performance. It is reasonable to expect that one or more of the excluded items will occur in future periods, but the amounts recognized may vary significantly.

Diluted earnings (loss) per share for the years ended December 31 reconciles to adjusted diluted EPS as follows:

<i>(in thousands, except per share amounts)</i>	2021	2020	2019
Net income (loss)	\$ 62,772	\$ 5,335	\$ (223,779)
Net income attributable to non-controlling interest	(139)	(91)	—
Net income (loss) attributable to Deluxe	62,633	5,244	(223,779)
Asset impairment charges	—	101,749	421,090
Acquisition amortization	82,915	55,867	70,720
Restructuring, integration and other costs	58,947	80,665	79,511
CEO transition costs ⁽¹⁾	—	(30)	9,390
Share-based compensation expense	29,477	21,824	19,138
Acquisition transaction costs	18,913	8	215
Certain legal-related expense (benefit)	2,443	(2,164)	6,420
Loss on sales of businesses and customer lists	—	1,846	124
Adjustments, pre-tax	192,695	259,765	606,608
Income tax provision impact of pre-tax adjustments ⁽²⁾	(45,783)	(50,153)	(88,096)
Adjustments, net of tax	146,912	209,612	518,512
Adjusted net income attributable to Deluxe	209,545	214,856	294,733
Income allocated to participating securities	(156)	(77)	(414)
Re-measurement of share-based awards classified as liabilities	(448)	(803)	64
Adjusted income attributable to Deluxe available to common shareholders	\$ 208,941	\$ 213,976	\$ 294,383
Weighted-average shares and potential common shares outstanding	42,827	42,142	43,029
Adjustment ⁽³⁾	(16)	(27)	158
Adjusted weighted-average shares and potential common shares outstanding	42,811	42,115	43,187
GAAP diluted earnings (loss) per share	\$ 1.45	\$ 0.11	\$ (5.20)
Adjustments, net of tax	3.43	4.97	12.02
Adjusted diluted EPS	\$ 4.88	\$ 5.08	\$ 6.82

⁽¹⁾ In 2019, includes share-based compensation expense related to the modification of certain awards in conjunction with our CEO transition.

⁽²⁾ The tax effect of the pretax adjustments considers the tax treatment and related tax rate(s) that apply to each adjustment in the applicable tax jurisdiction(s). Generally, this results in a tax impact that approximates the U.S. effective tax rate for each adjustment. However, the tax impact of certain adjustments, such as asset impairment charges, share-based compensation expense and CEO transition costs, depends on whether the amounts are deductible in the respective tax jurisdictions and the applicable effective tax rate(s) in those jurisdictions.

⁽³⁾ The total of weighted-average shares and potential common shares outstanding used in the calculations of adjusted diluted EPS differs from the GAAP calculations due to differences in the amount of dilutive shares in each calculation.

Adjusted EBITDA and adjusted EBITDA margin – We believe that adjusted EBITDA and adjusted EBITDA margin are useful in evaluating our operating performance, as they eliminate the effect of interest expense, income taxes, the accounting effects of capital investments (i.e., depreciation and amortization) and certain items, as presented below, that may vary for companies for reasons unrelated to current period operating performance. In addition, management utilizes these measures to assess the operating results and performance of the business, to perform analytical comparisons and to identify strategies to improve performance. We also believe that an increasing adjusted EBITDA and adjusted EBITDA margin depict an increase in the value of the company. We do not consider adjusted EBITDA to be a measure of cash flow, as it does not consider certain cash requirements such as interest, income taxes, debt service payments or capital investments.

We have not reconciled our adjusted EBITDA margin outlook guidance for 2022 to the directly comparable GAAP financial measure because we do not provide outlook guidance for net income or the reconciling items between net income and adjusted EBITDA. Because of the substantial uncertainty and variability surrounding certain of these forward-looking reconciling items, including asset impairment charges, restructuring, integration and other costs, and certain legal-related expenses, a reconciliation of the non-GAAP financial measure outlook guidance to the corresponding GAAP measure is not available without unreasonable effort. The probable significance of certain of these reconciling items is high and, based on historical experience, could be material.

Net income (loss) for the years ended December 31 reconciles to adjusted EBITDA and adjusted EBITDA margin as follows:

(in thousands)	2021	2020	2019
Net income (loss)	\$ 62,772	\$ 5,335	\$ (223,779)
Non-controlling interest	(139)	(91)	—
Depreciation and amortization expense	148,767	110,792	126,036
Interest expense	55,554	23,140	34,682
Income tax provision	31,031	21,468	8,039
Asset impairment charges	—	101,749	421,090
Restructuring, integration and other costs	58,947	80,665	79,511
CEO transition costs ⁽¹⁾	—	(30)	9,390
Share-based compensation expense	29,477	21,824	19,138
Acquisition transaction costs	18,913	8	215
Certain legal-related expense (benefit)	2,443	(2,164)	6,420
Loss on sales of businesses and customer lists	—	1,846	124
Adjusted EBITDA	\$ 407,765	\$ 364,542	\$ 480,866
Adjusted EBITDA as a percentage of total revenue (adjusted EBITDA margin)	20.2 %	20.4 %	23.9 %

⁽¹⁾ In 2019, includes share-based compensation expense related to the modification of certain awards in conjunction with our CEO transition.

RESTRUCTURING, INTEGRATION AND OTHER COSTS

Restructuring and integration expense consists of costs related to the consolidation and migration of certain applications and processes, including our financial and sales management systems. It also includes costs related to the integration of acquired businesses into our systems and processes. These costs primarily consist of information technology consulting, project management services and internal labor, as well as other costs associated with our initiatives, such as training, travel and relocation and costs associated with facility closures. In addition, we recorded employee severance costs related to these initiatives, as well as our ongoing cost reduction initiatives across functional areas. Further information regarding restructuring and integration expense can be found under the caption "Note 9: Restructuring and Integration Expense" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. In addition to restructuring and integration expense, we also recognized certain business transformation costs during 2020 and 2019 related to optimizing our business processes in line with our growth strategy.

The majority of the employee reductions included in our restructuring and integration accruals as of December 31, 2021 are expected to be completed in the first quarter of 2022, and we expect most of the related severance payments to be paid in the first half of 2022. As a result of our employee reductions, we realized cost savings of approximately \$40.0 million in SG&A expense and \$1.0 million in total cost of revenue in 2021. For those employee reductions included in our restructuring and integration accruals through December 31, 2021, we expect to realize cost savings of approximately \$19.0 million in SG&A expense in 2022, in comparison to our 2021 results of operations. Note that these labor savings were, and will continue to be, partially offset by increased labor and other costs, including costs associated with new employees as we restructure certain activities and strive for the optimal mix of employee skill sets that will support our growth strategy. In addition, as we continued to evaluate our real estate footprint, we closed 16 facilities during 2021. We anticipate annualized cost savings of approximately \$8.0 million from these closures, with approximately \$3.0 million realized during 2021.

CEO transition costs – In 2018, we announced the retirement of our former CEO. In connection with the transition, we incurred various costs, including retention payments to certain members of our management team, consulting fees related to the evaluation of our strategy and our current CEO's signing bonus. These costs totaled \$9.4 million for 2019 and are included in SG&A expense on the consolidated statement of loss.

SEGMENT RESULTS

We operate 4 reportable business segments: Payments, Cloud Solutions, Promotional Solutions and Checks. These segments are generally organized by product type and reflect the way we currently manage the company. The financial information presented below for our reportable business segments is consistent with that presented under the caption "Note 18: Business Segment Information" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report, where information regarding revenue for our product and service offerings can also be found.

Payments

Results for our Payments segment were as follows:

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Total revenue	\$ 510,359	\$ 301,901	\$ 269,573	69.0%	12.0%
Adjusted EBITDA	105,576	68,117	74,384	55.0%	(8.4%)
Adjusted EBITDA margin	20.7 %	22.6 %	27.6 %	(1.9) pt.	(5.0) pt.

The increase in total revenue for 2021, as compared to 2020, was driven by revenue of \$195.0 million from the First American acquisition, as well as growth in our core payments businesses, primarily digital payments, receivables management and lockbox processing. We continued with new customer implementations, some of which had been delayed, in part, due to impacts of the COVID-19 pandemic. Revenue also benefited from minimal price increases late in the year in response to the current inflationary environment. Longer term, we expect high single-digit revenue growth for this segment.

The increase in adjusted EBITDA for 2021, as compared to 2020, was driven by the contribution of \$39.1 million from the First American acquisition, as well as the revenue growth in our core payments businesses. In addition, adjusted EBITDA benefited from various cost reduction actions and the price increases late in the year. These increases in adjusted EBITDA were partially offset by continued sales and information technology investments, the benefit in the prior year of temporary salary and other cost reductions in response to the COVID-19 pandemic, and inflationary pressures on our cost structure, primarily labor costs in our lockbox processing business. Adjusted EBITDA margin decreased for 2021, as compared to 2020, as the investments in the business and the inflationary pressures exceeded the benefit of the revenue increases. For 2022, we expect adjusted EBITDA margin to continue to be in the low 20% range.

The increase in total revenue for 2020, as compared to 2019, was driven by an increase in treasury management revenue of 16.8%, related primarily to lockbox processing outsourcing deals signed in the fourth quarter of 2019 and other client wins. Partially offsetting this increase in revenue was a decline in payroll services revenue, primarily driven by the negative impact of the COVID-19 pandemic on our small business customers. Revenue for the fourth quarter of 2020 was impacted by customer implementation delays attributable to the COVID-19 pandemic.

The decrease in adjusted EBITDA for 2020, as compared to 2019, was primarily driven by increased costs in support of our One Deluxe strategy, including costs related to the lockbox processing outsourcing deals signed in the fourth quarter of 2019, as well as investments in our client operations area that included human capital investments and other costs related to on-boarding new clients. In addition, adjusted EBITDA was negatively impacted by the COVID-19 pandemic, as payroll revenue declined and we incurred incremental costs, including the Hero Pay premium we paid to employees working on-site during the second quarter of 2020. These impacts were partially offset by revenue from the lockbox processing outsourcing deals and temporary actions taken to reduce costs in response to the COVID-19 pandemic. Adjusted EBITDA margin decreased for 2020, as compared to 2019, as a result of the investments we made in this business and COVID-19-related delays in new customer implementations.

Cloud Solutions

Results for our Cloud Solutions segment were as follows:

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Total revenue	\$ 262,310	\$ 252,773	\$ 318,383	3.8%	(20.6%)
Adjusted EBITDA	70,172	61,580	77,199	14.0%	(20.2%)
Adjusted EBITDA margin	26.8 %	24.4 %	24.2 %	2.4 pt.	0.2 pt.

The increase in total revenue for 2021, as compared to 2020, was driven by growth in data-driven marketing revenue resulting from new client wins and from increased marketing efforts by our banking and mortgage lending customers due, in part, to the continuation of low interest rates and an improving credit risk environment. Data-driven marketing revenue also increased as many of our customers reactivated marketing campaigns that had been put on hold due to the COVID-19 pandemic. Overall, data-driven marketing revenue increased 26.5% for 2021, as compared to 2020. Within the web and hosted solutions business, our 2020 decision to exit certain product lines resulted in a revenue decline of \$19.9 million for 2021, as compared to 2020. We continue to add new data-driven marketing clients, which will benefit revenue going forward, and for 2022, we expect mid-single digit revenue growth to continue.

Adjusted EBITDA and adjusted EBITDA margin for 2021 increased compared to 2020, due to the revenue growth, as well as various cost reduction actions to bring expenses in line with our post-COVID-19 operating model. In addition, adjusted EBITDA benefited from the timing and type of customer marketing campaigns in each period. Partially offsetting these increases in adjusted EBITDA was the benefit in the prior year of temporary salary and other reductions we implemented in response to the COVID-19 pandemic. For 2022, we expect adjusted EBITDA margin to be in the low-to-mid 20% range.

The decrease in total revenue for 2020, as compared to 2019, was driven by the impact of the COVID-19 pandemic, primarily in data-driven marketing solutions as clients suspended their marketing campaigns, with some impact on web and hosted solutions as well. Data-driven marketing revenue for the fourth quarter of 2020 remained stable, as compared to the third quarter of 2020, as financial institutions slowly reactivated data-driven marketing analytics and campaigns in the second half of the year. Web and hosted solutions revenue declined, as compared to 2019, due to our decision in the third quarter of 2019 to exit certain customer contracts, the loss of certain large customers in the third quarter of 2019 as they elected to in-source some of the services we provide, and more recent decisions to exit certain product lines. Partially offsetting these decreases was a \$7.0 million increase in data-driven marketing revenue in the first quarter of 2020, prior to the commencement of the COVID-19 pandemic, driven by new campaigns and growth in pay-for-performance marketing campaigns.

The decrease in adjusted EBITDA for 2020, as compared to 2019, was primarily due to the impact of the COVID-19 pandemic and increased information technology costs in support of our One Deluxe strategy, as well as the loss of web hosting revenue related to the events that occurred in the third quarter of 2019. Partially offsetting these declines in adjusted EBITDA were various cost reductions unrelated to our response to the COVID-19 pandemic, primarily reductions in sales and marketing costs, and the benefit of temporary actions taken in response to the pandemic. Adjusted EBITDA also benefited from the increase in data-driven marketing revenue in the first quarter of 2020, prior to the commencement of the COVID-19 pandemic. Adjusted EBITDA margin increased slightly for 2020, as compared to 2019, as cost reductions outpaced the revenue decline and revenue mix was favorable in 2020.

Promotional Solutions

Results for our Promotional Solutions segment were as follows:

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Total revenue	\$ 546,473	\$ 529,649	\$ 640,892	3.2%	(17.4%)
Adjusted EBITDA	85,384	66,620	101,293	28.2%	(34.2%)
Adjusted EBITDA margin	15.6 %	12.6 %	15.8 %	3.0 pt.	(3.2) pt.

The increase in total revenue for 2021, as compared to 2020, was driven by some recovery of volume declines resulting from the impact of the COVID-19 pandemic, as our business customers began to resume a more normal level of activity. Additionally, revenue benefited from new clients and price increases in response to the current inflationary environment. Partially offsetting these revenue increases was the continuing secular decline in business forms and some accessories, and sales of PPE decreased approximately \$22.0 million for 2021, as compared to 2020. We are anticipating revenue growth in the low-single digits for 2022.

The increases in adjusted EBITDA and adjusted EBITDA margin for 2021, as compared to 2020, were driven by the benefit of new clients, some recovery of volume declines resulting from the impact of the COVID-19 pandemic, and lower bad debt expense related to notes receivable from distributors and trade accounts receivable. In addition, adjusted EBITDA benefited from price increases in response to the current inflationary environment, various cost reduction actions and lower expense for obsolete inventory in 2021. These increases in adjusted EBITDA were partially offset by various information technology investments, the benefit in the prior year of temporary salary and other cost reductions in response to the COVID-19 pandemic, and inflationary pressures on hourly wages, materials and delivery. For 2022, we anticipate a slightly improved adjusted EBITDA margin resulting from value realization and merchandising optimization initiatives.

The decrease in total revenue for 2020, as compared to 2019, was driven primarily by the impact of the COVID-19 pandemic, as our customers reacted to the economic environment, and demand for marketing and promotional products declined sharply, as our customers stopped virtually all promotional activities in response to the pandemic. The continuing

secular decline in business forms and some accessories also negatively impacted revenue. Partially offsetting these volume declines was new revenue of \$31.0 million from sales of PPE during 2020.

The decrease in adjusted EBITDA for 2020, as compared to 2019, was driven primarily by the loss of revenue resulting from the COVID-19 pandemic, investments in support of our One Deluxe strategy, primarily information technology and sales force expenses, and the continuing secular decline in business forms and some accessories. In addition, we recorded bad debt expense of \$5.4 million during 2020, related to notes receivable from our distributors, primarily one that was underperforming prior to the commencement of the COVID-19 pandemic, and expense for obsolete inventory was higher in 2020. These decreases in adjusted EBITDA were partially offset by the benefit of temporary actions taken in response to the COVID-19 pandemic, other cost reduction actions, primarily related to sales, marketing and fulfillment costs, and the sales of PPE in 2020. Adjusted EBITDA margin for 2020 decreased, as compared to 2019, as the revenue decline, investments in our transformation, and bad debt and obsolete inventory expense more than offset the benefit of temporary actions taken in response to the COVID-19 pandemic and the other cost savings realized.

Checks

Results for our Checks segment were as follows:

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Total revenue	\$ 703,055	\$ 706,458	\$ 779,867	(0.5%)	(9.4%)
Adjusted EBITDA	324,224	341,705	402,662	(5.1%)	(15.1%)
Adjusted EBITDA margin	46.1 %	48.4 %	51.6 %	(2.3) pt.	(3.2) pt.

The decrease in total revenue for 2021, as compared to 2020, was driven primarily by the expected continuing secular decline in checks. Partially offsetting this impact was some recovery of volume declines resulting from the impact of the COVID-19 pandemic, primarily business check volumes, as well as price increases in response to the current inflationary environment and the impact of new client wins. In 2022, we anticipate that the revenue decline rate will be in the low single digits.

The decreases in adjusted EBITDA and adjusted EBITDA margin for 2021, as compared to 2020, were driven by information technology investments, including new print-on-demand technology, costs of on-boarding new clients and inflationary pressures on hourly wages, materials and delivery. These decreases were partially offset by various cost reduction initiatives and lower bad debt expense for 2021.

The decrease in total revenue for 2020, as compared to 2019, was driven primarily by the impact of the COVID-19 pandemic, which resulted in a decline in business and personal check usage stemming from the slowdown in the economy. The continuing secular decline in checks also contributed to the revenue decline, partially offset by nominal price increases.

The decrease in adjusted EBITDA for 2020, as compared to 2019, was driven by the loss of revenue resulting from the COVID-19 pandemic and the secular decline in checks, as well as referral costs and investments in support of our One Deluxe strategy, primarily information technology expenses. Partially offsetting these decreases in adjusted EBITDA were various cost reductions unrelated to our response to the COVID-19 pandemic, primarily sales, marketing and fulfillment costs, and the benefit of temporary actions taken in response to the COVID-19 pandemic. Adjusted EBITDA margin for 2020 decreased as compared to 2019, as the impact of the revenue decline and investments in the business exceeded the impact of our cost saving initiatives.

CASH FLOWS AND LIQUIDITY

As of December 31, 2021, we held cash and cash equivalents of \$41.2 million, as well as restricted cash and restricted cash equivalents included in funds held for customers and in other non-current assets of \$244.3 million. The following table shows our cash flow activity for the past 3 years, and should be read in conjunction with the consolidated statements of cash flows appearing in Part II, Item 8 of this report.

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Net cash provided by operating activities	\$ 210,821	\$ 217,553	\$ 286,653	\$ (6,732)	\$ (69,100)
Net cash used by investing activities	(1,066,601)	(56,093)	(72,397)	(1,010,508)	16,304
Net cash provided (used) by financing activities	912,961	(110,555)	(190,148)	1,023,516	79,593
Effect of exchange rate change on cash, cash equivalents, restricted cash and restricted cash equivalents	(1,099)	3,693	5,444	(4,792)	(1,751)
Net change in cash, cash equivalents, restricted cash and restricted cash equivalents	\$ 56,082	\$ 54,598	\$ 29,552	\$ 1,484	\$ 25,046
Free cash flow ⁽¹⁾	\$ 101,681	\$ 154,915	\$ 220,058	\$ (53,234)	\$ (65,143)

⁽¹⁾ See *Reconciliation of Non-GAAP Financial Measures* within the *Consolidated Results of Operations* section, which illustrates how we calculate free cash flow.

Net cash provided by operating activities decreased \$6.7 million for 2021, as compared to 2020, driven primarily by investments in our business, including transaction costs related to the acquisition of First American and increased subscription and implementation costs related to SaaS solutions we are utilizing, including a new enterprise resource planning system. Additionally, operating cash flow was negatively impacted by the continuing secular decline in checks, business forms and some business accessories, a \$23.8 million increase in interest payments, driven by the debt issued to complete the First American acquisition, and the prior year benefited from the deferral of federal payroll tax payments under the CARES Act, a portion of which was paid during 2021. The prior year also benefited from temporary salary and other cost reductions implemented in response to the COVID-19 pandemic. These decreases in operating cash flow were substantially offset by the contribution from First American's operations, improved working capital management, the benefit of new clients, some recovery of revenue declines from the COVID-19 pandemic and various cost saving actions. Additionally, performance-based compensation payments decreased \$8.6 million, based on our 2020 performance.

Net cash provided by operating activities decreased \$69.1 million for 2020, as compared to 2019, driven primarily by the loss of revenue resulting from the COVID-19 pandemic, increased investments in support of our One Deluxe strategy, the continuing secular decline in checks and business forms, and changes in the timing of certain working capital items, such as inventory purchases and payments on accounts payable. These decreases in operating cash flow were partially offset by a \$36.1 million reduction in income tax payments resulting from lower taxable income, cost reduction actions taken in response to the COVID-19 pandemic, such as temporary salary reductions, delays in U.S. federal payroll tax payments of \$14.3 million allowed under the CARES Act, and a legal-related settlement of \$12.5 million in 2019 that was accrued in the previous year.

Included in net cash provided by operating activities were the following operating cash outflows:

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Medical benefit payments	\$ 50,918	\$ 43,419	\$ 41,714	\$ 7,499	\$ 1,705
Interest payments	46,621	22,853	33,227	23,768	(10,374)
Prepaid product discount payments	40,920	33,613	25,637	7,307	7,976
Income tax payments	18,761	24,701	60,764	(5,940)	(36,063)
Performance-based compensation payments ⁽¹⁾	12,192	20,832	23,583	(8,640)	(2,751)
Severance payments	10,202	14,289	10,585	(4,087)	3,704

⁽¹⁾ Amounts reflect compensation based on total company performance.

Net cash used by investing activities for 2021 was \$1,010.5 million higher than 2020, driven primarily by the acquisition of First American. In addition, purchases of capital assets increased \$46.5 million, as we continued investments to support our long-

term growth, including technology platform modernization initiatives, and proceeds from sales of facilities decreased \$7.1 million, related to the evaluation of our real estate footprint.

Net cash used by investing activities for 2020 was \$16.3 million lower than 2019, driven primarily by proceeds from the sale of facilities of \$9.7 million in 2020, an \$8.3 million reduction in payments for acquisitions and a reduction in capital purchases of \$4.0 million, partially offset by purchases of small business distributor customer lists of \$11.1 million in 2020. Further information regarding our 2019 acquisitions can be found under the caption "Note 6: Acquisitions" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

Net cash provided by financing activities for 2021 was \$1,023.5 million higher than 2020, driven by net proceeds from the debt we issued to complete the First American acquisition. Also contributing to the increase was the net change in customer funds obligations in each period, which is discussed further in *Other Financial Position Information*. In addition, common share repurchases decreased \$14.0 million, as we suspended our share repurchase program in the second quarter of 2020 in response to the COVID-19 pandemic, and proceeds from issuing shares increased \$13.1 million, as certain employees of First American purchased our stock in conjunction with the acquisition in the second quarter of 2021.

Net cash used by financing activities for 2020 was \$79.6 million lower than 2019, due primarily to a decrease in common share repurchases of \$104.5 million. To maintain liquidity during the COVID-19 pandemic, we did not repurchase any of our common shares during the last 3 quarters of 2020. Partially offsetting this decrease in cash used by financing activities was a net increase in payments on long-term debt of \$17.0 million and the net change in customer funds obligations in each period.

Significant cash transactions, excluding those related to operating activities, for each period were as follows:

(in thousands)	2021	2020	2019	Change	
				2021 vs. 2020	2020 vs. 2019
Payments for acquisitions, net of cash, cash equivalents, restricted cash and restricted cash equivalents acquired	\$ (958,514)	\$ —	\$ (8,251)	\$ (958,514)	\$ 8,251
Purchases of capital assets	(109,140)	(62,638)	(66,595)	(46,502)	3,957
Cash dividends paid to shareholders	(51,654)	(50,746)	(51,742)	(908)	996
Payments for debt issuance costs	(18,153)	—	—	(18,153)	—
Purchases of customer lists	(2,759)	(11,082)	—	8,323	(11,082)
Payments for common shares repurchased	—	(14,000)	(118,547)	14,000	104,547
Net change in debt	854,974	(43,500)	(26,500)	898,474	(17,000)
Net change in customer funds obligations	126,703	(168)	12,598	126,871	(12,766)
Proceeds from issuing shares	16,843	3,747	3,198	13,096	549
Proceeds from sale of facilities	2,648	9,713	—	(7,065)	9,713

During the fourth quarter of 2021, we repatriated accumulated foreign earnings of \$85.3 million held in cash by our Canadian subsidiaries. We decided to complete the repatriation due, in part, to changes in Canadian law announced during 2021 and the reorganization of our capital structure in June 2021. We utilized this cash to reduce our outstanding debt. The associated tax expense of \$4.6 million was included in our income tax provision for the fourth quarter of 2021.

During 2022, we will begin repatriating Canadian current year earnings on an annual basis, as we believe the accumulated and remaining cash of our Canadian subsidiaries is sufficient to meet their working capital needs. We intend to utilize the repatriated earnings to reduce our outstanding debt. The historical unremitted Canadian earnings as of December 31, 2021, as well as the accumulated and future unremitted earnings of our non-Canadian foreign subsidiaries, will continue to be reinvested indefinitely in the operations of those subsidiaries. Deferred income taxes have not been recognized on these earnings as of December 31, 2021. If we were to repatriate all foreign cash and cash equivalents into the U.S. at one time, we estimate we would incur a foreign withholding tax liability of approximately \$2.0 million. As of December 31, 2021, the amount of cash and cash equivalents held by our foreign subsidiaries was \$47.8 million, primarily in Canada.

In assessing our cash needs, we must consider our debt service requirements, lease obligations, other contractual commitments and contingent liabilities. Information regarding the maturities of our long-term debt, our operating and finance lease obligations and contingent liabilities can be found under the captions "Note 14: Debt," "Note 15: Leases" and "Note 16: Other Commitments and Contingencies," all of which appear in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. In addition, we have executed contracts with third-party service providers, primarily for information technology services, including cloud computing and professional services agreements related to the modernization of our technology platform, as well as agreements for outsourcing services, the purchase of data, and payment acceptance services. These contracts obligate us to pay approximately \$140.0 million in total, with approximately \$55.0 million due during 2022, \$50.0 million due during 2023 and the remainder due through 2027.

As of December 31, 2021, \$362.6 million was available for borrowing under our revolving credit facility. We anticipate that net cash generated by operations, along with cash and cash equivalents on hand and availability under our credit facility, will be sufficient to support our operations, including our contractual obligations and our debt service requirements, for the next 12 months. We anticipate that we will continue to pay our regular quarterly dividend. However, dividends are approved by our board of directors each quarter and thus, are subject to change.

CAPITAL RESOURCES

The principal amount of our debt obligations was \$1.7 billion as of December 31, 2021, an increase of \$862.1 million from December 31, 2020. Further information concerning our outstanding debt, including our debt service obligations, can be found under the caption "Note 14: Debt" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

Our capital structure for each period was as follows:

(in thousands)	December 31, 2021		December 31, 2020		Change
	Amount	Period-end interest rate	Amount	Period-end interest rate	
Fixed interest rate ⁽¹⁾	\$ 700,000	6.9 %	\$ 200,000	3.3 %	\$ 500,000
Floating interest rate	1,002,125	2.4 %	640,000	1.6 %	362,125
Total debt principal	1,702,125	4.2 %	840,000	2.0 %	862,125
Shareholders' equity	574,598		513,392		61,206
Total capital	\$ 2,276,723		\$ 1,353,392		\$ 923,331

⁽¹⁾ The fixed interest rate amount includes the amount of our variable-rate debt that is subject to an interest rate swap agreement. The related interest rate includes the fixed rate under the swap of 1.798% plus the credit facility spread due on all amounts outstanding under the credit facility agreement.

In October 2018, our board of directors authorized the repurchase of up to \$500.0 million of our common stock. This authorization has no expiration date. We have not repurchased any shares since the first quarter of 2020, when we suspended share repurchases in order to maintain liquidity during the COVID-19 pandemic. As of December 31, 2021, \$287.5 million remained available for repurchase under the authorization. Information regarding changes in shareholders' equity can be found in the consolidated statements of shareholders' equity appearing in Part II, Item 8 of this report.

As of December 31, 2021, total commitments under our revolving credit facility were \$500.0 million and the credit facility matures in June 2026. Our quarterly commitment fee ranges from 0.25% to 0.35%, based on our total leverage ratio, as defined in the credit agreement. Further information regarding the terms and maturities of our debt, as well as our debt covenants, can be found under the caption "Note 14: Debt" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. Under the terms of our credit facility, if our consolidated total leverage ratio exceeds 2.75 to 1.00, the aggregate annual amount of permitted dividends and share repurchases is limited to \$60.0 million. We were in compliance with our debt covenants as of December 31, 2021, and we anticipate that we will remain in compliance with our debt covenants throughout the next 12 months.

As of December 31, 2021, amounts were available for borrowing under our revolving credit facility as follows:

<i>(in thousands)</i>	Total available
Revolving credit facility commitment	\$ 500,000
Amount drawn on revolving credit facility	(130,000)
Outstanding letters of credit ⁽¹⁾	(7,381)
Net available for borrowing as of December 31, 2021	<u>\$ 362,619</u>

⁽¹⁾ We use standby letters of credit primarily to collateralize certain obligations related to our self-insured workers' compensation claims, as well as claims for environmental matters, as required by certain states. These letters of credit reduce the amount available for borrowing under our revolving credit facility.

OTHER FINANCIAL POSITION INFORMATION

Information concerning items comprising selected captions on our consolidated balance sheets can be found under the caption "Note 3: Supplemental Balance Sheet and Cash Flow Information" and information regarding the impact of the First American acquisition on our consolidated balance sheet as of December 31, 2021 can be found under the caption "Note 6: Acquisitions," both of which appear in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

Funds held for customers – Funds held for customers of \$254.8 million as of December 31, 2021 increased \$135.0 million from December 31, 2020, while the related liability for funds held for customers of \$256.3 million as of December 31, 2021 increased \$138.6 million from December 31, 2020. These increases were driven by the acquisition of First American during 2021. Funds held for customers as of the acquisition date were \$7.9 million. The remainder of the increase was due to the seasonal nature of a portion of First American's business, under which property tax payments are collected in December and paid on behalf of customers the following quarter.

Finance lease – During the third quarter of 2021, a lease for our headquarters facility located in Minnesota commenced and was recorded on the consolidated balance sheet as a finance lease. The lease resulted in an increase in property, plant and equipment and an increase in lease obligations of \$26.9 million. Further information regarding our finance leases, including their maturities, can be found under the caption "Note 15: Leases" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

Prepaid product discounts – Other non-current assets include prepaid product discounts that are recorded upon contract execution and are generally amortized on the straight-line basis as reductions of revenue over the related contract term. Changes in prepaid product discounts during the past 3 years can be found under the caption "Note 3: Supplemental Balance Sheet and Cash Flow Information" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. Cash payments made for prepaid product discounts were \$40.9 million for 2021, \$33.6 million for 2020 and \$25.6 million for 2019.

The number of checks being written has been declining, which has contributed to increased competitive pressure when attempting to retain or acquire clients. Both the number of financial institution clients requesting prepaid product discount payments and the amount of the payments has fluctuated from year to year. Although we anticipate that we will selectively continue to make these payments, we cannot quantify future amounts with certainty. The amount paid depends on numerous factors, such as the number and timing of contract executions and renewals, competitors' actions, overall product discount levels and the structure of up-front product discount payments versus providing higher discount levels throughout the term of the contract.

Liabilities for prepaid product discounts are recorded upon contract execution. These obligations are monitored for each contract and are adjusted as payments are made. Prepaid product discounts due within the next year are included in accrued liabilities on the consolidated balance sheets and were \$11.9 million as of December 31, 2021 and \$14.4 million as of December 31, 2020.

CRITICAL ACCOUNTING ESTIMATES

Our critical accounting estimates are those that are most important to the portrayal of our financial condition and results of operations, or which place the most significant demands on management's judgment about the effect of matters that are inherently uncertain, and the impact of different estimates or assumptions could be material to our financial condition or results of operations. Our MD&A discussion is based upon our consolidated financial statements, which have been prepared in accordance with GAAP. Our accounting policies are discussed under the caption "Note 1: Significant Accounting Policies" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. We review the accounting policies used in reporting our financial results on a regular basis. The preparation of our financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. We base our estimates on historical experience and on various other factors and assumptions that we believe are reasonable under the circumstances, the result of which forms the basis for making judgments about the carrying values of assets and liabilities. In some instances, we reasonably could have used different accounting estimates and, in other instances, changes in the accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results may differ from our estimates. Significant estimates and judgments are reviewed by management on an ongoing basis and by the audit committee of our board of directors at the end of each quarter prior to the public release of our financial results.

Goodwill Impairment

As of December 31, 2021, goodwill totaled \$1.43 billion, which represented 46.5% of our total assets. Goodwill is tested for impairment on an annual basis as of July 31, or more frequently if events occur or circumstances change that would indicate a possible impairment.

To analyze goodwill for impairment, we must assign our goodwill to individual reporting units. Identification of reporting units includes an analysis of the components that comprise each of our operating segments, which considers, among other things, the manner in which we operate our business and the availability of discrete financial information. Components of an operating segment are aggregated to form a reporting unit if the components have similar economic characteristics. We periodically review our reporting units to ensure that they continue to reflect the manner in which we operate our business.

When completing our annual goodwill impairment analysis, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after this qualitative assessment, we determine it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the quantitative impairment test is unnecessary. In completing the 2021 annual impairment analysis of goodwill as of July 31, 2021, we elected to perform qualitative analyses for all of our reporting units. These qualitative analyses evaluated factors, including, but not limited to, economic, market and industry conditions, cost factors and the overall financial performance of the reporting units. We also considered the most recent quantitative analyses completed in prior periods. In completing these assessments, we noted no changes in events or circumstances that indicated that it was more likely than not that the fair value of any reporting unit was less than its carrying amount. As such, no goodwill impairment charges were recorded as a result of our 2021 annual impairment analysis.

When performing a quantitative analysis of goodwill, we first compare the carrying value of the reporting unit, including goodwill, to its estimated fair value. Carrying value is based on the assets and liabilities associated with the operations of the reporting unit, which often requires the allocation of shared and corporate items among reporting units. We utilize a discounted cash flow model to calculate the estimated fair value of a reporting unit. This approach is a valuation technique under which we estimate future cash flows using the reporting unit's financial forecast from the perspective of an unrelated market participant. Using historical trending and internal forecasting techniques, we project revenue and apply our fixed and variable cost experience rates to the projected revenue to arrive at the future cash flows. A terminal value is then applied to the projected cash flow stream. Future estimated cash flows are discounted to their present value to calculate the estimated fair value. The discount rate used is the market-value-weighted average of our estimated cost of capital derived using both known and estimated customary market metrics. In determining the estimated fair values of our reporting units, we are required to estimate a number of factors, including revenue growth rates, terminal growth rates, direct costs, the discount rate and the allocation of shared and corporate items. When completing a quantitative analysis for all of our reporting units, the summation of our reporting units' fair values is compared to our consolidated fair value, as indicated by our market capitalization, to evaluate the reasonableness of our calculations.

While we did not record any goodwill impairment charges during 2021, we did record significant goodwill impairment charges during 2020 and 2019.

2020 goodwill impairment charges – During the first quarter of 2020, when the World Health Organization (WHO) classified the COVID-19 outbreak as a pandemic, we observed a decline in the market valuation of our common shares and we determined that the global response to the pandemic negatively impacted our estimates of expected future cash flows. We concluded that a triggering event had occurred for 2 of our reporting units and as such, we completed quantitative goodwill impairment analyses for our Promotional Solutions and Cloud Solutions Web Hosting reporting units as of March 31, 2020. Our

analyses indicated that the goodwill of our Promotional Solutions reporting unit was partially impaired and the goodwill of our Cloud Solutions Web Hosting reporting unit was fully impaired, and we recorded goodwill impairment charges of \$67.1 million and \$4.3 million, respectively. The impairment charges were measured as the amount by which the reporting units' carrying values exceeded their estimated fair values, limited to the carrying amount of goodwill. After the impairment charges, \$59.0 million of goodwill remained in the Promotional Solutions reporting unit as of the measurement date.

Our impairment analyses were based on assumptions made using the best information available at the time, including the performance of our reporting units subsequent to the WHO declaration of a pandemic and available economic forecasts. These assumptions anticipated a sharp decline in gross domestic product and a material decline in the number of small businesses. The sweeping nature of the pandemic made it extremely difficult to predict how our business and operations would be affected in the longer term. To the extent our assumptions differ from actual events, we may be required to record additional asset impairment charges.

Our impairment assessments are sensitive to changes in forecasted revenues and expenses, as well as our selected discount rate. For the March 31, 2020 assessment of our Promotional Solutions reporting unit, holding all other assumptions constant, if we assumed revenue in each year was 10% higher than we estimated, our goodwill impairment charge would have been approximately \$18.0 million less, and if we assumed revenue in each year was 10% lower than we estimated, our goodwill impairment charge would have been approximately \$18.0 million more. If we assumed our expenses, as a percentage of revenue, were 100 basis points lower in each year, our goodwill impairment charge would have been approximately \$39.0 million less, and if we assumed our expenses, as a percentage of revenue, were 100 basis points higher in each year, our goodwill impairment charge would have been approximately \$39.0 million more. If we assumed our selected discount rate of 12% was 100 basis points lower, our goodwill impairment charge would have been approximately \$21.0 million less, and if we assumed the discount rate was 100 basis points higher, our goodwill impairment charge would have been approximately \$17.0 million more.

2019 goodwill impairment charges – Our quantitative analyses of goodwill as of July 31, 2019 indicated that the goodwill of our former Financial Services Data-Driven Marketing reporting unit was partially impaired and the goodwill of our former Small Business Services Web Services reporting unit was fully impaired. As such, we recorded pretax goodwill impairment charges of \$145.6 million and \$242.3 million, respectively. Both impairment charges resulted from a combination of triggering events and circumstances, including underperformance against 2019 expectations and the original acquisition business case assumptions, driven substantially by our decision in the third quarter of 2019 to exit certain customer contracts, the loss of certain large customers in the third quarter of 2019 as they elected to in-source some of the services we provide, and the sustained decline in our stock price. The impairment charges were measured as the amount by which the reporting units' carrying values exceeded their estimated fair values, limited to the carrying amount of goodwill. After the impairment charges, \$40.8 million of goodwill remained in the former Financial Services Data-Driven Marketing reporting unit.

For our former Financial Services Data-Driven Marketing reporting unit, holding all other assumptions constant, if we assumed revenue in each year was 10% higher than we estimated, our impairment charge would have been approximately \$16.0 million less, and if we assumed revenue in each year was 10% lower than we estimated, our impairment charge would have been approximately \$17.0 million more. If we assumed our expenses, as a percentage of revenue, were 200 basis points lower in each year, our impairment charge would have been approximately \$28.0 million less, and if we assumed our expenses, as a percentage of revenue, were 200 basis points higher in each year, our impairment charge would have been approximately \$30.0 million more. If we assumed our selected discount rate of 12% was 200 basis points lower, our impairment charge would have been approximately \$43.0 million less, and if we assumed the discount rate was 200 basis points higher, our impairment charge would have been approximately \$28.0 million more.

In the case of our former Small Business Services Web Services reporting unit, holding all other assumptions constant, if we assumed revenue in each year was 10% higher than we estimated, our impairment charge would have been approximately \$6.0 million less. If we assumed our expenses, as a percentage of revenue, were 200 basis points lower in each year, our impairment charge would have been approximately \$35.0 million less, and if we assumed our selected discount rate of 12% was 200 basis points lower, our impairment charge would have been approximately \$12.0 million less.

Further information regarding all of our goodwill impairment analyses can be found under the caption "Note 8: Fair Value Measurements" in the Notes to Consolidated Financial Statements appearing in Item II, Part 8 of this report. Evaluations of asset impairment require us to make assumptions about future events, market conditions and financial performance over the life of the asset being evaluated. These assumptions require significant judgment and actual results may vary from our assumptions. For example, if our stock price were to further decline over a sustained period, if a further downturn in economic conditions were to negatively affect our actual and forecasted operating results, if we were to change our business strategies and/or the allocation of resources, if we were to lose significant customers, if competition were to materially increase, or if order volume declines for checks and business forms were to materially accelerate, these situations could indicate a decline in the fair value of one or more of our reporting units. This may require us to record additional impairment charges for a portion of goodwill or other assets.

Business Combinations

We allocate the purchase price of acquired businesses to the estimated fair values of the assets acquired and liabilities assumed as of the date of the acquisition. The calculations used to determine the fair value of the long-lived assets acquired, primarily intangible assets, can be complex and require significant judgment. We weigh many factors when completing these estimates, including, but not limited to, the nature of the acquired company's business; its competitive position, strengths, and challenges; its historical financial position and performance; estimated customer retention rates; discount rates; and future plans for the combined entity. We may also engage independent valuation specialists, when necessary, to assist in the fair value calculations for significant acquired long-lived assets.

We generally estimate the fair value of acquired customer lists using the multi-period excess earnings method. This valuation model estimates revenues and cash flows derived from the asset and then deducts portions of the cash flow that can be attributed to supporting assets, such as a trade name or fixed assets, that contributed to the generation of the cash flows. The resulting cash flow, which is attributable solely to the customer list asset, is then discounted at a rate of return commensurate with the risk of the asset to calculate a present value. The fair value of acquired customer lists may also be estimated by discounting the estimated cash flows expected to be generated by the assets. During 2021, we also utilized the multi-period excess earnings method to estimate the fair value of acquired partner relationship intangible assets. Key assumptions used in these calculations include same-customer revenue, merchant and partner growth rates; estimated earnings; estimated customer and partner retention rates, based on the acquirees' historical information; and the discount rate.

The fair value of acquired trade names and technology is estimated, at times, using the relief from royalty method, which calculates the cost savings associated with owning rather than licensing the assets. Assumed royalty rates are applied to projected revenue for the estimated remaining useful lives of the assets to estimate the royalty savings. Royalty rates are selected based on the attributes of the asset, including its recognition and reputation in the industry, and in the case of trade names, with consideration of the specific profitability of the products sold under a trade name and supporting assets. The fair value of acquired technology may also be estimated using the cost of reproduction method under which the primary components of the technology are identified and the estimated cost to reproduce the technology is calculated based on historical data provided by the acquiree.

The excess of the purchase price over the estimated fair value of the net assets acquired is recorded as goodwill. Goodwill is not amortized, but is subject to impairment testing on at least an annual basis.

We are also required to estimate the useful lives of the acquired intangible assets, which determines the amount of acquisition-related amortization expense we will record in future periods. Each reporting period, we evaluate the remaining useful lives of our amortizable intangibles to determine whether events or circumstances warrant a revision to the remaining period of amortization.

While we use our best estimates and assumptions, our fair value estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to 1 year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Any adjustments required after the measurement period are recorded in the consolidated statements of income (loss).

The judgments required in determining the estimated fair values and expected useful lives assigned to each class of assets and liabilities acquired can significantly affect net income. For example, different classes of assets will have different useful lives. Consequently, to the extent a longer-lived asset is ascribed greater value than a shorter-lived asset, net income in a given period may be higher. Additionally, assigning a lower value to amortizable intangibles would result in a higher amount assigned to goodwill. As goodwill is not amortized, this would benefit net income in a given period, although goodwill is subject to annual impairment analysis.

Revenue Recognition

Product revenue is recognized when control of the goods is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods. In most cases, control is transferred when products are shipped. We recognize the vast majority of our service revenue as the services are provided. The majority of our contracts are for the shipment of tangible products or the delivery of services that have a single performance obligation or include multiple performance obligations where control is transferred at the same time. Many of our financial institution contracts require prepaid product discounts in the form of cash payments we make to our financial institution clients. These prepaid product discounts are included in other non-current assets on our consolidated balance sheets and are generally amortized as reductions of revenue on the straight-line basis over the contract term. Sales tax collected concurrent with revenue-producing activities is excluded from revenue. Amounts billed to customers for shipping and handling are included in revenue, while the related costs incurred for shipping and handling are reflected in cost of products and are accrued when the related revenue is recognized.

When another party is involved in providing goods or services to a customer, we must determine whether our obligation is to provide the specified good or service itself (i.e., we are the principal in the transaction) or to arrange for that good or service to be provided by the other party (i.e., we are an agent in the transaction). When we are responsible for satisfying a performance

obligation, based on our ability to control the product or service provided, we are considered the principal and revenue is recognized for the gross amount of consideration. When the other party is primarily responsible for satisfying a performance obligation, we are considered the agent and revenue is recognized in the amount of any fee or commission to which we are entitled. We sell certain products and services through a network of distributors. We have determined that we are the principal in these transactions, and revenue is recorded for the gross amount of consideration.

Certain costs incurred to obtain customer contracts are required to be recognized as assets and amortized consistent with the transfer of goods or services to the customer. As such, we defer costs related to obtaining check supply, treasury management solutions and merchant services contracts. These amounts, which totaled \$18.0 million as of December 31, 2021, are included in other non-current assets and are amortized on the straight-line basis as SG&A expense. Amortization of these amounts on the straight-line basis approximates the timing of the transfer of goods or services to the customer. Generally, these amounts are being amortized over periods of 2 to 5 years. We expense these costs as incurred when the amortization period would have been 1 year or less.

Accounting for customer contracts can be complex and may involve the use of various techniques to estimate total contract revenue. Estimates related to variable consideration are based on various assumptions to project the outcome of future events. We review and update our contract-related estimates regularly, and we do not anticipate that revisions to our estimates would have a material effect on our results of operations, financial position or cash flows.

New Accounting Pronouncements

Information regarding the accounting pronouncements adopted during 2021 can be found under the caption "Note 2: New Accounting Pronouncements" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest rate risk – We are exposed to changes in interest rates primarily as a result of the borrowing activities used to support our capital structure, maintain liquidity and fund business operations and investments. We do not enter into financial instruments for speculative or trading purposes. The nature and amount of debt outstanding can be expected to vary as a result of future business requirements, market conditions and other factors

During the second quarter of 2021, we executed a new credit agreement that provides for a 5-year revolving credit facility with commitments of \$500.0 million and a term loan facility in the amount of \$1.155 billion. Our previous credit agreement was terminated contemporaneously with our entry into the new credit agreement and was repaid utilizing proceeds from the new credit facility. Interest is payable on amounts outstanding under the new credit facility at a fluctuating rate of interest determined by reference to the eurodollar rate plus an applicable margin ranging from 1.5% to 2.5%, depending on our consolidated total leverage ratio, as defined in the credit agreement. Also during the second quarter of 2021, we issued \$500.0 million of 8.0% senior, unsecured notes. Proceeds from this offering, net of discount and debt issuance costs, were \$490.7 million, resulting in an effective interest rate of 8.3%.

As of December 31, 2021, our total debt outstanding was as follows:

(in thousands)	Carrying amount ⁽¹⁾	Fair value ⁽²⁾	Interest rate ⁽³⁾
Senior, secured term loan facility	\$ 1,061,721	\$ 1,072,125	2.7 %
Senior, unsecured notes	491,228	526,390	8.0 %
Amounts drawn on revolving credit facility	130,000	130,000	2.7 %
Total debt	\$ 1,682,949	\$ 1,728,515	4.2 %

⁽¹⁾ The carrying amount has been reduced by unamortized discount and debt issuance costs of \$19.2 million.

⁽²⁾ For the amounts outstanding under our credit facility agreement, fair value approximates carrying value because the interest rate is variable and reflects current market rates. The fair value of the senior, unsecured notes is based on quoted prices in active markets for the identical liability when traded as an asset.

⁽³⁾ The interest rate presented for total debt includes the impact of the interest rate swap discussed below.

As part of our interest rate risk management strategy, in July 2019, we entered into an interest rate swap, which we designated as a cash flow hedge, to mitigate variability in interest payments on a portion of our variable-rate debt. The interest rate swap, which terminates in March 2023, effectively converts \$200.0 million of variable-rate debt to a fixed rate of 1.798%. Changes in the fair value of the interest rate swap are recorded in accumulated other comprehensive loss on the consolidated balance sheets and are subsequently reclassified into interest expense as interest payments are made on the variable-rate

debt. The fair value of the interest rate swap was \$3.0 million as of December 31, 2021 and was included in other non-current liabilities on the consolidated balance sheet.

Based on the daily average amount of outstanding variable-rate debt in our portfolio, a one-percentage-point change in our weighted-average interest rate would have resulted in a \$9.1 million change in interest expense for 2021.

Foreign currency exchange rate risk – We are exposed to changes in foreign currency exchange rates. Investments in, loans and advances to foreign subsidiaries and branches, as well as the operations of these businesses, are denominated in foreign currencies, primarily Canadian and Australian dollars. The effect of exchange rate changes is expected to have a minimal impact on our earnings and cash flows, as our foreign operations represent a relatively small portion of our business. We have not entered into hedges against changes in foreign currency exchange rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Deluxe Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Deluxe Corporation and its subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of income (loss), of comprehensive income (loss), of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2021, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for cloud computing arrangements in 2020 and the manner in which it accounts for leases in 2019.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in Management's Report on Internal Control over Financial Reporting, management has excluded First American from its assessment of internal control over financial reporting as of December 31, 2021 because it was acquired by the Company in a purchase business combination during 2021. We have also excluded First American from our audit of internal control over financial reporting. First American is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting represent 6.1% and 9.6%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2021.

Definition and Limitations of Internal Control over Financial Reporting

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

company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

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

Acquisition of First American – Valuation of Intangible Assets

As described in Notes 6 and 8 to the consolidated financial statements, the Company completed the acquisition of First American Payment Systems, L.P. ("First American") for cash consideration of \$958.5 million, which resulted in \$291.1 million of intangible assets being recorded. The intangibles recorded by management were primarily comprised of customer relationships, partner relationships, technology-based intangibles, and trade names. The fair values of the customer relationship and partner relationship intangibles were estimated using the multi-period excess earnings method. Key assumptions used by management to estimate the customer relationship and partner relationship intangibles related to same-customer revenue, merchant and partner growth rates, estimated earnings, estimated customer and partner retention rates, and the discount rate. The estimated fair values of the acquired trade names and technology-based intangibles were estimated using the relief from royalty method, which involved key assumptions used by management, related to the assumed royalty rates.

The principal considerations for our determination that performing procedures relating to the valuation of intangible assets acquired in the acquisition of First American is a critical audit matter are (i) a high degree of auditor judgment and subjectivity in performing procedures relating to the fair value of the customer relationships, partner relationships, trade names and technology-based intangible assets acquired due to the significant judgment by management when developing the estimates, (ii) the significant audit effort in evaluating the significant assumptions related to the estimated earnings, merchant growth rates, royalty rates and discount rates, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the acquisition accounting, including controls over management's valuation of the intangible assets and controls over development of the assumptions related to the estimated earnings, merchant growth rates, royalty rates and discount rates. These procedures also included, among others, reading the purchase agreement and testing management's process for estimating the fair value of the customer relationships, partner relationships, trade names and technology-based intangible assets. Testing management's process included evaluating the appropriateness of the valuation methods, testing the completeness and accuracy of data provided by management, and evaluating the reasonableness of management's assumptions related to the estimated earnings, merchant growth rates, royalty rates and discount rates. Evaluating the reasonableness of the estimated earnings and merchant growth rates involved considering historical performance and industry trends. Additional company specific inputs were assessed for reasonableness. Professionals with specialized skill and knowledge were used to assist in evaluating the appropriateness of valuation methods and evaluating the appropriateness of the discount rates and royalty rates assumptions.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
February 28, 2022

We have served as the Company's auditor since 2001.

DELUXE CORPORATION
CONSOLIDATED BALANCE SHEETS

(in thousands, except share par value)

	December 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 41,231	\$ 123,122
Trade accounts receivable, net of allowances for uncollectible accounts	197,947	161,959
Inventories and supplies, net of reserves	34,928	40,130
Funds held for customers, including securities carried at fair value of \$13,307 and \$28,462, respectively	254,795	119,749
Prepaid expenses	37,643	27,215
Revenue in excess of billings	30,393	17,617
Other current assets	23,536	16,839
Total current assets	620,473	506,631
Deferred income taxes	2,180	6,642
Long-term investments	47,201	45,919
Property, plant and equipment, net of accumulated depreciation	125,966	88,680
Operating lease assets	58,236	35,906
Intangibles, net of accumulated amortization	510,724	246,760
Goodwill	1,430,141	702,958
Other non-current assets	279,463	208,679
Total assets	\$ 3,074,384	\$ 1,842,175
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 153,072	\$ 116,990
Funds held for customers	256,257	117,647
Accrued liabilities	216,832	177,183
Current portion of long-term debt	57,197	—
Total current liabilities	683,358	411,820
Long-term debt	1,625,752	840,000
Operating lease liabilities	56,444	28,344
Deferred income taxes	75,121	5,401
Other non-current liabilities	59,111	43,218
Commitments and contingencies (Notes 10, 15, 16 and 19)		
Shareholders' equity:		
Common shares \$1 par value (authorized: 500,000 shares; outstanding: December 31, 2021 – 42,679; December 31, 2020 – 41,973)	42,679	41,973
Additional paid-in capital	57,368	17,558
Retained earnings	505,763	495,153
Accumulated other comprehensive loss	(31,492)	(41,433)
Non-controlling interest	280	141
Total shareholders' equity	574,598	513,392
Total liabilities and shareholders' equity	\$ 3,074,384	\$ 1,842,175

See Notes to Consolidated Financial Statements

DELUXE CORPORATION
CONSOLIDATED STATEMENTS OF INCOME (LOSS)

	Year Ended December 31,		
	2021	2020	2019
<i>(in thousands, except per share amounts)</i>			
Product revenue	\$ 1,244,529	\$ 1,230,638	\$ 1,409,155
Service revenue	777,668	560,143	599,560
Total revenue	2,022,197	1,790,781	2,008,715
Cost of products	(450,880)	(458,637)	(531,307)
Cost of services	(433,390)	(272,134)	(281,628)
Total cost of revenue	(884,270)	(730,771)	(812,935)
Gross profit	1,137,927	1,060,010	1,195,780
Selling, general and administrative expense	(941,023)	(841,658)	(891,693)
Restructuring and integration expense	(54,750)	(75,874)	(71,248)
Asset impairment charges	—	(101,749)	(421,090)
Operating income (loss)	142,154	40,729	(188,251)
Interest expense	(55,554)	(23,140)	(34,682)
Other income	7,203	9,214	7,193
Income (loss) before income taxes	93,803	26,803	(215,740)
Income tax provision	(31,031)	(21,468)	(8,039)
Net income (loss)	62,772	5,335	(223,779)
Net income attributable to non-controlling interest	(139)	(91)	—
Net income (loss) attributable to Deluxe	\$ 62,633	\$ 5,244	\$ (223,779)
Basic earnings (loss) per share	\$ 1.48	\$ 0.12	\$ (5.20)
Diluted earnings (loss) per share	1.45	0.11	(5.20)

See Notes to Consolidated Financial Statements

DELUXE CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(in thousands)	Year Ended December 31,		
	2021	2020	2019
Net income (loss)	\$ 62,772	\$ 5,335	\$ (223,779)
Other comprehensive income, net of tax:			
Postretirement benefit plans:			
Net actuarial gain arising during the year	6,194	5,616	6,594
Less reclassification of amounts from other comprehensive income to net income (loss):			
Amortization of prior service credit	(1,050)	(1,055)	(1,054)
Amortization of net actuarial loss	1,381	1,889	2,583
Postretirement benefit plans	6,525	6,450	8,123
Interest rate swap:			
Unrealized gain (loss) arising during the year	2,067	(4,973)	(1,040)
Reclassification of realized loss (gain) from other comprehensive income to net income (loss)	1,023	719	(57)
Interest rate swap	3,090	(4,254)	(1,097)
Debt securities:			
Unrealized holding (loss) gain arising during the year	(254)	338	48
Reclassification of realized gain from other comprehensive income to net income (loss)	—	(153)	—
Debt securities	(254)	185	48
Unrealized foreign currency translation adjustment	580	4,133	1,558
Other comprehensive income	9,941	6,514	8,632
Comprehensive income (loss)	72,713	11,849	(215,147)
Comprehensive income attributable to non-controlling interest	(139)	(91)	—
Comprehensive income (loss) attributable to Deluxe	\$ 72,574	\$ 11,758	\$ (215,147)
Income tax (expense) benefit of other comprehensive income included in above amounts:			
Postretirement benefit plans:			
Net actuarial gain arising during the year	\$ (2,186)	\$ (1,948)	\$ (2,321)
Less reclassification of amounts from other comprehensive income to net income (loss):			
Amortization of prior service credit	371	366	367
Amortization of net actuarial loss	(248)	(412)	(640)
Postretirement benefit plans	(2,063)	(1,994)	(2,594)
Interest rate swap:			
Unrealized gain (loss) arising during the year	(731)	1,725	364
Reclassification of realized loss (gain) from other comprehensive income to net income (loss)	(361)	(249)	20
Interest rate swap	(1,092)	1,476	384
Debt securities:			
Unrealized holding (loss) gain arising during the year	88	(117)	(17)
Reclassification of realized gain from other comprehensive income to net income (loss)	—	53	—
Debt securities	88	(64)	(17)
Total net tax expense included in other comprehensive income	\$ (3,067)	\$ (582)	\$ (2,227)

See Notes to Consolidated Financial Statements

DELUXE CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

<i>(in thousands)</i>	Common shares	Common shares par value	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Non- controlling interest	Total
Balance, December 31, 2018	44,647	\$ 44,647	\$ —	\$ 927,345	\$ (56,579)	\$ —	\$ 915,413
Net loss	—	—	—	(223,779)	—	—	(223,779)
Cash dividends (\$1.20 per share)	—	—	—	(52,285)	—	—	(52,285)
Common shares issued	194	194	3,645	—	—	—	3,839
Common shares repurchased	(2,632)	(2,632)	(13,615)	(102,300)	—	—	(118,547)
Other common shares retired	(83)	(83)	(3,852)	—	—	—	(3,935)
Employee share-based compensation	—	—	17,908	—	—	—	17,908
Adoption of Accounting Standards Update No. 2016-02	—	—	—	(267)	—	—	(267)
Other comprehensive income	—	—	—	—	8,632	—	8,632
Balance, December 31, 2019	42,126	42,126	4,086	548,714	(47,947)	—	546,979
Net income	—	—	—	5,244	—	91	5,335
Cash dividends (\$1.20 per share)	—	—	—	(51,431)	—	—	(51,431)
Common shares issued	446	446	3,446	—	—	—	3,892
Common shares repurchased	(499)	(499)	(9,767)	(3,734)	—	—	(14,000)
Other common shares retired	(100)	(100)	(2,894)	—	—	—	(2,994)
Employee share-based compensation	—	—	22,687	—	—	—	22,687
Adoption of Accounting Standards Update No. 2016-13	—	—	—	(3,640)	—	—	(3,640)
Other comprehensive income	—	—	—	—	6,514	—	6,514
Investment in non-controlling interest	—	—	—	—	—	50	50
Balance, December 31, 2020	41,973	41,973	17,558	495,153	(41,433)	141	513,392
Net income	—	—	—	62,633	—	139	62,772
Cash dividends (\$1.20 per share)	—	—	—	(52,023)	—	—	(52,023)
Common shares issued	861	861	16,350	—	—	—	17,211
Common shares retired	(155)	(155)	(5,814)	—	—	—	(5,969)
Employee share-based compensation	—	—	29,274	—	—	—	29,274
Other comprehensive income	—	—	—	—	9,941	—	9,941
Balance, December 31, 2021	42,679	\$ 42,679	\$ 57,368	\$ 505,763	\$ (31,492)	\$ 280	\$ 574,598

See Notes to Consolidated Financial Statements

DELUXE CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	Year Ended December 31,		
	2021	2020	2019
Cash flows from operating activities:			
Net income (loss)	\$ 62,772	\$ 5,335	\$ (223,779)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation	25,625	20,242	16,502
Amortization of intangibles	123,142	90,550	109,534
Operating lease expense	17,485	20,928	19,113
Asset impairment charges	—	101,749	421,090
Amortization of prepaid product discounts	31,784	29,235	24,055
Deferred income taxes	17,758	(5,456)	(41,178)
Employee share-based compensation expense	29,477	21,824	19,702
Other non-cash items, net	17,196	25,692	13,344
Changes in assets and liabilities, net of effect of acquisitions:			
Trade accounts receivable	(8,857)	(2,709)	5,609
Inventories and supplies	(1,842)	(11,281)	4,843
Other current assets	(15,574)	15,344	(10,568)
Payments for cloud computing arrangements	(41,547)	(19,426)	—
Other non-current assets	(11,467)	(6,367)	(5,360)
Accounts payable	22,794	(9,518)	5,130
Prepaid product discount payments	(40,920)	(33,613)	(25,637)
Other accrued and non-current liabilities	(17,005)	(24,976)	(45,747)
Net cash provided by operating activities	210,821	217,553	286,653
Cash flows from investing activities:			
Purchases of capital assets	(109,140)	(62,638)	(66,595)
Payments for acquisitions, net of cash, cash equivalents, restricted cash and restricted cash equivalents acquired	(958,514)	—	(8,251)
Purchases of customer lists	(2,759)	(11,082)	—
Proceeds from sale of facilities	2,648	9,713	—
Purchases of customer funds debt securities	(93)	(3,918)	(7,642)
Proceeds from customer funds debt securities	93	7,764	7,642
Other	1,164	4,068	2,449
Net cash used by investing activities	(1,066,601)	(56,093)	(72,397)
Cash flows from financing activities:			
Proceeds from issuing long-term debt	1,884,850	309,000	241,500
Payments on long-term debt	(1,029,876)	(352,500)	(268,000)
Payments for debt issuance costs	(18,153)	—	—
Net change in customer funds obligations	126,703	(168)	12,598
Proceeds from issuing shares	16,843	3,747	3,198
Employee taxes paid for shares withheld	(5,969)	(2,956)	(3,935)
Payments for common shares repurchased	—	(14,000)	(118,547)
Cash dividends paid to shareholders	(51,654)	(50,746)	(51,742)
Other	(9,783)	(2,932)	(5,220)
Net cash provided (used) by financing activities	912,961	(110,555)	(190,148)
Effect of exchange rate change on cash, cash equivalents, restricted cash and restricted cash equivalents	(1,099)	3,693	5,444
Net change in cash, cash equivalents, restricted cash and restricted cash equivalents	56,082	54,598	29,552
Cash, cash equivalents, restricted cash and restricted cash equivalents, beginning of year	229,409	174,811	145,259
Cash, cash equivalents, restricted cash and restricted cash equivalents, end of year (Note 3)	\$ 285,491	\$ 229,409	\$ 174,811

See Notes to Consolidated Financial Statements

NOTE 1: SIGNIFICANT ACCOUNTING POLICIES

Nature of operations – We help enterprises, small businesses and financial institutions deepen customer relationships through trusted, technology-enabled solutions, including marketing services and data analytics, treasury management solutions, merchant services, website development and hosting, promotional products and fraud solutions, as well as customized checks and forms. We are also a leading provider of checks and accessories sold directly to consumers.

Consolidation – The consolidated financial statements include the accounts of Deluxe Corporation and its wholly-owned subsidiaries. All intercompany accounts, transactions and profits have been eliminated.

On April 1, 2020, we executed an agreement to form MedPayExchange LLC (MPX), doing business as Medical Payment Exchange, which delivers payments to healthcare providers from insurance companies and other payers. This entity is a variable interest entity (VIE), as defined in Accounting Standards Codification (ASC) Topic 810, *Consolidation*. As we are the primary beneficiary of the VIE, we are required to consolidate MPX in our consolidated financial statements. Our partner's interest in MPX is reported as non-controlling interest in the consolidated balance sheets within equity, separate from our equity. Net income (loss) and comprehensive income (loss) are attributed to us and the non-controlling interest. The amounts attributable to the non-controlling interest were not significant during 2021 or 2020.

Revision – During the second quarter of 2021, we identified errors in the calculations of the goodwill impairment charges recorded during the third quarter of 2019 and the first quarter of 2020, resulting in an understatement of the goodwill impairment charges and net losses and an overstatement of goodwill. The errors in our calculations resulted from the erroneous application of the simultaneous equation method, which effectively grosses up the goodwill impairment charge to account for the related income tax benefit, so that the resulting carrying value does not exceed the calculated fair value.

We assessed the materiality of the errors on prior period financial statements in accordance with Securities and Exchange Commission Staff Accounting Bulletin No. 99, *Materiality*, codified in ASC 250, *Presentation of Financial Statements*. We concluded that the errors were not material to our prior period consolidated financial statements and therefore, amendments of previously filed consolidated financial statements are not required. In accordance with ASC 250, we have corrected the errors by revising the consolidated financial statements presented herein.

DELUXE CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(dollars in thousands, except per share amounts)

The impact of the revision on the consolidated statements of income (loss) and the consolidated statements of comprehensive income (loss) was as follows:

<i>(in thousands)</i>	Previously reported	Adjustment	Revised
Year ended December 31, 2020:			
Asset impairment charges	\$ (97,973)	\$ (3,776)	\$ (101,749)
Operating income	44,505	(3,776)	40,729
Income before income taxes	30,579	(3,776)	26,803
Income tax provision	(21,680)	212	(21,468)
Net income	8,899	(3,564)	5,335
Net income attributable to Deluxe	8,808	(3,564)	5,244
Basic earnings per share	0.21	(0.09)	0.12
Diluted earnings per share	0.19	(0.08)	0.11
Comprehensive income	15,413	(3,564)	11,849
Comprehensive income attributable to Deluxe	15,322	(3,564)	11,758
Year ended December 31, 2019:			
Asset impairment charges	\$ (390,980)	\$ (30,110)	\$ (421,090)
Operating loss	(158,141)	(30,110)	(188,251)
Loss before income taxes	(185,630)	(30,110)	(215,740)
Income tax provision	(14,267)	6,228	(8,039)
Net loss	(199,897)	(23,882)	(223,779)
Net loss attributable to Deluxe	(199,897)	(23,882)	(223,779)
Basic loss per share	(4.65)	(0.55)	(5.20)
Diluted loss per share	(4.65)	(0.55)	(5.20)
Comprehensive loss	(191,265)	(23,882)	(215,147)
Comprehensive loss attributable to Deluxe	(191,265)	(23,882)	(215,147)

The impact of the revision on the consolidated balance sheet as of December 31, 2020 was as follows:

<i>(in thousands)</i>	Previously reported	Adjustment	Revised
ASSETS			
Deferred income taxes	\$ 5,444	\$ 1,198	\$ 6,642
Goodwill	736,844	(33,886)	702,958
Total assets	1,874,863	(32,688)	1,842,175
LIABILITIES AND SHAREHOLDERS' EQUITY			
Deferred income taxes	\$ 10,643	\$ (5,242)	\$ 5,401
Retained earnings	522,599	(27,446)	495,153
Total shareholders' equity	540,838	(27,446)	513,392
Total liabilities and shareholders' equity	1,874,863	(32,688)	1,842,175

The impact of the revision on the consolidated statements of cash flows was as follows:

<i>(in thousands)</i>	Previously reported	Adjustment	Revised
Year ended December 31, 2020:			
Cash flows from operating activities:			
Net income	\$ 8,899	\$ (3,564)	\$ 5,335
Asset impairment charges	97,973	3,776	101,749
Deferred income taxes	(5,244)	(212)	(5,456)
Year ended December 31, 2019:			
Cash flows from operating activities:			
Net loss	\$ (199,897)	\$ (23,882)	\$ (223,779)
Asset impairment charges	390,980	30,110	421,090
Deferred income taxes	(34,950)	(6,228)	(41,178)

Comparability – The consolidated statements of cash flows for the years ended December 31, 2020 and 2019 have been modified to conform to the current year presentation. Loss on sales of businesses and customer lists is included in other non-cash items, net, within cash flows from operating activities, and holdback payments for acquisitions and asset purchases is included in other within cash flows from financing activities. Previously, these amounts were presented separately. In addition, we presented payments for cloud computing arrangements separately within cash flows from operating activities for the year ended December 31, 2020. Previously, this amount was included in other non-current assets.

The consolidated balance sheet as of December 31, 2020 has been modified to conform to the current year presentation. Prepaid expenses are presented separately on the consolidated balance sheet. Previously, this amount was included in other current assets.

Use of estimates – We have prepared the accompanying consolidated financial statements in conformity with U.S. generally accepted accounting principles (GAAP). In this process, it is necessary for us to make certain estimates and assumptions affecting the amounts reported in the consolidated financial statements and related notes. We base our estimates on historical experience and on various other factors and assumptions that we believe are reasonable under the circumstances, including the estimated impact of extraordinary events, such as the coronavirus (COVID-19) pandemic, the results of which form the basis for making judgments about the carrying values of our assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. Actual results may differ significantly from our estimates and assumptions, including our estimates of the severity and duration of the COVID-19 pandemic. Further information can be found in Note 19.

Foreign currency translation – The financial statements of our foreign subsidiaries are measured in the respective subsidiaries' functional currencies, primarily Canadian and Australian dollars, and are translated into U.S. dollars. Assets and liabilities are translated using the exchange rates in effect at the balance sheet date. Revenue and expenses are translated at the average exchange rates during the year. The resulting translation gains and losses are reflected in accumulated other comprehensive loss in the shareholders' equity section of the consolidated balance sheets. Foreign currency transaction gains and losses are recorded in other income on the consolidated statements of income (loss).

Cash and cash equivalents – We consider all cash on hand and other highly liquid investments with original maturities of 3 months or less to be cash and cash equivalents. The carrying amounts reported in the consolidated balance sheets for cash and cash equivalents approximate fair value. Checks issued by us but not presented to the banks for payment may create negative book cash balances. These book overdrafts are included in accounts payable on the consolidated balance sheets and were not significant as of December 31, 2021 or December 31, 2020.

Trade accounts receivable – Trade accounts receivable are initially recorded at the invoiced amount upon the sale of goods or services to customers, and also include amounts due for products shipped and services rendered, but for which invoices have not yet been issued due to timing. Our trade accounts receivable are not interest-bearing. They are stated net of allowances for uncollectible accounts, a valuation account that is deducted from an asset's amortized cost basis to present the net amount expected to be collected. Amounts are charged off against the allowance when we believe the uncollectibility of an account is confirmed. The point at which uncollected accounts are written off varies by type of customer, but generally does not exceed 1 year from the due date of the receivable. In calculating the allowances, we utilize a combination of aging schedules with reserve rates applied to both current and aged receivables and roll-rate reserves using historical loss rates and changes in current or projected conditions. Changes in the allowances for uncollectible accounts are included in selling, general and administrative (SG&A) expense on the consolidated statements of income (loss). Further information regarding our allowances for uncollectible accounts can be found in Note 3.

Inventories and supplies – Inventories are stated at the lower of cost or net realizable value. Cost is calculated using moving average and standard costs, which approximates the first-in, first-out basis. We periodically review our inventory quantities and record a provision for excess and/or obsolete inventory based on our historical usage and forecasts of future demand. It is possible that additional reserves above those already established may be required if there is a significant change in the timing or level of demand for our products compared to forecasted amounts. This would require a change in the reserve for excess or obsolete inventory, resulting in a charge to net income (loss) during the period of the change. Charges for inventory write-downs are included in cost of revenue on the consolidated statements of income (loss). Once written down, inventories are carried at this lower cost basis until sold or scrapped. Supplies consist of items not used directly in the production of goods, such as maintenance and other supplies utilized in the production area.

Funds held for customers – Our payroll services business collects funds from clients to pay their payroll and related taxes. We hold these funds temporarily until payments are remitted to the clients' employees and the appropriate taxing authorities. Our merchant services business temporarily holds funds collected from credit card networks and internet transaction processing on behalf of certain merchants, and our treasury management cash receipt processing business remits a portion of cash receipts to our clients the business day following receipt. Certain of our customer contracts include legal restrictions regarding the use of these funds.

All of these funds, consisting of cash and available-for-sale debt securities, are reported as funds held for customers on the consolidated balance sheets. The corresponding liability for these obligations is also reported as funds held for customers on the consolidated balance sheets. The available-for-sale debt securities are carried at fair value, with unrealized gains and losses included in accumulated other comprehensive loss on the consolidated balance sheets. Realized gains and losses are included in revenue on the consolidated statements of income (loss) and were not significant during the past 3 years.

Long-term investments – Long-term investments consist primarily of cash surrender values of company-owned life insurance policies. Certain of these policies fund amounts due under our deferred compensation plan and our inactive supplemental executive retirement plan. Further information regarding these plans can be found in Notes 12 and 13.

Property, plant and equipment – Property, plant and equipment, including leasehold and other improvements that extend an asset's useful life or productive capabilities, are stated at historical cost less accumulated depreciation. Buildings have been assigned useful lives of 40 years and machinery and equipment are generally assigned useful lives ranging from 1 year to 11 years, with a weighted-average useful life of 7 years as of December 31, 2021. Buildings are depreciated using the 150% declining balance method, and machinery and equipment is depreciated using the sum-of-the-years' digits method. Leasehold and building improvements are depreciated on the straight-line basis over the estimated useful life of the property or the life of the lease, whichever is shorter. Amortization of assets that are recorded under finance leases is included in depreciation expense. Maintenance and repairs are expensed as incurred.

Fully depreciated assets are retained in property, plant and equipment until disposal. Any gains or losses resulting from the disposition of property, plant and equipment are included in SG&A expense on the consolidated statements of income (loss).

Leases – We determine if an arrangement is a lease at inception by considering whether a contract explicitly or implicitly identifies assets deployed in the arrangement and whether we have obtained substantially all of the economic benefits from the use of the underlying assets and direct how and for what purpose the assets are used during the term of the contract. Lease expense is recognized on the straight-line basis over the lease term and is included in total cost of revenue and in SG&A expense on the consolidated statements of income (loss). Interest on finance leases is included in interest expense on the consolidated statements of income (loss).

Operating leases are included in operating lease assets, accrued liabilities and operating lease liabilities on the consolidated balance sheets. Finance leases are included in property, plant and equipment, accrued liabilities and other non-current liabilities on the consolidated balance sheets. Lease assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Lease assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. We have elected to exclude leases with original terms of 1 year or less from lease assets and liabilities, and we separate nonlease components, such as common area maintenance charges and utilities, from the associated lease component for real estate leases, based on their estimated fair values. As our lease agreements typically do not provide an implicit rate, we use our incremental borrowing rate, based on information available at the lease commencement date, in determining the present value of lease payments. Certain of our lease agreements include options to extend or terminate the lease. The lease term takes into account these options to extend or terminate the lease when it is reasonably certain that we will exercise the option.

Intangibles – Intangible assets are stated at historical cost less accumulated amortization. Amortization expense is generally determined on the straight-line basis, with the exception of customer lists, which are generally amortized using accelerated methods that reflect the pattern in which we receive the economic benefit of the asset. Intangibles have been assigned useful lives ranging from 1 year to 15 years, with a weighted-average useful life of 7 years as of December 31, 2021.

Each reporting period, we evaluate the remaining useful lives of our amortizable intangibles to determine whether events or circumstances warrant a revision to the remaining period of amortization. If our estimate of an asset's remaining useful life is revised, the remaining carrying amount of the asset is amortized prospectively over the revised remaining useful life. Any gains or losses resulting from the disposition of intangibles are included in SG&A expense on the consolidated statements of income (loss).

We capitalize costs of software developed or obtained for internal use, including website development costs, once the preliminary project stage has been completed, management commits to funding the project and it is probable that the project will be completed and the software will be used to perform the function intended. Capitalized costs include only (1) external direct costs of materials and services consumed in developing or obtaining internal-use software, (2) payroll and payroll-related costs for employees who are directly associated with and who devote time to the internal-use software project, and (3) interest costs incurred, when significant, while developing internal-use software. Costs incurred in populating websites with information about the company or products are expensed as incurred. Capitalization of costs ceases when the project is substantially complete and ready for its intended use. The carrying value of internal-use software is reviewed in accordance with our policy on impairment of long-lived assets and amortizable intangibles.

We incur costs in connection with the development of certain software products that we sell to our customers. Costs for the development of software products to be sold are expensed as incurred until technological feasibility is established, at which time, such costs are capitalized until the product is available for general release to customers.

Business combinations – We periodically complete business combinations that align with our business strategy. The identifiable assets acquired and liabilities assumed are recorded at their estimated fair values, and the results of operations of each acquired business are included in our consolidated statements of income (loss) from their acquisition dates. The purchase price for each acquisition is equivalent to the fair value of the consideration transferred, including any contingent consideration. Goodwill is recognized for the excess of the purchase price over the net fair value of the assets acquired and liabilities assumed. While we use our best estimates and assumptions in estimating the fair values of the assets acquired and liabilities assumed, our fair value estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to 1 year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Any adjustments required after the measurement period are recorded in the consolidated statements of income (loss). Transaction costs related to acquisitions are expensed as incurred and are included in SG&A expense on the consolidated statements of income (loss).

Impairment of long-lived assets and amortizable intangibles – We evaluate the recoverability of property, plant, equipment and amortizable intangibles not held for sale whenever events or changes in circumstances indicate that an asset group's carrying amount may not be recoverable. Such circumstances could include, but are not limited to, (1) a significant decrease in the market value of an asset, (2) a significant adverse change in the extent or manner in which an asset is used or in its physical condition, or (3) an accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of an asset. We compare the carrying amount of the asset group to the estimated undiscounted future cash flows associated with it. If the sum of the expected future net cash flows is less than the carrying value of the asset group being evaluated, an impairment loss is recognized. The impairment loss is calculated as the amount by which the carrying value of the asset group exceeds its estimated fair value. As quoted market prices are not available for the majority of our assets, the estimate of fair value is based on various valuation techniques, including the discounted value of estimated future cash flows. During 2020 and 2019, we recorded asset impairment charges related to certain intangible assets. Further information regarding these impairment charges can be found in Note 8.

We evaluate the recoverability of property, plant, equipment and intangibles held for sale by comparing the asset group's carrying amount with its estimated fair value less costs to sell. If the estimated fair value less costs to sell is less than the carrying value of the asset group, an impairment loss is recognized. The impairment loss is calculated as the amount by which the carrying value of the asset group exceeds its estimated fair value less costs to sell. During 2020, we recorded asset impairment charges related to certain real estate and internal-use software assets held for sale. Further information regarding these impairment charges can be found in Note 8.

The evaluation of asset impairment requires us to make assumptions about future cash flows over the life of the asset group being evaluated. These assumptions require judgment and actual results may differ from assumed and estimated amounts.

Impairment of goodwill – We evaluate the carrying value of goodwill as of July 31st of each year and between annual evaluations if events occur or circumstances change that would indicate a possible impairment. Such circumstances could include, but are not limited to, (1) a significant adverse change in legal factors or in business climate, (2) unanticipated competition, (3) an adverse change in market conditions that is indicative of a decline in the fair value of the assets, (4) a change in our business strategy, or (5) an adverse action or assessment by a regulator. Information regarding the results of our goodwill impairment analyses can be found in Note 8.

To analyze goodwill for impairment, we must assign our goodwill to individual reporting units. Identification of reporting units includes an analysis of the components that comprise each of our operating segments, which considers, among other things, the manner in which we operate our business and the availability of discrete financial information. Components of an operating segment are aggregated to form a reporting unit if the components have similar economic characteristics. We periodically review our reporting units to ensure that they continue to reflect the manner in which we operate our business.

When completing our annual goodwill impairment analysis, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after this qualitative assessment, we determine it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the quantitative impairment test is unnecessary.

When performing a quantitative analysis of goodwill, we calculate the estimated fair value of the reporting unit and compare this amount to the carrying amount of the reporting unit's net assets, including goodwill. We utilize a discounted cash flow model to calculate the estimated fair value of a reporting unit. This approach is a valuation technique under which we estimate future cash flows using the reporting unit's financial forecast from the perspective of an unrelated market participant. Using historical trending and internal forecasting techniques, we project revenue and apply our fixed and variable cost experience rates to the projected revenue to arrive at the future cash flows. A terminal value is then applied to the projected cash flow stream. Future estimated cash flows are discounted to their present value to calculate the estimated fair value. The discount rate used is the market-value-weighted average of our estimated cost of capital derived using both known and estimated customary market metrics. In determining the estimated fair values of our reporting units, we are required to estimate a number of factors, including revenue growth rates, terminal growth rates, direct costs, the discount rate and the allocation of shared and corporate items. When completing a quantitative analysis for all of our reporting units, the summation of our reporting units' fair values is compared to our consolidated fair value, as indicated by our market capitalization, to evaluate the reasonableness of our calculations. If the carrying amount of a reporting unit's net assets exceeds its estimated fair value, an impairment loss is recorded for the difference, not to exceed the carrying amount of goodwill.

Assets held for sale – We record assets held for sale at the lower of their carrying value or estimated fair value less costs to sell. Assets are classified as held for sale on our consolidated balance sheets when all of the following conditions are met: (1) management has the authority and commits to a plan to sell the assets; (2) the assets are available for immediate sale in their present condition; (3) there is an active program to locate a buyer and the plan to sell the assets has been initiated; (4) the sale of the assets is probable within 1 year; (5) the assets are being actively marketed at a reasonable sales price relative to their current fair value; and (6) it is unlikely that the plan to sell will be withdrawn or that significant changes to the plan will be made.

Prepaid product discounts – Certain of our financial institution contracts require prepaid product discounts in the form of upfront cash payments or accruals for amounts owed to financial institution clients. These prepaid product discounts are included in other non-current assets on the consolidated balance sheets and are generally amortized as reductions of revenue on the straight-line basis over the contract term. These amounts are being amortized over periods of up to 14.5 years, with a weighted-average period of 5 years as of December 31, 2021. Whenever events or changes occur that impact the related contract, including significant declines in the anticipated profitability, we evaluate the carrying value of prepaid product discounts to determine if they are impaired. Should a financial institution cancel a contract prior to the agreement's termination date, or should the volume of orders realized through a financial institution fall below contractually-specified minimums, we generally have a contractual right to a refund of the remaining unamortized prepaid product discount.

Loans and notes receivable from distributors – We have, at times, provided loans to certain of our Promotional Solutions distributors to allow them to purchase the operations of other small business distributors. We have also sold distributors and small business customer lists that we own in exchange for notes receivable. These loans and notes receivable are included in other current assets and other non-current assets on the consolidated balance sheets. Interest rates on these receivables generally range from 6% to 8% and reflect market interest rates at the time the transactions were executed. Interest is accrued as earned. Accrued interest included in loans and notes receivable was not significant as of December 31, 2021 or December 31, 2020.

In determining the allowances for uncollectible accounts related to loans and notes receivable, we utilize a loss-rate analysis based on historical loss information, current delinquency rates, the credit quality of the loan recipients and the portfolio mix to determine an appropriate credit risk measurement, adjusted to reflect current loan-specific risk characteristics and changes in environmental conditions affecting our small business distributors. Changes in conditions that may affect our distributors include, but are not limited to, general economic conditions, changes in the markets for their products and services and changes in governmental regulations. In completing our analysis, we utilize a reversion methodology for periods beyond the reasonable and supportable forecast period, as many of our loans and notes receivable have longer terms. Allowances for impaired loans are generally determined based on collateral values or the present value of estimated cash flows. Further information regarding current risks and uncertainties affecting our loans and notes receivable can be found in Note 19. Further information regarding our allowances for uncollectible accounts can be found in Note 3.

We generally withhold commissions payable to the distributors to settle the monthly payments due on the receivables, thus somewhat mitigating the risk that the receivables will not be collected. Our notes receivable also generally allow us to acquire a distributor's customer list in the case of default. As of December 31, 2021 and December 31, 2020, past due amounts and receivables placed on non-accrual status were not significant. The determination to place receivables on non-accrual status or to resume the accrual of interest is completed on a case-by-case basis, evaluating the specifics of each situation.

Cloud computing arrangements – On January 1, 2020, we adopted Accounting Standards Update (ASU) No. 2018-15, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. Under this standard, we are required to capitalize implementation costs incurred in a hosting arrangement that is a service contract. Implementation costs include activities such as integrating, configuring and customizing the related software. In evaluating whether our cloud computing arrangements include a software license, we consider whether we have the contractual right to take possession of the software at any time during the hosting period without significant penalty and whether it is feasible for us to either run the software on our own hardware or contract with another party unrelated to the vendor to host the software. If we determine that a cloud computing arrangement includes a software license, we account for the software license element of the arrangement consistent with the acquisition of other software licenses. If we determine that a cloud computing arrangement does not include a software license, we account for the implementation costs as non-current assets. In both cases, the remaining elements of the arrangement are accounted for as a service contract. The capitalized cloud computing implementation costs are amortized on the straight-line basis over the fixed, non-cancellable term of the associated hosting arrangement plus any reasonably certain renewal periods. We apply the same impairment model to these assets as we use to evaluate internally-developed software for impairment.

Advertising costs – Deferred advertising costs include materials, printing, labor and postage costs related to our direct response advertising programs. These costs are amortized as SG&A expense over periods that correspond to the estimated revenue streams of the individual advertisements. The actual revenue streams are analyzed at least annually to monitor the propriety of the amortization periods. Judgment is required in estimating the future revenue streams, especially with regard to check re-orders, which can span an extended period of time. Significant changes in the actual revenue streams would require the amortization periods to be modified, thus impacting our results of operations during the period in which the change occurred and in subsequent periods. Within our consumer checks business, approximately 89% of the costs of individual advertisements is expensed within 6 months of the advertisement. Other deferred advertising costs are fully amortized within 6 months of the advertisement. Deferred advertising costs are included in other current assets and other non-current assets on the consolidated balance sheets.

Non-direct response advertising costs are expensed as incurred. Catalogs provided to financial institution clients are accounted for as prepaid assets until they are shipped to financial institutions. The total amount of advertising expense, including non-direct response advertising and the amortization of direct response advertising, was \$47,461 in 2021, \$50,308 in 2020 and \$70,798 in 2019.

Litigation – We are party to legal actions and claims arising in the ordinary course of business. We record accruals for legal matters when the expected outcome of these matters is either known or considered probable and can be reasonably estimated. Our accruals do not include related legal and other costs expected to be incurred in defense of legal actions. Further information regarding litigation can be found in Note 16.

Income taxes – We estimate our income tax provision based on the various jurisdictions where we conduct business. We estimate our current tax liability and record deferred income taxes resulting from temporary differences between the financial reporting basis of assets and liabilities and their respective tax reporting bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences reverse. Net deferred tax assets are recognized to the extent that realization of such benefits is more likely than not. To the extent that we believe realization is not likely, we establish a valuation allowance against the net deferred tax assets.

We are subject to tax audits in numerous domestic and foreign tax jurisdictions. Tax audits are often complex and can require several years to complete. In the normal course of business, we are subject to challenges from the Internal Revenue Service and other tax authorities regarding the amount of taxes due. These challenges may alter the timing or amount of taxable income or deductions, or the allocation of income among tax jurisdictions. We recognize the benefits of tax return positions in the financial statements when they are more likely than not to be sustained by the taxing authorities based solely on the technical merits of the position. If the recognition threshold is met, the tax benefit is measured and recognized as the largest amount of tax benefit that, in our judgment, is greater than 50% likely to be realized. Accrued interest and penalties related to unrecognized tax positions is included in our provision for income taxes on the consolidated statements of income (loss).

Derivative financial instruments – As of December 31, 2021 and December 31, 2020, we had an outstanding interest rate swap related to our variable-rate debt. Further information regarding this derivative financial instrument can be found in Note 7.

We do not use derivative financial instruments for speculative or trading purposes. Our policy is that all derivative transactions must be linked to an existing balance sheet item or firm commitment, and the notional amount cannot exceed the value of the exposure being hedged.

We recognize all derivative financial instruments in the consolidated financial statements at fair value regardless of the purpose or intent for holding the instrument. Changes in the fair value of derivative financial instruments are recognized periodically either in income or in shareholders' equity as a component of accumulated other comprehensive loss, depending on whether the derivative financial instrument qualifies for hedge accounting, and if so, whether it qualifies as a fair value hedge or a cash flow hedge and whether the hedge is effective. Generally, changes in the fair value of derivatives accounted for as fair value hedges are recorded in income along with the portion of the change in the fair value of the hedged items that relate to the hedged risk. Changes in the fair value of derivatives accounted for as cash flow hedges, to the extent they are effective as hedges, are recorded in accumulated other comprehensive loss, net of tax. We classify the cash flows from derivative instruments that have been designated as fair value or cash flow hedges in the same category as the cash flows from the items being hedged. Changes in the fair value of derivatives not qualifying as hedges and the ineffective portion of hedges are included in net income (loss).

Revenue recognition – Product revenue is recognized when control of the goods is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods. In most cases, control is transferred when products are shipped. We have elected to account for shipping and handling activities that occur after the customer has obtained control of the product as fulfillment activities and not as separate performance obligations. We recognize the vast majority of our service revenue as services are provided. The majority of our contracts are for the shipment of tangible products or the delivery of services that have a single performance obligation or include multiple performance obligations where control is transferred at the same time.

Revenue is presented on the consolidated statements of income (loss) net of rebates, discounts, amortization of prepaid product discounts, and taxes collected concurrent with revenue-producing activities. Many of our check supply contracts with financial institutions provide for rebates on certain products. We record these rebates as reductions of revenue and as accrued liabilities on the consolidated balance sheets when the related revenue is recognized. Amounts billed to customers for shipping and handling are included in revenue, while the related shipping and handling costs are reflected in cost of products and are accrued when the related revenue is recognized.

When another party is involved in providing goods or services to a customer, we must determine whether our obligation is to provide the specified good or service itself (i.e., we are the principal in the transaction) or to arrange for that good or service to be provided by the other party (i.e., we are an agent in the transaction). When we are responsible for satisfying a performance obligation, based on our ability to control the product or service provided, we are considered the principal and revenue is recognized for the gross amount of consideration. When the other party is primarily responsible for satisfying a performance obligation, we are considered the agent and revenue is recognized in the amount of any fee or commission to which we are entitled. We sell certain products and services through a network of distributors. We have determined that we are the principal in these transactions, and revenue is recorded for the gross amount of consideration.

Certain of our contracts for data-driven marketing solutions have variable consideration that is contingent on the success of the marketing campaign ("pay-for-performance"). We recognize revenue for estimated variable consideration as services are provided based on the most likely amount to be realized. Revenue is recognized to the extent that it is probable that a significant reversal of revenue will not occur when the contingency is resolved. Estimates regarding the recognition of variable consideration are updated each quarter. Typically, the amount of consideration for these contracts is finalized within 4 months.

Our payment terms vary by type of customer and the products or services offered. The time period between invoicing and when payment is due is not significant. For certain products, services and customer types, we require payment before the products or services are delivered to the customer. When a customer pays in advance, primarily for treasury management solutions and web hosting services, we defer the revenue and recognize it as the services are performed, generally over a period of less than 1 year. Deferred revenue is included in accrued liabilities and other non-current liabilities on the consolidated balance sheets.

In addition to the amounts included in deferred revenue, we will recognize revenue in future periods related to remaining performance obligations for certain of our data-driven marketing and treasury management solutions contracts. Generally, these contracts have terms of 1 year or less and many have terms of 3 months or less, and therefore, we do not consider any potential financing component. The amount of revenue related to these unsatisfied performance obligations is not significant to our annual consolidated revenue. When the revenue recognized for uncompleted contracts exceeds the amount of customer billings and the right to receive the consideration is conditional, a contract asset is recorded. These amounts are included in revenue in excess of billings on the consolidated balance sheets. Additionally, we record an asset for unbilled receivables when the revenue recognized has not been billed to customers in accordance with contractually stated billing terms and the right to receive the consideration is unconditional. These amounts are also included in revenue in excess of billings on the consolidated balance sheets.

We record sales commissions related to obtaining check supply and treasury management solution contracts, as well as contract acquisition costs within our merchant services business, as other non-current assets on the consolidated balance sheets. These contract acquisition costs are amortized as SG&A expense on the straight-line basis, which approximates the timing of the transfer of goods or services to the customer. These amounts are being amortized over periods of 2 years to 5 years. We expense contract acquisition costs as incurred when the amortization period would be 1 year or less.

Restructuring and integration expense – We incur restructuring and integration expense as a result of fundamental changes in the manner in which certain business functions are conducted, including the integration of acquired businesses into our systems and processes and the consolidation and migration of certain applications and processes. We also incur expenses resulting from our various cost management efforts, including facility closings and the relocation of business activities. These expenses consist of costs that are expensed when incurred, such as information technology consulting, project management services, internal labor, training, travel and relocation, and costs associated with facility closures. In addition, we accrue the costs of employee termination benefits payable under our ongoing severance benefit plan. We record accruals for employee termination benefits when it is probable that a liability has been incurred and the amount of the liability is reasonably estimable. We are required to make estimates and assumptions in calculating these accruals as, on some occasions, employees choose to voluntarily leave the company prior to their termination date or they secure another position within the company. In these situations, the employees do not receive termination benefits. To the extent our assumptions and estimates differ from our actual costs, subsequent adjustments to restructuring and integration accruals have been and will be required. Restructuring and integration accruals are included in accrued liabilities on the consolidated balance sheets.

Employee share-based compensation – Our share-based compensation consists of non-qualified stock options, restricted stock units, restricted stock, performance share unit awards and an employee stock purchase plan. Employee share-based compensation expense is included in total cost of revenue and in SG&A expense on the consolidated statements of income (loss), based on the functional areas of the employees receiving the awards, and is recognized as follows:

- The fair value of stock options is measured on the grant date using the Black-Scholes option pricing model. The related compensation expense is recognized on the straight-line basis, net of estimated forfeitures, over the options' vesting periods.
- The fair value of restricted stock and a portion of our restricted stock unit awards is measured on the grant date based on the market value of our common stock. The related compensation expense, net of estimated forfeitures, is recognized over the applicable service period.
- Certain of our restricted stock unit awards may be settled in cash if an employee voluntarily chooses to leave the company. These awards are included in accrued liabilities and other non-current liabilities on the consolidated balance sheets and are remeasured at fair value as of each balance sheet date.
- Compensation expense resulting from the 15% discount provided under our employee stock purchase plan is recognized over each 3 month purchase period.
- Our performance share unit awards specify certain performance and market-based conditions that must be achieved in order for the awards to vest. For the portion of the awards based on a performance condition, the performance target is not considered in determining the fair value of the awards and thus, fair value is measured on the grant date based on the market value of our common stock. The related compensation expense for this type of award is recognized, net of estimated forfeitures, over the related service period. The amount of compensation expense is dependent on our periodic assessment of the probability of the targets being achieved and our estimate, which may vary over time, of the number of shares that ultimately will be issued. For the portion of the awards based on a market condition, fair value is calculated on the grant date using the Monte Carlo simulation model. All compensation cost for these awards is recognized, net of estimated forfeitures, over the related service period, even if the market condition is never satisfied.

Postretirement benefit plan – We have historically provided certain health care benefits for a large number of retired U.S. employees hired prior to January 1, 2002. Our postretirement benefit income and obligation are calculated utilizing various actuarial assumptions and methodologies. These assumptions include, but are not limited to, the discount rate, the expected long-term rate of return on plan assets, estimated medical claims, the expected health care cost trend rate and the average remaining life expectancy of plan participants. We analyze the assumptions used each year when we complete our actuarial valuation of the plan. When actual events differ from our assumptions or when we change the assumptions used, an actuarial gain or loss results. The gain or loss is recognized immediately on the consolidated balance sheets within accumulated other comprehensive loss and is amortized into postretirement benefit income over the average remaining life expectancy of inactive plan participants, as a large percentage of our plan participants are classified as inactive.

The valuation of our postretirement plan requires judgment about circumstances that are inherently uncertain, including projected equity market performance, the number of plan participants, catastrophic health care events for our plan participants and a significant change in medical costs. Actual results may differ from assumed and estimated amounts.

Earnings (loss) per share – We calculate earnings (loss) per share using the two-class method, as we have unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalent payments. The two-class method is an earnings allocation formula that determines earnings (loss) per share for each class of common stock and participating security according to dividends declared and participation rights in undistributed earnings. Basic earnings (loss) per share is based on the weighted-average number of common shares outstanding during the year. Diluted earnings (loss) per share is based on the weighted-average number of common shares outstanding during the year, adjusted to give effect to potential common shares such as stock options and other awards that are not participating securities, calculated using the treasury stock method.

Comprehensive income (loss) – Comprehensive income (loss) includes charges and credits to shareholders' equity that are not the result of transactions with shareholders. Our total comprehensive income (loss) consists of net income (loss), changes in the funded status and amortization of amounts related to our postretirement benefit plans, unrealized gains and losses on our cash flow hedge, unrealized gains and losses on available-for-sale debt securities, and foreign currency translation adjustments. The items of other comprehensive income are included in accumulated other comprehensive loss on the consolidated balance sheets and statements of shareholders' equity, net of their related tax impacts. We release stranded income tax effects from accumulated other comprehensive loss when the circumstances upon which they are premised cease to exist.

NOTE 2: NEW ACCOUNTING PRONOUNCEMENTS

Accounting Standards Adopted During 2021

ASU No. 2019-12 – In December 2019, the Financial Accounting Standards Board (FASB) issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes*. This standard addresses several specific areas of accounting for income taxes. We adopted this standard on January 1, 2021. Portions of the standard were adopted prospectively and certain aspects were required to be adopted using the modified retrospective approach. Adoption of this standard did not require an adjustment to retained earnings and did not have a significant impact on our results of operations or financial position.

ASU No. 2021-08 – In October 2021, the FASB issued ASU No. 2021-08, *Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. This standard requires an acquirer to recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with ASC Topic 606, *Revenue from Contracts with Customers*. Previously, contract assets and contract liabilities were recognized at fair value in a business combination. We early adopted this standard on October 1, 2021, applying the guidance to our accounting for the acquisition of First American Payment Systems, L.P. (First American) in June 2021. Adoption of this standard resulted in an increase in deferred revenue recognized as of the acquisition date of \$3,027.

Certain Accounting Standards Adopted During Prior Years

ASU No. 2018-15 – In August 2018, the FASB issued ASU No. 2018-15, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. This standard aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The accounting for the service element of a hosting arrangement that is a service contract is not affected by the new standard. We adopted this standard on January 1, 2020, applying it prospectively to eligible costs incurred on or after this date. Adoption of this standard did impact our results of operations and financial position, as we previously expensed these implementation costs as incurred. Cloud computing implementation costs are included in other non-current assets on the consolidated balance sheets and were \$63,806 as of December 31, 2021 and \$29,242 as of December 31, 2020. These costs primarily relate to the implementation of an enterprise resource planning system. Our policy regarding the accounting for these implementation costs can be found in Note 1.

ASU No. 2016-02 – In February 2016, the FASB issued ASU No. 2016-02, *Leasing*. This standard was intended to increase transparency and comparability among organizations by requiring the recognition of lease right-of-use assets and lease liabilities for virtually all leases and by requiring the disclosure of key information about leasing arrangements. In July 2018, the FASB issued two amendments to this standard: ASU No. 2018-10, *Codification Improvements to Topic 842, Leases*, which amended narrow aspects of the guidance in ASU No. 2016-02, and ASU No. 2018-11, *Targeted Improvements*, which provided an optional transition method under which comparative periods presented in financial statements in the period of adoption would not be restated. In March 2019, the FASB issued ASU No. 2019-01, *Codification Improvements*. This standard addressed areas identified as companies prepared to implement ASU No. 2016-02. We adopted all of these standards on January 1, 2019, using

a modified retrospective approach and the optional transition method under ASU No. 2018-11. As such, prior periods were not restated to reflect the new guidance.

We elected the practical expedient package outlined in ASU No. 2016-02 under which we did not have to reassess whether an arrangement contains a lease, we carried forward our previous classification of leases as either operating or capital leases, and we did not reassess previously recorded initial direct costs. Additionally, we made the following policy elections:

- we excluded leases with original terms of 1 year or less from lease assets and lease liabilities;
- we separated nonlease components, such as common area maintenance charges and utilities, from the associated lease component for real estate leases, based on their estimated fair values; and
- we used the accounting lease term when determining the incremental borrowing rate for leases with renewal options.

Adoption of the standards had a material impact on our consolidated balance sheet, but did not have a significant impact on our consolidated statement of loss or our consolidated statement of cash flows for the year ended December 31, 2019. The most significant impact was the recognition of operating lease assets of \$50,803, current operating lease liabilities of \$13,611 and non-current operating lease liabilities of \$37,440 as of January 1, 2019. Our accounting for finance leases remained substantially unchanged. Our policy regarding accounting for leases can be found in Note 1.

NOTE 3: SUPPLEMENTAL BALANCE SHEET AND CASH FLOW INFORMATION

Trade accounts receivable – Net trade accounts receivable was comprised of the following at December 31:

<i>(in thousands)</i>	2021	2020
Trade accounts receivable – gross	\$ 202,077	\$ 168,387
Allowances for uncollectible accounts	(4,130)	(6,428)
Trade accounts receivable – net ⁽¹⁾	\$ 197,947	\$ 161,959

⁽¹⁾ Includes unbilled receivables of \$47,420 as of December 31, 2021 and \$21,319 as of December 31, 2020.

Changes in the allowances for uncollectible accounts for the years ended December 31 were as follows:

<i>(in thousands)</i>	2021	2020	2019
Balance, beginning of year	\$ 6,428	\$ 4,985	\$ 3,639
Bad debt expense	223	5,003	5,213
Write-offs and other	(2,521)	(3,560)	(3,867)
Balance, end of year	\$ 4,130	\$ 6,428	\$ 4,985

Inventories and supplies – Inventories and supplies were comprised of the following at December 31:

<i>(in thousands)</i>	2021	2020
Raw materials	\$ 5,316	\$ 5,412
Semi-finished goods	6,708	7,943
Finished goods	21,995	33,513
Supplies	6,041	5,010
Reserve for excess and obsolete items	(5,132)	(11,748)
Inventories and supplies, net of reserves	\$ 34,928	\$ 40,130

Changes in the reserves for excess and obsolete items for the years ended December 31 were as follows:

<i>(in thousands)</i>	2021	2020	2019
Balance, beginning of year	\$ 11,748	\$ 6,600	\$ 5,499
Amounts charged to expense	3,513	6,713	1,831
Write-offs and sales	(10,129)	(1,565)	(730)
Balance, end of year	<u>\$ 5,132</u>	<u>\$ 11,748</u>	<u>\$ 6,600</u>

Available-for-sale debt securities – Available-for-sale debt securities included within funds held for customers were comprised of the following:

<i>(in thousands)</i>	December 31, 2021			
	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
Funds held for customers: ⁽¹⁾				
Canadian and provincial government securities	\$ 9,724	\$ —	\$ (374)	\$ 9,350
Canadian guaranteed investment certificate	3,957	—	—	3,957
Available-for-sale debt securities	<u>\$ 13,681</u>	<u>\$ —</u>	<u>\$ (374)</u>	<u>\$ 13,307</u>

⁽¹⁾ Funds held for customers, as reported on the consolidated balance sheet as of December 31, 2021, also included cash of \$241,488.

<i>(in thousands)</i>	December 31, 2020			
	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
Funds held for customers: ⁽¹⁾				
Domestic money market fund	\$ 15,000	\$ —	\$ —	\$ 15,000
Canadian and provincial government securities	9,566	—	(33)	9,533
Canadian guaranteed investment certificate	3,929	—	—	3,929
Available-for-sale debt securities	<u>\$ 28,495</u>	<u>\$ —</u>	<u>\$ (33)</u>	<u>\$ 28,462</u>

⁽¹⁾ Funds held for customers, as reported on the consolidated balance sheet as of December 31, 2020, also included cash of \$91,287.

Expected maturities of available-for-sale debt securities as of December 31, 2021 were as follows:

<i>(in thousands)</i>	Fair value
Due in one year or less	\$ 6,780
Due in two to five years	3,535
Due in six to ten years	2,992
Available-for-sale debt securities	<u>\$ 13,307</u>

Further information regarding the fair value of available-for-sale debt securities can be found in Note 8.

Revenue in excess of billings – Revenue in excess of billings was comprised of the following at December 31:

<i>(in thousands)</i>	2021	2020
Conditional right to receive consideration	\$ 22,780	\$ 13,950
Unconditional right to receive consideration ⁽¹⁾	7,613	3,667
Revenue in excess of billings	<u>\$ 30,393</u>	<u>\$ 17,617</u>

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⁽¹⁾Represents revenues that are earned but not currently billable under the related contract terms.

Property, plant and equipment – Property, plant and equipment was comprised of the following at December 31:

	2021			2020		
	Gross carrying amount	Accumulated depreciation	Net carrying amount	Gross carrying amount	Accumulated depreciation	Net carrying amount
<i>(in thousands)</i>						
Machinery and equipment	\$ 333,383	\$ (276,914)	\$ 56,469	\$ 340,032	\$ (287,384)	\$ 52,648
Buildings and improvements	118,219	(58,202)	60,017	89,875	(68,510)	21,365
Land and improvements	12,981	(3,501)	9,480	19,680	(5,013)	14,667
Property, plant and equipment	<u>\$ 464,583</u>	<u>\$ (338,617)</u>	<u>\$ 125,966</u>	<u>\$ 449,587</u>	<u>\$ (360,907)</u>	<u>\$ 88,680</u>

Intangibles – Amortizable intangibles were comprised of the following at December 31:

	2021			2020		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
<i>(in thousands)</i>						
Customer lists/relationships	\$ 493,495	\$ (255,178)	\$ 238,317	\$ 352,895	\$ (202,428)	\$ 150,467
Internal-use software	456,133	(342,656)	113,477	380,144	(303,422)	76,722
Technology-based intangibles	98,813	(38,553)	60,260	33,813	(27,613)	6,200
Partner relationships	73,095	(2,990)	70,105	—	—	—
Trade names	51,052	(31,277)	19,775	30,281	(29,926)	355
Software to be sold	36,900	(28,110)	8,790	36,900	(23,884)	13,016
Intangibles	<u>\$ 1,209,488</u>	<u>\$ (698,764)</u>	<u>\$ 510,724</u>	<u>\$ 834,033</u>	<u>\$ (587,273)</u>	<u>\$ 246,760</u>

Amortization expense related to intangibles was as follows for the years ended December 31:

	2021	2020	2019
<i>(in thousands)</i>			
Customer lists/relationships	\$ 61,805	\$ 41,377	\$ 51,243
Internal-use software	41,601	36,771	41,258
Technology-based intangibles	10,940	6,291	7,415
Partner relationships	2,990	—	—
Trade names	1,580	1,884	5,391
Software to be sold	4,226	4,227	4,227
Amortization of intangibles	<u>\$ 123,142</u>	<u>\$ 90,550</u>	<u>\$ 109,534</u>

Based on the intangibles in service as of December 31, 2021, estimated amortization expense for each of the next five years ending December 31 is as follows:

	Estimated amortization expense
<i>(in thousands)</i>	
2022	\$ 136,451
2023	106,420
2024	66,626
2025	47,702
2026	37,954

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We acquire internal-use software and certain partner relationships in the normal course of business. We also purchased customer lists and we acquired other intangible assets in conjunction with acquisitions (Note 6). The following intangible assets were acquired during the years ended December 31:

	2021		2020		2019	
	Amount	Weighted-average amortization period (in years)	Amount	Weighted-average amortization period (in years)	Amount	Weighted-average amortization period (in years)
<i>(in thousands)</i>						
Customer lists/relationships ⁽¹⁾	\$ 149,642	8	\$ 45,470	7	\$ 17,771	8
Internal-use software	75,918	3	39,344	4	43,991	3
Partner relationships	73,095	15	—	—	—	—
Technology-based intangibles	65,000	8	—	—	—	—
Trade names	21,000	10	—	—	—	—
Acquired intangibles	<u>\$ 384,655</u>	<u>8</u>	<u>\$ 84,814</u>	<u>6</u>	<u>\$ 61,762</u>	<u>5</u>

⁽¹⁾ We acquired customer lists that did not qualify as business combinations of \$22,642 during 2021, \$45,470 during 2020 and \$11,956 during 2019.

Goodwill – Changes in goodwill by reportable business segment and in total were as follows:

<i>(in thousands)</i>	Payments	Cloud Solutions	Promotional Solutions	Checks	Total
Balance, December 31, 2019:					
Goodwill, gross	\$ 168,165	\$ 432,984	\$ 252,834	\$ 434,812	\$ 1,288,795
Accumulated impairment charges	—	(387,851)	(126,567)	—	(514,418)
Goodwill, net of accumulated impairment charges	168,165	45,133	126,267	434,812	774,377
Impairment charges (Note 8)	—	(4,317)	(67,132)	—	(71,449)
Currency translation adjustment	—	—	30	—	30
Balance, December 31, 2020	<u>\$ 168,165</u>	<u>\$ 40,816</u>	<u>\$ 59,165</u>	<u>\$ 434,812</u>	<u>\$ 702,958</u>
Balance, December 31, 2020:					
Goodwill, gross	\$ 168,165	\$ 432,984	\$ 252,864	\$ 434,812	\$ 1,288,825
Accumulated impairment charges	—	(392,168)	(193,699)	—	(585,867)
Goodwill, net of accumulated impairment charges	168,165	40,816	59,165	434,812	702,958
Goodwill resulting from acquisition (Note 6)	727,173	—	—	—	727,173
Currency translation adjustment	—	—	10	—	10
Balance, December 31, 2021	<u>\$ 895,338</u>	<u>\$ 40,816</u>	<u>\$ 59,175</u>	<u>\$ 434,812</u>	<u>\$ 1,430,141</u>
Balance, December 31, 2021:					
Goodwill, gross	\$ 895,338	\$ 432,984	\$ 252,874	\$ 434,812	\$ 2,016,008
Accumulated impairment charges	—	(392,168)	(193,699)	—	(585,867)
Goodwill, net of accumulated impairment charges	<u>\$ 895,338</u>	<u>\$ 40,816</u>	<u>\$ 59,175</u>	<u>\$ 434,812</u>	<u>\$ 1,430,141</u>

Other non-current assets – Other non-current assets were comprised of the following at December 31:

<i>(in thousands)</i>	2021	2020
Postretirement benefit plan asset (Note 13)	\$ 87,019	\$ 71,208
Cloud computing arrangements	63,806	29,242
Prepaid product discounts	56,527	50,602
Loans and notes receivable from distributors, net of allowances for uncollectible accounts ⁽¹⁾	20,201	35,068
Deferred contract acquisition costs ⁽²⁾	17,975	9,199
Other	33,935	13,360
Other non-current assets	<u>\$ 279,463</u>	<u>\$ 208,679</u>

⁽¹⁾ Amount includes the non-current portion of loans and notes receivable. The current portion of these receivables is included in other current assets on the consolidated balance sheets and was \$1,317 as of December 31, 2021 and \$2,008 as of December 31, 2020. During 2021, we utilized \$15,528 of these notes receivable, along with current and future cash payments, to acquire related customer list intangible assets.

⁽²⁾ Amortization of deferred contract acquisition costs was \$4,975 for 2021, \$3,739 for 2020 and \$3,108 for 2019.

Changes in prepaid product discounts were as follows for the years ended December 31:

<i>(in thousands)</i>	2021	2020	2019
Balance, beginning of year	\$ 50,602	\$ 51,145	\$ 54,642
Additions ⁽¹⁾	37,882	30,346	21,068
Amortization	(31,784)	(29,235)	(24,055)
Other	(173)	(1,654)	(510)
Balance, end of year	<u>\$ 56,527</u>	<u>\$ 50,602</u>	<u>\$ 51,145</u>

⁽¹⁾ Prepaid product discounts are generally accrued upon contract execution. Cash payments made for prepaid product discounts were \$40,920 for 2021, \$33,613 for 2020 and \$25,637 for 2019.

Changes in the allowances for uncollectible accounts related to loans and notes receivable from distributors for the years ended December 31 were as follows:

<i>(in thousands)</i>	2021	2020	2019
Balance, beginning of year	\$ 3,995	\$ 284	\$ 284
Adoption of ASU No. 2016-13	—	4,749	—
Bad debt (benefit) expense	(1,165)	5,412	—
Exchange for customer lists	—	(6,402)	—
Write-offs	—	(48)	—
Balance, end of year	<u>\$ 2,830</u>	<u>\$ 3,995</u>	<u>\$ 284</u>

Bad debt expense for 2020 included loan-specific allowances primarily related to Promotional Solutions distributors that were underperforming. In calculating these reserves, we utilized various valuation techniques to determine the value of the underlying collateral. During the quarter ended September 30, 2020, these notes receivable were exchanged for the underlying collateral, which consisted of customer list intangible assets.

We categorize loans and notes receivable into risk categories based on information about the ability of the borrowers to service their debt, including current financial information, historical payment experience, current economic trends and other factors. The highest quality receivables are assigned a 1-2 internal grade. Those that have a potential weakness requiring management's attention are assigned a 3-4 internal grade.

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The following table presents loans and notes receivable from distributors, including the current portion, by credit quality indicator and by year of origination, as of December 31, 2021. There were no write-offs during the year ended December 31, 2021.

	Loans and notes receivable from distributors amortized cost basis by origination year					Total
	2020	2019	2018	2017	Prior	
<i>(in thousands)</i>						
Risk rating:						
1-2 internal grade	\$ 1,229	\$ 484	\$ 7,061	\$ 11,744	\$ 1,231	\$ 21,749
3-4 internal grade	—	2,599	—	—	—	2,599
Loans and notes receivable	<u>\$ 1,229</u>	<u>\$ 3,083</u>	<u>\$ 7,061</u>	<u>\$ 11,744</u>	<u>\$ 1,231</u>	<u>\$ 24,348</u>

Accrued liabilities – Accrued liabilities were comprised of the following at December 31:

<i>(in thousands)</i>	2021	2020
Deferred revenue ⁽¹⁾	\$ 52,645	\$ 42,104
Employee cash bonuses, including sales incentives	45,006	21,090
Operating lease liabilities (Note 15)	14,852	11,589
Prepaid product discounts due within one year	11,866	14,365
Customer rebates	9,036	8,179
Other	83,427	79,856
Accrued liabilities	<u>\$ 216,832</u>	<u>\$ 177,183</u>

⁽¹⁾ \$39,366 of the December 31, 2020 amount was recognized as revenue during 2021.

Supplemental cash flow information – Supplemental cash flow information was as follows for the years ended December 31:

<i>(in thousands)</i>	2021	2020	2019
Reconciliation of cash, cash equivalents, restricted cash and restricted cash equivalents to the consolidated balance sheets:			
Cash and cash equivalents	\$ 41,231	\$ 123,122	\$ 73,620
Restricted cash and restricted cash equivalents included in funds held for customers	241,488	106,287	101,191
Non-current restricted cash included in other non-current assets	2,772	—	—
Total cash, cash equivalents, restricted cash and restricted cash equivalents	<u>\$ 285,491</u>	<u>\$ 229,409</u>	<u>\$ 174,811</u>
Income taxes paid	\$ 18,761	\$ 24,701	\$ 60,764
Interest paid	46,621	22,853	33,227
Non-cash investing activities:			
Non-cash consideration for customer list purchases ⁽¹⁾	\$ 15,528	\$ 21,439	\$ 10,680
Non-cash financing activities:			
Liabilities for holdback payments on asset purchases and acquisitions	\$ 4,121	\$ 12,949	\$ 3,405
Vesting of restricted stock unit awards	16,646	7,839	4,374

⁽¹⁾ Consists of pre-acquisition amounts owed to us by the sellers.

Information regarding operating and finance leases executed in each period can be found in Note 15.

NOTE 4: EARNINGS (LOSS) PER SHARE

The following table reflects the calculation of basic and diluted earnings (loss) per share. During each period, certain stock options, as noted below, were excluded from the calculation of diluted earnings (loss) per share because their effect would have been antidilutive.

<i>(in thousands, except per share amounts)</i>	2021	2020	2019
Earnings (loss) per share – basic:			
Net income (loss)	\$ 62,772	\$ 5,335	\$ (223,779)
Net income attributable to non-controlling interest	(139)	(91)	—
Net income (loss) attributable to Deluxe	62,633	5,244	(223,779)
Income allocated to participating securities	(46)	(53)	(101)
Income (loss) attributable to Deluxe available to common shareholders	\$ 62,587	\$ 5,191	\$ (223,880)
Weighted-average shares outstanding	42,378	41,931	43,029
Earnings (loss) per share – basic	\$ 1.48	\$ 0.12	\$ (5.20)
Earnings (loss) per share – diluted:			
Net income (loss)	\$ 62,772	\$ 5,335	\$ (223,779)
Net income attributable to non-controlling interest	(139)	(91)	—
Net income (loss) attributable to Deluxe	62,633	5,244	(223,779)
Income allocated to participating securities	(26)	(2)	(101)
Remeasurement of share-based awards classified as liabilities	(438)	(677)	—
Income (loss) attributable to Deluxe available to common shareholders	\$ 62,169	\$ 4,565	\$ (223,880)
Weighted-average shares outstanding	42,378	41,931	43,029
Dilutive impact of potential common shares	449	211	—
Weighted-average shares and potential common shares outstanding	42,827	42,142	43,029
Earnings (loss) per share – diluted	\$ 1.45	\$ 0.11	\$ (5.20)
Antidilutive options excluded from calculation	2,179	2,060	1,347

NOTE 5: OTHER COMPREHENSIVE INCOME

Reclassification adjustments – Information regarding amounts reclassified from accumulated other comprehensive loss to net income (loss) was as follows:

Accumulated other comprehensive loss components <i>(in thousands)</i>	Amounts reclassified from accumulated other comprehensive loss			Affected line item in consolidated statements of income (loss)
	2021	2020	2019	
Amortization of postretirement benefit plan items:				
Prior service credit	\$ 1,421	\$ 1,421	\$ 1,421	Other income
Net actuarial loss	(1,629)	(2,301)	(3,223)	Other income
Total amortization	(208)	(880)	(1,802)	Other income
Tax (expense) benefit	(123)	46	273	Income tax provision
Amortization of postretirement benefit plan items, net of tax	(331)	(834)	(1,529)	Net income (loss)
Interest rate swap:				
Realized (loss) gain on interest rate swap	(1,384)	(968)	77	Interest expense
Tax benefit (expense)	361	249	(20)	Income tax provision
Realized (loss) gain on interest rate swap, net of tax	(1,023)	(719)	57	Net income (loss)
Debt securities:				
Realized gain on debt securities	—	206	—	Service revenue
Tax expense	—	(53)	—	Income tax provision
Realized gain on debt securities, net of tax	—	153	—	Net income (loss)
Total reclassifications, net of tax	\$ (1,354)	\$ (1,400)	\$ (1,472)	

Accumulated other comprehensive loss – Changes in the components of accumulated other comprehensive loss were as follows:

<i>(in thousands)</i>	Postretirement benefit plans	Net unrealized loss on available-for- sale debt securities	Net unrealized loss on cash flow hedge	Currency translation adjustment	Accumulated other comprehensive loss
Balance, December 31, 2018	\$ (36,529)	\$ (323)	\$ —	\$ (19,727)	\$ (56,579)
Other comprehensive income (loss) before reclassifications	6,594	48	(1,040)	1,558	7,160
Amounts reclassified from accumulated other comprehensive loss	1,529	—	(57)	—	1,472
Net current-period other comprehensive income (loss)	8,123	48	(1,097)	1,558	8,632
Balance, December 31, 2019	(28,406)	(275)	(1,097)	(18,169)	(47,947)
Other comprehensive income (loss) before reclassifications	5,616	338	(4,973)	4,133	5,114
Amounts reclassified from accumulated other comprehensive loss	834	(153)	719	—	1,400
Net current-period other comprehensive income (loss)	6,450	185	(4,254)	4,133	6,514
Balance, December 31, 2020	(21,956)	(90)	(5,351)	(14,036)	(41,433)
Other comprehensive income (loss) before reclassifications	6,194	(254)	2,067	580	8,587
Amounts reclassified from accumulated other comprehensive loss	331	—	1,023	—	1,354
Net current-period other comprehensive income (loss)	6,525	(254)	3,090	580	9,941
Balance, December 31, 2021	<u>\$ (15,431)</u>	<u>\$ (344)</u>	<u>\$ (2,261)</u>	<u>\$ (13,456)</u>	<u>\$ (31,492)</u>

NOTE 6: ACQUISITIONS

We periodically complete business combinations that align with our business strategy. Our acquisitions during 2021 and 2019 were cash transactions, funded by use of our revolving credit facility and additional debt issued in June 2021 (Note 14). We completed these acquisitions to add merchant services and financial technology capabilities and to reach new customers. Transaction costs related to these acquisitions totaled \$18,913 in 2021 and \$215 in 2019. We did not complete any acquisitions during 2020. Information regarding goodwill by reportable business segment and the useful lives of acquired intangibles can be found in Note 3. Information regarding the calculation of the estimated fair values of the acquired intangibles can be found in Note 8.

2021 acquisition – On June 1, 2021, we acquired all of the equity of First American in a cash transaction for \$958,514, net of cash, cash equivalents, restricted cash and restricted cash equivalents acquired, subject to customary adjustments under the terms of the acquisition agreement. First American is a large-scale payments technology company that provides partners and merchants with comprehensive in-store, online and mobile payment solutions. The preliminary allocation of the purchase price to the assets acquired and liabilities assumed resulted in non-deductible goodwill of \$727,173. The transaction resulted in goodwill as First American provides an end-to-end payments technology platform, which we believe will provide significant leverage to accelerate organic growth. The goodwill and results of operations of First American from the date of acquisition are included in the Payments segment.

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The acquisition was accounted for as a business combination and the allocation of the purchase price to the assets acquired and liabilities assumed is preliminary, pending finalization of tax returns for the pre-acquisition period, which we expect to complete prior to June 2022. Subsequent to the initial purchase price allocation completed during the second quarter of 2021, we recorded measurement period adjustments that increased intangible assets \$15,694, decreased goodwill \$9,135 and increased deferred revenue \$3,027, as discussed in Note 2, with the offset to various liabilities, primarily deferred income taxes. These measurement period adjustments did not have a significant impact on the 2021 consolidated statement of income.

The following illustrates the preliminary allocation of the purchase price, as of December 31, 2021, to the assets acquired and liabilities assumed:

<i>(in thousands)</i>	Purchase price allocation
Trade accounts receivable	\$ 27,296
Other current assets	8,533
Property, plant and equipment	9,873
Operating lease assets	24,396
Intangible assets:	
Customer relationships	127,000
Partner relationships	72,000
Technology-based intangibles	65,000
Trade names	21,000
Internal-use software	6,111
Total intangible assets	291,111
Goodwill	727,173
Other non-current assets	350
Accounts payable	(18,475)
Funds held for customers	(9,428)
Accrued liabilities	(23,460)
Operating lease liabilities, non-current	(21,316)
Deferred income taxes	(53,163)
Other non-current liabilities	(4,376)
Payment for acquisition, net of cash, cash equivalents, restricted cash and restricted cash equivalents acquired of \$15,841	<u>\$ 958,514</u>

Our results of operations for 2021 included revenue of \$194,976 and net income of \$1,806 from the operations of First American. The following unaudited pro forma financial information summarizes our consolidated results of operations for the years ended December 31 as though the acquisition occurred on January 1, 2020:

<i>(in thousands)</i>	2021	2020
Revenue	\$ 2,182,648	\$ 2,082,130
Net income (loss) attributable to Deluxe	64,705	(45,407)

The unaudited pro forma financial information was prepared in accordance with the accounting policies described in Note 1. The pro forma information includes adjustments to reflect the additional amortization that would have been charged assuming the fair value adjustments to intangible assets had been applied from January 1, 2020, with the consequential tax effects. The pro forma information also includes adjustments to reflect the additional interest expense on the debt we issued to fund the acquisition (Note 14). The acquisition transaction costs we incurred are reflected in the 2020 pro forma results.

This pro forma financial information is for informational purposes only. It does not reflect the integration of the businesses or any synergies that may result from the acquisition. As such, it is not indicative of the results of operations that would have been achieved had the acquisition been consummated on January 1, 2020. In addition, the pro forma amounts are not indicative of future operating results.

2019 acquisitions – In December 2019, we completed 2 acquisitions in our Payments segment totaling \$10,000. We acquired selected assets comprising the remittance processing business of Fiserv, Inc., including its lockbox processing services, and selected assets comprising the remittance processing business of Synchrony Financial. The allocation of the purchase prices based upon the estimated fair values of the assets acquired and liabilities assumed resulted in tax-deductible goodwill of \$4,174 related to the Fiserv business. This acquisition resulted in goodwill as it allowed us to extend our expertise and reach with the addition of a reseller arrangement through the banking sales channel of Fiserv. The other assets acquired and liabilities assumed consisted primarily of customer list intangible assets of \$5,815. As our 2019 acquisitions were not significant to our reported operating results both individually and in the aggregate, pro forma results of operations are not provided. During 2019, we also recorded a measurement period adjustment related to a 2018 acquisition, reducing the purchase price and related goodwill by \$1,749.

NOTE 7: DERIVATIVE FINANCIAL INSTRUMENTS

As part of our interest rate risk management strategy, we entered into an interest rate swap in July 2019, which we designated as a cash flow hedge, to mitigate variability in interest payments on a portion of our variable-rate debt (Note 15). The interest rate swap, which terminates in March 2023, effectively converts \$200,000 of variable-rate debt to a fixed rate of 1.798%. Changes in the fair value of the interest rate swap are recorded in accumulated other comprehensive loss on the consolidated balance sheets and are subsequently reclassified into interest expense as interest payments are made on the variable-rate debt. The fair value of the interest rate swap was \$3,028 as of December 31, 2021 and \$7,210 as of December 31, 2020 and was included in other non-current liabilities on the consolidated balance sheets. The fair value of this derivative is calculated based on the prevailing LIBOR rate curve on the date of measurement. The cash flow hedge was fully effective as of December 31, 2021 and December 31, 2020 and its impact on consolidated net income (loss) and the consolidated statements of cash flows was not significant. We also do not expect the amount to be reclassified to interest expense over the next 12 months to be significant.

NOTE 8: FAIR VALUE MEASUREMENTS

Goodwill impairment analyses

We evaluate the carrying value of goodwill as of July 31 of each year and between annual evaluations if events occur or circumstances change that could indicate a possible impairment. Our policy on impairment of goodwill, which is included in Note 1, explains our methodology for assessing goodwill impairment.

2021 annual goodwill impairment analyses – In completing the 2021 annual impairment analysis of goodwill as of July 31, 2021, we elected to perform qualitative analyses for all of our reporting units. These qualitative analyses evaluated factors, including, but not limited to, economic, market and industry conditions, cost factors and the overall financial performance of the reporting units. We also considered the most recent quantitative analyses completed in prior periods. In completing these assessments, we noted no changes in events or circumstances that indicated that it was more likely than not that the fair value of any reporting unit was less than its carrying amount. As such, no goodwill impairment charges were recorded as a result of our annual impairment analysis.

Second quarter 2021 realignment of reporting units – As a result of changes in our financial management reporting process during the second quarter of 2021, we concluded that a realignment of our reporting units was required. These changes did not require a revision to our reportable business segments. We analyzed goodwill for impairment immediately prior to this realignment by performing qualitative analyses for the reporting units with goodwill. The qualitative analyses evaluated factors, including, but not limited to, economic, market and industry conditions, cost factors and the overall financial performance of the reporting units. We also considered the last quantitative analyses we completed. In completing these assessments, we noted no changes in events or circumstances that indicated that it was more likely than not that the fair value of any reporting unit was less than its carrying amount.

The realignment of our reporting units, effective April 1, 2021, did not change the reporting units within our Cloud Solutions or Checks segments. Within our Payments segment, the number of reporting units increased from 1 to 4, and within our Promotional Solutions segment, the number of reporting units increased from 1 to 2. Upon completing the realignment, we reallocated the carrying value of goodwill to our new reporting units based on their relative fair values. Immediately subsequent to the realignment, we completed qualitative analyses for the reporting units that changed and to which goodwill was assigned. We determined that it was appropriate to perform qualitative assessments, given that our analysis indicated that the change in reporting units did not mask or prevent an impairment that existed at the time of the change. In completing the qualitative assessments, we noted no changes in events or circumstances that indicated that it was more likely than not that the fair value of any reporting unit was less than its carrying amount. As such, no goodwill impairment charges were recorded as a result of these analyses.

2020 annual goodwill impairment analyses – In completing the 2020 annual impairment analysis of goodwill as of July 31, 2020, we elected to perform qualitative analyses for 2 of our reporting units: Payments and Checks. These qualitative analyses evaluated factors, including, but not limited to, economic, market and industry conditions, cost factors and the overall financial performance of the reporting units. We also considered the most recent quantitative analyses we completed, which indicated that the estimated fair values of these reporting units exceeded their carrying values by approximately \$490,000 and \$954,000, or by 189% and 180% above the carrying values of their net assets. In completing these assessments, we noted no changes in events or circumstances that indicated that it was more likely than not that the fair value of either reporting unit was less than its carrying amount.

We elected to perform quantitative analyses for our other 2 reporting units: Cloud Data Analytics and Promotional Solutions. These quantitative analyses indicated that the estimated fair values of these reporting units exceeded their carrying values by approximately \$100,000 and \$210,000, or by 63% and 132% above the carrying values of their net assets. As such, no goodwill impairment charges were recorded as a result of our annual impairment analysis.

First quarter 2020 goodwill impairment analyses – Effective January 1, 2020, we reorganized our reportable business segments to align with structural and management reporting changes in support of our growth strategy. As a result, we reassessed our previously determined reporting units and concluded that a realignment of our reporting units was required. We analyzed goodwill for impairment immediately prior to this realignment by performing qualitative analyses for the reporting units that changed, with the exception of our Direct-to-Consumer reporting unit, which is now part of our Checks reportable business segment. The qualitative analyses evaluated factors, including, but not limited to, economic, market and industry conditions, cost factors and the overall financial performance of the reporting units. We also considered the last quantitative analyses we completed. In completing these assessments, we noted no changes in events or circumstances that indicated that it was more likely than not that the fair value of any reporting unit was less than its carrying amount. The quantitative analysis of our Direct-to-Consumer reporting unit indicated that its fair value exceeded its carrying value by approximately \$35,000, or 26%, as of January 1, 2020.

In completing the realignment of our reporting units, we reallocated the carrying value of goodwill to our new reporting units based on their relative fair values. Immediately subsequent to the realignment, we completed quantitative analyses for the reporting units that changed as a result of the realignment. These quantitative analyses, as of January 1, 2020, indicated that the estimated fair values of our reporting units exceeded their carrying values by approximate amounts between \$37,000 and \$954,000, or by amounts between 121% and 189% above the carrying values of their net assets.

In March 2020, the World Health Organization classified the COVID-19 outbreak as a pandemic. Following the pandemic designation, we observed a decline in the market value of our common shares and we determined that the global response to the pandemic negatively impacted our estimates of expected future cash flows. After our consideration of economic, market and industry conditions, cost factors, the overall financial performance of our reporting units and the last quantitative analyses we completed, we concluded that a triggering event had occurred for 2 of our reporting units. As such, we completed quantitative goodwill impairment analyses for our Promotional Solutions and Cloud Solutions Web Hosting reporting units as of March 31, 2020. Our analyses indicated that the goodwill of our Promotional Solutions reporting unit was partially impaired and the goodwill of our Cloud Solutions Web Hosting reporting unit was fully impaired. We recorded goodwill impairment charges of \$67,132 and \$4,317, respectively, during the quarter ended March 31, 2020. The impairment charges were measured as the amount by which the reporting units' carrying values exceeded their estimated fair values, limited to the carrying amount of goodwill. After the impairment charges, \$59,009 of goodwill remained in the Promotional Solutions reporting unit as of the measurement date.

2019 annual goodwill impairment analyses – In completing the 2019 annual impairment analysis of goodwill as of July 31, 2019, we elected to perform a qualitative analysis for 4 of our former reporting units and a quantitative assessment for 2 of our former reporting units: Financial Services Data-Driven Marketing and Small Business Services Web Services. Financial Services Data-Driven Marketing included our businesses that provide outsourced marketing campaign targeting and execution and marketing analytics solutions. Small Business Services Web Services included our businesses that provide web hosting and domain name services, logo and web design, payroll services, email marketing, search engine marketing and optimization, and business incorporation and organization services.

The qualitative analyses evaluated factors, including, but not limited to, economic, market and industry conditions, cost factors and the overall financial performance of the reporting units. We also considered the quantitative analyses completed as of July 31, 2017, which indicated that the estimated fair values of the 4 reporting units exceeded their carrying values by approximate amounts between \$64,000 and \$1,405,000, or by amounts between 50% and 314% above the carrying values of their net assets. In completing these assessments, we noted no changes in events or circumstances that indicated that it was more likely than not that the fair value of any reporting unit was less than its carrying amount.

The quantitative analyses as of July 31, 2019 indicated that the goodwill of our Financial Services Data-Driven Marketing reporting unit was partially impaired and the goodwill of our Small Business Services Web Services reporting unit was fully impaired. As such, we recorded goodwill impairment charges of \$145,584 and \$242,267, respectively, during the quarter ended September 30, 2019. Both impairment charges resulted from a combination of triggering events and circumstances, including underperformance against 2019 expectations and the original acquisition business case assumptions, driven substantially by our decision in the third quarter of 2019 to exit certain customer contracts, the loss of certain large customers in the third quarter of 2019 as they elected to in-source some of the services we provide, and the sustained decline in our stock price. The impairment charges were measured as the amount by which the reporting units' carrying values exceeded their estimated fair values, limited to the carrying amount of goodwill. After the impairment charges, \$40,804 of goodwill remained in the Financial Services Data-Driven Marketing reporting unit.

Other non-recurring asset impairment analyses

We evaluate the recoverability of property, plant, equipment and amortizable intangibles not held for sale whenever events or changes in circumstances indicate that an asset group's carrying amount may not be recoverable. Our policy on impairment of long-lived assets and amortizable intangibles, which is included in Note 1, explains our methodology for assessing impairment of these assets. Assets held for sale are recorded at the lower of their carrying value or estimated fair value less costs to sell.

2020 impairment analyses – As a result of the impacts of the COVID-19 pandemic, we assessed for impairment certain long-lived assets of our Cloud Solutions Web Hosting reporting unit as of March 31, 2020. As a result of these assessments, we recorded asset impairment charges of \$17,678 related to customer list, software and trade name intangible assets. With the exception of certain internal-use software assets, we determined that the assets were fully impaired. We utilized the discounted value of estimated future cash flows to estimate the fair value of the asset group. In our analysis, we assumed a revenue decline of 31% and a gross margin decline of 5.2 points for 2020, as well as a discount rate of 9%.

During the first quarter of 2020, we assessed for impairment the carrying value of an asset group related to a small business distributor that we previously purchased. Our assessment was the result of customer attrition during the quarter that impacted our projections of future cash flows. Based on our estimate of future cash flows, we determined that the asset group was partially impaired as of February 29, 2020, and we recorded an asset impairment charge of \$2,752, reducing the carrying value of the related customer list intangible asset. During the third quarter of 2020, as customer attrition continued, we again assessed this asset group for impairment and recorded an additional asset impairment charge of \$2,356, bringing the total impairment charge to \$5,108 in 2020. In calculating the estimated fair value of the asset group as of September 30, 2020, we assumed no revenue growth, a 1.0 point improvement in gross margin and a discount rate of 11%.

Also during 2020, we recorded asset impairment charges of \$7,514 related primarily to the rationalization of our real estate footprint, as well as internal-use software held for sale as of December 31, 2019. These assets were written down to their estimated fair values less costs to sell. The sale of the related real estate assets was completed during the quarter ended September 30, 2020 and the sale of the internal-use software was completed on December 31, 2020.

2019 impairment analyses – As of July 31, 2019, due to certain triggering events, we assessed for impairment the long-lived assets of our former Financial Services Data-Driven Marketing and Small Business Services Web Services reporting units. As a result of the same factors that resulted in the goodwill impairment charge, we recorded asset impairment charges of \$31,316 related to certain trade name, customer list and technology-based intangible assets in the Small Business Services Web Services reporting unit. We concluded that the long-lived assets of our Financial Services Data-Driven Marketing reporting unit were not impaired. During the quarter ended September 30, 2019, we also recorded an asset impairment charge of \$1,923 related to an additional customer list intangible asset. Due to a change in the related forecasted cash flows associated with the asset, we determined that it was fully impaired as of July 31, 2019. We utilized the discounted value of estimated future cash flows to estimate the fair values of these asset groups (level 3 fair value measurements).

No asset impairment charges were recorded during 2021. Information regarding the impairment analyses completed during 2020 and 2019 was as follows:

	Fair value measurements using					
	Fair value as of measurement date	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Impairment charge	
(in thousands)						
2020 analyses:						
Intangible assets (Cloud Solutions Web Hosting reporting unit) ⁽¹⁾	\$ 2,172	\$ —	\$ —	\$ 2,172	\$ 17,678	
Small business distributor	4,479	—	—	4,479	5,108	
Other assets	11,210	—	—	11,210	7,514	
Goodwill					71,449	
Total					\$ 101,749	
2019 analyses:						
Intangible assets (Small Business Services Web Services) ⁽²⁾	\$ 8,379	\$ —	\$ —	\$ 8,379	\$ 31,316	
Customer list	—	—	—	—	1,923	
Goodwill					387,851	
Total					\$ 421,090	

⁽¹⁾ The impairment charge consisted of \$8,397 related to customer lists, \$6,932 related to internal-use software and \$2,349 related to other intangible assets.

⁽²⁾ The impairment charge consisted of \$14,441 related to trade names, \$11,655 related to customer lists and \$5,220 related to technology-based intangible assets.

Business combinations

For all acquisitions, we are required to measure the fair value of the net identifiable tangible and intangible assets and liabilities acquired. Information regarding our acquisitions can be found in Note 6 and information regarding the useful lives of acquired intangibles can be found in Note 3. The identifiable net assets acquired during 2021 and 2019 were comprised primarily of intangible assets, accounts receivable and operating lease assets and liabilities. The fair value of the customer relationship intangibles acquired during 2021, as well as the partner relationship intangibles, was estimated using the multi-period excess earnings method. This valuation model estimates revenues and cash flows derived from the asset and then deducts portions of the cash flow that can be attributed to supporting assets, such as a trade name or fixed assets, that contributed to the generation of the cash flows. The resulting cash flow, which is attributable solely to the customer relationship or partner relationship asset, is then discounted at a rate of return commensurate with the risk of the asset to calculate a present value. The fair values of the customer relationship intangibles acquired during 2019 were estimated by discounting the estimated cash flows expected to be generated by the assets. Key assumptions used in all these calculations included same-customer revenue, merchant and partner growth rates; estimated earnings; estimated customer and partner retention rates, based on the acquirees' historical information; and the discount rate.

The estimated fair values of the acquired trade names and technology-based intangibles were estimated using the relief from royalty method, which calculates the cost savings associated with owning rather than licensing the assets. Assumed royalty rates were applied to projected revenue for the estimated remaining useful lives of the assets to estimate the royalty savings. Royalty rates are selected based on the attributes of the asset, including its recognition and reputation in the industry, and in the case of trade names, with consideration of the specific profitability of the products sold under a trade name and supporting assets.

The estimated fair value of the acquired accounts receivable approximated the gross contractual amounts receivable and we expect to collect all acquired receivables. The fair value of the acquired operating lease liabilities was estimated as if the leases were new. As such, we reassessed the lease term, the discount rate and the lease payments. The fair value of the related operating lease assets was measured at the same amount as the lease liability, adjusted to reflect favorable or unfavorable terms of the leases as compared to market terms.

Recurring fair value measurements

Funds held for customers included available-for-sale debt securities (Note 3). These securities included a mutual fund investment that invests in Canadian and provincial government securities and an investment in a Canadian guaranteed investment certificate (GIC) with a maturity of 2 years. As of December 31, 2020, our debt securities also included a money market fund that was traded in an active market. The mutual fund investment is not traded in an active market and its fair value is determined by obtaining quoted prices in active markets for the underlying securities held by the fund. The cost of the GIC approximates its fair value, based on estimates using current market rates offered for deposits with similar remaining maturities. The cost of the money market fund approximated its fair value because of the short-term nature of the investment. Unrealized gains and losses, net of tax, are included in accumulated other comprehensive loss on the consolidated balance sheets. The cost of securities sold is determined using the average cost method. Realized gains and losses are included in revenue on the consolidated statements of income (loss) and were not significant during the past 3 years.

Information regarding the fair values of our financial instruments was as follows:

				Fair value measurements using			
		December 31, 2021		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
(in thousands)	Balance sheet location	Carrying value	Fair value				
<i>Measured at fair value through comprehensive income (loss):</i>							
Available-for-sale debt securities	Funds held for customers	\$ 13,307	\$ 13,307	\$ —	\$ 13,307	\$ —	
Derivative liability (Note 7)	Other non-current liabilities	(3,028)	(3,028)	—	(3,028)		
<i>Amortized cost:</i>							
Cash	Cash and cash equivalents	41,231	41,231	41,231	—		
Cash	Funds held for customers	241,488	241,488	241,488	—		
Loans and notes receivable from distributors	Other current and non- current assets	21,518	22,344	—	—		22,344
Long-term debt ⁽¹⁾	Current portion of long- term debt and long- term debt	1,682,949	1,728,515	—	1,728,515		

⁽¹⁾ The carrying value of long-term debt is net of unamortized discount and debt issuance costs of \$19,176.

				Fair value measurements using			
(in thousands)	Balance sheet location	December 31, 2020		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
		Carrying value	Fair value				
Measured at fair value through comprehensive income (loss):							
Cash equivalents	Funds held for customers	\$ 15,000	\$ 15,000	\$ 15,000	\$ —	\$ —	
Available-for-sale debt securities	Funds held for customers	13,462	13,462	—	13,462	—	
Derivative liability (Note 7)	Other non-current liabilities	(7,210)	(7,210)	—	(7,210)	—	
Amortized cost:							
Cash	Cash and cash equivalents	123,122	123,122	123,122	—	—	
Cash	Funds held for customers	91,287	91,287	91,287	—	—	
Loans and notes receivable from distributors	Other current and non-current assets	37,076	36,950	—	—	36,950	
Long-term debt	Long-term debt	840,000	840,000	—	840,000	—	

NOTE 9: RESTRUCTURING AND INTEGRATION EXPENSE

Restructuring and integration expense consists of costs related to the consolidation and migration of certain applications and processes, including our financial and sales management systems. It also includes costs related to the integration of acquired businesses into our systems and processes. These costs primarily consist of information technology consulting, project management services and internal labor, as well as other costs associated with our initiatives, such as training, travel and relocation and costs associated with facility closures. In addition, we recorded employee severance costs related to these initiatives, as well as our ongoing cost reduction initiatives across functional areas. We are currently pursuing several initiatives designed to focus on our growth strategy and to increase our efficiency. Restructuring and integration expense is not allocated to our reportable business segments.

Restructuring and integration expense is reflected on the consolidated statements of income (loss) as follows for the years ended December 31:

(in thousands)	2021	2020	2019
Total cost of revenue	\$ 4,197	\$ 3,465	\$ 3,562
Operating expenses	54,750	75,874	71,248
Restructuring and integration expense	\$ 58,947	\$ 79,339	\$ 74,810

Restructuring and integration expense was comprised of the following for the years ended December 31:

(in thousands)	2021	2020	2019
External consulting fees	\$ 26,676	\$ 44,096	\$ 45,638
Employee severance benefits	9,076	17,628	10,865
Internal labor	7,948	7,568	12,115
Other	15,247	10,047	6,192
Restructuring and integration expense	\$ 58,947	\$ 79,339	\$ 74,810

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(dollars in thousands, except per share amounts)

Our restructuring and integration accruals are included in accrued liabilities on the consolidated balance sheets and represent expected cash payments required to satisfy the remaining severance obligations to those employees already terminated and those expected to be terminated under our various initiatives. The majority of the employee reductions are expected to be completed in the first quarter of 2022, and we expect most of the related severance payments to be paid in the first half of 2022, utilizing cash from operations.

Changes in our restructuring and integration accruals were as follows:

<i>(in thousands)</i>	Employee severance benefits	Operating lease obligations	Total
Balance, December 31, 2018	\$ 3,179	\$ 282	\$ 3,461
Charges	11,516	—	11,516
Reversals	(651)	—	(651)
Payments	(10,585)	—	(10,585)
Adoption of ASU No. 2016-02 ⁽¹⁾	—	(282)	(282)
Balance, December 31, 2019	3,459	—	3,459
Charges	19,025	—	19,025
Reversals	(1,397)	—	(1,397)
Payments	(14,289)	—	(14,289)
Balance, December 31, 2020	6,798	—	6,798
Charges	10,897	—	10,897
Reversals	(1,821)	—	(1,821)
Payments	(10,202)	—	(10,202)
Balance, December 31, 2021	<u>\$ 5,672</u>	<u>\$ —</u>	<u>\$ 5,672</u>

⁽¹⁾ Upon adoption of ASU No. 2016-02, *Leasing*, and related amendments on January 1, 2019, our operating lease obligation accrual was reversed and the related operating lease asset was analyzed for impairment in accordance with the new guidance.

The charges and reversals presented in the rollforward of our restructuring and integration accruals do not include items charged directly to expense as incurred, as those items are not reflected in accrued liabilities on the consolidated balance sheets.

Chief Executive Officer (CEO) transition costs – In 2018, we announced the retirement of our former CEO. In connection with the transition, we incurred various costs, including retention payments to certain members of our management team, consulting fees related to the evaluation of our strategy and our current CEO's signing bonus. These costs totaled \$9,390 for 2019 and were included in SG&A expense on the consolidated statement of loss.

NOTE 10: INCOME TAX PROVISION

Income (loss) before income taxes was comprised of the following for the years ended December 31:

<i>(in thousands)</i>	2021	2020	2019
U.S.	\$ 62,361	\$ 7,130	\$ (191,843)
Foreign	31,442	19,673	(23,897)
Income (loss) income before income taxes	<u>\$ 93,803</u>	<u>\$ 26,803</u>	<u>\$ (215,740)</u>

The components of the income tax provision were as follows for the years ended December 31:

<i>(in thousands)</i>	2021	2020	2019
Current tax provision:			
Federal	\$ (61)	\$ 17,643	\$ 36,967
State	2,389	4,502	7,400
Foreign	10,945	4,779	4,850
Total current tax provision	13,273	26,924	49,217
Deferred tax provision:			
Federal	15,889	(4,480)	(35,154)
State	1,958	(1,232)	(8,239)
Foreign	(89)	256	2,215
Total deferred tax provision	17,758	(5,456)	(41,178)
Income tax provision	\$ 31,031	\$ 21,468	\$ 8,039

The effective tax rate on pretax income (loss) reconciles to the U.S. federal statutory tax rate for the years ended December 31 as follows:

	2021	2020	2019
Income tax at federal statutory rate	21.0 %	21.0 %	21.0 %
Goodwill impairment charges (Note 8)	—	46.8 %	(25.6 %)
Tax on repatriation of foreign earnings	4.9 %	—	—
State income tax expense, net of federal income tax benefit	2.4 %	2.1 %	4.7 %
Foreign tax rate differences	1.7 %	4.3 %	1.1 %
Non-deductible executive compensation	1.7 %	2.2 %	(0.6 %)
Non-deductible acquisition costs	1.5 %	—	—
Tax impact of share-based compensation	0.9 %	8.5 %	(1.0 %)
Payables and receivables for prior year tax returns	0.2 %	3.2 %	0.2 %
Change in valuation allowances ⁽¹⁾	0.1 %	0.9 %	(3.9 %)
Research and development tax credit	(0.9 %)	(3.7 %)	0.5 %
Change in unrecognized tax benefits, including interest and penalties	(0.6 %)	(3.3 %)	(0.2 %)
Non-taxable income from employee life insurance policies	(0.3 %)	(1.1 %)	0.1 %
Return to provision adjustments	—	(2.6 %)	0.3 %
Other	0.5 %	1.8 %	(0.3 %)
Effective tax rate	33.1 %	80.1 %	(3.7 %)

⁽¹⁾ During the quarter ended September 30, 2019, we recorded asset impairment charges related to certain intangible assets located in Australia (Note 8). As a result, we placed a full valuation allowance on the intangible-related deferred tax asset of \$8,432, as we do not expect that we will realize the benefit of this deferred tax asset.

During the fourth quarter of 2021, we repatriated accumulated foreign earnings of \$85,285 held in cash by our Canadian subsidiaries. We decided to complete the repatriation due, in part, to changes in Canadian law announced during 2021 and the reorganization of our capital structure in June 2021 (Note 14). The associated tax expense of \$4,555 was included in the income tax provision for the fourth quarter of 2021.

During 2022, we will begin repatriating Canadian current year earnings on an annual basis, as we believe the accumulated and remaining cash of our Canadian subsidiaries is sufficient to meet their working capital needs. We intend to utilize the repatriated earnings to reduce our outstanding debt. The historical unremitted Canadian earnings as of December 31, 2021, as well as the accumulated and future unremitted earnings of our non-Canadian foreign subsidiaries, will continue to be reinvested indefinitely in the operations of those subsidiaries. Deferred income taxes have not been recognized on these earnings as of December 31, 2021. If we were to repatriate all foreign cash and cash equivalents into the U.S. at one time, the tax effects would generally be limited to foreign withholding taxes on any such distribution. As of December 31, 2021, the amount of cash and cash equivalents held by our foreign subsidiaries was \$47,779, primarily in Canada.

A reconciliation of the beginning and ending amount of unrecognized tax benefits, excluding accrued interest and penalties and the federal benefit of deductible state income tax, was as follows:

<i>(in thousands)</i>	2021	2020	2019
Balance, beginning of year	\$ 3,361	\$ 4,169	\$ 4,801
Additions for tax positions of current year	169	237	364
Additions for tax positions of prior years	8	30	546
Reductions for tax positions of prior years	(673)	(414)	(887)
Settlements	—	—	(341)
Lapse of statutes of limitations	(314)	(661)	(314)
Balance, end of year	<u>\$ 2,551</u>	<u>\$ 3,361</u>	<u>\$ 4,169</u>

If the unrecognized tax benefits as of December 31, 2021 were recognized in the consolidated financial statements, income tax expense would decrease \$2,551. Accruals for interest and penalties, excluding the tax benefits of deductible interest, were \$635 as of December 31, 2021 and \$551 as of December 31, 2020. Our income tax provision included expense for interest and penalties of \$84 in 2021 and \$605 in 2019 and included a reduction for interest and penalties of \$384 in 2020. We believe that it is reasonably possible that a decrease of up to \$1,400 in unrecognized tax benefits related to state tax exposures may be necessary within the next 12 months, with the majority related to the lapse of statutes of limitations. We believe it is reasonably possible that an increase of up to \$2,000 in unrecognized tax benefits may be necessary within the next 12 months, related to legislative and regulatory changes in certain state and local jurisdictions. Due to the nature of the underlying liabilities and the extended time frame often needed to resolve income tax uncertainties, we cannot provide reliable estimates of the amount or timing of cash payments that may be required to settle these liabilities.

The statute of limitations for federal tax assessments for 2017 and prior years has expired. Audits of our federal income tax returns through 2015 have been completed by the Internal Revenue Service (IRS). Our 2018 through 2020 returns and our 2021 return, when filed, are subject to IRS examination. In general, income tax returns for the years 2018 through 2021 remain subject to examination by foreign, state and city tax jurisdictions. In the event that we have determined not to file income tax returns with a particular state or city, all years remain subject to examination by the tax jurisdiction.

The ultimate outcome of tax matters may differ from our estimates and assumptions. Unfavorable settlement of any particular issue would require the use of cash and could result in increased income tax expense. Favorable resolution would result in reduced income tax expense.

Tax-effected temporary differences that gave rise to deferred tax assets and liabilities as of December 31 were as follows:

(in thousands)	2021		2020	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Intangible assets	\$ —	\$ 37,170	\$ 26,686	\$ —
Goodwill	—	21,190	—	13,694
Cloud computing arrangements	—	16,646	—	7,532
Employee benefit plans	—	10,093	—	7,140
Prepaid assets	—	4,844	—	3,456
Revenue recognition	—	5,496	—	2,659
Operating leases	18,388	14,996	11,202	9,043
Deductible interest carryforward	8,352	—	—	—
Net operating loss, tax credit and capital loss carryforwards	8,083	—	7,026	—
Reserves and accruals	7,320	—	5,848	—
Payroll tax deferral under the CARES Act	2,175	—	3,692	—
Inventories	1,661	—	4,153	—
Property, plant and equipment	1,347	—	—	3,366
All other	3,780	2,619	4,003	3,026
Total deferred taxes	51,106	113,054	62,610	49,916
Valuation allowances	(10,993)	—	(11,453)	—
Net deferred taxes	\$ 40,113	\$ 113,054	\$ 51,157	\$ 49,916

The valuation allowances as of December 31, 2021 and December 31, 2020 related primarily to intangible-related deferred tax assets of our Australian operations, capital loss carryforwards in Canada and net operating loss carryforwards in various state jurisdictions that we do not currently expect to fully realize. Changes in our valuation allowances for the years ended December 31 were as follows:

(in thousands)	2021	2020	2019
Balance, beginning of year	\$ (11,453)	\$ (10,349)	\$ (1,689)
Expense from change in allowances	(65)	(244)	(8,336)
Foreign currency translation	525	(860)	(324)
Balance, end of year	\$ (10,993)	\$ (11,453)	\$ (10,349)

As of December 31, 2021, we had the following net operating loss, deductible interest, capital loss and tax credit carryforwards:

- state net operating loss carryforwards and tax credit carryforwards of \$115,199 that expire at various dates between 2022 and 2050;
- federal deductible interest carryforwards of \$32,078 that do not expire;
- foreign capital loss carryforwards of \$5,027 that do not expire;
- federal net operating loss carryforwards of \$937 that expire at various dates between 2025 and 2029; and
- federal capital loss carryforwards of \$912 that expire in 2025.

NOTE 11: SHARE-BASED COMPENSATION PLANS

Our employee share-based compensation plans consist of our employee stock purchase plan and our long-term incentive plan. Effective April 29, 2020, our shareholders approved the Deluxe Corporation 2020 Long-Term Incentive Plan, simultaneously terminating our previous plan. Under the current plan, 5.0 million shares of common stock plus any shares released as a result of the forfeiture or termination of awards issued under our prior plan are reserved for issuance, with 3.3 million shares remaining available for issuance as of December 31, 2021. Full value awards such as restricted stock, restricted stock units and performance share unit awards reduce the number of shares available for issuance by a factor of 2.23, or if such an award were

forfeited or terminated without delivery of the shares, the number of shares that again become eligible for issuance would be multiplied by a factor of 2.23. Under our current and previous plans, we have granted non-qualified stock options, restricted stock units, restricted shares and performance share unit awards. Our current plan also allows for the issuance of stock appreciation rights, none of which have been granted as of December 31, 2021. Our policy regarding the recognition of compensation expense for employee share-based awards can be found in Note 1.

The following amounts were recognized in our consolidated statements of income (loss) for share-based compensation awards for the years ended December 31:

<i>(in thousands)</i>	2021	2020	2019
Restricted shares and restricted stock units	\$ 20,407	\$ 15,066	\$ 13,411
Performance share unit awards	4,338	2,590	2,907
Stock options	4,187	3,689	2,954
Employee stock purchase plan	545	479	430
Total share-based compensation expense	\$ 29,477	\$ 21,824	\$ 19,702
Income tax benefit	\$ (7,714)	\$ (5,779)	\$ (5,350)

As of December 31, 2021, the total compensation expense for unvested awards not yet recognized in our consolidated statements of income (loss) was \$35,860, net of the effect of estimated forfeitures. This amount is expected to be recognized over a weighted-average period of 2.1 years.

Non-qualified stock options – All options allow for the purchase of shares of common stock at prices equal to the stock's market value at the date of grant. Options become exercisable beginning 1 year after the grant date, with one-fourth vesting each year over 4 years. Options granted under the current plan may be exercised up to 10 years following the grant date. Awards granted prior to 2019 have a 7 year life. Beginning 1 year after the grant date, in the case of qualified retirement, death or disability, options vest immediately and the period over which the options can be exercised is shortened. Beginning 1 year after the grant date, in the case of involuntary termination without cause, a pro-rata portion of the options vest immediately and the period over which the options can be exercised is shortened. Employees forfeit unvested options when they voluntarily terminate their employment with the company, and they have up to 3 months to exercise vested options before they are canceled. In the case of involuntary termination with cause, the entire unexercised portion of the award is canceled. All options may vest immediately upon a change of control, as defined in the award agreement. The following weighted-average assumptions were used in the Black-Scholes option pricing model to determine the fair value of stock options granted:

	2021	2020	2019
Risk-free interest rate	0.7 %	1.3 %	2.3 %
Dividend yield	2.9 %	3.2 %	2.7 %
Expected volatility	42.0 %	25.8 %	24.5 %
Weighted-average option life (in years)	4.8	5.4	5.3

The risk-free interest rate for periods within the expected option life is based on the U.S. Treasury yield curve in effect at the grant date. The dividend yield is estimated over the expected life of the option based on historical dividends paid. Expected volatility is based on the historical volatility of our stock over the most recent historical period equivalent to the expected life of the option. The expected option life is the average length of time over which we expect the employee groups will exercise their options, based on historical experience with similar grants.

Each option is convertible into 1 share of common stock upon exercise. Information regarding options issued under the current and all previous plans was as follows:

	Number of options <i>(in thousands)</i>	Weighted-average exercise price per option	Aggregate intrinsic value <i>(in thousands)</i>	Weighted-average remaining contractual term <i>(in years)</i>
Outstanding, December 31, 2018	1,245	\$ 62.04		
Granted	644	44.72		
Exercised	(21)	32.42		
Forfeited or expired	(521)	62.75		
Outstanding, December 31, 2019	1,347	53.92		
Granted	1,030	38.13		
Exercised	(12)	38.80		
Forfeited or expired	(231)	54.87		
Outstanding, December 31, 2020	2,134	46.28		
Granted	440	41.50		
Exercised	(31)	27.56		
Forfeited or expired	(357)	44.87		
Outstanding, December 31, 2021	2,186	45.81	\$ 69	6.7
Exercisable at December 31, 2019	485	\$ 61.44		
Exercisable at December 31, 2020	654	57.68		
Exercisable at December 31, 2021	1,015	51.48	\$ 14	4.8

The weighted-average grant-date fair value of options granted was \$11.57 per option for 2021, \$6.39 per option for 2020 and \$8.30 per option for 2019. The intrinsic value of a stock award is the amount by which the fair value of the underlying stock exceeds the exercise price of the award. The total intrinsic value of options exercised was \$510 for 2021, \$118 for 2020 and \$292 for 2019.

Restricted stock units – We grant restricted stock unit awards to all North American employees and during 2021 and 2020, we paid a portion of employee bonuses in restricted stock units. We also grant certain other restricted stock unit awards under our long-term incentive plan. These awards generally vest over 3 years.

Additionally, certain management employees have the option to receive a portion of their bonus payment in the form of restricted stock units. When employees elect this payment method, we provide an additional matching amount of restricted stock units equal to 100% of the restricted stock units earned under the bonus plan. These awards vest 2 years from the date of grant. In the case of qualified retirement, death, disability or change of control, the awards vest immediately. In the case of involuntary termination without cause or voluntary termination, employees receive a cash payment for the units earned under the bonus plan, but forfeit the company-provided matching amount.

In addition to awards granted to employees, non-employee members of our board of directors can elect to receive all or a portion of their fees in the form of restricted stock units. Directors are issued shares in exchange for the units upon the earlier of the tenth anniversary of February 1st of the year following the year in which the non-employee director ceases to serve on the board or such other objectively determinable date pre-elected by the director.

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Each restricted stock unit is convertible into 1 share of common stock upon completion of the vesting period. Information regarding our restricted stock units was as follows:

	Number of units <i>(in thousands)</i>	Weighted-average grant date fair value per unit	Weighted-average remaining contractual term <i>(in years)</i>
Outstanding at December 31, 2018	195	\$ 45.41	
Granted	611	44.73	
Vested	(93)	49.31	
Forfeited	(49)	45.40	
Outstanding at December 31, 2019	664	44.35	
Granted	628	37.25	
Vested	(282)	45.18	
Forfeited	(83)	40.44	
Outstanding at December 31, 2020	927	39.68	
Granted	642	42.90	
Vested	(425)	40.50	
Forfeited	(112)	39.78	
Outstanding at December 31, 2021	1,032	41.37	3.0

Of the awards outstanding at December 31, 2021, 39 thousand restricted stock units with a value of \$1,446 were included in accrued liabilities and other non-current liabilities on the consolidated balance sheet. As of December 31, 2021, these units had a fair value of \$37 per unit and a weighted-average remaining contractual term of 5 months.

The total fair value of restricted stock units that vested was \$16,646 for 2021, \$7,839 for 2020 and \$4,374 for 2019. We made cash payments of \$64 during 2021, \$58 during 2020 and \$263 during 2019 to settle share-based liabilities.

Restricted shares – For restricted share awards granted to employees under our current long-term incentive plan, in most cases one-fourth of the shares vested each year over 4 years. No restricted share awards were outstanding as of December 31, 2021.

Information regarding unvested restricted shares was as follows:

	Number of shares <i>(in thousands)</i>	Weighted-average grant date fair value per share
Unvested at December 31, 2018	168	\$ 66.02
Vested	(117)	63.15
Forfeited	(25)	73.62
Unvested at December 31, 2019	26	71.61
Vested	(16)	72.79
Forfeited	(2)	61.43
Unvested at December 31, 2020	8	71.02
Vested	(8)	71.02
Unvested at December 31, 2021	—	—

The total fair value of restricted shares that vested was \$332 for 2021, \$600 for 2020 and \$5,608 for 2019.

Performance share unit awards – Our performance share unit awards have a 3 year vesting period. Shares will be issued at the end of the vesting period if performance targets relating to revenue and total shareholder return are achieved. If employment is terminated for any reason prior to the 1 year anniversary of the commencement of the performance period, the award is forfeited. On or after the 1 year anniversary of the commencement of the performance period, a pro-rata portion of the

shares awarded at the end of the performance period is issued in the case of qualified retirement, death, disability, involuntary termination without cause or resignation for good reason, as defined in the agreement. The following weighted-average assumptions were used in the Monte Carlo simulation model in determining the fair value of market-based performance share units granted:

	2021	2020	2019
Risk-free interest rate	0.3 %	1.4 %	2.3 %
Dividend yield	4.4 %	2.4 %	3.1 %
Expected volatility	55.6 %	28.6 %	26.8 %

The risk-free interest rate for periods within the expected award life is based on the U.S. Treasury yield curve in effect at the grant date. The dividend yield is estimated over the expected life of the award based on historical dividends paid. Expected volatility is based on the historical volatility of our stock.

Information regarding unvested performance share units was as follows:

	Performance share units (in thousands)	Weighted-average grant date fair value per unit	Weighted-average remaining contractual term (in years)
Unvested at December 31, 2018	250	\$ 67.54	
Granted ⁽¹⁾	151	41.79	
Vested	(118)	59.67	
Forfeited	(38)	54.42	
Adjustment for performance results achieved ⁽²⁾	7	54.42	
Unvested at December 31, 2019	252	57.64	
Granted ⁽¹⁾	127	36.06	
Vested	(61)	71.03	
Forfeited	(23)	62.18	
Unvested at December 31, 2020	295	45.20	
Granted ⁽¹⁾	208	32.46	
Forfeited	(68)	67.77	
Unvested at December 31, 2021	435	35.56	1.1

⁽¹⁾ Reflects awards granted assuming achievement of performance goals at target.

⁽²⁾ Reflects the difference between the awards earned at the end of the performance period and the target number of shares.

Employee stock purchase plan – During 2021, 108 thousand shares were issued under this plan at prices ranging from \$18.84 to \$37.32. During 2020, 125 thousand shares were issued under this plan at prices ranging from \$18.22 to \$40.97. During 2019, 65 thousand shares were issued under this plan at prices ranging from \$37.93 to \$39.92.

NOTE 12: EMPLOYEE COMPENSATION PLANS

401(k)/profit sharing plan – Through December 31, 2019, we maintained a 401(k)/profit sharing plan to provide retirement benefits for certain employees. Effective January 1, 2020, the profit sharing component of the plan was discontinued. The plan covers a majority of full-time employees, as well as some part-time employees. Employees generally become eligible to participate in the plan after completing 30 days of service.

401(k) contributions are made by both employees and Deluxe. Employees may contribute up to 50% of eligible wages, subject to IRS limitations and the terms and conditions of the plan. For the majority of employees, we typically match 100% of the first 1% of wages contributed and 50% of the next 5% of wages contributed, beginning on the first day of the quarter following an employee's first full year of service. Effective April 1, 2020, we suspended the company matching contribution to maintain liquidity during the COVID-19 pandemic. The company matching contribution was reinstated on January 1, 2022. Contributions under the discontinued profit sharing plan were made solely by Deluxe and varied based on the company's performance. All employee and

employer contributions are remitted to the plan's trustee. Benefits provided by the plan are paid from accumulated funds of the trust.

Employees are provided a broad range of investment options to choose from when investing their 401(k)/profit sharing plan funds. Investing in our common stock is not one of these options, although funds selected by employees may at times hold our common stock.

Cash bonus programs – We provide short-term cash bonus programs under which employees may receive cash bonus payments based on our total company performance for a given fiscal year. Payments earned are paid directly to employees shortly after the end of the year.

Expense recognized in the consolidated statements of income (loss) for these plans was as follows for the years ended December 31:

<i>(in thousands)</i>	2021	2020	2019
Performance-based compensation plans ⁽¹⁾	\$ 34,743	\$ 11,032	\$ 21,143
401(k) expense ⁽²⁾	763	2,823	10,176

⁽¹⁾ Excludes expense for share-based compensation, which is discussed in Note 11.

⁽²⁾ The 2021 amount relates to First American, which was acquired on June 1, 2021 (Note 6).

Deferred compensation plan – We have a non-qualified deferred compensation plan that allows eligible employees to defer a portion of their compensation. Participants can elect to defer up to 100% of their base salary plus up to 50% of their bonus for the year. The compensation deferred under this plan is credited with earnings or losses measured by the mirrored rate of return on phantom investments elected by plan participants, which are similar to the investments available for funds invested under our 401(k) plan. Each participant is fully vested in all deferred compensation and earnings. A participant may elect to receive deferred amounts in a lump-sum payment or in monthly installments upon termination of employment or disability. Our total liability under this plan was \$3,513 as of December 31, 2021 and \$4,816 as of December 31, 2020. These amounts are reflected in accrued liabilities and other non-current liabilities on the consolidated balance sheets. We hold investments in an irrevocable rabbi trust in support of our deferred compensation plan. These assets consist of investments in company-owned life insurance policies, which are included in long-term investments on the consolidated balance sheets, and totaled \$11,985 as of December 31, 2021 and \$11,591 as of December 31, 2020.

NOTE 13: POSTRETIREMENT BENEFITS

We have historically provided certain health care benefits for a large number of retired U.S. employees. Employees hired prior to January 1, 2002 become eligible for benefits if they attain the appropriate years of service and age prior to retirement. Employees hired on January 1, 2002 or later are not eligible to participate in the plan. In addition to our retiree health care plan, we also have a U.S. supplemental executive retirement plan (SERP). The SERP is no longer an active plan. It is not adding new participants and all of the current participants are retired. The SERP has no plan assets, but our obligation is fully funded by investments in company-owned life insurance policies.

Obligations and funded status – Changes in our benefit obligation, plan assets and funded status for the years ended December 31 were as follows:

<i>(in thousands)</i>	Postretirement benefit plan	Pension plan⁽¹⁾
Change in benefit obligation:		
Benefit obligation, December 31, 2019	\$ 73,175	\$ 3,251
Interest cost	1,835	76
Net actuarial loss	218	340
Benefits paid from plan assets and company funds	(7,064)	(324)
Benefit obligation, December 31, 2020	68,164	3,343
Interest cost	929	39
Net actuarial (gain) loss	(5,721)	2
Benefits paid from plan assets and company funds	(5,591)	(324)
Benefit obligation, December 31, 2021	<u>\$ 57,781</u>	<u>\$ 3,060</u>
Change in plan assets:		
Fair value of plan assets, December 31, 2019	\$ 129,918	\$ —
Return on plan assets	15,741	—
Benefits paid	(6,287)	—
Fair value of plan assets, December 31, 2020	139,372	—
Return on plan assets	10,159	—
Benefits paid	(4,731)	—
Fair value of plan assets, December 31, 2021	<u>\$ 144,800</u>	<u>\$ —</u>
Funded status, December 31, 2020	\$ 71,208	\$ (3,343)
Funded status, December 31, 2021	<u>\$ 87,019</u>	<u>\$ (3,060)</u>

⁽¹⁾ The accumulated benefit obligation equals the projected benefit obligation.

The funded status of our plans was recognized on the consolidated balance sheets as of December 31 as follows:

<i>(in thousands)</i>	Postretirement benefit plan		Pension plan	
	2021	2020	2021	2020
Other non-current assets	\$ 87,019	\$ 71,208	\$ —	\$ —
Accrued liabilities	—	—	324	324
Other non-current liabilities	—	—	2,736	3,019

Amounts included in accumulated other comprehensive loss as of December 31 that have not been recognized as components of postretirement benefit income were as follows:

<i>(in thousands)</i>	2021	2020
Unrecognized prior service credit	\$ 9,914	\$ 11,335
Unrecognized net actuarial loss	(25,445)	(35,454)
Tax effect	100	2,163
Amount recognized in accumulated other comprehensive loss, net of tax	<u>\$ (15,431)</u>	<u>\$ (21,956)</u>

The unrecognized prior service credit relates to our postretirement benefit plan and is a result of previous plan amendments that reduced the accumulated postretirement benefit obligation. A reduction is first used to reduce any existing unrecognized prior service cost, then to reduce any remaining unrecognized transition obligation. The excess is the unrecognized prior service credit. The prior service credit is amortized on the straight-line basis over the remaining life expectancy of plan participants at the time of each plan amendment.

Unrecognized net actuarial gains and losses result from experience different from that assumed and from changes in assumptions. The net actuarial gain recognized during 2021 was primarily due to the increase in the discount rate used to discount the benefit obligation, as well as favorable claims experience. The net actuarial loss generated during 2020 was primarily due to the decrease in the discount rate used to discount the benefit obligation, partially offset by our claims and other experience. Unrecognized actuarial gains and losses for our postretirement benefit plan are amortized over the average remaining life expectancy of inactive plan participants, as a large percentage of the plan participants are classified as inactive. This amortization period is currently 12.5 years.

Postretirement benefit income – Postretirement benefit income for the years ended December 31 consisted of the following components:

(in thousands)	2021	2020	2019
Interest cost	\$ 968	\$ 1,911	\$ 2,727
Expected return on plan assets	(7,498)	(7,619)	(6,957)
Amortization of prior service credit	(1,421)	(1,421)	(1,421)
Amortization of net actuarial losses	1,629	2,301	3,223
Net periodic benefit income	<u>\$ (6,322)</u>	<u>\$ (4,828)</u>	<u>\$ (2,428)</u>

Actuarial assumptions – In measuring the benefit obligations as of December 31, the following discount rate assumptions were used:

	Postretirement benefit plan		Pension plan	
	2021	2020	2021	2020
Discount rate	2.61 %	2.16 %	2.26 %	1.74 %

In measuring net periodic benefit income for the years ended December 31, the following assumptions were used:

	Postretirement benefit plan			Pension plan		
	2021	2020	2019	2021	2020	2019
Discount rate	2.16 %	3.03 %	4.13 %	1.74 %	2.76 %	4.01 %
Expected return on plan assets	5.50 %	6.00 %	6.25 %	—	—	—

The discount rate assumption is based on the rates of return on high-quality, fixed-income instruments currently available whose cash flows approximate the timing and amount of expected benefit payments. In determining the expected long-term rate of return on plan assets, we utilize our historical returns and then adjust these returns for estimated inflation and projected market returns. Our inflation assumption is primarily based on analysis of historical inflation data.

In measuring the benefit obligation as of December 31 for our postretirement benefit plan, the following assumptions for health care cost trend rates were used. These rates are utilized to determine our periodic benefit income for the following year.

	2021		2020		2019	
	Participants under age 65	Participants age 65 and older	Participants under age 65	Participants age 65 and older	Participants under age 65	Participants age 65 and older
Health care cost trend rate assumed for next year	6.9 %	7.6 %	7.2 %	8.0 %	7.4 %	8.4 %
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	4.5 %	4.5 %	4.5 %	4.5 %	4.5 %	4.5 %
Year that the rate reaches the ultimate trend rate	2030	2030	2030	2030	2029	2029

Plan assets – The allocation of plan assets by asset category as of December 31 was as follows:

	Postretirement benefit plan	
	2021	2020
Mortgage-backed securities	41 %	24 %
International equity securities	20 %	20 %
U.S. corporate debt securities	19 %	21 %
U.S. large capitalization equity securities	17 %	17 %
Government debt securities	—	15 %
U.S. small and mid-capitalization equity securities	3 %	3 %
Total	100 %	100 %

Our postretirement benefit plan has assets that are intended to meet long-term obligations. In order to meet these obligations, we employ a total return investment approach that considers cash flow needs and balances long-term projected returns against expected asset risk, as measured using projected standard deviations. Risk tolerance is established through consideration of projected plan liabilities, the plan's funded status, projected liquidity needs and our financial condition.

The target asset allocation percentages for our postretirement benefit plan are based on our liability and asset projections. The targeted allocation of plan assets is 60% fixed income securities, 20% international equity securities, 17% large capitalization equity securities and 3% small and mid-capitalization equity securities. During 2021, we modified certain of the funds in which our plan assets are invested and we began utilizing collective investment trusts (CITs).

Information regarding fair value measurements of plan assets was as follows as of December 31, 2021:

Fair value measurements using					
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Investments measured at net asset value	Fair value as of December 31, 2021
<i>(in thousands)</i>					
Mortgage-backed securities	\$ (94)	\$ 58,893	\$ —	\$ —	\$ 58,799
International equity securities	285	28,708	—	—	28,993
U.S. corporate debt securities	22	27,836	—	—	27,858
U.S. large capitalization equity securities	(15)	25,410	—	—	25,395
U.S. small and mid-capitalization equity securities	26	3,729	—	—	3,755
Plan assets	\$ 224	\$ 144,576	\$ —	\$ —	\$ 144,800

Information regarding fair value measurements of plan assets was as follows as of December 31, 2020:

	Fair value measurements using				Fair value as of December 31, 2020
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Investments measured at net asset value	
<i>(in thousands)</i>					
Mortgage-backed securities	\$ —	\$ 10,546	\$ —	\$ 22,507	\$ 33,053
U.S. corporate debt securities	—	27,439	—	1,474	28,913
International equity securities	24,512	3,632	—	—	28,144
U.S. large capitalization equity securities	—	24,536	—	—	24,536
Government debt securities	—	20,357	—	—	20,357
U.S. small and mid-capitalization equity securities	3,406	356	—	—	3,762
Other debt securities	387	220	—	—	607
Plan assets	<u>\$ 28,305</u>	<u>\$ 87,086</u>	<u>\$ —</u>	<u>\$ 23,981</u>	<u>\$ 139,372</u>

The fair value of Level 2 mortgage-backed securities is estimated using pricing models with inputs derived principally from observable market data. The fair value of our other Level 2 debt securities is typically estimated using pricing models, quoted prices of securities with similar characteristics or discounted cash flow calculations that maximize observable inputs, such as current yields for similar instruments adjusted for trades and other pertinent market information. Our policy is to recognize transfers between fair value levels as of the end of the reporting period in which the transfer occurred.

Cash flows – We made no contributions to plan assets during the past 3 years.

We have fully funded the SERP obligation with investments in company-owned life insurance policies. The cash surrender value of these policies is included in long-term investments on the consolidated balance sheets and totaled \$7,370 as of December 31, 2021 and \$7,095 as of December 31, 2020.

The following benefit payments are expected to be paid during the years indicated:

<i>(in thousands)</i>	Postretirement benefit plan	Pension plan
2022	\$ 6,190	\$ 320
2023	5,846	320
2024	5,314	310
2025	4,810	300
2026	4,338	290
2027 - 2031	17,328	1,190

NOTE 14: DEBT

Debt outstanding was comprised of the following at December 31:

<i>(in thousands)</i>	2021	2020
Senior, secured term loan facility	\$ 1,072,125	\$ —
Senior, unsecured notes	500,000	—
Amounts drawn on senior, secured revolving credit facility	130,000	840,000
Total principal amount	1,702,125	840,000
Less: unamortized discount and debt issuance costs	(19,176)	—
Total debt, net of discount and debt issuance costs	1,682,949	840,000
Less: current portion of long-term debt, net of debt issuance costs	(57,197)	—
Long-term debt	\$ 1,625,752	\$ 840,000

Maturities of long-term debt were as follows as of December 31, 2021:

<i>(in thousands)</i>	Debt obligations
2022	\$ 57,750
2023	72,188
2024	86,625
2025	101,062
2026	884,500
Thereafter	500,000
Total principal amount	\$ 1,702,125

Credit facility – Debt outstanding as of December 31, 2020 consisted of amounts drawn on our previous revolving credit facility. In June 2021, we executed a new credit agreement that provides for a 5-year revolving credit facility with commitments of \$500,000 and a term loan facility in the amount of \$1,155,000. The revolving credit facility includes a \$40,000 swingline sub-facility and a \$25,000 letter of credit sub-facility. Our previous credit facility agreement was terminated contemporaneously with our entry into the new credit agreement and was repaid utilizing proceeds from the new credit facility. We also utilized the proceeds from the new credit facility to complete the acquisition of First American in June 2021 (Note 6) and to pay related debt issuance costs.

Loans under the revolving credit facility may be borrowed, repaid and re-borrowed until June 1, 2026, at which time all amounts borrowed must be repaid. The term loan facility will be repaid in equal quarterly installments of \$14,438 through June 30, 2023, \$21,656 from September 30, 2023 through June 30, 2025, and \$28,875 from September 30, 2025 through March 31, 2026. The remaining balance is due on June 1, 2026. The term loan facility also includes mandatory prepayment requirements related to asset sales, new debt (other than permitted debt) and excess cash flow, subject to certain limitations. No premium or penalty is payable in connection with any mandatory or voluntary prepayment of the term loan facility.

Interest is payable on the senior, secured credit facility at a fluctuating rate of interest determined by reference to the eurodollar rate plus an applicable margin ranging from 1.5% to 2.5%, depending on our consolidated total leverage ratio, as defined in the credit agreement. A commitment fee is payable on the unused portion of the revolving credit facility at a rate ranging from 0.25% to 0.35%, depending on our consolidated total leverage ratio. Amounts outstanding under our credit facilities had a weighted-average interest rate of 2.67% as of December 31, 2021 and 2.01% as of December 31, 2020, including the impact of the interest rate swap that effectively converts \$200,000 of our variable-rate debt to fixed rate debt. Further information on the interest rate swap can be found in Note 7.

Borrowings under the credit facility are collateralized by substantially all of the present and future tangible and intangible personal property held by us and our subsidiaries that have guaranteed our obligations under the credit facility, subject to certain exceptions. The credit agreement contains customary covenants regarding limits on levels of indebtedness, liens, mergers, certain asset dispositions, changes in business, advances, investments, loans and restricted payments. The covenants are subject to a number of limitations and exceptions set forth in the credit agreement. The credit agreement also includes

requirements regarding our consolidated total leverage ratio and our consolidated secured leverage ratio, as defined in the credit agreement. These ratios may not equal or exceed the following amounts during the periods indicated:

Fiscal Quarter Ending	Consolidated total leverage ratio	Consolidated secured leverage ratio
March 31, 2022	5.00 to 1:00	4.00 to 1:00
June 30, 2022 through March 31, 2023	4.75 to 1:00	3.75 to 1:00
June 30, 2023 through March 31, 2024	4.50 to 1:00	3.50 to 1:00
June 30, 2024 and each fiscal quarter thereafter	4.25 to 1:00	3.50 to 1:00

In addition, we must maintain a minimum interest coverage ratio of at least 2.75 to 1.00 through March 31, 2022 and 3.00 to 1.00 thereafter. Failure to meet any of the above requirements would result in an event of default that would allow lenders to declare amounts outstanding immediately due and payable and would allow the lenders to enforce their interests against collateral pledged if we were unable to settle the amounts outstanding. We were in compliance with all debt covenants as of December 31, 2021.

The credit agreement contains customary representations and warranties and as a condition to borrowing, requires that all such representations and warranties be true and correct in all material respects on the date of each borrowing, including representations as to no material adverse change in our business, assets, operations or financial condition. If our consolidated total leverage ratio exceeds 2.75 to 1.00, the aggregate annual amount of permitted dividends and share repurchases is limited to \$60,000.

Daily average amounts outstanding under our current and previous credit facility were as follows for the years ended December 31:

<i>(in thousands)</i>	2021	2020	2019
Daily average amount outstanding	\$ 1,109,819	\$ 1,016,896	\$ 925,715
Weighted-average interest rate	2.43 %	2.12 %	3.54 %

As of December 31, 2021, amounts were available for borrowing under our revolving credit facility as follows:

<i>(in thousands)</i>	Total available
Revolving credit facility commitment	\$ 500,000
Amount drawn on revolving credit facility	(130,000)
Outstanding letters of credit ⁽¹⁾	(7,381)
Net available for borrowing as of December 31, 2021	<u>\$ 362,619</u>

⁽¹⁾ We use standby letters of credit primarily to collateralize certain obligations related to our self-insured workers' compensation claims, as well as claims for environmental matters, as required by certain states. These letters of credit reduce the amount available for borrowing under our revolving credit facility.

Senior unsecured notes – In June 2021, we issued \$500,000 of 8.0% senior, unsecured notes that mature in June 2029. The notes were issued via a private placement under Rule 144A of the Securities Act of 1933. Proceeds from the offering, net of discount and offering costs, were \$490,741, resulting in an effective interest rate of 8.3%. The net proceeds from the notes were used to fund the acquisition of First American in June 2021 (Note 6). Interest payments are due each June and December. The indenture governing the notes contains covenants that limit our ability and the ability of our restricted subsidiaries to, among other things, incur additional indebtedness and liens, issue redeemable stock and preferred stock, pay dividends and distributions, make loans and investments and consolidate or merge or sell all or substantially all of our assets.

NOTE 15: LEASES

We have entered into operating leases for the majority of our facilities. These real estate leases have remaining terms of up to 10 years, with a weighted-average remaining term of 5.7 years as of December 31, 2021. We utilize leases for these facilities to limit our exposure to risks related to ownership, such as fluctuations in real estate prices, and to maintain flexibility in our real estate utilization. We have also entered into operating leases for certain equipment, primarily production printers and data center equipment. Certain of our leases include options to extend the lease term. The impact of renewal periods was not

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significant to the amounts recorded for operating lease assets and liabilities. We have also entered into finance leases for our corporate headquarters and for certain information technology hardware.

Leases were reflected on the consolidated balance sheets as follows at December 31:

<i>(in thousands)</i>	2021	2020
Operating leases:		
Operating lease assets	\$ 58,236	\$ 35,906
Accrued liabilities	\$ 14,852	\$ 11,589
Operating lease liabilities	\$ 56,444	\$ 28,344
Total operating lease liabilities	\$ 71,296	\$ 39,933
Weighted-average remaining lease term (in years)	5.6	4.7
Weighted-average discount rate	4.7 %	3.1 %
Finance leases:		
Property, plant and equipment, gross	\$ 33,359	\$ 6,970
Accumulated depreciation	(7,076)	(6,324)
Property, plant and equipment, net	\$ 26,283	\$ 646
Accrued liabilities	\$ 531	\$ 459
Other non-current liabilities	27,406	140
Total finance lease liabilities	\$ 27,937	\$ 599
Weighted-average remaining lease term (in years)	15.6	1.5
Weighted-average discount rate	6.0 %	2.0 %

The components of lease expense for the years ended December 31 were as follows:

<i>(in thousands)</i>	2021	2020	2019
Operating lease expense	\$ 17,485	\$ 20,928	\$ 19,113
Finance lease expense:			
Amortization of right-of-use assets	\$ 1,283	\$ 751	\$ 915
Interest on lease liabilities	829	20	37
Total finance lease expense	\$ 2,112	\$ 771	\$ 952

Supplemental cash flow information related to leases for the years ended December 31 was as follows:

<i>(in thousands)</i>	2021	2020	2019
Lease assets obtained in exchange for lease obligations:			
Operating leases ⁽¹⁾	\$ 38,630	\$ 11,000	\$ 11,637
Finance leases ⁽²⁾	26,941	—	350
Cash paid for amounts included in lease obligations:			
Operating cash flows from operating leases ⁽³⁾	\$ 8,444	\$ 19,026	\$ 17,737
Operating cash flows from finance leases	8	20	37
Financing cash flows from finance leases	421	735	883

⁽¹⁾ Operating lease assets obtained during 2021 included \$24,396 acquired in conjunction with the acquisition of First American in June 2021 (Note 6).

⁽²⁾ Finance lease assets obtained during 2021 consisted of a lease on our corporate headquarters located in Minnesota that commenced in July 2021.

⁽³⁾ Cash paid for operating leases during 2021 was reduced by lease incentives received of \$9,410.

Maturities of lease liabilities were as follows at December 31, 2021:

<i>(in thousands)</i>	Operating lease obligations	Finance lease obligations
2022	\$ 18,793	\$ 1,313
2023	14,628	2,709
2024	13,479	2,743
2025	11,326	2,777
2026	10,353	2,812
Thereafter	17,096	31,879
Total lease payments	85,675	44,233
Less lease incentive receivable	(2,458)	—
Less imputed interest	(11,921)	(16,296)
Present value of lease payments	\$ 71,296	\$ 27,937

NOTE 16: OTHER COMMITMENTS AND CONTINGENCIES

Indemnifications – In the normal course of business, we periodically enter into agreements that incorporate general indemnification language. These indemnification provisions generally encompass third-party claims arising from our products and services, including, without limitation, service failures, breach of security, intellectual property rights, governmental regulations and/or employment-related matters. Performance under these indemnities would generally be triggered by our breach of the terms of the contract. In disposing of assets or businesses, we often provide representations, warranties and/or indemnities to cover various risks including, for example, unknown damage to the assets, environmental risks involved in the sale of real estate, liability to investigate and remediate environmental contamination at waste disposal sites and manufacturing facilities, and unidentified tax liabilities and legal matters related to periods prior to disposition. We do not have the ability to estimate the potential liability from such indemnities because they relate to unknown conditions. However, we do not believe that any liability under these indemnities would have a material adverse effect on our financial position, annual results of operations or annual cash flows. We have recorded liabilities for known indemnifications related to environmental matters. These liabilities were not significant as of December 31, 2021 or December 31, 2020.

First American indemnification – Pursuant to the First American acquisition agreement, we are entitled to limited indemnification for certain expenses and losses, if any, that may be incurred after the consummation of the transaction that arise out of certain matters, including a Federal Trade Commission investigation initiated in December 2019 seeking information to determine whether certain subsidiaries of First American may have engaged in conduct prohibited by the Federal Trade Commission Act, the Fair Credit Reporting Act or the Duties of Furnishers of Information. As fully set forth in the merger agreement, our rights to indemnification for any such expenses and losses are limited to the amount of an indemnity holdback, which will be our sole recourse for any such losses. Neither any fines nor any asset for the related holdback are expected to have a material impact on our consolidated financial statements.

Self-insurance – We are self-insured for certain costs, primarily workers' compensation claims and medical and dental benefits for active employees and those employees on long-term disability. The liabilities associated with these items represent our best estimate of the ultimate obligations for reported claims plus those incurred, but not reported, and totaled \$7,401 as of December 31, 2021 and \$9,046 as of December 31, 2020. These accruals are included in accrued liabilities and other non-current liabilities on the consolidated balance sheets. Our workers' compensation liability is recorded at present value. The difference between the discounted and undiscounted liability was not significant as of December 31, 2021 or December 31, 2020.

Our self-insurance liabilities are estimated, in part, by considering historical claims experience, demographic factors and other actuarial assumptions. The estimated accruals for these liabilities could be significantly affected if future events and claims differ from these assumptions and historical trends.

Litigation – Recorded liabilities for legal matters, as well as related charges recorded in each of the past 3 years, were not material to our financial position, results of operations or liquidity during the periods presented, and we do not believe that any of the currently identified claims or litigation will materially affect our financial position, results of operations or liquidity upon resolution. However, litigation is subject to inherent uncertainties, and unfavorable rulings could occur. If an unfavorable ruling

were to occur, it may cause a material adverse impact on our financial position, results of operations or liquidity for the period in which the ruling occurs or in future periods.

NOTE 17: SHAREHOLDERS' EQUITY

In October 2018, our board of directors authorized the repurchase of up to \$500,000 of our common stock. This authorization has no expiration date. No shares were repurchased during 2021, as we suspended share repurchases in March 2020 to maintain liquidity during the COVID-19 pandemic. During 2020, we repurchased 499 thousand shares for \$14,000 and during 2019, we repurchased 2.6 million shares for \$118,547 under this authorization. As of December 31, 2021, \$287,452 remained available for repurchase. During the second quarter of 2021, we issued 294 thousand shares to employees of First American in conjunction with the acquisition (Note 6), resulting in cash proceeds of \$13,000 during the quarter.

NOTE 18: BUSINESS SEGMENT INFORMATION

We operate 4 reportable business segments, generally organized by product type, as follows:

- **Payments** – This segment includes our treasury management solutions, including remittance and lockbox processing, remote deposit capture, receivables management, payment processing and paperless treasury management; merchant in-store, online and mobile payment solutions; payroll and disbursement services, including Deluxe Payment Exchange; and fraud and security services.
- **Cloud Solutions** – This segment includes web hosting and design services, data-driven marketing solutions and hosted solutions, including digital engagement, logo design, financial institution profitability reporting and business incorporation services.
- **Promotional Solutions** – This segment includes business forms, accessories, advertising specialties, promotional apparel and retail packaging.
- **Checks** – This segment includes printed business and personal checks.

The accounting policies of the segments are the same as those described in Note 1. We allocate corporate costs for our shared services functions to our business segments when the costs are directly attributable to a segment. This includes certain sales and marketing, human resources, supply chain, real estate, finance, information technology and legal costs. Costs that are not directly attributable to a business segment are reported as Corporate operations and consist primarily of marketing, accounting, information technology, facilities, executive management and legal, tax and treasury costs that support the corporate function. Corporate operations also includes other income. All of our segments operate primarily in the U.S., with some operations in Canada. In addition, Cloud Solutions has operations in Australia and portions of Europe, as well as partners in Central and South America. No single customer accounted for more than 10% of consolidated revenue during the past 3 years.

Our chief operating decision maker (i.e., our Chief Executive Officer) reviews earnings before interest, taxes, depreciation and amortization (EBITDA) on an adjusted basis for each segment when deciding how to allocate resources and to assess segment operating performance. Adjusted EBITDA for each segment excludes depreciation and amortization expense, interest expense, income tax expense and certain other amounts, which may include, from time to time: asset impairment charges; restructuring, integration and other costs; CEO transition costs; share-based compensation expense; acquisition transaction costs; certain legal-related expense; and gains or losses on sales of businesses and customer lists. Our Chief Executive Officer does not review segment asset information when making investment or operating decisions regarding our reportable business segments.

DELUXE CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(dollars in thousands, except per share amounts)

Our segment information for the years ended December 31 was as follows:

<i>(in thousands)</i>	2021	2020	2019
Payments:			
Revenue	\$ 510,359	\$ 301,901	\$ 269,573
Adjusted EBITDA	105,576	68,117	74,384
Cloud Solutions:			
Revenue	262,310	252,773	318,383
Adjusted EBITDA	70,172	61,580	77,199
Promotional Solutions:			
Revenue	546,473	529,649	640,892
Adjusted EBITDA	85,384	66,620	101,293
Checks:			
Revenue	703,055	706,458	779,867
Adjusted EBITDA	324,224	341,705	402,662
Total segments:			
Revenue	\$ 2,022,197	\$ 1,790,781	\$ 2,008,715
Adjusted EBITDA	585,356	538,022	655,538

The following table presents a reconciliation of total segment adjusted EBITDA to consolidated income (loss) before income taxes:

<i>(in thousands)</i>	2021	2020	2019
Total segment adjusted EBITDA	\$ 585,356	\$ 538,022	\$ 655,538
Corporate operations	(177,591)	(173,480)	(174,672)
Depreciation and amortization	(148,767)	(110,792)	(126,036)
Interest expense	(55,554)	(23,140)	(34,682)
Net income attributable to non-controlling interest	139	91	—
Asset impairment charges	—	(101,749)	(421,090)
Restructuring, integration and other costs	(58,947)	(80,665)	(79,511)
CEO transition costs ⁽¹⁾	—	30	(9,390)
Share-based compensation expense	(29,477)	(21,824)	(19,138)
Acquisition transaction costs	(18,913)	(8)	(215)
Certain legal-related (expense) benefit	(2,443)	2,164	(6,420)
Loss on sales of businesses and customer lists	—	(1,846)	(124)
Income (loss) before income taxes	\$ 93,803	\$ 26,803	\$ (215,740)

⁽¹⁾ In 2019, CEO transition costs includes share-based compensation expense related to the modification of certain awards in conjunction with our CEO transition (Note 9).

DELUXE CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(dollars in thousands, except per share amounts)

The following tables present revenue disaggregated by our product and service offerings:

Year Ended December 31, 2021					
<i>(in thousands)</i>	Payments	Cloud Solutions	Promotional Solutions	Checks	Consolidated
Checks	\$ —	\$ —	\$ —	\$ 703,055	\$ 703,055
Forms and other products	—	—	296,993	—	296,993
Merchant services and other payment solutions	276,118	—	—	—	276,118
Marketing and promotional solutions	—	—	249,480	—	249,480
Treasury management solutions	234,241	—	—	—	234,241
Data-driven marketing solutions	—	150,772	—	—	150,772
Web and hosted solutions	—	111,538	—	—	111,538
Total revenue	<u>\$ 510,359</u>	<u>\$ 262,310</u>	<u>\$ 546,473</u>	<u>\$ 703,055</u>	<u>\$ 2,022,197</u>

Year Ended December 31, 2020					
<i>(in thousands)</i>	Payments	Cloud Solutions	Promotional Solutions	Checks	Consolidated
Checks	\$ —	\$ —	\$ —	\$ 706,458	\$ 706,458
Forms and other products	—	—	316,245	—	316,245
Merchant services and other payment solutions	75,796	—	—	—	75,796
Marketing and promotional solutions	—	—	213,404	—	213,404
Treasury management solutions	226,105	—	—	—	226,105
Data-driven marketing solutions	—	119,155	—	—	119,155
Web and hosted solutions	—	133,618	—	—	133,618
Total revenue	<u>\$ 301,901</u>	<u>\$ 252,773</u>	<u>\$ 529,649</u>	<u>\$ 706,458</u>	<u>\$ 1,790,781</u>

Year Ended December 31, 2019					
<i>(in thousands)</i>	Payments	Cloud Solutions	Promotional Solutions	Checks	Consolidated
Checks	\$ —	\$ —	\$ —	\$ 779,867	\$ 779,867
Forms and other products	—	—	348,757	—	348,757
Merchant services and other payment solutions	76,046	—	—	—	76,046
Marketing and promotional solutions	—	—	292,135	—	292,135
Treasury management solutions	193,527	—	—	—	193,527
Data-driven marketing solutions	—	162,286	—	—	162,286
Web and hosted solutions	—	156,097	—	—	156,097
Total revenue	<u>\$ 269,573</u>	<u>\$ 318,383</u>	<u>\$ 640,892</u>	<u>\$ 779,867</u>	<u>\$ 2,008,715</u>

The following table presents revenue disaggregated by geography, based on where items are shipped or services are performed. Substantially all of our long-lived assets reside in the U.S. Long-lived assets of our foreign subsidiaries are located primarily in Canada and Australia are not significant to our consolidated financial position.

<i>(in thousands)</i>	Payments	Cloud Solutions	Promotional Solutions	Checks	Consolidated
Year ended December 31, 2021:					
U.S.	\$ 469,102	\$ 227,091	\$ 522,966	\$ 678,229	\$ 1,897,388
Foreign, primarily Canada and Australia	41,257	35,219	23,507	24,826	124,809
Total revenue	\$ 510,359	\$ 262,310	\$ 546,473	\$ 703,055	\$ 2,022,197
Year ended December 31, 2020:					
U.S.	\$ 266,920	\$ 220,699	\$ 506,240	\$ 684,328	\$ 1,678,187
Foreign, primarily Canada and Australia	34,981	32,074	23,409	22,130	112,594
Total revenue	\$ 301,901	\$ 252,773	\$ 529,649	\$ 706,458	\$ 1,790,781
Year ended December 31, 2019:					
U.S.	\$ 233,152	\$ 283,695	\$ 613,830	\$ 757,359	\$ 1,888,036
Foreign, primarily Canada and Australia	36,421	34,688	27,062	22,508	120,679
Total revenue	\$ 269,573	\$ 318,383	\$ 640,892	\$ 779,867	\$ 2,008,715

NOTE 19: RISKS AND UNCERTAINTIES

The impact on our business of the COVID-19 pandemic continues to evolve. As such, we are uncertain of the impact on our future financial condition, liquidity and/or results of operations. This uncertainty affected several of the assumptions made and estimates used in the preparation of these consolidated financial statements. As discussed in Note 8, the COVID-19 pandemic resulted in a goodwill impairment triggering event during the first quarter of 2020, as the adverse economic effects of the pandemic materially decreased demand for certain of our products and services. The extent to which the pandemic will continue to impact our business depends on future developments, including the severity and duration of the pandemic, the impact of variants of the virus, the effectiveness and utilization of vaccines, business and workforce disruptions and the ultimate number of businesses that fail. Our evaluation of asset impairment required us to make assumptions about these future events over the life of the assets being evaluated. This required significant judgment and actual results may differ significantly from our estimates. As a result of the continuing impact of COVID-19, we may be required to record additional goodwill or other asset impairment charges in the future.

We held loans and notes receivable from our Promotional Solutions distributors of \$21,518 as of December 31, 2021. These distributors sell their products and services primarily to small businesses, which have been significantly impacted by the COVID-19 pandemic. As of December 31, 2021, our allowances for expected credit losses on these receivables were \$2,830. We utilized all information known to us in determining these allowances, as well as allowances related to our trade accounts receivable and unbilled receivables. If our assumptions prove to be incorrect, we may be required to record additional bad debt expense in the future. Additionally, uncertainty surrounding the impact of COVID-19 could affect estimates we made regarding inventory obsolescence and workers' compensation liabilities and thus, could result in additional expense in the future.

NOTE 20: QUARTERLY FINANCIAL DATA (Unaudited)

During the second quarter of 2021, we identified errors in the calculation of goodwill impairment charges recorded during the first quarter of 2020. We have corrected the errors by revising the consolidated financial statements presented herein. Further information regarding the revision can be found in Note 1. Revised quarterly financial data for 2020 is as follows:

<i>(in thousands, except per share amounts)</i>	2020 Quarter Ended			
	March 31	June 30	September 30	December 31
Total revenue	\$ 486,423	\$ 410,405	\$ 439,461	\$ 454,492
Gross profit	284,374	248,122	265,000	262,514
Net (loss) income attributable to Deluxe	(63,695)	14,859	29,417	24,663
(Loss) earnings per share:				
Basic	(1.52)	0.36	0.70	0.59
Diluted	(1.53)	0.35	0.70	0.58
Cash dividends per share	0.30	0.30	0.30	0.30

Significant items affecting our fourth quarter results were as follows:

<i>(in thousands)</i>	Quarter Ended December 31,	
	2021	2020
Restructuring and integration expense	\$ 17,862	\$ 21,551
Discrete income tax expense (benefit) ⁽¹⁾	4,186	(837)

⁽¹⁾ The fourth quarter 2021 amount relates primarily to withholding taxes due on the repatriation of cash from our Canadian subsidiaries (Note 10).

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures – As of the end of the period covered by this report, December 31, 2021 (the "Evaluation Date"), we carried out an evaluation, under the supervision and with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")). Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that, as of the Evaluation Date, our disclosure controls and procedures were effective to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in applicable rules and forms, and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

Internal Control Over Financial Reporting – There were no changes in our internal control over financial reporting identified in connection with our evaluation during the quarter ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting – Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is 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 in the U.S.

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.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2021. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control - Integrated Framework* (2013). Based on this assessment, we have concluded that, as of December 31, 2021, our internal control over financial reporting was effective based on those criteria.

Management excluded First American Payment Systems, L.P. (First American) from its assessment of internal control over financial reporting as of December 31, 2021 because it was acquired in a business combination during 2021. First American's total assets and total revenue that were excluded from management's assessment represented 6.1% and 9.6%, respectively, of consolidated total assets and total revenue, as of and for the year ended December 31, 2021.

The attestation report on our internal control over financial reporting issued by PricewaterhouseCoopers LLP appears in Item 8 of this report.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Except where otherwise noted, the information required by Items 10 through 14 is incorporated by reference from our definitive proxy statement, to be filed with the Securities and Exchange Commission within 120 days of our fiscal year-end, with the exception of the executive officers section of Item 10, which is included in Part I, Item 1 of this report.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

See Part I, Item 1 of this report “Information About Our Executive Officers.” The sections of the proxy statement entitled “Item 1: Election of Directors,” “Board Structure and Governance-Director Selection Process,” “Board Structure and Governance-Audit Committee Financial Expertise; Complaint-Handling Procedures,” “Board Structure and Governance-Committee Membership and Responsibilities-Audit Committee,” and “Board Structure and Governance-Code of Business Ethics” are incorporated by reference into this report.

The full text of our Code of Business Ethics is posted on our investor relations website, www.deluxe.com/investor-relations. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of the Code of Business Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions by posting such information on our website at the address and location specified above.

ITEM 11. EXECUTIVE COMPENSATION

The sections of the proxy statement entitled “Executive Compensation” and “Board Structure and Governance-Non-Employee Director Compensation” are incorporated by reference into this report.

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

The section of the proxy statement entitled “Stock Ownership and Reporting-Security Ownership of Certain Beneficial Owners and Management” is incorporated by reference into this report.

The following table provides information concerning all of our equity compensation plans as of December 31, 2021:

Equity Compensation Plan Information

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column)
Equity compensation plans approved by shareholders	3,653,376 (1)	\$ 45.81 (1)	6,489,298 (2)
Equity compensation plans not approved by shareholders	—	—	—
Total	3,653,376	\$ 45.81	6,489,298

⁽¹⁾ Includes awards granted under our 2020 Long-Term Incentive Plan and our previous stock incentive plans. The number of securities to be issued upon exercise of outstanding options, warrants and rights includes outstanding stock options of 2,186,088, restricted stock unit awards of 1,032,311 and 434,977 shares subject to outstanding performance share unit awards. The number of performance share units reflects the target amount for awards outstanding as of December 31, 2021. The actual number of shares issued under our performance share unit awards will range between 0% and 200% of the target amount based on our performance relative to the applicable performance goals as determined by our Compensation Committee following the end of the performance period. The performance share unit and restricted stock unit awards are not included in the weighted-average exercise price of outstanding options, warrants and rights because they require no consideration upon vesting.

⁽²⁾ Includes 3,177,567 shares reserved for issuance under our Amended and Restated 2000 Employee Stock Purchase Plan and 3,311,731 shares available for issuance under our 2020 Long-Term Incentive Plan. Under the 2020 Long-Term Incentive Plan, full value awards such as restricted stock, restricted stock units and performance share unit awards reduce the number of shares available for issuance by a factor of 2.23, or if such an award were forfeited or terminated without delivery of the shares, the number of shares that again become eligible for issuance would be multiplied by a factor of 2.23.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The sections of the proxy statement entitled “Board Structure and Governance-Board Oversight and Director Independence” and “Board Structure and Governance-Policies and Procedures with Respect to Related Person Transactions” are incorporated by reference into this report.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The sections of the proxy statement entitled “Item 4: Ratification of the Appointment of Independent Registered Public Accounting Firm-Fees Paid to Independent Registered Public Accounting Firm” and “Item 4: Ratification of the Appointment of Independent Registered Public Accounting Firm-Policy on Audit Committee Pre-Approval of Accounting Firm Fees and Services” are incorporated by reference into this report.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) [Financial Statements and Schedules](#)

The financial statements are set forth under Item 8 of the Annual Report on Form 10-K. Financial statement schedules have been omitted since they are either not required or are not applicable, or the required information is shown in the consolidated financial statements or notes.

(b) [Exhibit Listing](#)

The following exhibits are filed as part of or are incorporated into this report by reference:

Exhibit Number	Description
2.1	Agreement and Plan of Merger, dated as of April 21, 2021, by and among us, Fox Acquirer Sub, Inc., FAPS Holdings, Inc. and Applepoint FAPS Holdings LP (solely in its capacity as the stockholder representative) (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed with the Commission on April 22, 2021)
3.1	Amended and Restated Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2010)
3.2	Bylaws, as amended on August 21, 2019 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed with the Commission on August 27, 2019)
4.1	Description of Deluxe Corporation Common Stock Registered Under Section 12 of the Exchange Act of 1934 (incorporated by reference to Exhibit 4.2 to the Annual Report on Form 10-K for the year ended December 31, 2019)
4.2	Indenture, dated as of June 1, 2021, by and among us, certain of our subsidiaries and U.S. Bank National Association (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed with the Commission on June 1, 2021)
4.3	Supplemental Indenture, dated as of June 1, 2021, by and among us, FAPS Holdings, Inc., all of the domestic subsidiaries of FAPS Holdings, Inc. and U.S. Bank National Association (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed with the Commission on June 1, 2021)
10.1	Deluxe Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Annex B of the definitive proxy statement filed with the Commission on March 20, 2020)*
10.2	Deluxe Corporation 2017 Long-Term Incentive Plan (incorporated by reference to Appendix B of the definitive proxy statement filed with the Commission on March 17, 2017)*

Exhibit Number	Description
10.3	<u>Amended and Restated 2000 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.3 to the Annual Report on Form 10-K for the year ended December 31, 2020)*</u>
10.4	<u>Deluxe Corporation Deferred Compensation Plan (2020 Restatement) (incorporated by reference to Exhibit 10.4 to the Annual Report on Form 10-K for the year ended December 31, 2020)*</u>
10.5	<u>Deluxe Corporation Deferred Compensation Plan Trust (incorporated by reference to Exhibit 4.3 to the Form S-8 filed with the Commission on January 7, 2002)*</u>
10.6	<u>Deluxe Corporation Executive Deferred Compensation Plan for Employee Retention and Other Eligible Arrangements (incorporated by reference to Exhibit 10.24 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2000)*</u>
10.7	<u>Deluxe Corporation Severance Plan for Certain Executive Level Employees, effective July 30, 2019 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2019)*</u>
10.8	<u>Employment Agreement, dated October 14, 2018, between us and Barry C. McCarthy and related forms of Restricted Stock Unit Award Agreement and Non-Qualified Stock Option Agreement (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Commission on November 6, 2018)*</u>
10.9	<u>First Amendment to Employment Agreement, dated October 14, 2018, between us and Barry C. McCarthy (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Commission on March 26, 2020)*</u>
10.10	<u>Second Amendment to Employment Agreement, dated August 6, 2021, between us and Barry C. McCarthy (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Commission on August 6, 2021)*</u>
10.11	<u>Form of Restricted Stock Unit Award Agreement (Bonus Deferral) (version 1/21) (incorporated by reference to Exhibit 10.10 to the Annual Report on Form 10-K for the year ended December 31, 2020)*</u>
10.12	<u>Form of CEO Restricted Stock Unit Award Agreement (version 4/19) (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019)*</u>
10.13	<u>Form of U.S. Employee Restricted Stock Unit Award Agreement (version 4/19) (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019)*</u>
10.14	<u>Form of U.S. Employee New Day Restricted Stock Unit Award Agreement (version 4/19) (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019)*</u>
10.15	<u>Form of U.S. Employee Restricted Stock Unit Award Agreement (version 3/21) (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2021)*</u>
10.16	<u>Form of Non-Qualified Stock Option Agreement (version 12/17) (incorporated by reference to Exhibit 10.19 to the Annual Report on Form 10-K for the year ended December 31, 2017)*</u>
10.17	<u>Form of CEO Non-Qualified Stock Option Agreement (version 4/19) (incorporated by reference to Exhibit 10.6 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019)*</u>
10.18	<u>Form of U.S. Employee Non-Qualified Stock Option Agreement (version 4/19) (incorporated by reference to Exhibit 10.7 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019)*</u>
10.19	<u>Form of U.S. Employee Non-Qualified Stock Option Agreement (version 3/21) (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2021)*</u>
10.20	<u>Form of Performance Share Unit Award Agreement for Named Executive Officers (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Commission on March 3, 2021)*</u>

Exhibit Number	Description
10.21	Form of Performance Unit Award Agreement for Named Executive Officers (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Commission on March 3, 2021)*
10.22	Form of U.S. Employee Performance Share Unit Award Agreement (version 4/19) (incorporated by reference to Exhibit 10.9 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019)*
10.23	Form of U.S. Employee Performance Share Unit Award Agreement (version 3/21) (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2021)*
10.24	Description of modification to the Deluxe Corporation Non-Employee Director Retirement and Deferred Compensation Plan (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K for the year ended December 31, 2017)*
10.25	First Amendment to the Deluxe Corporation Non-Employee Director Stock and Deferral Plan (incorporated by reference to Exhibit 10.3 to the Annual Report on Form 10-K for the year ended December 31, 2008)*
10.26	Form of Non-Employee Director Restricted Stock Unit Award Agreement (version 4/20) (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K for the year ended December 31, 2020)*
10.27	Credit Agreement, dated as of June 1, 2021, by and among us, as borrower, the several lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Commission on June 1, 2021)
21.1	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
31.1	CEO Certification of Periodic Report pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	CFO Certification of Periodic Report pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	CEO and CFO Certification of Periodic Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
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 Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document

Exhibit Number	Description
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover page interactive data file (formatted as Inline XBRL and contained in Exhibit 101)

* Denotes compensatory plan or management contract

Note to recipients of Form 10-K: Copies of exhibits will be furnished upon written request and payment of reasonable expenses in furnishing such copies.

ITEM 16. FORM 10-K SUMMARY

We have elected not to include an optional Form 10-K Summary.

SIGNATURES

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

Date: February 21, 2022

DELUXE CORPORATION

/s/ Barry C. McCarthy

Barry C. McCarthy, President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 21, 2022.

<u>Signature</u>	<u>Title</u>
<u>/s/ Barry C. McCarthy</u> Barry C. McCarthy	President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ Scott C. Bomar</u> Scott C. Bomar	Senior Vice President, Chief Financial Officer (Principal Financial Officer)
<u>/s/ Ronald Van Houwelingen</u> Ronald Van Houwelingen	Vice President, Corporate Controller (Principal Accounting Officer)
<u>/s/ William C. Cobb</u> William C. Cobb	Director
<u>/s/ Paul R. Garcia</u> Paul R. Garcia	Director
<u>/s/ Cheryl Mayberry McKissack</u> Cheryl Mayberry McKissack	Director
<u>/s/ Don J. McGrath</u> Don J. McGrath	Director
<u>/s/ Thomas J. Reddin</u> Thomas J. Reddin	Director
<u>/s/ Martyn R. Redgrave</u> Martyn R. Redgrave	Director
<u>/s/ John L. Stauch</u> John L. Stauch	Director
<u>/s/ Victoria A. Treyger</u> Victoria A. Treyger	Director
<u>/s/ Telisa L. Yancy</u> Telisa L. Yancy	Director

DELUXE CORPORATION SUBSIDIARIES

1STPAYGATEWAY, LLC (Delaware)
 Accelerated Card Company, LLC (Delaware)
 Anchor Systems Pty Ltd (Australia)
 Canada IATS Payments, Inc. (Canada)
 ChecksByDeluxe.com, LLC (Minnesota)
 Crucial Paradigm Pty Ltd (Australia)
 Datamyx LLC (Delaware)
 Direct Checks Unlimited, LLC (Colorado)
 Direct Checks Unlimited Sales, Inc. (Colorado)
 Deluxe Business Operations, Inc. (Delaware)
 Deluxe Enterprise Operations, LLC (Minnesota)
 Deluxe Financial Services, LLC (Minnesota)
 Deluxe Manufacturing Operations, LLC (Minnesota)
 Deluxe Small Business Sales, Inc. (Minnesota)
 Deluxe Strategic Sourcing, Inc. (Texas)
 Digital Pacific Assets Pty Ltd (Australia)
 Digital Pacific Group Pty Ltd (Australia)
 Digital Pacific Pty Ltd (Australia)
 Digital Pacific Services Pty Ltd (Australia)
 Eliot Management Group, LLC (Utah)
 FAPS Holdings, Inc. (Delaware)
 Financial Transactions, LLC (Delaware)
 First American Payment Systems, L.P. (Texas)
 First Manhattan Consulting Group, LLC (Delaware)
 Fitech Payments, LLC (Delaware)
 goEmerchant, LLC (Delaware)
 Govolution, LLC (Delaware)
 Hostopia Australia Holding Co Pty Ltd (Australia)
 Hostopia Australia Pty Ltd (Australia)
 Hostopia Australia Web Pty Ltd (Australia)
 Hostopia Bulgaria EOOD (Bulgaria)
 Hostopia Canada, Corp. (Canada)
 Hostopia Ireland Limited (Ireland)
 IATS, LLC (Delaware)
 Internet Names for Business Inc. (Canada)
 LogoMix Inc. (Delaware)
 MedPayExchange, LLC (Delaware)
 MyCorporation Business Services, Inc. (Minnesota)
 NEBS Business Products Limited (Canada)
 Payce, Inc. (Maryland)
 Quick Processing, LLC (Delaware)
 REMITCO LLC (Delaware)
 Research Development and Manufacturing Corporation (Canada)
 Safeguard Acquisitions, Inc. (Texas)
 Safeguard Business Systems, Inc. (Delaware)
 Safeguard Business Systems Limited (Canada)
 Safeguard Franchise Sales, Inc. (Texas)
 Safeguard Franchise Systems, Inc. (Texas)
 Safeguard Holdings, Inc. (Texas)
 Think Point Financial, LLC (Delaware)
 Wausau Delaware, LLC (Delaware)
 Wausau Financial Systems, Inc. (Wisconsin)

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-95739, 333-52452, 333-52454, 333-89532, 333-150674, 333-181435, 333-223180 and 333-238105) of Deluxe Corporation of our report dated February 28, 2022 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
February 28, 2022

CEO CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Barry C. McCarthy, President and Chief Executive Officer of Deluxe Corporation, certify that:

1. I have reviewed this annual report on Form 10-K of Deluxe Corporation;
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: February 21, 2022

/s/ Barry C. McCarthy

Barry C. McCarthy
President and Chief Executive Officer

CFO CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Scott C. Bomar, Chief Financial Officer of Deluxe Corporation, certify that:

1. I have reviewed this annual report on Form 10-K of Deluxe Corporation;
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: February 21, 2022

/s/ Scott C. Bomar

Scott C. Bomar

Senior Vice President, Chief Financial Officer

CEO AND CFO CERTIFICATION OF PERIODIC REPORT

We, Barry C. McCarthy, President and Chief Executive Officer of Deluxe Corporation (the “Company”), and Scott C. Bomar, Chief Financial Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

- (1) the Annual Report on Form 10-K of the Company for the year ended December 31, 2021 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); 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: February 21, 2022

/s/ Barry C. McCarthy

Barry C. McCarthy
President and Chief Executive Officer

/s/ Scott C. Bomar

Scott C. Bomar
Senior Vice President, Chief Financial Officer