

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, 2020

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)
3680 Victoria St. N. Shoreview MN
(Address of principal executive offices)

41-0216800
(I.R.S. Employer Identification No.)
55126-2966
(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	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
		Emerging Growth Company	<input type="checkbox"/>

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

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

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

The aggregate market value of the voting stock held by non-affiliates of the registrant is \$978,925,599 based on the last sales price of the registrant's common stock on the New York Stock Exchange on June 30, 2020. The number of outstanding shares of the registrant's common stock as of February 10, 2021 was 42,029,373.

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, 2020

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PART I

ITEM 1. BUSINESS

OUR BACKGROUND

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 have transformed from a check printing company to a Trusted Business Technology™ company that champions business so communities thrive. We support millions of small businesses, thousands of vital financial institutions and hundreds of the world's largest consumer brands, while processing more than \$2.8 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.

OUR BUSINESS SEGMENTS, PRODUCTS AND SERVICES

Effective January 1, 2020, we transitioned from a "company of companies" to a "company of products," reorganizing our management and reporting structure by product type. In conjunction with our reorganization, we began reporting operating results for 4 business segments: Payments, Cloud Solutions, Promotional Solutions and Checks. These segments provide the following products and services:

Business Segment	Category	Percentage of 2020 revenue	Description
Payments	Treasury management solutions	12.6 %	Lockbox, remote deposit capture, integrated receivables, payment acceptance
	Other payment solutions	4.2 %	Payroll, disbursements, Medical Payment Exchange, Deluxe Payment Exchange, eChecks, fraud and security services
Cloud Solutions	Web and hosted solutions	7.5 %	Web hosting and design, digital engagement, logo design, financial institution profitability reporting, business incorporation services
	Data-driven marketing solutions	6.7 %	Solutions for marketing business-to-business and business-to-consumer
Promotional Solutions	Forms and other products	17.7 %	Business forms, accessories, strategic sourcing services
	Marketing and promotional solutions	11.9 %	Advertising specialties, promotional apparel, retail packaging
Checks	Checks	39.4 %	Printed personal and business checks

OUR "ONE DELUXE" STRATEGY

Our vision is to be a Trusted Business Technology leader in payments and data. Payments encompasses all of the products and services that help our customers pay and get paid. Data includes our project and platform data businesses. To accomplish this, we are focused on the following key enablers:

- **Our customers** – Our products and services can be utilized by customers of all sizes and maturities. While we serve customers across all industries, we will focus our efforts on key verticals, including financial institutions, health care, real estate/construction and insurance. In addition, we continue to benefit from a long heritage of offering trusted service to our check 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 will continue investments to build market-leading payments and data products and platforms that are proprietary to Deluxe, so that our customers will build their businesses upon our platforms for the long-term.

- **Scale** – We believe our volumes in many of our service offerings enable us to offer per-unit costs and reliability superior to our competitors. We plan to continue to focus on scaling our product management capabilities and creating a product innovation center.
- **Recurring and reoccurring revenue** – Our focus will continue to be 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 deploy our resources, including our sales force and our various strategic partnerships, to cost-effectively reach customers.

In support of our strategy, we continue to invest significant resources to build out our technology platforms. We completed the implementation of a human capital management system in January 2020. We also completed the first implementation phase of sales technology that enables a single view of our customers, thereby providing for deeper cross-sell opportunities, and we continue to invest in enhancing sales technology for continued optimization. In addition, we are investing in our financial tools, including an enterprise resource planning system. Strategically, we believe these enhancements will allow us to better assess and manage our business at the total company level and will make it easier for us to quickly integrate any future acquisitions. While we reduced certain expenditures in the early stages of the COVID-19 pandemic, we have since resumed our investments in these initiatives and we plan to continue with important system implementations.

We expect to continue our efforts to simplify processes, eliminate duplicative processes and lower costs. During 2020, we continued to review our real estate footprint and announced plans to lower future operating expenses through further site consolidation. We closed 24 facilities during 2020, and we anticipate closing additional facilities in 2021. Additionally, we plan to continue to develop our post-COVID-19 operating model to match expected customer needs and anticipated volumes, as well as to gain efficiencies.

IMPACT OF THE COVID-19 PANDEMIC

In March 2020, the World Health Organization declared the outbreak of COVID-19 to be a pandemic. The COVID-19 pandemic is having widespread, rapidly-evolving and unpredictable impacts on global society, economies, financial markets and business practices. Federal, state and foreign governments have implemented measures in an effort to contain the virus, including social distancing, travel restrictions, border closures, limitations on public gatherings, working from home, supply chain logistical changes, and restrictions on certain non-essential businesses. To protect the health and well-being of our employees, suppliers and customers, we have made substantial modifications to employee travel policies, implemented office closures as employees are advised to work from home, and cancelled or shifted conferences and other sales and marketing events to virtual events. The COVID-19 pandemic has impacted, and will continue to impact, our business operations, including our employees, customers, partners and communities, and there is substantial uncertainty as to the nature and degree of its continued effects over time. Please refer to *Management's Discussion and Analysis of Financial Condition and Results of Operations* appearing in Part II, Item 7 of this report for further discussion regarding the impact of COVID-19 on our 2020 financial results.

The extent to which the COVID-19 pandemic impacts our business going forward will depend on numerous evolving factors we cannot reliably predict, including the severity and duration of the pandemic; governmental, business and individuals' actions in response to the pandemic; the timing and effectiveness of vaccines; and the resulting impact on economic activity and the financial markets. 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.

OUR SALES AND MARKETING STRATEGY

We continue to make progress in becoming a sales-driven revenue growth company. 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 upon our platforms for the long-term.

Business Lifecycle



Note: Illustration is not indicative of our full set of products and services.

Our sales and marketing strategy employs a multi-channel, demand-generation 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. In July 2020, we launched our free small business advisory service, providing our expertise to help businesses improve their marketing efforts, reach new customers, find inventive ways to save time and money, navigate how to grow or evolve their business, or start a new business. Excluding the impact of the COVID-19 pandemic, we believe that we delivered sales-driven quarterly revenue growth throughout 2020, giving us confidence in our go-to-market approach.

INDUSTRY TRENDS AND OUR COMPETITION

Payments, including Checks

The payments industry continues to expand and evolve, with digital payment vehicles and transaction volumes growing around the world. The challenge for payment providers is to 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, 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. We believe our competitive advantages are: our scalable platform, our extensive distribution channels, frictionless payments (i.e., non-disruptive for payer, and payment choices for payee), our automated receivables management and our strong brand. We also believe there is great opportunity to convert paper checks to digital payments, which we are addressing with our Medical Payments Exchange (MPX) and Deluxe Payments Exchange platforms.

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, although 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 the cost-effective cross-selling of our products and services. Although we saw some decrease in our check volumes resulting from the impact of the COVID-19 pandemic, we do not believe that the pandemic resulted in a significant shift from checks to digital payment solutions, and we have seen some recovery in business checks as a result of new small business formations.

Our Checks business faces intense competition 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. 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.

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 saw a decrease in data-driven marketing revenue as a result of the COVID-19 pandemic, as customers suspended their marketing campaigns because of the resulting economic uncertainty. We are not able to predict the rate at which this business will recover, but we are adapting to the changing needs of our customers and expanding our offerings to provide a greater breadth of services.

We believe we have significant growth opportunity in this market. We intend 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 software-as-a-service (SaaS) solutions, including search, social and email marketing, 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, that they are simple to use and that they are competitively priced. We also believe that we will better compete in these markets as we optimize our suite of solutions to deliver more integrated offerings.

Promotional Solutions

The market for business forms and certain 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 also has contributed to the overall decline in printed products. Demand for promotional products was significantly impacted in 2020 by the COVID-19 pandemic, as companies reduced their advertising and marketing spending in response to the overall economic decline and their customers' and governmental responses to the pandemic. We anticipate that demand for promotional products will improve as the overall economy recovers.

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. We believe that our competitive advantages include our multi-channel experience, ease of use, our deep sources of supply and our 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 to 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 continue to sponsor sustainability initiatives that encompass environmentally-friendly practices. We have aligned with suppliers that promote sustainable business practices and we seek opportunities to eliminate wasted material, reduce cycle times, use more environmentally-friendly materials and reduce solid waste sent to landfills. More than 90% of our check and forms paper is purchased from Forest Stewardship Council certified supplier mills, certain of our check designs are made from recycled paper and we use environmentally-friendly janitorial supplies in the majority of our locations. In 2019, we introduced our environmentally-responsible Smart Check by Deluxe® check configuration, which utilizes eco-friendly materials and plant-based ink. In addition, our sustainability initiatives over the past several years have focused on reducing our consumption of water, electricity and natural gas and improving our transportation efficiency.

CYBERSECURITY

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 cyber attack 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 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. 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 have an Enterprise Risk Management Steering Committee 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 Information Officer, our Chief Strategy Officer, our Chief Compliance Officer, our Chief Information Security Officer and the Division Presidents. 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.

In the event a cybersecurity incident is identified, we have a Cyber Security Incident Response team and an Incident and Crisis Response 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 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.

For more information on risks related to data security, see Item 1A, "Operational Risks – Security breaches, computer malware or other cyber attacks 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. We believe that we will be able to obtain an adequate supply of materials from current or alternative suppliers.

We have entered into agreements with third-party providers for delivery services and information technology services, including telecommunications, network server and transaction processing services. We also rely upon 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. We believe we would be able to obtain an alternative source of supply if one or more of our service providers failed to perform.

OUR HUMAN CAPITAL

Our most valuable asset is our employee-owners. As of December 31, 2020, we had 6,185 employees. Approximately 98% of our team is full-time employees, with 65% representing non-exempt roles working in production, processing or call center functions. We employ 5,487 employees in the United States, 586 employees in Canada and 112 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 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 One Deluxe strategy is that all North American employees own company stock. 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:

- We put customers first.
- We earn trust.
- We create what's next.
- We deliver for shareholders.
- We are a get-it-done team.

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 inclusion, diversity and equity (ID&E), leadership development and mentoring. We also strive to ensure that we are consistently receiving real-time feedback and that we continue to focus on transparent communication channels through change pulse checks, surveys, senior leadership forums and employee resource groups. During 2020, we received certification as a Great Place to Work from The Great Place to Work Institute.

Inclusion, Diversity and Equity

We embrace ID&E in our workforce, customers, partners and shareholders, valuing their unique backgrounds, experiences, thoughts and talents. Our mission is to empower all employees to bring their full authentic selves to work as One Deluxe 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 for the next two years 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, 2020, our total workforce was approximately 55% female and 43% male. Our team members located in the United States were comprised of approximately 58% white, 14% Black or African American, 10% Asian American and 10% Hispanic or Latino.

Health, Wellness and Safety

Creating a culture where all employee-owners feel supported and valued is paramount to our One Deluxe strategy. The ongoing COVID-19 pandemic has led to unique challenges, and we continue to evolve our programs to support Deluxers' health, safety and general well-being.

In response to the COVID-19 pandemic, we implemented significant changes to our operating environment to help our employee-owners remain productive and safe. Among other things, nearly half of our employee-owners continue to work from home, and we have implemented additional safety measures for employees continuing essential on-site work. We also reconfigured our factory floors and other personnel areas to ensure sufficient distancing in high density areas of our facilities, and we installed Plexiglas shields, implemented modified training programs to comply with distancing requirements, substantially limited visitor entry, increased virtual meetings and adjusted shifts to aid in physical distancing. Finally, we continue to provide a competitive benefits package focused on fostering work/life integration.

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. 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, holiday card and retail packaging sales and revenues from search and email marketing services are typically stronger in the fourth quarter of the year due to the holiday season. Sales of tax forms are stronger in the first and fourth quarters of the year, and direct-to-consumer check sales have historically been stronger in the first quarter of the year. In addition, we may experience some fluctuations in revenue driven by our customers' marketing campaign cycles.

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, online payment services, real estate, e-commerce, intellectual property, health care, environmental matters, and workplace health and safety. In response to the COVID-19 pandemic, local, state, national and international governments and health authorities have established myriad new laws, rules, regulations and orders. These emergency enactments evolve rapidly, and sometimes become effective within a 24-hour period. The complexity of complying with existing and new laws and regulations is significant, and regulators may adopt new laws or regulations at any time.

We believe that our business is operated in substantial compliance with all applicable laws and regulations. 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 2020.

AVAILABLE INFORMATION

We make available 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, 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 64235, St. Paul, Minnesota 55164-0235, or by sending an email request to investorrelations@deluxe.com.

Further information about Deluxe Corporation is also available at www.deluxe.com, facebook.com/deluxecorp and twitter.com/deluxe.

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 64235, St. Paul, Minnesota 55164-0235. 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/corporate-governance, or upon written request.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Our executive officers are elected 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	57	President and Chief Executive Officer	2018
Keith Bush	50	Senior Vice President, Chief Financial Officer	2017
Garry Capers, Jr.	44	Senior Vice President, Division President, Cloud Solutions	2019
Jeffrey Cotter	53	Senior Vice President, Chief Administrative Officer and General Counsel	2018
Jane Elliott	54	Senior Vice President, Chief Communications and Human Resources Officer	2019
Tracey Engelhardt	56	Senior Vice President, Division President, Checks	2012
Pete Godich	56	Senior Vice President, Chief of Operations	2008
Michael Mathews	48	Senior Vice President, Chief Information Officer	2013
Amanda Parrilli	42	Senior Vice President, Strategy, Transformation and Business Development	2019
Michael Reed	49	Senior Vice President, Division President, Payments	2019
Thomas Riccio	47	Senior Vice President, Division President, Promotional Solutions	2019
Christopher Thomas	52	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.

Keith Bush joined us in March 2017 as Senior Vice President, Chief Financial Officer. Prior to joining us, Mr. Bush was self-employed as a consultant from July 2016 to March 2017. From June 2009 through July 2016, Mr. Bush served as Senior Vice President, Finance for American Airlines.

Garry Capers, Jr. joined us in September 2019 as Senior Vice President, Division President, Cloud Solutions. 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. Prior to this, Mr. Capers held several positions at Equifax Inc., a global data, analytics and technology company, including General Manager, NACS Marketing Services from January 2014 to January 2017.

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 and Executive Vice President and Chief of Staff from November 2013 to January 2016.

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.

Pete Godich was named Senior Vice President, Chief of Operations in October 2019. From January 2019 to October 2019, Mr. Godich served as Senior Vice President, Financial Services, and from March 2011 to January 2019, he served as Senior Vice President, Fulfillment.

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 joined us in September 2019 as Senior Vice President, Division President, Promotional Solutions. 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

Our businesses 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 have disclosed all currently known material risks. 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 is expected to 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 primarily affected our Promotional Solutions, Checks and Cloud Solutions segments, and late in the year, our Payments segment experienced delays in new client implementations because of the impacts of the pandemic. The sweeping nature of the pandemic makes it extremely difficult to predict how our business and operations will be affected in the longer term. Consistent with various state and federal orders, we were able to designate portions of our business as "essential." As such, many of our facilities remained open during government-mandated shut-downs. We successfully activated our business continuity plan to ensure uninterrupted operations and services, while keeping our facilities safe for our employees, customers and communities. Under this plan, employees who have the ability to work from home continue to do so, which poses additional cybersecurity and data security risk. Certain of our facilities remain closed. We may close additional facilities, as necessary, 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. If it becomes necessary to close additional facilities to protect the health of our employees, we have the ability to move work between our various facilities.

As the current economic environment is significantly impacting small businesses, we are closely monitoring the breadth and depth of small business closures and bankruptcies, changes in the level of small business optimism, lending to small and mid-sized businesses and the general functioning of the credit markets, adoption of government stimulus and other economic programs, consumer unemployment levels and changes in consumer spending patterns. We cannot predict the pace at which these factors will improve or the impact a prolonged downturn in the economy will have on our business, financial condition and/or results of operations.

We also incurred, and may continue to incur, additional costs as we respond to the pandemic, including, but not limited to, costs incurred to implement operational changes allowing social distancing, costs related to employees who are not working during the pandemic, a Hero Pay premium provided to employees working on-site, overtime pay as required and costs associated with additional cleaning and disinfecting of our facilities. In addition, in response to the pandemic, local, state, national and international governments and health authorities have established myriad new laws, rules, regulations and orders. These

emergency enactments evolve rapidly, and sometimes become effective within a 24-hour period. The complexity of complying with COVID-19 specific regulations is significant.

All of these circumstances negatively impact our liquidity. To bolster our liquidity at the beginning of the pandemic, we drew an additional \$238.0 million on our \$1.15 billion revolving credit facility in March 2020. We subsequently repaid \$300.0 million of the amount drawn on the credit facility. In addition, we suspended our share repurchase program and we took additional steps to reduce discretionary spending and other expenditures in line with revenue declines. These steps included temporary salary reductions for all salaried employees, including our leadership team and board of directors, project delays, furloughs and other actions. We also delayed U.S. federal payroll tax payments as permitted by the Coronavirus Aid, Relief and Economic Security (CARES) Act. We continue to monitor the situation closely, including impacts on our operations, suppliers, customers, industry and workforce. If conditions deteriorate, we may implement further measures to provide additional financial flexibility and to improve our cash position and liquidity, including additional borrowings under our revolving credit facility.

If demand for our products and services further deteriorates or does not return to normal levels in the longer term, we may be required to take further actions to improve our cash position, including but not limited to, implementing further employee furloughs and/or workforce reductions, or foregoing capital expenditures and other discretionary expenses. In addition, dividends are approved by our board of directors each quarter and thus, are subject to change.

The situation surrounding COVID-19 remains fluid and the potential for a material impact on our results of operations, financial condition and/or liquidity increases the longer the virus impacts activity levels in the U.S. and the other countries in which we operate. For this reason, we cannot reasonably estimate with any degree of certainty the future impact the pandemic may have on our results of operations, financial position and/or liquidity. The extent to which the COVID-19 pandemic impacts our business depends on future developments, many of which are beyond our control, such as: the severity and duration of the pandemic; governmental, business and individuals' actions in response to the pandemic; the timing and effectiveness of vaccines; and the resulting impact on economic activity and the financial markets. We may not have yet experienced the full impact of the pandemic or its resulting impact on our customers. Our revenue may not immediately recover with an improvement in macroeconomic conditions and may require new business formations and/or the expansion of sales to our existing customers.

In completing asset impairment analyses during 2020, we were required to make assumptions using the best information available at the time, including the performance of our reporting units before and subsequent to the declaration of a pandemic and available economic forecasts. To the extent our assumptions differ materially and negatively from actual events, we may be required to record additional asset impairment charges.

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 COVID-19 pandemic could have the effect of heightening many of the other risks described below, including, without limitation, those related to the success of our strategy, our ability to attract and retain customers, competition, the rate of decline for checks and business forms, our ability to reduce costs, risks of cybersecurity breaches, interruptions to our website operations or information technology systems, the ability of third-party providers to perform, and potential litigation. COVID-19-related impacts on the preparation of our consolidated financial statements are addressed under the caption: "Note 20: 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 Business Technology leader in payments and data. Further information about our strategy and its related key enablers can be found in the discussion of our "One Deluxe" 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 transform to a sales-driven organization;
- 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 implement sales technology that enables a single view of our customers;
- our inability to implement 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 our digital services and products to achieve widespread customer acceptance;
- our inability to promote, strengthen and protect our brand;

- 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 earnings before interest, taxes, depreciation and amortization (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.

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. 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, as well as financial institution in-house capabilities. Volume is the key to staying cost-competitive, and breadth of services is critical to stay 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. In addition to competition from the digitization of payments, we also face intense competition 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, 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 software-as-a-service (SaaS) solutions, including search, social and email marketing and logo design and business incorporation services, are also large, dynamic and highly competitive, with dominant integrated players, as well as niche providers. Competition for our data-driven marketing services is also 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.

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.

The markets for many of the products and services we provide are characterized by constant change and innovation. 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 the digitization of payments, could make some or all 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 us to incur substantial costs. Any of the foregoing risks could result in harm to our business and results of operations.

We face uncertainty regarding the success and integration of past and future acquisitions, which could have an adverse impact on our operating results.

We completed many acquisitions during the past several years. The details of our more recent acquisitions can be found under the caption "Note 6: Acquisitions" of the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. These acquisitions extended our range of products and services, including treasury management and web services. In addition, we purchased the operations of several small business distributors with the intention of growing revenue in our enterprise accounts and dealer channels. The integration of any acquisition involves numerous risks, including, among others:

- difficulties and/or delays in assimilating operations, products and services, including effectively scaling revenue and ensuring that a strong system of information security and controls is in place;
- failure to realize expected synergies and savings or to achieve projected profitability levels on a sustained basis;
- diversion of management's attention from other business concerns and risks of managing an increasingly diverse set of products and services across expanded and new industries;
- unanticipated integration costs;
- difficulty in maintaining controls, procedures and policies, especially when the acquired business was a non-public company and may not have employed the same rigor in these areas as required for a publicly traded company;
- decisions by our customers or the customers of the acquired business to temporarily or permanently seek alternate suppliers;
- difficulty in assimilating the acquired business into our corporate culture;
- increased compliance and other complexity;
- 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 negatively affect our results of operations.

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 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 39.4% of our consolidated revenue in 2020. 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. According to the most recent information released by the Federal Reserve in October 2020, the total number of checks written declined an average of 8.4% each year between 2015 and 2018, compared to an average decline of 3.4% each year between 2012 and 2015. 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® and Venmo®. In addition, the RTP® system run by The Clearing House Payments Company, LLC is a real-time payments system that currently reaches over 50% of U.S. bank accounts. In August 2019, the U.S. Federal Reserve announced that it plans to develop its own real-time payments system, FedNowSM, with an expected launch in 2023 or 2024.

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 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.

We may not succeed in promoting and strengthening our brand, which could prevent us from acquiring customers and increasing revenue.

The success of our businesses depends on our ability to attract new and returning customers. For this reason, the promotion and strengthening of the Deluxe brand plays a key role in the execution of our strategy. We believe that the importance of brand recognition 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 our ability to provide a consistent, high-quality customer experience. In the past, we had many brands associated with our products and services as a result of previous acquisitions. Unifying our brands to operate as one Deluxe is an essential part of our One Deluxe strategy. In February 2020, we unveiled our new Deluxe brand. We can provide no assurance that our branding strategy will be successful or will result in a positive return on our investment.

To promote our brand, we have incurred, and will continue to incur, expense related to advertising and other marketing efforts. We can provide no assurance that these efforts will be successful or that our revenue will increase at a level commensurate with our marketing expenditures. There is also the risk that adverse publicity, whether or not justified, could adversely affect our business. We currently have an agreement with television personality Ty Pennington, who appears in our online series, *Small Business Revolution*. If Mr. Pennington, other 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. A security incident that results in unauthorized disclosure of our customers' sensitive data could materially harm our reputation. 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 compel 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 items 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 cyber attacks 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 increased use of the internet and cloud-based activities, as well as the increased sophistication and activities of hackers, terrorists and activists. In addition, our own information security risks have increased due to the acquisition of companies with their own internally-developed technologies. 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 and email hosting. Cybersecurity is one of the top risks identified by our Enterprise Risk Management Steering Committee, as technology-based organizations such as ours are vulnerable to targeted attacks aimed at exploiting network and system application 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 networks and the internet 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 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 efforts, a party that is able to circumvent our security measures could misappropriate our or our customers' 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 credit and debit card payments from our customers, 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 is critical to our reputation and our ability to attract and retain customers. We could experience temporary interruptions in our websites, transaction 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 are investing significant resources to build out our technology platforms. We implemented a human capital management system in January 2020. We also completed the first implementation phase of sales technology that enables a single view of our customers, and we are investing in our financial tools, including an enterprise resource planning system. System implementations are complex. Any disruptions, delays or deficiencies in the design, implementation or operation of these systems, particularly any disruptions, delays or deficiencies that impact our operations, could adversely affect our ability to effectively run and manage our business. In addition, our continued development and implementation of new generation software solutions and information technology infrastructure may take longer than originally expected and may require the acquisition of additional personnel and other resources, which may adversely affect our business, results of operations and financial condition. Any inability to deploy new generation information technology throughout our organization would result in operating multiple platforms, which would increase costs.

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 issues 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 that may occur.

If third-party providers of certain significant information technology needs are unable to provide services, our business could be disrupted and the cost of such services could increase.

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 such as online payment solutions. 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 information technology 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 information technology 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.

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

For us to successfully grow and compete, we must recruit, retain and develop the key personnel necessary to execute our growth strategy. Our success depends on the contributions and abilities of key employees, especially in our digital services businesses and specifically in sales, marketing, product management and development, data analytics and information technology. If we are unable to retain our existing employees and/or attract qualified personnel, we may not be able to grow and

manage our business effectively. Although we have implemented various "Great Place to Work" initiatives, including employee wellness initiatives, the introduction of employee resource groups and a revised performance management process, we can provide no assurance that we will be successful in attracting and retaining key personnel.

The cost and availability of materials, delivery and other third-party services could 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 and other raw materials. 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. Historically, we have not been negatively impacted by paper shortages because of our relationships with paper suppliers. However, we can provide no assurance that we will be able to purchase sufficient quantities of paper if such a shortage were to occur.

We depend upon third-party providers for delivery services and for other outsourced products and services. Events resulting in the inability of these service providers to perform their obligations, such as work slowdowns or extended labor strikes, 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. Increased fuel costs increase the costs we incur to deliver products to our customers, as well as the price we pay for outsourced products. We also rely on third-party providers for certain technology, processing and support functions. If we are unable to renew our existing contracts with our most significant providers, we may be forced to obtain alternative suppliers at higher costs. 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, 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. 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 associations for inadequate fraud protection.

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, online payment services, real estate, e-commerce, intellectual property, health care, environmental matters, and workplace health and safety. In response to the COVID-19 pandemic, local, state, national and international governments and health authorities have established myriad new laws, rules, regulations and orders. These emergency enactments evolve rapidly and sometimes become effective within a 24-hour period. 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 ACH, remote deposit capture and lockbox services. These laws and regulations require us to develop, implement, and maintain certain policies and procedures related to payment processing. 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 cyber security 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 increasing 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 relating 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.

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. In spite of settled law in the U.S., claims are 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

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

Goodwill represented 39% of our total assets as of December 31, 2020. 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 2020 impairment analyses can be found under the caption "Note 8: Fair value measurements" of 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.

Economic conditions, including 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 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, 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.

The COVID-19 pandemic and the actions taken in response to it have significantly increased economic uncertainty. The pandemic has caused a global recession and increased unemployment and we cannot predict the extent to which our customers will be able to survive such a downturn. Given the ongoing and dynamic nature of the COVID-19 pandemic, we cannot predict the impact on our business, financial position or results of operations, and there is no guarantee that our efforts to address the ongoing adverse impact of the pandemic will be successful.

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

The majority of the borrowings under our revolving credit 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.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2020, we occupied 38 facilities throughout the U.S., 5 facilities in Canada, 2 facilities in Europe and 1 facility in Australia, where we conduct printing and fulfillment, call center, data center and administrative functions. 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 25% of our facilities are owned, while the remaining 75% are leased. Our facilities have a combined floor space of approximately 2.5 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 continue to assess our real estate footprint as we continue to develop our post-COVID-19 operating model to match expected future volumes and to gain efficiencies. As a result of this assessment, we closed 24 facilities during 2020, and we anticipate closing additional facilities during 2021. A majority of the impacted employees have transitioned to a work-from-home environment. Additionally, during 2020, we entered into leases on new facilities in Minnesota and Georgia, which will house our corporate headquarters and our technology innovation center, respectively. We expect to occupy these facilities by the third quarter of 2021.

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

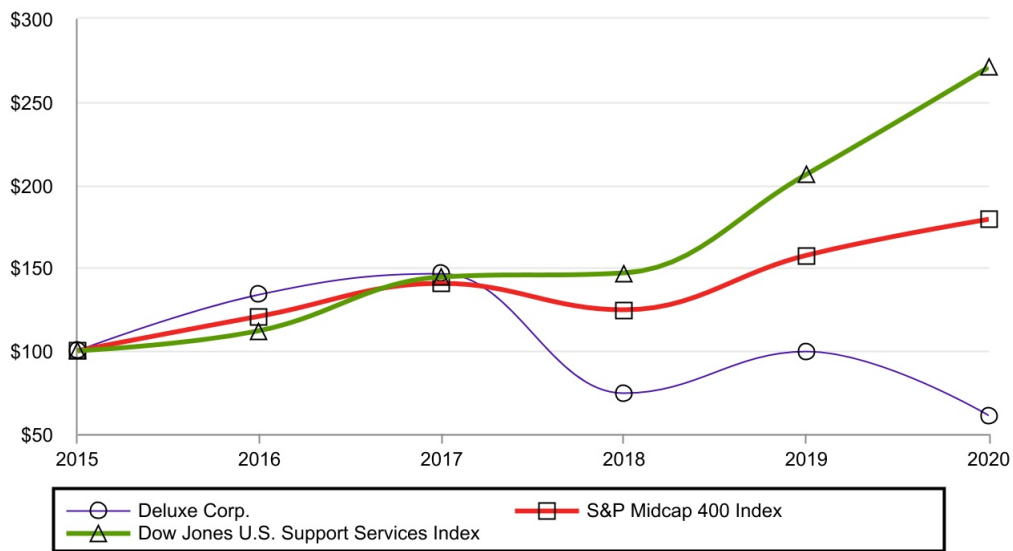
Our common stock is traded on the New York Stock Exchange under the symbol DLX. Dividends are declared by our board of directors on a quarterly basis, and therefore, are subject to change. As of December 31, 2020, the number of shareholders of record was 5,499, excluding shareholders whose shares are held in the name of various dealers, clearing agencies, banks, brokers and other fiduciaries.

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 did not repurchase any shares during the fourth quarter of 2020 and \$287.5 million remained available for repurchase as of December 31, 2020.

While not considered repurchases of shares, we do at times withhold 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 2020, we withheld 32,947 shares in conjunction with the vesting and exercise of equity-based awards.

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 2020**



The graph assumes that \$100 was invested on December 31, 2015 in each of Deluxe common stock, the S&P MidCap 400 Index and the DJUSIS Index, and that all dividends were reinvested.

ITEM 6. SELECTED FINANCIAL DATA

The following table shows certain selected financial data for the five years ended December 31, 2020. This information should be read in conjunction with *Management's Discussion and Analysis of Financial Condition and Results of Operations* appearing in Part II, Item 7 of this report and our consolidated financial statements appearing in Part II, Item 8 of this report. These items include discussion of various factors that affect the comparability of the selected financial data, including asset impairment charges, business combinations, the Tax Cuts and Jobs Act of 2017 and the adoption of new accounting pronouncements. Historical results are not necessarily indicative of future results.

(dollars in thousands, except per share amounts)

	2020	2019	2018	2017	2016
Statement of Income (Loss) Data:					
Total revenue	\$ 1,790,781	\$ 2,008,715	\$ 1,998,025	\$ 1,965,556	\$ 1,849,062
As a percentage of total revenue:					
Gross profit	59.2 %	59.5 %	60.4 %	62.2 %	63.9 %
Selling, general and administrative expense	47.0 %	44.4 %	42.7 %	42.2 %	43.7 %
Operating income (loss)	2.5 %	(7.9 %)	11.6 %	16.7 %	19.8 %
Operating income (loss)	\$ 44,505	\$ (158,141)	\$ 231,221	\$ 329,176	\$ 366,887
Net income (loss) attributable to Deluxe	8,808	(199,897)	149,630	230,155	222,382
Per share - basic	0.21	(4.65)	3.18	4.75	4.68
Per share - diluted	0.19	(4.65)	3.16	4.72	4.65
Balance Sheet Data:					
Cash and cash equivalents	\$ 123,122	\$ 73,620	\$ 59,740	\$ 59,240	\$ 76,574
Return on average assets ⁽¹⁾	0.5 %	(9.4 %)	6.6 %	10.5 %	11.4 %
Total assets	\$ 1,874,863	\$ 1,943,311	\$ 2,305,096	\$ 2,208,827	\$ 2,184,338
Long-term obligations ⁽²⁾	880,532	931,319	911,864	709,300	758,648
Statement of Cash Flows Data:					
Net cash provided by operating activities	\$ 217,553	\$ 286,653	\$ 339,315	\$ 338,431	\$ 319,312
Net cash used by investing activities ⁽³⁾	(56,093)	(72,397)	(253,059)	(170,738)	(277,977)
Net cash (used) provided by financing activities ⁽³⁾	(110,555)	(190,148)	(62,180)	(193,109)	4,464
Purchases of capital assets	(62,638)	(66,595)	(62,238)	(47,450)	(46,614)
Payments for acquisitions, net of cash acquired ⁽³⁾	—	(8,251)	(191,903)	(129,070)	(238,130)
Payments for common shares repurchased	(14,000)	(118,547)	(200,000)	(65,000)	(55,224)
Other Data:					
Cash dividends per share	\$ 1.20	\$ 1.20	\$ 1.20	\$ 1.20	\$ 1.20
Number of employees	6,185	6,352	6,701	5,886	6,026
Number of facilities	46	67	81	75	86

⁽¹⁾ Return on average assets is calculated as net income (loss) attributable to Deluxe divided by average assets for the period.

⁽²⁾ Long-term obligations include the current and long-term portions of our debt obligations and finance lease obligations, as well as the current and long-term portions of our operating lease obligations as of December 31, 2020 and December 31, 2019.

⁽³⁾ As discussed under the caption "Note 1: Significant Accounting Policies" appearing in Part II, Item 8 of this report, we revised the statements of cash flows for prior periods to correct the presentation of holdback payments for acquisitions and asset purchases.

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

Our 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; CEO Transition 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, capital structure and financial position;
- [Off-Balance Sheet Arrangements, Guarantees and Contractual Obligations](#) that discusses our financial commitments; and
- [Critical Accounting Policies](#) that discusses the policies we believe are most important to understanding the assumptions and judgments underlying our financial statements.

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 period 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*.

EXECUTIVE OVERVIEW

Realignment – Effective January 1, 2020, we reorganized our reportable business segments to align with structural and management reporting changes in support of our growth strategy. We now operate 4 reportable 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. Further information regarding our segments and our product and service offerings can be found under the caption "Note 19: Business Segment Information" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

COVID-19 impact on 2020 results – 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. Within Promotional Solutions, many of our business customers were significantly impacted by their customers' and governmental responses to the pandemic. Demand for promotional products declined, as our customers reduced or stopped their promotional activities when they were forced to close, and many of their operations are still limited. The decline in travel and event cancellations also reduced promotional spending. In our Checks segment, the volume of both business and personal checks declined as a result of the slowdown in the economy, while the impact in Cloud Solutions was primarily driven by a decline in data-driven marketing solutions, as clients suspended their marketing campaigns during this period of uncertainty. Within our Payments segment, the impact of the pandemic resulted in some reduction in payroll services revenue, as well as delays in new customer implementations. Partially offsetting these impacts was new revenue of \$31.0 million during 2020 from sales of personal protective equipment (PPE) in our Promotional Solutions segment.

The impact of the COVID-19 pandemic on our revenue was most severe in April and began to improve throughout the remainder of the second quarter. The impact in the third and fourth quarters of the year remained relatively stable, with the fourth

quarter benefiting from new business and some seasonality in Promotional Solutions. Despite the challenges of the pandemic, adjusted EBITDA margin was 20.4% for 2020, in line with our annual expectations prior to the pandemic. To bolster our liquidity at the beginning of the pandemic, we drew an additional \$238.0 million on our \$1.15 billion revolving credit facility in March 2020 and we suspended share repurchases for the remainder of 2020. We also took steps to reduce discretionary spending and other expenditures in line with the revenue decline. These steps included temporary salary reductions for all salaried employees, including our leadership team and board of directors, project delays, furloughs and other actions. We also delayed U.S. federal payroll tax payments under the Coronavirus Aid, Relief and Economic Security (CARES) Act. As a result of these actions and our stronger than expected performance, free cash flow for 2020 was \$154.9 million and net debt as of December 31, 2020 was the lowest since June 30, 2018. As a result of our strong cash flow, we were able to end the temporary salary reductions, effective July 1, 2020. Also, during the second half of 2020, we repaid \$300.0 million of the amount drawn on our revolving credit facility, reducing our outstanding debt by \$43.5 million from December 31, 2019. Our priority is to maintain our financial strength, while simultaneously continuing our business transformation. While we reduced some expenditures during the first half of 2020, we subsequently decided to resume certain capital projects and to continue important systems implementation work, including our enterprise resource planning and sales technology implementations. In addition, we paid our regular quarterly dividend of \$0.30 per share during each quarter of 2020.

We continue to monitor the impact of COVID-19 on all aspects of our business, including our operations, suppliers, customers, industry and workforce. We are keeping 2 primary goals in mind: (1) protecting our employees and customers and (2) continuing to serve the customers who rely on us. The situation surrounding COVID-19 remains fluid, and the potential for additional negative impacts on our results of operations, financial condition and/or liquidity increases the longer the virus impacts activity levels in the U.S. and the other countries in which we operate. During the first quarter of 2020, we successfully activated our business continuity plan to ensure uninterrupted operations and services. We have not experienced any significant interruptions in our supply chain to-date, and we currently do not expect significant future interruptions. Many of our facilities remain open, employees who have the ability to work from home continue to do so, and the success of our work-from-home model allowed us to accelerate certain site closures.

2020 results vs. 2019 – Numerous factors drove the increase in net income for 2020, as compared to 2019. The primary factor was a decrease in asset impairment charges of \$293.0 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 \$0.19 for 2020, as compared to diluted loss per share of \$4.65 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 and growth in treasury management revenue. 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 \$98.0 million, or \$1.45 per 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. Net loss for 2019 included asset impairment charges of \$391.0 million, or \$7.94 per 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 are encouraged by the success to-date of our One Deluxe strategy. We believe revenue in 2020 benefited from sales-driven growth, although this growth was not large enough to overcome the impact of the COVID-19 pandemic. We signed new customers and expanded many of our relationships. We retained our strong client base and we signed numerous deals during 2020. New initiatives in our tele-sales centers led to increased cross-sell opportunities that improved average order value. During 2020, we upgraded our talent pool throughout product and business development and innovation, as we seek to drive differentiation in the market across all of our businesses. We also added new services such as Medical Payment Exchange (MPX) and Deluxe Payment Exchange, along with improved customer experiences. We took advantage of the new reality of working remotely in 2020 to accelerate our efforts to reduce our real estate footprint, closing 24 additional sites in 2020. We also expect to achieve future operating savings and significant capital avoidance by relocating both our Minnesota headquarters and our Atlanta technology facilities to more efficient spaces. Despite the pressures of the pandemic, we continued to execute on our technology infrastructure upgrades and renewals with a focus on optimization, gaining efficiencies and building scale for future growth. We remain optimistic about our transformation initiatives as we move into 2021.

Outlook for 2021

During 2021, we plan continued focus on growth in Payments and Cloud Solutions, specifically scaling and leveraging distribution and optimizing product offerings and solutions to drive new recurring revenue streams. In Promotional Solutions, we will remain focused on improving profitability and driving recurring revenue streams. Within Checks, we plan to continue managing profitability, while continuing to increase market share. We may also consider potential acquisitions within the payments and data spaces, focused on driving scale and/or adding technology that would provide additional value-added services to our customers.

While the overall economic recovery in 2021 remains uncertain, we believe that, by building on our 2020 actions, we will generate sales-driven revenue growth during 2021 in the range of 0% to 2%, primarily due to the combination of our sales performance and expected steady macroeconomic recovery from the COVID-19 pandemic. We expect that our first quarter financial performance will be similar to fourth quarter 2020 results, as we begin to lap the onset of the pandemic in March 2020. We are positioned for recovery to begin in the second quarter, enabling us to exit the year with revenue growth in the mid-single digits, and we expect that adjusted EBITDA margin for the full year will be between 20% and 21%, at the lower end of our long-term target range. We anticipate that our annual effective income tax rate for 2021 will be approximately 25%.

As of December 31, 2020, we held cash and cash equivalents of \$123.1 million and \$302.3 million was available for borrowing under our revolving credit facility. Our credit facility includes an accordion feature allowing us, subject to lender consent, to expand the facility from \$1.150 billion to \$1.425 billion. We anticipate that capital expenditures will be approximately \$90.0 million in 2021, as we continue with important transformation work, innovation investments and building future 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 for the next 12 months. We were in compliance with our debt covenants as of December 31, 2020, and we anticipate that we will remain in compliance with our debt covenants throughout the next 12 months.

CONSOLIDATED RESULTS OF OPERATIONS

Consolidated Revenue

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Total revenue	\$ 1,790,781	\$ 2,008,715	\$ 1,998,025	(10.8%)	0.5%

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, as discussed in *Executive Overview*. 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 some 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 our 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.

The increase in total revenue for 2019, as compared to 2018, was driven primarily by incremental revenue of approximately \$65.1 million from businesses acquired, price increases in certain of our Checks sales channels and an increase in Cloud Solutions data-driven marketing volume. Information regarding our 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. These increases in revenue were partially offset by the continuing decline in order volume for both personal and business checks, as well as business forms and accessories sold by our Promotional Solutions segment. In addition, web and hosted solutions and marketing and promotional solutions volume, excluding incremental revenue from businesses acquired, declined approximately \$14.7 million and \$10.0 million, respectively. Revenue was also negatively impacted during 2019 by continued check pricing pressure within our financial institution sales channel.

Service revenue represented 31.3% of total revenue in 2020, 29.8% in 2019 and 27.3% in 2018. 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 19: 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:

	2020	2019	2018
Payments	16.9 %	13.4 %	11.2 %
Cloud Solutions	14.1 %	15.9 %	15.4 %
Promotional Solutions	29.6 %	31.9 %	33.0 %
Checks	39.4 %	38.8 %	40.4 %
Total revenue	100.0 %	100.0 %	100.0 %

Consolidated Cost of Revenue

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Total cost of revenue	\$ 730,771	\$ 812,935	\$ 791,748	(10.1%)	2.7%
Total cost of revenue as a percentage of total revenue	40.8 %	40.5 %	39.6 %	0.3 pt.	0.9 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 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.

The increase in total cost of revenue for 2019, as compared to 2018, was primarily attributable to incremental costs of businesses acquired of approximately \$32.9 million, as well as increased shipping and material rates and an increase in medical costs of approximately \$5.0 million in 2019. Partially offsetting these increases in total cost of revenue was the impact of the lower order volume for both personal and business checks, as well as business forms and some accessories. In addition, manufacturing efficiencies and other benefits resulting from our continued cost reduction initiatives resulted in a reduction in total cost of revenue of approximately \$10.0 million in 2019. Total cost of revenue as a percentage of total revenue increased as compared to 2018, due in large part to the increase in service revenue, including the impact of acquisitions, as well as the increase in shipping, materials and medical costs, partially offset by price increases in certain of our Checks sales channels.

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

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
SG&A expense	\$ 841,658	\$ 891,693	\$ 854,000	(5.6%)	4.4%
SG&A expense as a percentage of total revenue	47.0 %	44.4 %	42.7 %	2.6 pt.	1.7 pt.

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 initiatives such as transforming our brand and our website and expanding our sales capabilities, as well as ongoing new costs related to software-as-a-service 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.

The increase in SG&A expense for 2019, as compared to 2018, was driven by incremental costs of approximately \$20.2 million from businesses acquired, excluding acquisition amortization, as well as investments in our One Deluxe transformation, increased commission rates on customer referrals, an increase of \$7.0 million in share-based compensation expense, driven by an increase in the level of equity awards in 2019, a \$6.5 million increase in medical costs and increased sales incentives in our data-driven marketing business. These increases in SG&A expense were partially offset by various expense reduction initiatives of approximately \$40.0 million. Total SG&A expense as a percentage of revenue increased for 2019, as compared to 2018, as the investments in our transformation more than offset the impact of cost reductions.

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

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Acquisition amortization (SG&A portion)	\$ 42,955	\$ 59,108	\$ 66,965	\$ (16,153)	\$ (7,857)
Legal-related (benefit) costs	(2,164)	6,420	10,502	(8,584)	(4,082)
CEO transition costs	(30)	9,390	7,210	(9,420)	2,180
Loss (gain) from sales of businesses and customer lists ⁽¹⁾	1,846	124	(15,641)	1,722	15,765

⁽¹⁾ Further information regarding the 2018 asset sales 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.

Restructuring and Integration Expense

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Restructuring and integration expense	\$ 75,874	\$ 71,248	\$ 19,737	\$ 4,626	\$ 51,511

We are currently 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)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Asset impairment charges	\$ 97,973	\$ 390,980	\$ 101,319	\$ (293,007)	\$ 289,661

Further information regarding our asset 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*.

During 2020, we recorded asset impairment charges of \$98.0 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.

During 2019, we recorded asset impairment charges of \$391.0 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.

During 2018, we recorded asset impairment charges of \$101.3 million related primarily to the goodwill and indefinite-lived trade name of our former Small Business Services Indirect reporting unit.

Interest Expense

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Interest expense	\$ 23,140	\$ 34,682	\$ 27,112	(33.3%)	27.9%
Weighted-average debt outstanding ⁽¹⁾	1,016,896	925,715	796,667	9.8%	16.2%
Weighted-average interest rate ⁽¹⁾	2.12 %	3.54 %	3.21 %	(1.42) pt.	0.33 pt.

⁽¹⁾ Amounts for 2018 include our obligations under finance leases, which were reported as debt in our consolidated balance sheets prior to the adoption of Accounting Standards Update (ASU) No. 2016-02, *Leasing*, and related amendments on January 1, 2019.

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. Those funds were subsequently repaid and our total debt outstanding was \$840.0 million as of December 31, 2020, compared to \$883.5 million as of December 31, 2019.

The increase in interest expense for 2019, as compared to 2018, was driven primarily by our higher weighted-average debt level that funded share repurchases throughout 2019 and 2018 and acquisitions throughout 2018, as well as our higher weighted-average interest rate during 2019.

Income Tax Provision

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Income tax provision	\$ 21,680	\$ 14,267	\$ 63,001	52.0%	(77.4%)
Effective tax rate	70.9 %	(7.7 %)	29.6 %	78.6 pt.	(37.3) pt.

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 68.5 point increase in our tax rate in 2020 and the tax impact of share-based compensation resulted in an 8.5 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, resulting in a 4.5 point increase in our tax rate in 2020, as compared to 2019. Partially offsetting these increases in our effective tax rate was a 3.2 decrease in our state income tax rate. Further information regarding our effective tax rates for 2020 and 2019 can be found under the caption "Note 11: Income Tax Provision" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. We anticipate that our annual effective income tax rate for 2021 will be approximately 25%.

The decrease in our effective income tax rate for 2019, as compared to 2018, was driven primarily by the nondeductible portion of the goodwill impairment charges in each period, combined with the impact of the asset impairment charges on pretax (loss) income in each period. The larger non-deductible goodwill impairment charge in 2019 resulted in a decrease in our effective tax rate of 36.4 points, as compared to 2018. 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, decreasing our tax rate 4.5 points. Partially offsetting these decreases in our effective income tax rate was an increase in our state income tax rate of 1.9 points, as compared to 2018. Further information regarding our effective tax rates for 2019 and 2018 can be found under the caption "Note 11: 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)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Net income (loss)	\$ 8,899	\$ (199,897)	\$ 149,630	104.5 %	(233.6 %)
Diluted earnings (loss) per share	0.19	(4.65)	3.16	104.1 %	(247.2 %)
Adjusted diluted EPS ⁽¹⁾	5.08	6.82	6.88	(25.5 %)	(0.9 %)

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

The change in net income and diluted EPS for 2020, as compared to 2019, was driven by the factors outlined in *Executive Overview – 2020 results vs. 2019*. The decrease in adjusted diluted 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 and growth in treasury management revenue.

We reported a net loss and diluted loss per share for 2019, compared to net income and diluted EPS for 2018. The primary factor contributing to the net loss in 2019 was a \$289.7 million increase in asset impairment charges. Other factors that contributed to the net loss in 2019 included:

- an increase in restructuring, integration and other costs of \$58.3 million in support of our growth strategies and to increase our efficiency;
- the continuing secular decline in check and forms usage;
- investments in our One Deluxe transformation;
- increased shipping and material rates, medical costs and interest expense;
- organic declines in web and hosted solutions and marketing and promotional solutions revenue;
- gains from sales of businesses and customer lists of \$15.6 million in 2018;
- increased share-based compensation expense, driven by an increase in the level of equity awards in 2019; and
- an unfavorable effective income tax rate.

Partially offsetting these increases in net loss and diluted loss per share were:

- a benefit in 2019 of approximately \$50.0 million from continuing initiatives to reduce our cost structure;
- lower shares outstanding in 2019;
- the benefit of price increases in certain of our Checks sales channels;
- a \$7.9 million decrease in acquisition amortization expense; and
- incremental earnings from businesses acquired.

The decrease in adjusted diluted EPS for 2019, as compared to 2018, was driven primarily by the continuing decline in checks, business forms and some accessories, investments in our One Deluxe transformation, increased shipping and material rates, increased medical costs and interest expense, lower organic web and hosted solutions and marketing and promotional solutions revenue, increased referral costs and continued check pricing pressure within our financial institution sales channel. These decreases in adjusted diluted EPS were partially offset by benefits from our cost reduction initiatives, lower shares outstanding in 2019, the benefit of price increases in certain of our Checks sales channels and incremental earnings from businesses acquired.

Adjusted EBITDA

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Adjusted EBITDA	\$ 364,542	\$ 480,866	\$ 509,297	(24.2%)	(5.6%)
Adjusted EBITDA margin	20.4 %	23.9 %	25.5 %	(3.5) pt.	(1.6) pt.

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 software-as-a-service 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.

Adjusted EBITDA decreased for 2019, as compared to 2018, driven primarily by the continuing decline in checks, business forms and some accessories, investments in our One Deluxe transformation, increased shipping and material rates, increased medical costs and lower organic web and hosted solutions and marketing and promotional solutions revenue. In addition, referral costs increased and check pricing pressure within our financial institution sales channel continued. These decreases in adjusted EBITDA were partially offset by benefits from our cost reduction initiatives, price increases in certain of our Checks sales channels and incremental earnings from businesses acquired.

Reconciliation of Non-GAAP Financial Measures

We have not reconciled adjusted EBITDA outlook guidance for 2021 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.

Free cash flow – 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 share repurchases, dividends, mandatory and discretionary debt reduction and acquisitions or other strategic investments.

Net cash provided by operating activities reconciles to free cash flow as follows:

<i>(in thousands)</i>	Year Ended December 31,		
	2020	2019	2018
Net cash provided by operating activities	\$ 217,553	\$ 286,653	\$ 339,315
Purchases of capital assets	(62,638)	(66,595)	(62,238)
Free cash flow	\$ 154,915	\$ 220,058	\$ 277,077

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 and that there is less debt than the most comparable GAAP measure indicates.

Total debt reconciles to net debt as follows:

<i>(in thousands)</i>	December 31, 2020	December 31, 2019
Total debt	\$ 840,000	\$ 883,500
Cash and cash equivalents	(123,122)	(73,620)
Net debt	\$ 716,878	\$ 809,880

Liquidity – We consider liquidity to be an important metric for demonstrating the amount of cash that is available or that could be readily 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.

<i>(in thousands)</i>	December 31, 2020
Cash and cash equivalents	\$ 123,122
Amount available for borrowing under revolving credit facility	302,342
Liquidity	\$ 425,464

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 reconciles to adjusted diluted EPS as follows:

(in thousands, except per share amounts)	Year Ended December 31,		
	2020	2019	2018
Net income (loss)	\$ 8,899	\$ (199,897)	\$ 149,630
Net income attributable to non-controlling interest	(91)	—	—
Net income (loss) attributable to Deluxe	8,808	(199,897)	149,630
Asset impairment charges	97,973	390,980	101,319
Acquisition amortization	55,867	70,720	78,577
Restructuring, integration and other costs	80,665	79,511	21,203
CEO transition costs ⁽¹⁾	(30)	9,390	7,210
Share-based compensation expense	21,824	19,138	11,689
Acquisition transaction costs	8	215	1,719
Certain legal-related (benefit) expense	(2,164)	6,420	10,502
Loss (gain) on sales of businesses and customer lists	1,846	124	(15,641)
Loss on debt retirement	—	—	453
Adjustments, pre-tax	255,989	576,498	217,031
Income tax provision impact of pre-tax adjustments ⁽²⁾	(49,941)	(81,868)	(39,715)
Impact of federal tax reform	—	—	(1,700)
Adjustments, net of tax	206,048	494,630	175,616
Adjusted net income attributable to Deluxe	214,856	294,733	325,246
Income allocated to participating securities	(77)	(414)	(1,336)
Re-measurement of share-based awards classified as liabilities	(803)	64	(471)
Adjusted income attributable to Deluxe available to common shareholders	\$ 213,976	\$ 294,383	\$ 323,439
Weighted-average shares and potential common shares outstanding	42,142	43,029	46,991
Adjustment ⁽³⁾	(27)	158	(2)
Adjusted weighted-average shares and potential common shares outstanding	42,115	43,187	46,989
GAAP diluted earnings (loss) per share	\$ 0.19	\$ (4.65)	\$ 3.16
Adjustments, net of tax	4.89	11.47	3.72
Adjusted Diluted EPS	\$ 5.08	\$ 6.82	\$ 6.88

⁽¹⁾ In 2019 and 2018, 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 calculation of adjusted diluted EPS differs from that used in the GAAP diluted EPS calculations because of the impact on the GAAP calculations of the net losses in certain of the periods in each year.

Adjusted EBITDA – We believe that adjusted EBITDA is useful in evaluating our operating performance, as the calculation eliminates 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 adjusted EBITDA 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 depicts 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.

Net income (loss) reconciles to adjusted EBITDA as follows:

(in thousands)	Year Ended December 31,		
	2020	2019	2018
Net income (loss)	\$ 8,899	\$ (199,897)	\$ 149,630
Non-controlling interest	(91)	—	—
Depreciation and amortization expense	110,792	126,036	131,100
Interest expense	23,140	34,682	27,112
Income tax provision	21,680	14,267	63,001
Asset impairment charges	97,973	390,980	101,319
Restructuring, integration and other costs	80,665	79,511	21,203
CEO transition costs ⁽¹⁾	(30)	9,390	7,210
Share-based compensation expense	21,824	19,138	11,689
Acquisition transaction costs	8	215	1,719
Certain legal-related (benefit) expense	(2,164)	6,420	10,502
Loss (gain) on sales of businesses and customer lists	1,846	124	(15,641)
Loss on debt retirement	—	—	453
Adjusted EBITDA	\$ 364,542	\$ 480,866	\$ 509,297

⁽¹⁾ In 2019 and 2018, 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, sales and human resources 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. Our restructuring and integration activities began to increase during the second half of 2019, as we began pursuing several initiatives designed to focus our business behind our growth strategy and to increase our efficiency. 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 related to optimizing our business processes in line with our growth strategies. While we reduced certain expenditures during the first half of 2020 in response to the COVID-19 pandemic, we subsequently decided to resume certain capital projects and to continue important system implementation work.

The majority of the employee reductions included in our restructuring and integration accruals as of December 31, 2020 are expected to be completed in the first quarter of 2021, and we expect most of the related severance payments to be paid in the first half of 2021. As a result of our employee reductions, we realized cost savings of approximately \$25.0 million in SG&A expense and \$5.0 million in total cost of revenue in 2020, in comparison to our 2019 results of operations, which represents a portion of the total net cost reductions we realized in 2020. For those employee reductions included in our restructuring and integration accruals through December 31, 2020, we expect to realize cost savings of approximately \$35.0 million in SG&A expense and \$1.0 million in total cost of revenue in 2021, in comparison to our 2020 results of operations, which represents a portion of the total net cost reductions we expect to realize in 2021. In addition, we closed 24 facilities during 2020 and we expect to close additional facilities during 2021. These facilities primarily contain sales and administrative functions, and most of the impacted employees have converted to a work-from-home model. We anticipate annual savings of more than \$10.0 million from these facility closures, once they are complete.

CEO TRANSITION COSTS

In April 2018, we announced the retirement of Lee Schram, our former CEO. Mr. Schram remained employed under the terms of a transition agreement through March 1, 2019. Under the terms of this agreement, we provided certain benefits to Mr. Schram, including a transition bonus in the amount of \$2.0 million that was paid in March 2019. In addition, modifications were made to certain of his share-based payment awards. In conjunction with the CEO transition, we offered retention agreements to

certain members of our management team under which each employee was entitled to receive a cash bonus equal to his or her annual base salary or up to 1.5 times his or her annual base salary if he or she remained employed during the retention period, generally from July 1, 2018 to December 31, 2019, and complied with certain covenants. In addition to these expenses, we incurred certain other costs related to the CEO transition process, including executive search, legal, travel and board of directors fees in 2018. During 2019, we incurred consulting fees related to the evaluation of our strategic plan and we expensed the majority of the current CEO's signing bonus. CEO transition costs are included in SG&A expense on the consolidated statements of income (loss) and were \$9.4 million in 2019 and \$7.2 million in 2018. Accruals for CEO transition costs were \$4.4 million as of December 31, 2019 and were included in accrued liabilities on the consolidated balance sheet. All of these amounts were paid during 2020.

SEGMENT RESULTS

Effective January 1, 2020, we reorganized our reportable business segments to align with structural and management reporting changes in support of our growth strategy. We currently operate 4 reportable 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 19: Business Segment Information" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report, where information regarding our product and service offerings can also be found.

Payments

Results for our Payments segment were as follows:

<i>(in thousands)</i>	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Total revenue	\$301,901	\$269,573	\$224,546	12.0%	20.1%
Adjusted EBITDA	68,117	74,384	59,016	(8.4%)	26.0%
Adjusted EBITDA margin	22.6 %	27.6 %	26.3 %	(5.0) pt.	1.3 pt.

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 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 expected COVID-19-related delays in new customer implementations. Throughout 2020, we expanded the number of financial institution partners that utilize our full suite of capabilities, and during 2021, we will continue to work with these partners to on-board these services and to expand the number of full-service clients.

The increase in total revenue for 2019, as compared to 2018, was driven by incremental treasury management revenue of approximately \$49.1 million from businesses acquired. Information regarding our 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. Partially offsetting this increase in revenue was a decrease in treasury management volume of \$3.6 million due to a customer electing to bring its services in-house, as well as a reduction in software maintenance revenue.

The increases in adjusted EBITDA and adjusted EBITDA margin for 2019, as compared to 2018, were primarily driven by incremental earnings of the acquired businesses, as well as continuing cost reduction initiatives across functional areas. Partially offsetting these increases were investments in our One Deluxe strategy and increased medical costs in 2019.

Cloud Solutions

Results for our Cloud Solutions segment were as follows:

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Total revenue	\$252,773	\$318,383	\$307,589	(20.6%)	3.5%
Adjusted EBITDA	61,580	77,199	69,976	(20.2%)	10.3%
Adjusted EBITDA margin	24.4 %	24.2 %	22.7 %	0.2 pt.	1.5 pt.

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 sales and marketing costs, and the benefit of 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. We expect that the loss of revenue associated with certain product exits in the fourth quarter of 2020 will continue to impact revenue in 2021, but we anticipate adjusted EBITDA margins to remain in the low-to-mid 20% range.

The increase in total revenue for 2019, as compared to 2018, was driven by incremental revenue from businesses acquired of approximately \$14.6 million. Information regarding our 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. In addition, data-driven marketing revenue increased \$10.9 million, as compared to 2018, driven by new campaigns and growth in existing client spend. Partially offsetting these revenue increases was softness in web and hosted solutions driven primarily by the events that occurred in the third quarter of 2019.

The increase in adjusted EBITDA and adjusted EBITDA margin for 2019, as compared to 2018, was driven by growth in data-driven marketing revenue and the contribution of the acquired businesses, as well as cost saving initiatives designed to bring our cost structure in line with the level of web and hosted solutions revenue. In addition, adjusted EBITDA margin benefited from a more favorable product mix.

Promotional Solutions

Results for our Promotional Solutions segment were as follows:

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Total revenue	\$529,649	\$640,892	\$658,357	(17.4%)	(2.7%)
Adjusted EBITDA	66,620	101,293	105,586	(34.2%)	(4.1%)
Adjusted EBITDA margin	12.6 %	15.8 %	16.0 %	(3.2) pt.	(0.2) pt.

The decrease in total revenue for 2020, as compared to 2019, was driven primarily by the impact of the COVID-19 pandemic, as our small business and enterprise customers reacted to the current 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. Revenue for the fourth quarter of 2020 increased 15.3% over the third quarter of 2020, primarily in marketing and promotional solutions, partially due to seasonality in certain of our products. We believe revenue will continue to improve in 2021, but we are not expecting a rapid recovery in this segment until COVID-19 impacts abate.

The decrease in adjusted EBITDA for 2020, as compared to 2019, was primarily driven 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 actions taken in response to COVID-19, various cost reductions unrelated to our response to the COVID-19 pandemic, primarily 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 actions taken in response to COVID-19 and the other cost savings realized. We are anticipating improved adjusted EBITDA margins in 2021, as a result of cost reduction actions taken in 2020, including changes in key distribution relationships that will continue in 2021.

The decrease in total revenue for 2019, as compared to 2018, was driven primarily by the continued secular decline in business forms and some accessories, the loss of a large customer and a decline in promotional products volume.

The decreases in adjusted EBITDA and adjusted EBITDA margin for 2019, as compared to 2018, were driven by the lower order volume, investments in our One Deluxe strategy, increased medical costs and higher materials and shipping rates. These decreases were partially offset by the benefits of our cost reductions initiatives, including efficiency initiatives and spending reductions.

Checks

Results for our Checks segment were as follows:

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Total revenue	\$706,458	\$779,867	\$807,533	(9.4%)	(3.4%)
Adjusted EBITDA	341,705	402,662	415,221	(15.1%)	(3.0%)
Adjusted EBITDA margin	48.4 %	51.6 %	51.4 %	(3.2) pt.	0.2 pt.

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. Based on our client retention rate and new business that we won during 2020, we anticipate revenue declines in 2021 to return to mid-single digits.

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 actions taken in response to COVID-19. We continue to focus on scaling our operating expenses to match anticipated check volumes, while we make strategic investments in this business.

The decrease in total revenue for 2019, as compared to 2018, was primarily due to the reduction in orders stemming from the continuing secular decline in check usage. This decrease in revenue was partially offset by the benefit of price increases in certain sales channels.

The decrease in adjusted EBITDA for 2019, as compared to 2018, was due primarily to the revenue decline, increased material and shipping rates, as well as increased referral and medical costs. These decreases were partially offset by benefits from our cost reduction initiatives, including lower advertising expense driven by advertising print reduction initiatives, efficiency initiatives and spending reductions. These cost reductions drove the increase in adjusted EBITDA margin for 2019, as compared to 2018.

CASH FLOWS AND LIQUIDITY

As of December 31, 2020, we held cash and cash equivalents of \$123.1 million and cash and cash equivalents included in funds held for customers of \$106.3 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)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Net cash provided by operating activities	\$ 217,553	\$ 286,653	\$ 339,315	\$ (69,100)	\$ (52,662)
Net cash used by investing activities	(56,093)	(72,397)	(253,059)	16,304	180,662
Net cash used by financing activities	(110,555)	(190,148)	(62,180)	79,593	(127,968)
Effect of exchange rate change on cash, cash equivalents, restricted cash and restricted cash equivalents	3,693	5,444	(7,636)	(1,751)	13,080
Net change in cash, cash equivalents, restricted cash and restricted cash equivalents	\$ 54,598	\$ 29,552	\$ 16,440	\$ 25,046	\$ 13,112
Free cash flow ⁽¹⁾	\$ 154,915	\$ 220,058	\$ 277,077	\$ (65,143)	\$ (57,019)

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

To maintain liquidity at the onset of the COVID-19 pandemic, we took steps to reduce discretionary spending and other expenditures in line with revenue declines. These steps included temporary salary reductions for all salaried employees, including our leadership team and board of directors, project delays, furloughs and other actions. We also delayed U.S. federal payroll tax payments as permitted by the CARES Act. As a result of these actions and our stronger than expected performance, we generated operating cash flow of \$217.6 million and free cash flow of \$154.9 million in 2020. This allowed us to end the temporary salary reductions, effective July 1, 2020. In addition, during the second half of 2020, we repaid \$300.0 million of the amount drawn on our revolving credit facility, and we ended 2020 with liquidity of \$425.5 million, comprised of cash on hand and availability on our credit facility.

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, actions taken in response to COVID-19, such as the temporary salary reductions and other actions, 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.

The \$52.7 million decrease in net cash provided by operating activities for 2019, as compared to 2018, was due primarily to increased restructuring and integration activities in support of our growth strategy and to increase efficiency, the continuing secular decline in check and forms usage, the payment of certain legal-related expenses, including \$12.5 million accrued in the prior year and paid in the first quarter of 2019, an increase of \$10.1 million in medical benefit payments and a \$7.3 million increase in interest payments. These decreases in operating cash flow were partially offset by benefits of our cost reduction initiatives, a \$27.5 million reduction in income tax payments in 2019, the timing of accounts receivable collections and annual billings in certain of our businesses, and Checks price increases in certain sales channels.

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

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Medical benefit payments	\$ 43,419	\$ 41,714	\$ 31,610	\$ 1,705	\$ 10,104
Prepaid product discount payments	33,613	25,637	23,814	7,976	1,823
Income tax payments	24,701	60,764	88,253	(36,063)	(27,489)
Interest payments	22,853	33,227	25,910	(10,374)	7,317
Performance-based compensation payments ⁽¹⁾	20,832	23,583	21,780	(2,751)	1,803
Severance payments	14,289	10,585	6,971	3,704	3,614

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

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 customer lists of \$11.1 million in 2020.

Net cash used by investing activities for 2019 was \$180.7 million lower than in 2018, driven primarily by a decrease of \$183.7 million in payments for acquisitions. Our One Deluxe growth strategy focuses on profitable organic growth, supplemented by acquisitions, rather than being dependent on acquisitions for growth. As such, the amount paid for acquisitions in 2019 decreased significantly from 2018. Information about our 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 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 the year. 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.

Net cash used by financing activities for 2019 was \$128.0 million higher than in 2018, driven primarily by a net decrease in borrowings on long-term debt of \$227.6 million, as our borrowings were higher in 2018 to fund acquisitions and share repurchases. This increase in cash used by financing activities was partially offset by a decrease in share repurchases of \$81.5 million.

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

(in thousands)	2020	2019	2018	Change	
				2020 vs. 2019	2019 vs. 2018
Purchases of capital assets	\$ (62,638)	\$ (66,595)	\$ (62,238)	\$ 3,957	\$ (4,357)
Cash dividends paid to shareholders	(50,746)	(51,742)	(56,669)	996	4,927
Net change in debt	(43,500)	(26,500)	201,147	(17,000)	(227,647)
Payments for common shares repurchased	(14,000)	(118,547)	(200,000)	104,547	81,453
Purchases of customer lists	(11,082)	—	—	(11,082)	—
Payments for acquisitions, net of cash acquired	—	(8,251)	(191,903)	8,251	183,652
Employee taxes paid for shares withheld	(2,956)	(3,935)	(7,977)	979	4,042
Net change in customer funds obligations	(168)	12,598	20,279	(12,766)	(7,681)
Proceeds from sale of facilities	9,713	—	—	9,713	—
Proceeds from issuing shares under employee plans	3,747	3,198	7,523	549	(4,325)

As of December 31, 2020, our foreign subsidiaries held cash and cash equivalents of \$98.7 million. Deferred income taxes have not been recognized on unremitted earnings of our foreign subsidiaries, as these amounts are intended to be reinvested indefinitely in the operations of those subsidiaries. If we were to repatriate all of our foreign cash and cash equivalents into the U.S. at one time, we estimate we would incur a foreign withholding tax liability of approximately \$5.0 million.

As of December 31, 2020, \$302.3 million was available for borrowing under our \$1.15 billion revolving credit facility. Our credit facility includes an accordion feature allowing us, subject to lender consent, to expand the facility to \$1.425 billion. We anticipate that net cash generated by operating activities, along with cash and cash equivalents on hand and availability under our revolving credit facility, will be sufficient to support our operations 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

Our total debt was \$840.0 million as of December 31, 2020, a decrease of \$43.5 million from December 31, 2019. Further information concerning our outstanding debt can be found under the caption "Note 15: Debt" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. Information regarding our debt service obligations can be found under *Off-Balance Sheet Arrangements, Guarantees and Contractual Obligations*.

Our capital structure for each period was as follows:

(in thousands)	December 31, 2020		December 31, 2019		Change
	Amount	Period-end interest rate	Amount	Period-end interest rate	
Fixed interest rate ⁽¹⁾	\$ 200,000	3.3 %	\$ 200,000	3.2 %	\$ —
Floating interest rate	640,000	1.6 %	683,500	3.0 %	(43,500)
Total debt	840,000	2.0 %	883,500	3.0 %	(43,500)
Shareholders' equity	540,838		570,861		(30,023)
Total capital	\$ 1,380,838		\$ 1,454,361		\$ (73,523)

⁽¹⁾ The fixed interest rate amount represents the amount drawn under our revolving credit facility 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. To maintain liquidity during the COVID-19 pandemic, we did not repurchase any of our common shares during the last 3 quarters of 2020. During the first quarter of 2020, we repurchased 0.5 million shares for \$14.0 million. As of December 31, 2020, \$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, 2020, the total availability under our revolving credit facility was \$1.15 billion. The facility includes an accordion feature allowing us, subject to lender consent, to increase the credit commitment to an aggregate amount not exceeding \$1.425 billion. The credit facility matures in March 2023. Our quarterly commitment fee ranges from 0.175% to 0.35%, based on our leverage ratio.

Borrowings under the credit facility agreement are collateralized by substantially all of our personal and intangible property. The credit agreement governing the credit facility contains customary covenants regarding limits on levels of subsidiary indebtedness and capital expenditures, liens, investments, acquisitions, certain mergers, certain asset sales outside the ordinary course of business and change in control as defined in the agreement. The agreement also requires us to maintain certain financial ratios, including a maximum leverage ratio of 3.5 and a minimum ratio of consolidated earnings before interest and taxes to consolidated interest expense, as defined in the credit agreement, of 3.0. Additionally, the agreement contains customary representations and warranties including, as a condition to borrowing, that all such representations and warranties are true and correct in all material respects on the date of the borrowing, including representations as to no material adverse change in our business, assets, operations or financial condition. We were in compliance with all debt covenants as of December 31, 2020, and we anticipate that we will remain in compliance with our debt covenants throughout 2021.

As of December 31, 2020, amounts were available for borrowing under our revolving credit facility as follows:

(in thousands)	Total available
Revolving credit facility commitment	\$ 1,150,000
Amount drawn on revolving credit facility	(840,000)
Outstanding letters of credit ⁽¹⁾	(7,658)
Net available for borrowing as of December 31, 2020	\$ 302,342

⁽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" 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 \$33.6 million for 2020, \$25.6 million for 2019 and \$23.8 million for 2018.

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 our consolidated balance sheets. These accruals were \$14.4 million as of December 31, 2020 and \$14.7 million as of December 31, 2019. Accruals for prepaid product discounts included in other non-current liabilities on our consolidated balance sheets were \$3.7 million as of December 31, 2019.

OFF-BALANCE SHEET ARRANGEMENTS, GUARANTEES AND CONTRACTUAL OBLIGATIONS

It is not our general business practice to enter into off-balance sheet arrangements or to guarantee the performance of third parties. 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, 2020 or December 31, 2019. Further information regarding our liabilities related to self-insurance and litigation can be found under the caption "Note 17: Other Commitments and Contingencies" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report.

We are not engaged in any transactions, arrangements or other relationships with unconsolidated entities or other third parties that are reasonably likely to have a material effect on our liquidity or on our access to, or requirements for, capital resources. We have not established any special purpose entities other than our agreement to form MedPay Exchange 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 Topic 810, *Consolidation*. Further information regarding our accounting for this entity can be found 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 have not entered into any material related party transactions during the past 3 years.

As of December 31, 2020, our contractual obligations were as follows:

<i>(in thousands)</i>	Total	2021	2022 and 2023	2024 and 2025	2026 and thereafter
Long-term debt	\$ 840,000	\$ —	\$ 840,000	\$ —	\$ —
Operating lease obligations	108,827	13,231	28,021	20,773	46,802
Purchase obligations	107,440	55,179	38,129	11,778	2,354
Other non-current liabilities	64,802	41,905	17,903	2,717	2,277
Total contractual obligations	\$ 1,121,069	\$ 110,315	\$ 924,053	\$ 35,268	\$ 51,433

Purchase obligations include amounts due under executed contracts with third-party service providers. These contracts are primarily for information technology services, including cloud computing and professional services contracts related to the

build-out of the technology platforms discussed in *Executive Overview*. Purchase obligations also include direct mail advertising agreements and data agreements. We routinely issue purchase orders to numerous vendors for the purchase of inventory and other supplies. These purchase orders are not included in the purchase obligations presented here, as our business partners typically allow us to cancel these purchase orders as necessary to accommodate business needs. Of the purchase obligations included in the table above, \$36.1 million allow for early termination upon the payment of early termination fees. If we were to terminate these agreements, we would have incurred early termination fees of \$3.6 million as of December 31, 2020. Of the operating lease obligations included in the table above, \$42.7 million allow for early termination upon the payment of early termination fees. If we were to terminate these agreements, we would have incurred early termination fees of approximately \$4.4 million as of December 31, 2020.

Other non-current liabilities on the consolidated balance sheet as of December 31, 2020 consisted primarily of amounts due under our deferred compensation and postretirement pension plans, the fair value of our interest rate swap agreement, the liability for federal payroll tax payments that we deferred under the CARES Act, and income tax liabilities related to uncertain tax positions and prior year tax returns. Of the \$43.2 million reported as other non-current liabilities on the consolidated balance sheet as of December 31, 2020, \$20.3 million is excluded from the obligations shown in the table above. The excluded amounts, including the current portion of each liability, are comprised primarily of the following:

- Fair value of interest rate swap agreement – We have no plans, at this time, to terminate the interest rate swap agreement.
- Income tax liabilities – Due to the nature of the underlying liabilities and the extended time frame often needed to resolve income tax uncertainties, we cannot make reliable estimates of the amount or timing of cash payments that may be required to settle these liabilities.
- A portion of the amount due under our deferred compensation plan – Under this plan, some employees may begin receiving payments upon the termination of employment or disability, and we cannot predict when these events will occur. As such, \$3.1 million of our deferred compensation liability as of December 31, 2020 is excluded from the obligations shown in the table above.
- Other non-current liabilities that are not settled in cash, such as incentive compensation that will be settled by issuing shares of our common stock and deferred revenue.

The table of contractual obligations does not include the following:

- Benefit payments under our postretirement medical benefit plan – We have the option of paying benefits from the accumulated assets of the plan or from the general funds of the company. Additionally, we expect the plan assets to earn income over time. As such, we cannot predict when or if payments from our general funds will be required. We anticipate that we will utilize plan assets to pay a majority of the benefits due during 2021. Our postretirement benefit plan was overfunded by \$71.2 million as of December 31, 2020.
- Income tax payments, which are dependent upon our taxable income.

CRITICAL ACCOUNTING POLICIES

Our critical accounting policies 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 utilized 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.

The full impact of the COVID-19 pandemic continues to evolve. As such, we are uncertain of the full impact the pandemic will have on our financial condition, liquidity and/or results of operations. This uncertainty affected several of the assumptions made and estimates used in the preparation of our 2020 consolidated financial statements. Further information can be found under the caption "Note 20: Risks and Uncertainties" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report, as well as in Part I, Item 1A of this report.

Goodwill Impairment

As of December 31, 2020, goodwill totaled \$736.8 million, which represented 39.3% 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 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.

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.

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 a qualitative analysis for the reporting units that changed, with the exception of our Direct-to-Consumer reporting unit, which is part of our new 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 \$35.0 million, or 26%.

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 a quantitative analysis for the reporting units that changed as a result of the realignment. This quantitative analysis, as of January 1, 2020, indicated that the estimated fair values of our reporting units exceeded their carrying values by approximate amounts between \$37.0 million and \$954.0 million, or by amounts between 121% and 189% above the carrying values of their net assets.

On January 30, 2020, the World Health Organization (WHO) announced a global health emergency due to an outbreak of COVID-19 originating in Wuhan, China and the risks to the international community as the virus spread globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic, based on the rapid increase in exposure globally. Following the pandemic designation, 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. 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. As such, we recorded goodwill impairment charges of \$63.4 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, \$62.8 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. We may have not yet experienced the full impact of the pandemic or its resulting impact on our small business customers and thus, actual events may differ from our assumptions. The sweeping nature of the pandemic makes it extremely difficult to predict how our business and operations will 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.

2020 annual impairment analysis – In completing the 2020 annual impairment analysis of goodwill, 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 \$490.0 million and \$954.0 million, 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 \$100.0 million and \$210.0 million, 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. This impairment assessment is sensitive to changes in forecasted cash flows, as well as our selected discount rate of 11%. Changes in the reporting units' forecast assumptions and estimates could materially affect the estimation of the fair value of these reporting units.

Information regarding our 2019 and 2018 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.

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. Key assumptions used in these calculations include same-customer revenue growth rates, estimated earnings, estimated customer 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.

Income Taxes

When preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves estimating our actual current tax expense based on expected taxable income, statutory tax rates, tax credits allowed in the various jurisdictions in which we operate, and risks associated with uncertain tax positions, together with assessing temporary and permanent differences resulting from the differing treatment of certain items between income tax return and financial reporting requirements. In interim reporting periods, we use an estimate of our annual effective tax rate based on the facts available at the time. Changes in the jurisdictional mix or the estimated amount of annual pretax income could impact our estimated effective tax rate for interim periods. The actual effective income tax rate is calculated at the end of the year.

We recognize deferred tax assets and liabilities for temporary differences between the financial reporting basis of assets and liabilities and their respective tax reporting bases, using the enacted tax rates and laws that will be in effect when we expect the temporary differences to reverse. We must assess the likelihood that our deferred tax assets will be realized through future taxable income, and to the extent we believe that realization is not likely, we must establish a valuation allowance against those deferred tax assets. Judgment is required in evaluating our tax positions, and in determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against our net deferred tax assets. As of December 31, 2020, we had net deferred tax liabilities of \$5.2 million, including valuation allowances of \$11.5 million.

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. As of December 31, 2020, our liability for uncertain tax positions, including accrued interest and penalties, was \$3.9 million, excluding tax benefits of deductible interest and the federal benefit of deductible state income tax. Further information regarding our unrecognized tax benefits can be found under the caption "Note 11: Income Tax Provision" in the Notes to Consolidated Financial Statements appearing in Part II, Item 8 of this report. The ultimate outcome of tax matters may differ from our estimates and assumptions. Unfavorable settlement of a 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.

A one-percentage-point change in our effective income tax rate would have resulted in a \$0.3 million change in income tax expense for 2020. The determination of our provision for income taxes, deferred income taxes and unrecognized tax

positions requires judgment, the use of estimates, and the interpretation and application of complex tax laws. As such, the amounts reflected in our consolidated financial statements may require adjustment in the future as additional facts become known or circumstances change. If actual results differ from estimated amounts, our effective income tax rate and related tax balances would be affected.

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 sales commissions related to obtaining check supply and treasury management solution contracts. These amounts, which totaled \$9.2 million as of December 31, 2020, 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 3 to 5 years. We expense sales commissions 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 2020 and those not yet adopted 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

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. 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. As of December 31, 2020, our total debt was comprised of \$840.0 million drawn under our revolving credit facility at a weighted-average interest rate of 2.0%. The interest rate on the majority of the amount drawn under our revolving credit facility is variable and reflects current market rates. As such, the related carrying amount reported on the consolidated balance sheets approximates fair value. Our revolving credit facility matures in March 2023.

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 the amount drawn under our revolving credit facility. The interest rate swap, which terminates in March 2023 when our revolving credit facility matures, 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 \$7.2 million as of December 31, 2020 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 rates would have resulted in an \$8.2 million change in interest expense for 2020.

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

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, 2020 and 2019, 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, 2020, 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, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 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, 2020, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Change in Accounting Principle

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.

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.

Goodwill Impairment Assessment – Promotional Solutions Reporting Unit

As described in Notes 1, 3 and 8 to the consolidated financial statements, the Company's consolidated goodwill balance was \$736.8 million as of December 31, 2020 and the goodwill associated with the Promotional Solutions reporting unit was \$62.9 million. Management evaluates the carrying value of goodwill as of July 31 of each year and between annual evaluations if events occur or circumstances change that would indicate a possible impairment. In March 2020 as a result of the COVID-19 pandemic, management observed a decline in the market valuation of their common shares and management determined that the global response to the outbreak negatively impacted their estimates of expected future cash flows. After management's consideration of economic, market and industry conditions, cost factors, the overall financial performance of the reporting unit and the last quantitative analysis they completed, management concluded that a triggering event had occurred for the Promotional Solutions reporting unit. As such, management completed a quantitative goodwill impairment analysis for the Promotional Solutions reporting unit as of March 31, 2020. Based on the results of the quantitative goodwill impairment analysis, management concluded that the goodwill of the Promotional Solutions reporting unit was partially impaired and recorded a goodwill impairment charge of \$63.4 million in the first quarter of 2020. In completing the annual impairment analysis of goodwill, management elected to perform a quantitative analysis for the Promotional Solutions reporting unit. No goodwill impairment charges were recorded as a result of the annual impairment analysis. When performing a quantitative analysis of goodwill, management calculates the estimated fair value of the reporting unit and compares this amount to the carrying amount of the reporting unit's net assets, including goodwill. Management utilizes a discounted cash flow model to calculate the estimated fair value of a reporting unit. This approach is a valuation technique under which management estimates future cash flows using the reporting unit's financial forecast from the perspective of an unrelated market participant. In determining the estimated fair values of the Company's reporting unit, management is required to estimate a number of factors, including revenue growth rates, terminal growth rate, direct costs, the discount rate, and the allocation of shared and corporate items.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Promotional Solutions reporting unit is a critical audit matter are (i) the significant judgment by management when developing the fair value measurement of the reporting unit, (ii) a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's significant assumptions related to the revenue growth rates, terminal growth rate, direct costs and the discount rate, 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 management's goodwill impairment assessment, including controls over the valuation of the Promotional Solutions reporting unit and development of the assumptions related to the revenue growth rates, terminal growth rate, direct costs and the discount rate. These procedures also included, among others, (i) testing management's process for developing the fair value estimate of the Promotional Solutions reporting unit, (ii) evaluating the appropriateness of the discounted cash flow model, (iii) testing the completeness and accuracy of underlying data used in the discounted cash flow model, and (iv) evaluating the significant assumptions used by management related to the revenue growth rates, terminal growth rate, direct costs and the discount rate. Evaluating management's assumptions related to the revenue growth rates, terminal growth rate, and direct costs involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Evaluating management's assumption related to the discount rate involved considering the cost of capital of comparable businesses, Company specific factors and other industry factors. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow model and the terminal growth rate and the discount rate assumptions.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
February 19, 2021

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

DELUXE CORPORATION
CONSOLIDATED BALANCE SHEETS

(in thousands, except share par value)

	December 31, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents, including securities carried at fair value of \$9,713 as of December 31, 2019	\$ 123,122	\$ 73,620
Trade accounts receivable, net of allowances for uncollectible accounts	161,959	163,421
Inventories and supplies, net of reserve	40,130	39,921
Funds held for customers, including securities carried at fair value of \$28,462 and \$34,450, respectively	119,749	117,641
Revenue in excess of billings	17,617	32,790
Other current assets	44,054	44,818
Total current assets	506,631	472,211
Deferred income taxes	5,444	3,907
Long-term investments	45,919	44,995
Property, plant and equipment, net of accumulated depreciation	88,680	96,467
Operating lease assets	35,906	44,372
Intangibles, net of accumulated amortization	246,760	276,122
Goodwill	736,844	804,487
Other non-current assets	208,679	200,750
Total assets	<u>\$ 1,874,863</u>	<u>\$ 1,943,311</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 116,990	\$ 112,198
Funds held for customers	117,647	116,411
Accrued liabilities	177,183	179,338
Total current liabilities	411,820	407,947
Long-term debt	840,000	883,500
Operating lease liabilities	28,344	33,585
Deferred income taxes	10,643	14,898
Other non-current liabilities	43,218	32,520
Commitments and contingencies (Notes 11, 16, 17 and 20)		
Shareholders' equity:		
Common shares \$1 par value (authorized: 500,000 shares; outstanding: December 31, 2020 – 41,973; December 31, 2019 – 42,126)	41,973	42,126
Additional paid-in capital	17,558	4,086
Retained earnings	522,599	572,596
Accumulated other comprehensive loss	(41,433)	(47,947)
Non-controlling interest	141	—
Total shareholders' equity	540,838	570,861
Total liabilities and shareholders' equity	<u>\$ 1,874,863</u>	<u>\$ 1,943,311</u>

See Notes to Consolidated Financial Statements

DELUXE CORPORATION
CONSOLIDATED STATEMENTS OF INCOME (LOSS)

	Year Ended December 31,		
	2020	2019	2018
<i>(in thousands, except per share amounts)</i>			
Product revenue	\$ 1,230,638	\$ 1,409,155	\$ 1,451,833
Service revenue	560,143	599,560	546,192
Total revenue	1,790,781	2,008,715	1,998,025
Cost of products	(458,637)	(531,307)	(547,640)
Cost of services	(272,134)	(281,628)	(244,108)
Total cost of revenue	(730,771)	(812,935)	(791,748)
Gross profit	1,060,010	1,195,780	1,206,277
Selling, general and administrative expense	(841,658)	(891,693)	(854,000)
Restructuring and integration expense	(75,874)	(71,248)	(19,737)
Asset impairment charges	(97,973)	(390,980)	(101,319)
Operating income (loss)	44,505	(158,141)	231,221
Interest expense	(23,140)	(34,682)	(27,112)
Other income	9,214	7,193	8,522
Income (loss) before income taxes	30,579	(185,630)	212,631
Income tax provision	(21,680)	(14,267)	(63,001)
Net income (loss)	8,899	(199,897)	149,630
Net income attributable to non-controlling interest	(91)	—	—
Net income (loss) attributable to Deluxe	\$ 8,808	\$ (199,897)	\$ 149,630
Basic earnings (loss) per share	\$ 0.21	\$ (4.65)	\$ 3.18
Diluted earnings (loss) per share	0.19	(4.65)	3.16

See Notes to Consolidated Financial Statements

DELUXE CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

<i>(in thousands)</i>	Year Ended December 31,		
	2020	2019	2018
Net income (loss)	\$ 8,899	\$ (199,897)	\$ 149,630
Other comprehensive income (loss), net of tax:			
Postretirement benefit plans:			
Net actuarial gain (loss) arising during the year	5,616	6,594	(3,805)
Less reclassification of amounts from other comprehensive income (loss) to net income (loss):			
Amortization of prior service credit	(1,055)	(1,054)	(853)
Amortization of net actuarial loss	1,889	2,583	1,825
Postretirement benefit plans	6,450	8,123	(2,833)
Interest rate swap:			
Unrealized loss arising during the year	(4,973)	(1,040)	—
Reclassification of realized loss (gain) from other comprehensive income (loss) to net income (loss)	719	(57)	—
Interest rate swap	(4,254)	(1,097)	—
Debt securities:			
Unrealized holding gain (loss) arising during the year	338	48	(1)
Reclassification of realized gain from other comprehensive income (loss) to net income (loss)	(153)	—	—
Debt securities	185	48	(1)
Unrealized foreign currency translation adjustment	4,133	1,558	(9,281)
Other comprehensive income (loss)	6,514	8,632	(12,115)
Comprehensive income (loss)	15,413	(191,265)	137,515
Comprehensive income attributable to non-controlling interest	(91)	—	—
Comprehensive income (loss) attributable to Deluxe	\$ 15,322	\$ (191,265)	\$ 137,515
Income tax (expense) benefit of other comprehensive income (loss) included in above amounts:			
Postretirement benefit plans:			
Net actuarial gain (loss) arising during the year	\$ (1,948)	\$ (2,321)	\$ 1,339
Less reclassification of amounts from other comprehensive income (loss) to net income (loss):			
Amortization of prior service credit	366	367	568
Amortization of net actuarial loss	(412)	(640)	(1,059)
Postretirement benefit plans	(1,994)	(2,594)	848
Interest rate swap:			
Unrealized loss arising during the year	1,725	364	—
Reclassification of realized loss (gain) from other comprehensive income (loss) to net income (loss)	(249)	20	—
Interest rate swap	1,476	384	—
Debt securities:			
Unrealized holding gain (loss) arising during the year	(117)	(17)	—
Reclassification of realized gain from other comprehensive income (loss) to net income (loss)	53	—	—
Debt securities	(64)	(17)	—
Total net tax (expense) benefit included in other comprehensive income (loss)	\$ (582)	\$ (2,227)	\$ 848

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, 2017	47,953	\$ 47,953	\$ —	\$ 1,004,657	\$ (37,597)	\$ —	\$ 1,015,013
Net income	—	—	—	149,630	—	—	149,630
Cash dividends (\$1.20 per share)	—	—	—	(56,743)	—	—	(56,743)
Common shares issued	525	525	18,397	—	—	—	18,922
Common shares repurchased	(3,584)	(3,584)	(14,384)	(182,032)	—	—	(200,000)
Other common shares retired	(247)	(247)	(17,609)	—	—	—	(17,856)
Employee share-based compensation	—	—	13,596	—	—	—	13,596
Adoption of Accounting Standards Update No. 2014-09	—	—	—	4,966	—	—	4,966
Adoption of Accounting Standards Update No. 2018-02	—	—	—	6,867	(6,867)	—	—
Other comprehensive loss	—	—	—	—	(12,115)	—	(12,115)
Balance, December 31, 2018	44,647	44,647	—	927,345	(56,579)	—	915,413
Net loss	—	—	—	(199,897)	—	—	(199,897)
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 (Note 2)	—	—	—	(267)	—	—	(267)
Other comprehensive income	—	—	—	—	8,632	—	8,632
Balance, December 31, 2019	42,126	42,126	4,086	572,596	(47,947)	—	570,861
Net income	—	—	—	8,808	—	91	8,899
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 (Note 2)	—	—	—	(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	\$ 522,599	\$ (41,433)	\$ 141	\$ 540,838

See Notes to Consolidated Financial Statements

DELUXE CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	Year Ended December 31,		
	2020	2019	2018
Cash flows from operating activities:			
Net income (loss)	\$ 8,899	\$ (199,897)	\$ 149,630
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation	20,242	16,502	16,572
Amortization of intangibles	90,550	109,534	114,528
Operating lease expense	20,928	19,113	—
Asset impairment charges	97,973	390,980	101,319
Amortization of prepaid product discounts	29,235	24,055	22,941
Deferred income taxes	(5,244)	(34,950)	(11,356)
Employee share-based compensation expense	21,824	19,702	13,378
Loss (gain) on sales of businesses and customer lists	1,846	124	(15,641)
Other non-cash items, net	23,846	13,220	8,030
Changes in assets and liabilities, net of effect of acquisitions:			
Trade accounts receivable	(2,709)	5,609	(16,795)
Inventories and supplies	(11,281)	4,843	(3,641)
Other current assets	15,344	(10,568)	(12,032)
Non-current assets	(25,793)	(5,360)	(6,913)
Accounts payable	(9,518)	5,130	4,366
Prepaid product discount payments	(33,613)	(25,637)	(23,814)
Other accrued and non-current liabilities	(24,976)	(45,747)	(1,257)
Net cash provided by operating activities	217,553	286,653	339,315
Cash flows from investing activities:			
Purchases of capital assets	(62,638)	(66,595)	(62,238)
Payments for acquisitions, net of cash acquired	—	(8,251)	(191,903)
Purchases of customer lists	(11,082)	—	—
Proceeds from sale of facilities	9,713	—	—
Purchases of customer funds debt securities	(3,918)	(7,642)	(7,807)
Proceeds from customer funds debt securities	7,764	7,642	7,807
Other	4,068	2,449	1,082
Net cash used by investing activities	(56,093)	(72,397)	(253,059)
Cash flows from financing activities:			
Proceeds from issuing long-term debt	309,000	241,500	1,280,000
Payments on long-term debt	(352,500)	(268,000)	(1,078,853)
Holdback payments for acquisitions and asset purchases	(1,994)	(3,354)	(22,355)
Net change in customer funds obligations	(168)	12,598	20,279
Proceeds from issuing shares under employee plans	3,747	3,198	7,523
Employee taxes paid for shares withheld	(2,956)	(3,935)	(7,977)
Payments for common shares repurchased	(14,000)	(118,547)	(200,000)
Cash dividends paid to shareholders	(50,746)	(51,742)	(56,669)
Other	(938)	(1,866)	(4,128)
Net cash used by financing activities	(110,555)	(190,148)	(62,180)
Effect of exchange rate change on cash, cash equivalents, restricted cash and restricted cash equivalents	3,693	5,444	(7,636)
Net change in cash, cash equivalents, restricted cash and restricted cash equivalents	54,598	29,552	16,440
Cash, cash equivalents, restricted cash and restricted cash equivalents, beginning of year	174,811	145,259	128,819
Cash, cash equivalents, restricted cash and restricted cash equivalents, end of year (Note 3)	\$ 229,409	\$ 174,811	\$ 145,259

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, 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.

Effective 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 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 sheet 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 2020.

Comparability – The consolidated balance sheet as of December 31, 2019 has been modified to conform to the current year presentation. Assets held for sale are included within other non-current assets. Previously, this amount was presented separately.

During 2020, we identified the incorrect presentation of certain amounts reported in the consolidated statements of cash flows for the years ended December 31, 2019 and 2018. We determined that holdback payments for acquisitions and asset purchases were incorrectly included in net cash used by investing activities and should be included in net cash used by financing activities. We determined that the amounts impacting payments for acquisitions were not material to the 2019 or 2018 consolidated financial statements, and the presentation of these amounts has been revised in the consolidated statements of cash flows for the years ended December 31, 2019 and 2018 appearing herein.

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, 2019:			
Payments for acquisitions, net of cash acquired	\$ (11,605)	\$ 3,354	\$ (8,251)
Net cash used by investing activities	(75,751)	3,354	(72,397)
Holdback payments for acquisitions and asset purchases	—	(3,354)	(3,354)
Net cash used by financing activities	(186,794)	(3,354)	(190,148)
Net change in cash, cash equivalents, restricted cash and restricted cash equivalents	<u>\$ 29,552</u>	<u>\$ —</u>	<u>\$ 29,552</u>
Year ended December 31, 2018:			
Payments for acquisitions, net of cash acquired	\$ (214,258)	\$ 22,355	\$ (191,903)
Net cash used by investing activities	(275,414)	22,355	(253,059)
Holdback payments for acquisitions and asset purchases	—	(22,355)	(22,355)
Net cash used by financing activities	(39,825)	(22,355)	(62,180)
Net change in cash, cash equivalents, restricted cash and restricted cash equivalents	<u>\$ 16,440</u>	<u>\$ —</u>	<u>\$ 16,440</u>

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 novel 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 20.

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, 2020 or December 31, 2019.

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 receivables 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 businesses collect 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. Certain of the customer contracts for our domestic payroll processing business include legal restrictions regarding the use of these funds. In addition, our treasury management cash receipt processing business remits a portion of cash receipts to our clients the business day following receipt. 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 13 and 14.

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, 2020. 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, as well as rent expense in 2018, 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. Operating lease assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. 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 10 years, with a weighted-average useful life of 6 years as of December 31, 2020. 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. In each of the past 3 years, 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 and indefinite-lived intangibles – We evaluate the carrying value of goodwill and indefinite-lived intangibles 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 impairment analyses can be found in Note 8.

During 2018, we held a trade name asset that was assigned an indefinite useful life. In completing the annual impairment analysis of this asset, we elected to perform a quantitative assessment. This assessment compared the carrying amount of the asset to its estimated fair value. The estimate of fair value was based on the relief from royalty method, which calculates the cost savings associated with owning rather than licensing the trade name. An assumed royalty rate was applied to forecasted revenue and the resulting cash flows were discounted. When the estimated fair value is less than the carrying value of the asset, an impairment loss is recognized for the difference. During 2018, our analysis indicated that this asset was fully impaired. Further information regarding this impairment 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. Currently, 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, 2020. 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, 2020 or December 31, 2019.

In determining the allowances for doubtful 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 20. 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, 2020 and December 31, 2019, 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 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 90% 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 direct response advertising and the amortization of non-direct response advertising, was \$50,308 in 2020, \$70,798 in 2019 and \$74,549 in 2018.

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 17.

Income taxes – We estimate our income tax provision based on the various jurisdictions where we conduct business. Judgment is required in determining our worldwide income tax provision. 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, 2020 and December 31, 2019, we had an outstanding interest rate swap related to amounts drawn under our revolving credit facility. 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 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. Generally, these amounts are being amortized over periods of 3 to 5 years. We expense these sales commissions 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 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 re-measured 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 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 unrecognized actuarial gain or loss results. The gain or loss is recognized immediately on the consolidated balance sheets within accumulated 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 (loss) 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 Recently Adopted

ASU No. 2016-02 – In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (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 12 months 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. 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.

ASU No. 2016-13 – In June 2016, the FASB issued ASU No. 2016-13, *Measurement of Credit Losses on Financial Instruments*. Subsequently, the FASB issued several amendments to this standard. These standards replaced the incurred loss methodology previously utilized for valuing financial instruments with an expected loss methodology that is referred to as the current expected credit loss (CECL) methodology. The measurement of expected losses under the CECL methodology is applicable to financial instruments measured at amortized cost, including accounts and notes receivable. The standards also made targeted changes to the accounting for available-for-sale debt securities. We adopted the standards on January 1, 2020 using the modified retrospective method for financial instruments measured at amortized cost. Under this method, prior period amounts continue to be reported in accordance with previously applicable GAAP. We recorded a net decrease in retained earnings of \$3,640 as of January 1, 2020 for the cumulative effect of adopting the standards, which consisted primarily of an increase in the allowance for credit losses on loans and notes receivable, net of the related deferred income tax impact. We recorded no allowance for credit losses related to our available-for-sale debt securities. Our policies regarding the determination of the allowances for uncollectible accounts related to trade accounts receivable and loans and notes receivable from distributors can be found in Note 1. Further information regarding our available-for-sale debt securities can be found in Note 3.

ASU No. 2018-13 – In August 2018, the FASB issued ASU No. 2018-13, *Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurements*. This standard removed, modified and added certain disclosures related to recurring and nonrecurring fair value measurements. During 2018, we adopted the provisions of the standard that removed and modified disclosure requirements. The additional disclosures were effective for us on January 1, 2020 and were required to be applied prospectively to fair value measurements completed on or after that date. Disclosures regarding our fair value measurements can be found in Note 8.

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. As of December 31, 2020, \$29,242 of cloud computing implementation costs were included within other non-current assets on the consolidated balance sheet. These costs primarily relate to our planned implementation of a new enterprise resource planning system. Our policy regarding the accounting for these implementation costs can be found in Note 1.

Accounting Standards Not Yet Adopted

ASU No. 2019-12 – In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes*. This standard addresses several specific areas of accounting for income taxes. The guidance is effective for us on January 1, 2021. Portions of the standard are required to be adopted prospectively and certain aspects will be adopted using the modified retrospective approach. We do not expect the application of this standard to have a significant impact on our results of operations or financial position.

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>	2020	2019
Trade accounts receivable – gross	\$ 168,387	\$ 168,406
Allowances for uncollectible accounts	(6,428)	(4,985)
Trade accounts receivable – net ⁽¹⁾	<u>\$ 161,959</u>	<u>\$ 163,421</u>

⁽¹⁾ Includes unbilled receivables of \$21,319 as of December 31, 2020 and \$17,925 as of December 31, 2019.

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

<i>(in thousands)</i>	2020	2019	2018
Balance, beginning of year	\$ 4,985	\$ 3,639	\$ 2,884
Bad debt expense	5,003	5,213	3,622
Write-offs, net of recoveries	(3,560)	(3,867)	(2,867)
Balance, end of year	<u>\$ 6,428</u>	<u>\$ 4,985</u>	<u>\$ 3,639</u>

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

<i>(in thousands)</i>	2020	2019	2018
Raw materials	\$ 5,412	\$ 7,797	\$ 7,797
Semi-finished goods	7,943	8,234	8,234
Finished goods	33,513	24,563	24,563
Supplies	5,010	5,927	5,927
Reserve for excess and obsolete items	(11,748)	(6,600)	(6,600)
Inventories and supplies, net of reserve	<u>\$ 40,130</u>	<u>\$ 39,921</u>	<u>\$ 39,921</u>

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

<i>(in thousands)</i>	2020	2019	2018
Balance, beginning of year	\$ 6,600	\$ 5,499	\$ 5,470
Amounts charged to expense	6,713	1,831	1,002
Write-offs	(1,565)	(730)	(973)
Balance, end of year	<u>\$ 11,748</u>	<u>\$ 6,600</u>	<u>\$ 5,499</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, 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 certificates	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.

	December 31, 2019			
	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
<i>(in thousands)</i>				
Funds held for customers: ⁽¹⁾				
Domestic money market fund	\$ 18,000	\$ —	\$ —	\$ 18,000
Canadian and provincial government securities	9,056	—	(304)	8,752
Canadian guaranteed investment certificates	7,698	—	—	7,698
Available-for-sale debt securities	<u>\$ 34,754</u>	<u>\$ —</u>	<u>\$ (304)</u>	<u>\$ 34,450</u>

⁽¹⁾ Funds held for customers, as reported on the consolidated balance sheet as of December 31, 2019, also included cash of \$83,191.

Expected maturities of available-for-sale debt securities as of December 31, 2020 were as follows:

<i>(in thousands)</i>	Fair value
Due in one year or less	\$ 20,807
Due in two to five years	4,156
Due in six to ten years	3,499
Available-for-sale debt securities	<u>\$ 28,462</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>	2020	2019
Conditional right to receive consideration	\$ 13,950	\$ 24,499
Unconditional right to receive consideration ⁽¹⁾	3,667	8,291
Revenue in excess of billings	<u>\$ 17,617</u>	<u>\$ 32,790</u>

⁽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:

<i>(in thousands)</i>	2020			2019		
	Gross carrying amount	Accumulated depreciation	Net carrying amount	Gross carrying amount	Accumulated depreciation	Net carrying amount
Machinery and equipment	\$ 340,032	\$ (287,384)	\$ 52,648	\$ 327,151	\$ (282,741)	\$ 44,410
Buildings and improvements	89,875	(68,510)	21,365	118,284	(86,162)	32,122
Land and improvements	19,680	(5,013)	14,667	28,212	(8,277)	19,935
Property, plant and equipment	<u>\$ 449,587</u>	<u>\$ (360,907)</u>	<u>\$ 88,680</u>	<u>\$ 473,647</u>	<u>\$ (377,180)</u>	<u>\$ 96,467</u>

Assets held for sale – During 2018, we sold 2 providers of printed and promotional products and 2 small business distributors within our Promotional Solutions segment, as well as several small business customer lists. We determined that these assets would be better positioned for long-term growth if they were managed by independent distributors. Subsequent to the sales, the assets were owned by independent distributors that are part of our distributor network. As such, our revenue was not impacted by these sales and the impact to our costs was not significant. During 2018, we entered into aggregate notes receivable of \$35,616 in conjunction with these sales and we recognized aggregate net gains of \$15,641 within SG&A expense on the consolidated statement of income.

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

<i>(in thousands)</i>	2020			2019		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Internal-use software	\$ 380,144	\$ (303,422)	\$ 76,722	\$ 380,905	\$ (299,698)	\$ 81,207
Customer lists/relationships	352,895	(202,428)	150,467	348,055	(187,462)	160,593
Software to be sold	36,900	(23,884)	13,016	36,900	(19,657)	17,243
Technology-based intangibles	33,813	(27,613)	6,200	34,780	(22,122)	12,658
Trade names	30,281	(29,926)	355	32,505	(28,084)	4,421
Intangibles	<u>\$ 834,033</u>	<u>\$ (587,273)</u>	<u>\$ 246,760</u>	<u>\$ 833,145</u>	<u>\$ (557,023)</u>	<u>\$ 276,122</u>

In each of the past 3 years, we recorded asset impairment charges related to our intangible assets. Further information can be found in Note 8.

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

<i>(in thousands)</i>	2020	2019	2018
Customer lists/relationships	\$ 41,377	\$ 51,243	\$ 57,243
Internal-use software	36,771	41,258	38,307
Technology-based intangibles	6,291	7,415	7,607
Software to be sold	4,227	4,227	5,009
Trade names	1,884	5,391	6,362
Amortization of intangibles	<u>\$ 90,550</u>	<u>\$ 109,534</u>	<u>\$ 114,528</u>

Based on the intangibles in service as of December 31, 2020, estimated amortization expense for each of the next five years ending December 31 is as follows:

<i>(in thousands)</i>	Estimated amortization expense
2021	\$ 84,989
2022	58,322
2023	38,324
2024	21,131
2025	15,641

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

<i>(in thousands)</i>	2020		2019		2018	
	Amount	Weighted-average amortization period (in years)	Amount	Weighted-average amortization period (in years)	Amount	Weighted-average amortization period (in years)
Customer lists/relationships ⁽¹⁾	\$ 45,470	7	\$ 17,771	8	\$ 60,775	8
Internal-use software	39,344	4	43,991	3	42,744	3
Trade names	—	—	—	—	14,700	7
Technology-based intangibles	—	—	—	—	7,500	5
Acquired intangibles	<u>\$ 84,814</u>	<u>6</u>	<u>\$ 61,762</u>	<u>5</u>	<u>\$ 125,719</u>	<u>6</u>

⁽¹⁾We acquired customer lists that did not qualify as business combinations of \$45,470 during 2020, \$11,956 during 2019 and \$1,188 during 2018.

Information regarding acquired intangibles does not include measurement-period adjustments recorded in 2019 for changes in the estimated fair values of intangibles acquired through acquisitions. Information regarding these adjustments can be found in Note 6.

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

<i>(in thousands)</i>	Payments	Cloud Solutions	Promotional Solutions	Checks	Total
Balance, December 31, 2018:					
Goodwill, gross	\$ 165,417	\$ 434,203	\$ 252,761	\$ 434,812	\$ 1,287,193
Accumulated impairment charges	—	—	(126,567)	—	(126,567)
Goodwill, net of accumulated impairment charges	165,417	434,203	126,194	434,812	1,160,626
Impairment charges (Note 8)	—	(357,741)	—	—	(357,741)
Goodwill resulting from acquisitions (Note 6)	4,174	—	—	—	4,174
Measurement-period adjustments for prior year acquisitions (Note 6)	(1,426)	(340)	—	—	(1,766)
Currency translation adjustment	—	(879)	73	—	(806)
Balance, December 31, 2019	<u>\$ 168,165</u>	<u>\$ 75,243</u>	<u>\$ 126,267</u>	<u>\$ 434,812</u>	<u>\$ 804,487</u>
Balance, December 31, 2019:					
Goodwill, gross	\$ 168,165	\$ 432,984	\$ 252,834	\$ 434,812	\$ 1,288,795
Accumulated impairment charges	—	(357,741)	(126,567)	—	(484,308)
Goodwill, net of accumulated impairment charges	168,165	75,243	126,267	434,812	804,487
Impairment charges (Note 8)	—	(4,317)	(63,356)	—	(67,673)
Currency translation adjustment	—	—	30	—	30
Balance, December 31, 2020	<u>\$ 168,165</u>	<u>\$ 70,926</u>	<u>\$ 62,941</u>	<u>\$ 434,812</u>	<u>\$ 736,844</u>
Balance, December 31, 2020:					
Goodwill, gross	\$ 168,165	\$ 432,984	\$ 252,864	\$ 434,812	\$ 1,288,825
Accumulated impairment charges	—	(362,058)	(189,923)	—	(551,981)
Goodwill, net of accumulated impairment charges	<u>\$ 168,165</u>	<u>\$ 70,926</u>	<u>\$ 62,941</u>	<u>\$ 434,812</u>	<u>\$ 736,844</u>

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

<i>(in thousands)</i>	2020	2019
Postretirement benefit plan asset (Note 14)	\$ 71,208	\$ 56,743
Prepaid product discounts	50,602	51,145
Loans and notes receivable from distributors, net of allowances for uncollectible accounts ⁽¹⁾	35,068	66,872
Cloud computing arrangements	29,242	—
Deferred sales commissions ⁽²⁾	9,199	9,682
Other	13,360	16,308
Other non-current assets	<u>\$ 208,679</u>	<u>\$ 200,750</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 \$2,008 as of December 31, 2020 and \$3,511 as of December 31, 2019. During 2020, we utilized \$21,439 of these notes receivable, along with current and future cash payments, to acquire related customer list intangible assets.

⁽²⁾ Amortization of deferred sales commission was \$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>	2020	2019	2018
Balance, beginning of year	\$ 51,145	\$ 54,642	\$ 63,895
Additions ⁽¹⁾	30,346	21,068	14,023
Amortization	(29,235)	(24,055)	(22,941)
Other	(1,654)	(510)	(335)
Balance, end of year	<u>\$ 50,602</u>	<u>\$ 51,145</u>	<u>\$ 54,642</u>

⁽¹⁾ Prepaid product discounts are generally accrued upon contract execution. Cash payments made for prepaid product discounts were \$33,613 for 2020, \$25,637 for 2019 and \$23,814 for 2018.

Upon adoption of ASU No. 2016-13 and related amendments on January 1, 2020 (Note 2), we recorded an additional allowance for uncollectible accounts related to loans and notes receivable from distributors. Changes in the allowances for uncollectible accounts for the years ended December 31 were as follows:

<i>(in thousands)</i>	2020	2019	2018
Balance, beginning of year	\$ 284	\$ 284	\$ 273
Adoption of ASU No. 2016-13 (Note 2)	4,749	—	—
Bad debt expense	5,412	—	11
Exchange for customer lists	(6,402)	—	—
Write-offs	(48)	—	—
Balance, end of year	<u>\$ 3,995</u>	<u>\$ 284</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.

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, 2020. Write-offs are for the year ended December 31, 2020.

Loans and notes receivable from distributors amortized cost basis by origination year							
<i>(in thousands)</i>	2020	2019	2018	2017	2016	Prior	Total
Risk rating:							
1-2 internal grade	\$ 1,335	\$ 606	\$ 23,240	\$ 11,721	\$ 216	\$ 1,351	\$ 38,469
3-4 internal grade	—	2,602	—	—	—	—	2,602
Loans and notes receivable	<u>\$ 1,335</u>	<u>\$ 3,208</u>	<u>\$ 23,240</u>	<u>\$ 11,721</u>	<u>\$ 216</u>	<u>\$ 1,351</u>	<u>\$ 41,071</u>
Current period write-offs	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 48</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 48</u>

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

<i>(in thousands)</i>	2020	2019
Deferred revenue ⁽¹⁾	\$ 42,104	\$ 46,098
Employee cash bonuses, including sales incentives	21,090	36,918
Prepaid product discounts due within one year	14,365	14,709
Operating lease liabilities	11,589	12,898
Customer rebates	8,179	8,944
Other	79,856	59,771
Accrued liabilities	<u>\$ 177,183</u>	<u>\$ 179,338</u>

⁽¹⁾ \$42,108 of the December 31, 2019 amount was recognized as revenue during 2020.

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

<i>(in thousands)</i>	2020	2019	2018
Reconciliation of cash, cash equivalents, restricted cash and restricted cash equivalents to the consolidated balance sheets:			
Cash and cash equivalents	\$ 123,122	\$ 73,620	\$ 59,740
Restricted cash and restricted cash equivalents included in funds held for customers	106,287	101,191	85,519
Total cash, cash equivalents, restricted cash and restricted cash equivalents	<u>\$ 229,409</u>	<u>\$ 174,811</u>	<u>\$ 145,259</u>
Income taxes paid	\$ 24,701	\$ 60,764	\$ 88,253
Interest paid	22,853	33,227	25,910
Non-cash investing activities:			
Non-cash consideration for asset purchases and acquisitions ⁽¹⁾	21,439	10,680	1,060
Proceeds from sales of assets – notes receivable	1,612	1,685	35,616
Non-cash financing activities:			
Liabilities for holdback payments on asset purchases and acquisitions	12,949	3,405	2,786

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

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>	2020	2019	2018
Earnings (loss) per share – basic:			
Net income (loss)	\$ 8,899	\$ (199,897)	\$ 149,630
Net income attributable to non-controlling interest	(91)	—	—
Net income (loss) attributable to Deluxe	8,808	(199,897)	149,630
Income allocated to participating securities	(53)	(101)	(617)
Income (loss) attributable to Deluxe available to common shareholders	\$ 8,755	\$ (199,998)	\$ 149,013
Weighted-average shares outstanding	41,931	43,029	46,842
Earnings (loss) per share – basic	\$ 0.21	\$ (4.65)	\$ 3.18
Earnings (loss) per share – diluted:			
Net income (loss)	\$ 8,899	\$ (199,897)	\$ 149,630
Net income attributable to non-controlling interest	(91)	—	—
Net income (loss) attributable to Deluxe	8,808	(199,897)	149,630
Income allocated to participating securities	(2)	(101)	(616)
Re-measurement of share-based awards classified as liabilities	(677)	—	(471)
Income (loss) attributable to Deluxe available to common shareholders	\$ 8,129	\$ (199,998)	\$ 148,543
Weighted-average shares outstanding	41,931	43,029	46,842
Dilutive impact of potential common shares	211	—	149
Weighted-average shares and potential common shares outstanding	42,142	43,029	46,991
Earnings (loss) per share – diluted	\$ 0.19	\$ (4.65)	\$ 3.16
Antidilutive options excluded from calculation	2,060	1,347	1,209

NOTE 5: OTHER COMPREHENSIVE INCOME (LOSS)

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

Accumulated other comprehensive loss components	Amounts reclassified from accumulated other comprehensive loss			Affected line item in consolidated statements of income (loss)
	2020	2019	2018	
<i>(in thousands)</i>				
Amortization of postretirement benefit plan items:				
Prior service credit	\$ 1,421	\$ 1,421	\$ 1,421	Other income
Net actuarial loss	(2,301)	(3,223)	(2,884)	Other income
Total amortization	(880)	(1,802)	(1,463)	Other income
Tax benefit	46	273	491	Income tax provision
Amortization of postretirement benefit plan items, net of tax	(834)	(1,529)	(972)	Net income (loss)
Interest rate swap:				
Realized (loss) gain on interest rate swap	(968)	77	—	Interest expense
Tax benefit (expense)	249	(20)	—	Income tax provision
Realized (loss) gain on interest rate swap, net of tax	(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	<u>\$ (1,400)</u>	<u>\$ (1,472)</u>	<u>\$ (972)</u>	

Accumulated other comprehensive loss – Changes in the components of accumulated other comprehensive loss were as follows for the years ended December 31:

<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, 2017	\$ (26,829)	\$ (322)	\$ —	\$ (10,446)	\$ (37,597)
Other comprehensive loss before reclassifications	(3,805)	(1)	—	(9,281)	(13,087)
Amounts reclassified from accumulated other comprehensive loss	972	—	—	—	972
Net current-period other comprehensive loss	(2,833)	(1)	—	(9,281)	(12,115)
Adoption of ASU No. 2018-02	(6,867)	—	—	—	(6,867)
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	<u>\$ (21,956)</u>	<u>\$ (90)</u>	<u>\$ (5,351)</u>	<u>\$ (14,036)</u>	<u>\$ (41,433)</u>

NOTE 6: ACQUISITIONS

We periodically complete business combinations that align with our business strategy. Our acquisitions during 2019 and 2018 were all cash transactions, funded by use of our revolving credit facility. We completed these acquisitions primarily to add financial technology and web services capabilities, to improve our product and service offerings and to reach new customers. Transaction costs related to these acquisitions totaled \$215 in 2019 and \$1,719 in 2018. We did not complete any acquisitions during 2020.

2019 acquisitions – In December 2019, we completed 2 acquisitions in our Payments segment. 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.

2018 acquisitions – During 2018, we completed the following acquisitions:

- In March 2018, we acquired all of the equity of Logomix Inc. (Logomix), a self-service marketing and branding platform that helps small businesses create logos and custom marketing products. The allocation of the purchase price based upon the estimated fair values of the assets acquired and liabilities assumed resulted in nondeductible goodwill of \$29,451. The acquisition resulted in goodwill as we expected to accelerate revenue growth by combining our

capabilities with Logomix's platform. The results of operations from this acquisition are included in the Cloud Solutions and Promotional Solutions segments.

- In June 2018, we acquired selected assets of Velocity Servers, Inc., doing business as ColoCrossing, a data center solutions, cloud hosting and infrastructure colocation provider of dedicated hosting services. The allocation of the purchase price based upon the estimated fair values of the assets acquired and liabilities assumed resulted in tax-deductible goodwill of \$9,082. The acquisition resulted in goodwill as we expected to accelerate revenue growth by bringing colocation services into our portfolio of hosting services. The results of operations from this acquisition are included in the Cloud Solutions segment.
- In August 2018, we acquired the equity of REMITCO LLC (RemitCo), the remittance processing business of First Data Corporation, which subsequently merged with Fiserv, Inc. The allocation of the purchase price based upon the estimated fair values of the assets acquired and liabilities assumed resulted in tax-deductible goodwill of \$44,992 and a customer list intangible asset of \$36,000. The acquisition resulted in goodwill as it expanded the scale of our receivables management solutions, which allows us to take advantage of the ongoing market trend toward outsourcing technology-enabled services to trusted financial technology partners of scale. The results of operations from this acquisition are included in the Payments segment.
- In December 2018, we acquired selected assets of My Corporation Business Services, Inc., a provider of business incorporation and organization services. The allocation of the purchase price based upon the estimated fair values of the assets acquired and liabilities assumed resulted in tax-deductible goodwill of \$20,615. The acquisition resulted in goodwill as we expected to accelerate revenue growth by bringing these services into our portfolio of web services. The results of operations from this acquisition are included in the Cloud Solutions segment.
- During 2018, we acquired the operations of 3 small business distributors in our Promotional Solutions segment. The assets acquired consisted primarily of customer list intangible assets. As these small business distributors were previously part of our distributor network, our revenue was not impacted by these acquisitions, and the impact to our costs was not significant.

Aggregate information – Information regarding goodwill by reportable 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. As our acquisitions were not significant to our reported operating results both individually and in the aggregate, pro forma results of operations are not provided.

The following illustrates the allocation of the aggregate purchase price for the above acquisitions to the assets acquired and liabilities assumed:

<i>(in thousands)</i>	2019 acquisitions⁽¹⁾	2018 acquisitions⁽²⁾
Net tangible assets acquired and liabilities assumed	\$ 2,735	\$ 8,200
Identifiable intangible assets:		
Customer lists/relationships	5,815	60,587
Trade names	—	14,700
Technology-based intangibles	—	7,500
Internal-use software	276	—
Total intangible assets	<u>6,091</u>	<u>82,787</u>
Goodwill	<u>4,174</u>	<u>104,140</u>
Total aggregate purchase price	13,000	195,127
Liabilities for holdback payments ⁽³⁾	(3,000)	(2,133)
Non-cash consideration ⁽⁴⁾	—	(1,060)
Net cash paid for current year acquisitions	10,000	191,934
Adjustments to purchase price for prior year acquisitions	(1,749)	(31)
Payments for acquisitions, net of cash acquired ⁽⁵⁾	<u>\$ 8,251</u>	<u>\$ 191,903</u>

⁽¹⁾ Net tangible assets acquired and liabilities assumed in 2019 consisted primarily of operating lease assets and property, plant and equipment, as well as operating lease liabilities.

⁽²⁾ Net tangible assets acquired and liabilities assumed in 2018 consisted primarily of accounts receivable of \$11,564 and deferred income tax liabilities. Amounts include measurement-period adjustments recorded in 2019 for the finalization of purchase accounting for certain of the 2018 acquisitions. These adjustments decreased goodwill \$1,766, with the offset to various assets and liabilities, including a \$1,000 increase in customer list intangible assets.

⁽³⁾ Consists of holdback payments due at future dates.

⁽⁴⁾ Consists of pre-acquisition amounts owed to us by certain of the acquired businesses.

⁽⁵⁾ Cash and cash equivalents acquired were \$1,692 during 2018.

NOTE 7: DERIVATIVE FINANCIAL INSTRUMENTS

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 the amount drawn under our revolving credit facility (Note 15). The interest rate swap, which terminates in March 2023 when our revolving credit facility matures, 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 \$7,210 as of December 31, 2020 and \$1,480 as of December 31, 2019 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, 2020 and December 31, 2019 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 into 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 and indefinite-lived intangibles 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 and indefinite-lived intangibles, which is included in Note 1, explains our methodology for assessing impairment of these assets.

First quarter 2020 impairment analysis – Effective January 1, 2020, we reorganized our reportable business segments to align with structural and management reporting changes in support of our growth strategy (Note 19). 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 a qualitative analysis for the reporting units that changed, with the exception of our Direct-to-Consumer reporting unit, which is part of our new 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%.

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 a quantitative analysis for the reporting units that changed as a result of the realignment. This quantitative analysis, 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.

On January 30, 2020, the World Health Organization (WHO) announced a global health emergency due to an outbreak of COVID-19 originating in Wuhan, China and the risks to the international community as the virus spread globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic, based on the rapid increase in exposure globally. Following the pandemic designation, 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. 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. As such, we recorded goodwill impairment charges of \$63,356 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, \$62,785 of goodwill remained in the Promotional Solutions reporting unit as of the measurement date.

2020 annual impairment analyses – In completing the 2020 annual impairment analysis of goodwill, 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.

2019 annual impairment analyses – In completing the 2019 annual impairment analysis of goodwill, 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 pretax goodwill impairment charges of \$115,474 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, \$70,914 of goodwill remained in the Financial Services Data-Driven Marketing reporting unit.

2018 annual impairment analyses – In completing the 2018 annual impairment analysis of goodwill, we elected to perform a qualitative assessment for 5 of our former reporting units and a quantitative assessment for 2 of our former reporting units: Small Business Services Web Services and Small Business Services Indirect. 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. Small Business Services Indirect consisted primarily of our distributor channel, former distributors that we purchased and our independent dealer channel.

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 5 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 analysis as of July 31, 2018 for the Small Business Services Web Services reporting unit indicated that the estimated fair value of the reporting unit exceeded its carrying value by approximately \$63,000, or 22%. The carrying value of this reporting unit's goodwill was \$225,383 as of July 31, 2018. The quantitative analysis of the Small Business Services Indirect reporting unit indicated that the reporting unit's goodwill was fully impaired, resulting in a pretax goodwill impairment charge of \$78,188 during the quarter ended September 30, 2018. The impairment charge was measured as the amount by which the reporting unit's carrying value exceeded its estimated fair value, limited to the carrying amount of goodwill. The analysis of this reporting unit, which incorporated the results of the annual strategic planning process completed during the third quarter of 2018, indicated lowered projected long-term revenue growth and profitability levels resulting from changes in strategy and focus and in the mix of products and services sold, including the continuing secular decline in check and forms usage. Additionally, our strategic plan reflected a shift in company resources to our growing businesses. This reporting unit included our former Safeguard trade name intangible asset, which was assigned an indefinite useful life. As of July 31, 2018, we completed a quantitative analysis of this asset that indicated the asset was fully impaired (level 3 fair value measurement), resulting in a pretax asset impairment charge of \$19,100. This impairment charge was driven by the same factors that resulted in the goodwill impairment charge, which indicated that any royalties attributable to the asset under our relief from royalty calculation had no future value.

Fourth quarter 2018 impairment analysis – During the fourth quarter of 2018, we performed a quantitative analysis of our former Financial Services Data-Driven Marketing reporting unit. Revenue for this reporting unit was below our projections driven by higher mortgage lending rates, which result in less lending activity for our financial institution clients and thus, may cause them to reduce their marketing spending. In addition, a large client elected to do certain of its marketing in-house. The quantitative analysis as of December 31, 2018 indicated that the estimated fair value of the reporting unit exceeded its carrying value by approximately \$105,000, or 36%. As such, no goodwill impairment charge was recorded for this reporting unit. The carrying value of this reporting unit's goodwill was \$186,388 as of December 31, 2018.

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 certain 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 in 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 discounted 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).

2018 impairment analyses – During the quarter ended September 30, 2018, we recorded pretax asset impairment charges of \$1,882 for customer list intangible assets related to 2 distributors we acquired in 2015. Based on higher than anticipated customer attrition, we determined that the customer lists were partially impaired as of July 31, 2018. During the quarter ended March 31, 2018, we recorded an asset impairment charge of \$2,149 related to an additional customer list intangible asset. Based on changes in the customer base of one of our small business distributors, we determined that the customer list asset was fully impaired as of March 31, 2018. We utilized the discounted value of estimated future cash flows to estimate the fair values of these asset groups (level 3 fair value measurements).

Information regarding the impairment analyses completed during each year was as follows:

(in thousands)	Fair value measurements using				Impairment charge
	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)	
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					67,673
Total					<u>\$ 97,973</u>
2019 analyses:					
Intangible assets (Small Business Services Web Services)	\$ 8,379	\$ —	\$ —	\$ 8,379	\$ 31,316
Customer list	—	—	—	—	1,923
Goodwill					357,741
Total					<u>\$ 390,980</u>
2018 analyses:					
Indefinite-lived trade name	\$ —	\$ —	\$ —	\$ —	\$ 19,100
Customer lists	4,223	—	—	4,223	4,031
Goodwill					78,188
Total					<u>\$ 101,319</u>

⁽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 2019 and 2018 were comprised primarily of customer list intangible assets, trade names and technology-based intangible assets. The fair value of the more significant acquired customer lists 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 list asset, is then discounted at a rate of return commensurate with the risk of the asset to calculate a present value. The estimated fair value of the remainder of the acquired customer lists was estimated by discounting the estimated cash flows expected to be generated by the assets. Key assumptions used in these calculations included same-customer revenue growth rates, estimated earnings, estimated customer retention rates based on the acquirees' historical information and the discount rate.

The estimated fair value of the acquired trade names and technology-based intangibles was 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.

Recurring fair value measurements

Cash and cash equivalents as of December 31, 2019, included an investment in an available-for-sale money market fund. The cost of the money market fund approximated its fair value because of the short-term nature of the investment.

Funds held for customers included available-for-sale debt securities (Note 3). These securities included a money market fund that is traded in an active market, a mutual fund investment that invests in Canadian and provincial government securities, and investments in Canadian guaranteed investment certificates (GICs) with maturities of 1 to 2 years. The cost of the money market fund approximates its fair value because of the short-term nature of the investment. The cost of the GICs approximates their fair values, based on estimates using current market rates offered for deposits with similar remaining maturities. 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. 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, 2020		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
<i>(in thousands)</i>	Balance sheet location	Carrying value	Fair value			
<i>Measured at fair value through comprehensive income (loss):</i>						
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)	—
<i>Amortized cost:</i>						
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	—

Fair value measurements using

<i>(in thousands)</i>	Balance sheet location	December 31, 2019		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			
<i>Measured at fair value through comprehensive income (loss):</i>						
Cash equivalents	Cash and cash equivalents	\$ 9,713	\$ 9,713	\$ 9,713	\$ —	\$ —
Cash equivalents	Funds held for customers	18,000	18,000	18,000	—	—
Available-for-sale debt securities	Funds held for customers	16,450	16,450	—	16,450	—
Derivative liability (Note 7)	Other non-current liabilities	(1,480)	(1,480)	—	(1,480)	—
<i>Amortized cost:</i>						
Cash	Cash and cash equivalents	63,907	63,907	63,907	—	—
Cash	Funds held for customers	83,191	83,191	83,191	—	—
Loans and notes receivable from distributors	Other current and non-current assets	70,383	68,887	—	—	68,887
Long-term debt	Long-term debt	883,500	883,500	—	883,500	—

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, sales and human resources 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:

<i>(in thousands)</i>	2020	2019	2018
Total cost of revenue	\$ 3,465	\$ 3,562	\$ 1,466
Operating expenses	75,874	71,248	19,737
Restructuring and integration expense	<u>\$ 79,339</u>	<u>\$ 74,810</u>	<u>\$ 21,203</u>

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

<i>(in thousands)</i>	2020	2019	2018
External consulting fees	\$ 44,096	\$ 45,638	\$ 8,509
Employee severance benefits	17,628	10,865	5,774
Internal labor	7,568	12,115	4,654
Other	10,047	6,192	2,266
Restructuring and integration expense	<u>\$ 79,339</u>	<u>\$ 74,810</u>	<u>\$ 21,203</u>

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 2021, and we expect most of the related severance payments to be paid in the first half of 2021, 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, 2017	\$ 4,376	\$ 4	\$ 4,380
Charges	7,672	597	8,269
Reversals	(1,898)	(71)	(1,969)
Payments	(6,971)	(248)	(7,219)
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	<u>\$ 6,798</u>	<u>\$ —</u>	<u>\$ 6,798</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.

NOTE 10: CHIEF EXECUTIVE OFFICER TRANSITION COSTS

In April 2018, we announced the retirement of Lee Schram, our former Chief Executive Officer (CEO). Mr. Schram remained employed under the terms of a transition agreement through March 1, 2019. Under the terms of this agreement, we provided certain benefits to Mr. Schram, including a transition bonus in the amount of \$2,000 that was paid in March 2019, accelerated vesting of certain restricted stock unit awards, and continued vesting and settlement of a pro-rata portion of outstanding performance share awards to the extent such awards were earned based on the attainment of performance goals. The modifications to Mr. Schram's share-based payment awards resulted in expense of \$2,088, which was largely recognized in 2018.

In conjunction with the CEO transition, we offered retention agreements to certain members of our management team under which each employee was entitled to receive a cash bonus equal to his or her annual base salary or up to 1.5 times his or her annual base salary if he or she remained employed during the retention period, generally from July 1, 2018 to December 31, 2019, and complied with certain covenants. The retention bonus was paid to an employee at the end of the retention period or earlier if his or her employment was terminated without cause before the end of the retention period. In addition to these expenses, we incurred certain other costs related to the CEO transition process, including executive search, legal, travel and board of directors fees in 2018. During 2019, we incurred consulting fees related to the evaluation of our strategic plan and we expensed the majority of our current CEO's signing bonus.

CEO transition costs are included in SG&A expense on the consolidated statements of income (loss) and were \$9,390 for 2019 and \$7,210 for 2018. Accruals for CEO transition costs were \$4,406 as of December 31, 2019 and were included in accrued liabilities on the consolidated balance sheet. All of these amounts were paid during 2020.

NOTE 11: INCOME TAX PROVISION

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

<i>(in thousands)</i>	2020	2019	2018
U.S.	\$ 10,906	\$ (161,733)	\$ 198,727
Foreign	19,673	(23,897)	13,904
Income (loss) income before income taxes	<u>\$ 30,579</u>	<u>\$ (185,630)</u>	<u>\$ 212,631</u>

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

<i>(in thousands)</i>	2020	2019	2018
Current tax provision:			
Federal	\$ 17,643	\$ 36,967	\$ 57,117
State	4,502	7,400	11,319
Foreign	4,779	4,850	5,921
Total current tax provision	<u>26,924</u>	<u>49,217</u>	<u>74,357</u>
Deferred tax provision:			
Federal	(4,298)	(30,095)	(7,220)
State	(1,202)	(7,070)	(1,701)
Foreign	256	2,215	(2,435)
Total deferred tax provision	<u>(5,244)</u>	<u>(34,950)</u>	<u>(11,356)</u>
Income tax provision	<u>\$ 21,680</u>	<u>\$ 14,267</u>	<u>\$ 63,001</u>

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

	2020	2019	2018
Income tax at federal statutory rate	21.0 %	21.0 %	21.0 %
Goodwill impairment charges (Note 8)	39.2 %	(29.3 %)	7.1 %
Tax impact of share-based compensation	7.4 %	(1.1 %)	(0.8 %)
Foreign tax rate differences	3.7 %	1.3 %	0.4 %
Payables and receivables for prior year tax returns	2.8 %	0.2 %	—
Non-deductible executive compensation	2.0 %	(0.7 %)	0.6 %
State income tax expense, net of federal income tax benefit	1.7 %	4.9 %	3.0 %
Change in valuation allowances ⁽¹⁾	0.8 %	(4.5 %)	0.1 %
Research and development tax credit	(3.3 %)	0.5 %	(0.4 %)
Change in unrecognized tax benefits, including interest and penalties	(2.9 %)	(0.2 %)	(0.1 %)
Return to provision adjustments	(2.3 %)	0.3 %	(0.3 %)
Other	0.8 %	(0.1 %)	(1.0 %)
Effective tax rate	<u>70.9 %</u>	<u>(7.7 %)</u>	<u>29.6 %</u>

⁽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.

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>	2020	2019	2018
Balance, beginning of year	\$ 4,169	\$ 4,801	\$ 3,795
Additions for tax positions of current year	237	364	315
Additions for tax positions of prior years	30	546	1,177
Reductions for tax positions of prior years	(414)	(887)	(108)
Settlements	—	(341)	—
Lapse of statutes of limitations	(661)	(314)	(378)
Balance, end of year	<u>\$ 3,361</u>	<u>\$ 4,169</u>	<u>\$ 4,801</u>

If the unrecognized tax benefits as of December 31, 2020 were recognized in the consolidated financial statements, income tax expense would decrease \$3,361. Accruals for interest and penalties, excluding the tax benefits of deductible interest, were \$551 as of December 31, 2020 and \$935 as of December 31, 2019. Our income tax provision included a reduction for interest and penalties of \$384 in 2020 and included expense for interest and penalties of \$605 in 2019 and \$110 in 2018. Within the next 12 months, it is reasonably possible that our unrecognized tax benefits will change in the range of a decrease of \$1,800 to an increase of \$1,900 as we attempt to resolve certain federal and state tax matters or as federal and state statutes of limitations expire. 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 2016 and prior years has expired. Audits of our federal income tax returns through 2015 have been completed by the Internal Revenue Service (IRS). Our 2017 through 2019 returns and our 2020 return, when filed, are subject to IRS examination. In general, income tax returns for the years 2017 through 2020 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)	2020		2019	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Goodwill	\$ —	\$ 20,134	\$ —	\$ 16,424
Cloud computing arrangements	—	7,532	—	—
Employee benefit plans	—	7,140	—	2,747
Prepaid assets	—	3,456	—	3,830
Property, plant and equipment	—	3,366	—	3,200
Revenue recognition	—	2,659	—	4,752
Intangible assets	26,686	—	14,900	—
Operating leases	11,202	9,043	11,409	10,578
Net operating loss, tax credit and capital loss carryforwards	7,026	—	7,698	—
Reserves and accruals	5,848	—	6,154	—
Inventories	4,153	—	2,595	—
Payroll tax deferral under the CARES Act	3,692	—	—	—
All other	4,003	3,026	2,756	4,623
Total deferred taxes	62,610	56,356	45,512	46,154
Valuation allowances	(11,453)	—	(10,349)	—
Net deferred taxes	\$ 51,157	\$ 56,356	\$ 35,163	\$ 46,154

The valuation allowances as of December 31, 2020 and December 31, 2019 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)	2020	2019	2018
Balance, beginning of year	\$ (10,349)	\$ (1,689)	\$ (1,518)
Expense from change in allowances	(244)	(8,336)	(290)
Foreign currency translation	(860)	(324)	119
Balance, end of year	\$ (11,453)	\$ (10,349)	\$ (1,689)

As of December 31, 2020, deferred income taxes have not been recognized on unremitted earnings of our foreign subsidiaries, as these amounts are intended to be reinvested indefinitely in the operations of those subsidiaries. If we were to repatriate all of our 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 distributions. As of December 31, 2020, the amount of cash and cash equivalents held by our foreign subsidiaries was \$98,735, primarily in Canada.

As of December 31, 2020, we had the following net operating loss, capital loss and tax credit carryforwards:

- state net operating loss carryforwards and tax credit carryforwards of \$79,822 that expire at various dates up to 2050;
- foreign capital loss carryforwards of \$4,993 that do not expire;
- foreign net operating loss carryforwards and research tax credit carryforwards of \$546 that expire at various dates up to 2036; and
- federal net operating loss carryforwards of \$1,194 that expire at various dates between 2025 and 2029.

NOTE 12: 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 4.7 million shares remaining available for issuance as of December 31, 2020. Full value awards such as restricted stock, restricted stock units and performance share 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 awards. Our current plan also allows for the issuance of stock appreciation rights, which we have not granted as of December 31, 2020. 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>	2020	2019	2018
Restricted shares and restricted stock units	\$ 15,066	\$ 13,411	\$ 5,232
Stock options	3,689	2,954	3,143
Performance share awards	2,590	2,907	4,502
Employee stock purchase plan	479	430	501
Total share-based compensation expense	<u>\$ 21,824</u>	<u>\$ 19,702</u>	<u>\$ 13,378</u>
Income tax benefit	<u>\$ (5,779)</u>	<u>\$ (5,350)</u>	<u>\$ (3,946)</u>

As of December 31, 2020, the total compensation expense for unvested awards not yet recognized in our consolidated statements of income (loss) was \$34,307, net of the effect of estimated forfeitures. This amount is expected to be recognized over a weighted-average period of 2.3 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, and beginning in 2019, one-fourth vest each year over 4 years. Awards granted prior to 2019 vest one-third each year over 3 years. Beginning in 2019, options 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:

	2020	2019	2018
Risk-free interest rate	1.3 %	2.3 %	2.7 %
Dividend yield	3.2 %	2.7 %	2.0 %
Expected volatility	25.8 %	24.5 %	23.0 %
Weighted-average option life (in years)	5.4	5.3	3.9

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, 2017	1,139	\$ 56.51		
Granted	519	62.12		
Exercised	(339)	42.55		
Forfeited or expired	(74)	66.85		
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	\$ 667	7.2
Exercisable at December 31, 2018	472	\$ 59.90		
Exercisable at December 31, 2019	485	61.44		
Exercisable at December 31, 2020	654	57.68	\$ 118	4.2

The weighted-average grant-date fair value of options granted was \$6.39 per option for 2020, \$8.30 per option for 2019 and \$10.98 per option for 2018. 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 \$118 for 2020, \$292 for 2019 and \$10,007 for 2018.

Restricted stock units – Beginning in 2019, we increased our use of restricted stock unit awards. We grant awards to all North American employees, we pay a portion of employee bonuses previously settled in cash in the form of restricted stock units and we grant certain other 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.

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, 2017	109	\$ 38.31	
Granted	110	52.32	
Vested	(22)	48.14	
Forfeited	(2)	74.96	
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	1.9

Of the awards outstanding as of December 31, 2020, 41 thousand restricted stock units with a value of \$1,190 were included in accrued liabilities and other non-current liabilities on the consolidated balance sheet. As of December 31, 2020, these units had a fair value of \$29 per unit and a weighted-average remaining contractual term of 10 months.

The total fair value of restricted stock units that vested was \$7,839 for 2020, \$4,374 for 2019 and \$1,619 for 2018. We made cash payments of \$58 during 2020, \$263 during 2019 and \$78 during 2018 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 vest each year over 4 years. Such awards granted under our previous plan vest in their entirety at the end of the 3 year vesting period. The restrictions lapse immediately in the case of qualified retirement, death or disability, or in the event of a change in control where replacement securities are not awarded. In the case of involuntary termination without cause, restrictions on a pro-rata portion of the shares lapse based on how much of the vesting period has passed. In the case of voluntary termination of employment or termination with cause, the unvested restricted shares are forfeited.

Information regarding unvested restricted shares was as follows:

	Number of shares <i>(in thousands)</i>	Weighted-average grant date fair value per share	Weighted-average remaining contractual term <i>(in years)</i>
Unvested at December 31, 2017	181	\$ 65.33	
Granted	77	71.29	
Vested	(76)	69.73	
Forfeited	(14)	66.24	
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	0.2

The total fair value of restricted shares that vested was \$600 for 2020, \$5,608 for 2019 and \$5,375 for 2018.

Performance share awards – Our performance share 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 shares granted:

	2020	2019	2018
Risk-free interest rate	1.4 %	2.3 %	2.4 %
Dividend yield	2.4 %	3.1 %	1.6 %
Expected volatility	28.6 %	26.8 %	21.6 %

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 shares was as follows:

	Performance shares <i>(in thousands)</i>	Weighted-average grant date fair value per share	Weighted-average remaining contractual term <i>(in years)</i>
Unvested at December 31, 2017	255	\$ 63.42	
Granted ⁽¹⁾	91	74.49	
Forfeited	(48)	59.32	
Vested	(45)	67.10	
Adjustment for performance results achieved ⁽²⁾	(3)	67.11	
Unvested at December 31, 2018	250	67.54	
Granted ⁽¹⁾	151	41.79	
Forfeited	(38)	54.42	
Vested	(118)	59.67	
Adjustment for performance results achieved ⁽²⁾	7	54.42	
Unvested at December 31, 2019	252	57.64	
Granted ⁽¹⁾	127	36.06	
Forfeited	(23)	62.18	
Vested	(61)	71.03	
Unvested at December 31, 2020	295	45.20	1.4

⁽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 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. During 2018, 53 thousand shares were issued under this plan at prices ranging from \$50.09 to \$63.13.

NOTE 13: EMPLOYEE COMPENSATION PLANS

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

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 match in an effort to maintain liquidity during the COVID-19 pandemic. 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>	2020	2019	2018
Performance-based compensation plans ⁽¹⁾	\$ 11,032	\$ 21,143	\$ 20,297
401(k) expense	2,823	10,176	9,686

⁽¹⁾ Excludes expense for share-based compensation, which is discussed in Note 12.

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 \$4,816 as of December 31, 2020 and \$5,036 as of December 31, 2019. 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 \$11,591 as of December 31, 2020 and \$11,204 as of December 31, 2019.

NOTE 14: 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 – The following tables summarize the change in benefit obligation, plan assets and funded status during 2020 and 2019:

<i>(in thousands)</i>	Postretirement benefit plan	Pension plan⁽¹⁾
Change in benefit obligation:		
Benefit obligation, December 31, 2018	\$ 73,717	\$ 3,148
Interest cost	2,617	111
Net actuarial loss	5,012	316
Benefits paid from plan assets and company funds	(8,171)	(324)
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	<u>\$ 68,164</u>	<u>\$ 3,343</u>
Change in plan assets:		
Fair value of plan assets, December 31, 2018	\$ 114,976	\$ —
Return on plan assets	21,179	—
Benefits paid	(6,237)	—
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	<u>\$ 139,372</u>	<u>\$ —</u>
Funded status, December 31, 2019	\$ 56,743	\$ (3,251)
Funded status, December 31, 2020	<u>\$ 71,208</u>	<u>\$ (3,343)</u>

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

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

<i>(in thousands)</i>	Postretirement benefit plan		Pension plan	
	2020	2019	2020	2019
Other non-current assets	\$ 71,208	\$ 56,743	\$ —	\$ —
Accrued liabilities	—	—	324	324
Other non-current liabilities	—	—	3,019	2,927

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>	2020	2019
Unrecognized prior service credit	\$ 11,335	\$ 12,756
Unrecognized net actuarial loss	(35,454)	(45,319)
Tax effect	2,163	4,157
Amount recognized in accumulated other comprehensive loss, net of tax	<u>\$ (21,956)</u>	<u>\$ (28,406)</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 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. The net actuarial loss generated during 2019 was primarily due to the decrease in the discount rate used to discount the benefit obligation. 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 8.7 years.

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

<i>(in thousands)</i>	2020	2019	2018
Interest cost	\$ 1,911	\$ 2,727	\$ 2,626
Expected return on plan assets	(7,619)	(6,957)	(7,737)
Amortization of prior service credit	(1,421)	(1,421)	(1,421)
Amortization of net actuarial losses	2,301	3,223	2,884
Net periodic benefit income	<u>\$ (4,828)</u>	<u>\$ (2,428)</u>	<u>\$ (3,648)</u>

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

	Postretirement benefit plan		Pension plan	
	2020	2019	2020	2019
Discount rate	2.16 %	3.03 %	1.74 %	2.76 %

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

	Postretirement benefit plan			Pension plan		
	2020	2019	2018	2020	2019	2018
Discount rate	3.03 %	4.13 %	3.46 %	2.76 %	4.01 %	3.35 %
Expected return on plan assets	6.00 %	6.25 %	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:

	2020		2019		2018	
	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	7.2 %	8.0 %	7.4 %	8.4 %	7.7 %	8.7 %
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	2029	2029	2029	2029

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

	Postretirement benefit plan	
	2020	2019
Mortgage-backed securities	24 %	24 %
U.S. corporate debt securities	21 %	15 %
International equity securities	20 %	19 %
U.S. large capitalization equity securities	17 %	24 %
Government debt securities	15 %	14 %
U.S. small and mid-capitalization equity securities	3 %	4 %
Total	<u>100 %</u>	<u>100 %</u>

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, 17% large capitalization equity securities, 20% international equity securities and 3% small and mid-capitalization equity securities.

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

Fair value measurements using

<i>(in thousands)</i>	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, 2020
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>

Information regarding fair value measurements of plan assets was as follows as of December 31, 2019:

Fair value measurements using					
<i>(in thousands)</i>	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, 2019
U.S. large capitalization equity securities	\$ —	\$ 30,990	\$ —	\$ —	\$ 30,990
Mortgage-backed securities	—	13,060	—	17,768	30,828
International equity securities	20,859	3,173	—	—	24,032
U.S. corporate debt securities	—	14,771	—	5,184	19,955
Government debt securities	—	18,776	—	—	18,776
U.S. small and mid-capitalization equity securities	4,228	363	—	—	4,591
Other debt securities	529	217	—	—	746
Plan assets	<u>\$ 25,616</u>	<u>\$ 81,350</u>	<u>\$ —</u>	<u>\$ 22,952</u>	<u>\$ 129,918</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 \$7,095 as of December 31, 2020 and \$7,136 as of December 31, 2019.

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

<i>(in thousands)</i>	Postretirement benefit plan	Pension plan
2021	\$ 6,283	\$ 320
2022	6,129	310
2023	5,905	300
2024	5,568	290
2025	5,137	280
2026 - 2030	20,189	1,170

NOTE 15: DEBT

Debt outstanding consisted of amounts drawn on our revolving credit facility of \$840,000 as of December 31, 2020 and \$883,500 as of December 31, 2019. As of December 31, 2020, the total of availability under our revolving credit facility was \$1,150,000. The facility includes an accordion feature allowing us, subject to lender consent, to increase the credit commitment to an aggregate amount not exceeding \$1,425,000. The credit facility matures in March 2023. Our quarterly commitment fee ranges from 0.175% to 0.35% based on our leverage ratio. Amounts drawn under the credit facility had a weighted-average interest rate of 2.01% as of December 31, 2020 and 3.03% as of December 31, 2019. In July 2019, we executed an interest rate swap to convert \$200,000 of the amount drawn under the credit facility to fixed rate debt. Further information can be found in Note 7.

Borrowings under the credit agreement are collateralized by substantially all of our personal and intangible property. The credit agreement governing our credit facility contains customary covenants regarding limits on levels of subsidiary indebtedness and capital expenditures, liens, investments, acquisitions, certain mergers, certain asset sales outside the ordinary course of business and change in control as defined in the agreement. The agreement also requires us to maintain certain financial ratios, including a maximum leverage ratio of 3.5 and a minimum ratio of consolidated earnings before interest and taxes to consolidated interest expense, as defined in the credit agreement, of 3.0. Additionally, the agreement contains customary representations and warranties including, as a condition to borrowing, that all such representations and warranties are true and correct in all material respects on the date of the borrowing, including representations as to no material adverse change in our business, assets, operations or financial condition.

There are currently no limitations on the amount of dividends and share repurchases under the terms of our credit agreement. However, if our leverage ratio, defined as total debt less unrestricted cash to EBITDA, should exceed 2.75 to 1, there would be an annual limitation on the amount of dividends and share repurchases.

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

<i>(in thousands)</i>	2020	2019	2018
Revolving credit facility:			
Daily average amount outstanding	\$ 1,016,896	\$ 925,715	\$ 731,110
Weighted-average interest rate	2.12 %	3.54 %	3.24 %
Term loan facility:⁽¹⁾			
Daily average amount outstanding	\$ —	\$ —	\$ 63,638
Weighted-average interest rate	—	—	2.97 %

⁽¹⁾ During 2018, we had borrowings outstanding under a variable rate term loan facility. These amounts were repaid in March 2018.

As of December 31, 2020, amounts were available for borrowing under our revolving credit facility as follows:

<i>(in thousands)</i>	Total available
Revolving credit facility commitment	\$ 1,150,000
Amount drawn on revolving credit facility	(840,000)
Outstanding letters of credit ⁽¹⁾	(7,658)
Net available for borrowing as of December 31, 2020	\$ 302,342

⁽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.

NOTE 16: LEASES

We have entered into operating leases for the majority of our facilities. These real estate leases have remaining terms of up to 9 years, with a weighted-average remaining term of 4.8 years as of December 31, 2020. 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 significant to the amounts recorded for operating lease assets and liabilities.

We have entered into finance leases for certain information technology hardware. The net book value of the related lease assets and the related lease liabilities was not significant as of December 31, 2020 or December 31, 2019.

Operating lease expense was \$20,928 for 2020 and \$19,113 for 2019. Rental expense related to operating leases was \$23,928 for 2018. Additional information regarding our operating leases was as follows:

<i>(in thousands)</i>	2020	2019
Operating cash outflows	\$ 19,026	\$ 17,737
Lease assets obtained during the period in exchange for lease obligations	11,000	11,637

<i>(in thousands)</i>	December 31,	
	2020	2019
Operating lease assets	\$ 35,906	\$ 44,372
Accrued liabilities	\$ 11,589	\$ 12,898
Operating lease liabilities	28,344	33,585
Total operating lease liabilities	<u>\$ 39,933</u>	<u>\$ 46,483</u>
Weighted-average remaining lease term (in years)	4.7	5.1
Weighted-average discount rate	3.1 %	3.4 %

Maturities of operating lease liabilities were as follows:

<i>(in thousands)</i>	Operating lease obligations
2021	\$ 12,632
2022	10,616
2023	6,170
2024	4,688
2025	2,752
Thereafter	6,528
Total lease payments	<u>43,386</u>
Less imputed interest	<u>(3,453)</u>
Present value of lease payments	<u>\$ 39,933</u>

During the third quarter of 2020, we executed leases on new facilities in Minnesota and Georgia with terms of 16 years and 6 years, respectively. As a result, our total lease obligations increased approximately \$65,441, with \$599 due in 2021, \$4,792 due in 2022, \$6,443 due in 2023, \$6,591 due in 2024, \$6,742 due in 2025, and \$40,274 due thereafter through 2037. The Minnesota lease includes an option allowing us to terminate the lease in 2032, subject to an early termination penalty estimated at \$4,370. As these leases have not yet commenced, they are not reflected on our consolidated balance sheet as of December 31, 2020.

NOTE 17: 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, 2020 or December 31, 2019.

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 \$9,046 as of December 31, 2020 and \$7,576 as of December 31, 2019. 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, 2020 or December 31, 2019.

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 18: 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. During 2020, we repurchased 0.5 million shares for \$14,000 and during 2019, we repurchased 2.6 million shares for \$118,547 under this authorization. As of December 31, 2020, \$287,452 remained available for repurchase. Under the current and previous authorizations, we repurchased 3.6 million shares for \$200,000 during 2018.

NOTE 19: BUSINESS SEGMENT INFORMATION

For many years, we operated 3 reportable business segments: Small Business Services, Financial Services and Direct Checks. These segments were generally organized by customer type and reflected the way we managed the company. Effective January 1, 2020, we reorganized our reportable business segments to align with structural and management reporting changes in support of our growth strategy. We now operate 4 reportable 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, in addition to 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, retail packaging and strategic sourcing services.
- **Checks** – This segment includes printed personal and business 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.

Under the new segment structure, 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.

The following is our segment information for the years ended December 31. The segment information for 2019 and 2018 has been revised to reflect our current segment structure.

<i>(in thousands)</i>	2020	2019	2018
Payments:			
Revenue	\$301,901	\$269,573	\$224,546
Adjusted EBITDA	68,117	74,384	59,016
Cloud Solutions:			
Revenue	252,773	318,383	307,589
Adjusted EBITDA	61,580	77,199	69,976
Promotional Solutions:			
Revenue	529,649	640,892	658,357
Adjusted EBITDA	66,620	101,293	105,586
Checks:			
Revenue	706,458	779,867	807,533
Adjusted EBITDA	341,705	402,662	415,221
Total segments:			
Revenue	\$1,790,781	\$2,008,715	\$1,998,025
Adjusted EBITDA	538,022	655,538	649,799

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

<i>(in thousands)</i>	2020	2019	2018
Total segment adjusted EBITDA	\$ 538,022	\$ 655,538	\$ 649,799
Corporate operations	(173,480)	(174,672)	(140,502)
Depreciation and amortization	(110,792)	(126,036)	(131,100)
Interest expense	(23,140)	(34,682)	(27,112)
Net income attributable to non-controlling interest	91	—	—
Asset impairment charges	(97,973)	(390,980)	(101,319)
Restructuring, integration and other costs	(80,665)	(79,511)	(21,203)
CEO transition costs ⁽¹⁾	30	(9,390)	(7,210)
Share-based compensation expense	(21,824)	(19,138)	(11,689)
Acquisition transaction costs	(8)	(215)	(1,719)
Certain legal-related benefit (expense)	2,164	(6,420)	(10,502)
(Loss) gain on sales of businesses and customer lists	(1,846)	(124)	15,641
Loss on debt retirement	—	—	(453)
Income (loss) before income taxes	<u>\$ 30,579</u>	<u>\$ (185,630)</u>	<u>\$ 212,631</u>

⁽¹⁾ In 2019 and 2018, includes share-based compensation expense related to the modification of certain awards in conjunction with our CEO transition (Note 10).

The following tables present revenue disaggregated by our product and service offerings. In conjunction with the realignment of our reportable segments on January 1, 2020, we refined the disaggregation of our revenue by product and service offering. As such, certain amounts reported in the prior year have been revised from previously reported amounts.

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
Treasury management solutions	226,105	—	—	—	226,105
Marketing and promotional solutions	—	—	213,404	—	213,404
Web and hosted solutions	—	133,618	—	—	133,618
Data-driven marketing solutions	—	119,155	—	—	119,155
Other payments solutions	75,796	—	—	—	75,796
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
Treasury management solutions	193,527	—	—	—	193,527
Marketing and promotional solutions	—	—	292,135	—	292,135
Web and hosted solutions	—	156,097	—	—	156,097
Data-driven marketing solutions	—	162,286	—	—	162,286
Other payments solutions	76,046	—	—	—	76,046
Total revenue	<u>\$ 269,573</u>	<u>\$ 318,383</u>	<u>\$ 640,892</u>	<u>\$ 779,867</u>	<u>\$ 2,008,715</u>

Year Ended December 31, 2018					
<i>(in thousands)</i>	Payments	Cloud Solutions	Promotional Solutions	Checks	Consolidated
Checks	\$ —	\$ —	\$ —	\$ 807,533	\$ 807,533
Forms and other products	—	—	357,700	—	357,700
Treasury management solutions	148,011	—	—	—	148,011
Marketing and promotional solutions	—	—	300,657	—	300,657
Web and hosted solutions	—	156,164	—	—	156,164
Data-driven marketing solutions	—	151,425	—	—	151,425
Other payments solutions	76,535	—	—	—	76,535
Total revenue	<u>\$ 224,546</u>	<u>\$ 307,589</u>	<u>\$ 658,357</u>	<u>\$ 807,533</u>	<u>\$ 1,998,025</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, 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
Year ended December 31, 2018:					
U.S.	\$ 188,156	\$ 269,919	\$ 629,592	\$ 783,708	\$ 1,871,375
Foreign, primarily Canada and Australia	36,390	37,670	28,765	23,825	126,650
Total revenue	\$ 224,546	\$ 307,589	\$ 658,357	\$ 807,533	\$ 1,998,025

NOTE 20: 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 the products and services we provide to our customers. 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 timing and effectiveness 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 effects 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 \$37,076 as of December 31, 2020. 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, 2020, our allowances for expected credit losses on these receivables were \$3,995, although the majority of this amount was not driven by impacts of the pandemic. We utilized all information known to us in determining this allowance, as well as allowances related to our trade accounts receivable. 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 the COVID-19 outbreak could affect estimates we made regarding inventory obsolescence and workers' compensation liabilities and thus, could result in additional expense in the future.

DELUXE CORPORATION
SUMMARIZED QUARTERLY FINANCIAL DATA (Unaudited)

	2020 Quarter Ended			
	March 31	June 30	September 30	December 31
<i>(in thousands, except per share amounts)</i>				
Total revenue	\$ 486,423	\$ 410,405	\$ 439,461	\$ 454,492
Gross profit	284,374	248,122	265,000	262,514
Net income (loss) attributable to Deluxe	(60,131)	14,859	29,417	24,663
Earnings (loss) per share:				
Basic	(1.43)	0.36	0.70	0.59
Diluted	(1.45)	0.35	0.70	0.58
Cash dividends per share	0.30	0.30	0.30	0.30

	2019 Quarter Ended			
	March 31	June 30	September 30	December 31
<i>(in thousands, except per share amounts)</i>				
Total revenue	\$ 499,065	\$ 493,986	\$ 493,593	\$ 522,071
Gross profit	299,442	291,458	289,870	315,010
Net income (loss) attributable to Deluxe	41,190	32,582	(318,493)	44,824
Earnings (loss) per share:				
Basic	0.93	0.75	(7.49)	1.06
Diluted	0.93	0.75	(7.49)	1.06
Cash dividends per share	0.30	0.30	0.30	0.30

Significant items affecting the comparability of our quarterly results were as follows:

	2020 Quarter Ended			
	March 31	June 30	September 30	December 31
<i>(in thousands)</i>				
Asset impairment charges	\$ 90,330	\$ 4,883	\$ 2,760	\$ —
Restructuring and integration expense	18,483	20,382	18,923	21,551
Discrete income tax expense (benefit) ⁽¹⁾	13,406	661	353	(837)

	2019 Quarter Ended			
	March 31	June 30	September 30	December 31
<i>(in thousands)</i>				
Asset impairment charges	\$ —	\$ —	\$ 390,980	\$ —
Restructuring and integration expense	6,283	17,497	27,674	23,356
Certain legal-related expense	412	6,005	—	3
CEO transition costs	5,488	1,906	1,145	851
Other discrete income tax expense (benefit) ⁽¹⁾	926	1,194	62,854	(298)

⁽¹⁾ Relates primarily to the tax effects of share-based compensation and the non-deductible portion of goodwill impairment charges.

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, 2020 (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, 2020 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, 2020. 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, 2020, our internal control over financial reporting was effective based on those criteria. 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.

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-Audit Committee Financial Expertise; Complaint-Handling Procedures," "Board Structure and Governance-Committee Membership and Responsibilities-Audit Committee," "Board Structure and Governance-Director Selection Process" 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, 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-Compensation Committee Report," "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, 2020:

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	3,355,579 (1)	\$ 46.28 (1)	8,008,630 (2)
Equity compensation plans not approved by shareholders	—	—	—
Total	3,355,579	\$ 46.28	8,008,630

⁽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 2,133,974, restricted stock unit awards of 926,568 and 295,037 shares subject to outstanding performance share awards. The number of performance shares reflects the target amount for awards outstanding as of December 31, 2020. The actual number of shares issued under our performance share 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 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 3,285,569 shares reserved for issuance under our Amended and Restated 2000 Employee Stock Purchase Plan and 4,723,061 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 share-based performance 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 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 3: Ratification of the Appointment of Independent Registered Public Accounting Firm-Fees Paid to Independent Registered Public Accounting Firm" and "Item 3: 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
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	Indenture, dated as of April 30, 2003, by and between us and Wells Fargo Bank Minnesota, N.A., as trustee (incorporated by reference to Exhibit 4.8 to the Registration Statement on Form S-3 (Registration No. 333-104858) filed with the Commission on April 30, 2003)
4.2	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)
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)*
10.3	Amended and Restated 2000 Employee Stock Purchase Plan*
10.4	Deluxe Corporation Deferred Compensation Plan (2020 Restatement)*
10.5	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)*
10.6	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)*
10.7	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)*

Exhibit Number	Description
10.8	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)*
10.9	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)*
10.10	Form of Restricted Stock Unit Award Agreement (Bonus Deferral) (version 1/21)*
10.11	Form of Restricted Stock Unit Award Agreement (Bonus Deferral) (version 1/19) (incorporated by reference to Exhibit 10.19 to the Annual Report on Form 10-K for the year ended December 31, 2018)*
10.12	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)*
10.13	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)*
10.14	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)*
10.15	Form of Employee Restricted Stock Award Agreement (version 12/17) (incorporated by reference to Exhibit 10.16 to the Annual Report on Form 10-K for the year ended December 31, 2017)*
10.16	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)*
10.17	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)*
10.18	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)*
10.19	Form of CEO Performance Share Unit Award Agreement (version 4/19) (incorporated by reference to Exhibit 10.8 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019)*
10.20	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)*
10.21	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)*
10.22	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)*
10.23	Form of Non-Employee Director Restricted Stock Unit Award Agreement (version 4/20)*
10.24	Form of Non-Employee Director Restricted Stock Unit Award Agreement (version 2/18) (incorporated by reference to Exhibit 10.26 to the Annual Report on Form 10-K for the year ended December 31, 2017)*
10.25	Credit agreement, dated as of March 21, 2018, by and among us, the financial institutions signatory thereto and JPMorgan Chase Bank, N.A., in its capacity as administrative agent for itself and the other lenders (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Commission on March 21, 2018)

Exhibit Number	Description
10.26	Increasing Lender Supplement, dated January 22, 2019, to the credit agreement dated as of March 21, 2018, among us, the lenders 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 January 24, 2019)
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
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 19, 2021

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 19, 2021.

Signature	Title
<u>/s/ Barry C. McCarthy</u> Barry C. McCarthy	President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ Keith A. Bush</u> Keith A. Bush	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/ Ronald C. Baldwin</u> Ronald C. Baldwin	Director
<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

**DELUXE CORPORATION
AMENDED AND RESTATED
2000 EMPLOYEE STOCK PURCHASE PLAN
(Amended and Restated Effective February 1, 2020)**

Section 1. Purpose.

1.01. The Plan is designed to encourage employee stock ownership in Deluxe Corporation by providing Eligible Employees of the Company and Participating Subsidiaries with an opportunity to purchase shares of the Company's common stock through voluntary payroll deductions. It is the purpose and policy of the Plan to foster ownership interest among employees, thus aligning the interests of employees with the interests of shareholders. The Company intends that the Plan qualify as an "employee stock purchase plan" under Section 423 of the Code. Accordingly, the provisions of the Plan shall be administered, interpreted and construed in a manner consistent with the requirements of that section of the Code. The effective date of this Amended and Restated Plan shall be February 1, 2020 (the "Effective Date").

Section 2. Certain Definitions.

2.01. **Board.** The term "Board" shall mean the Company's Board of Directors.

2.02. **Business Day.** The term "Business Day" shall mean a day on which the New York Stock Exchange is open for trading.

2.03. **Code.** The term "Code" shall mean the Internal Revenue Code of 1986, as amended.

2.04. **Company.** The term "Company" shall mean Deluxe Corporation, a Minnesota corporation.

2.05 **Corporate Transaction.** The term "Corporate Transaction" shall mean the merger into or consolidation of the Company with one or more corporations during the Plan, or the sale of all or substantially all of the assets of the Company.

2.06. **Eligible Compensation.** The term "Eligible Compensation" shall mean all regular base wage and salary payments paid by the Company to a Participant in accordance with the terms of his or her employment, including payments made to him or her under the short term disability or paid time off plan of the Company or Participating Subsidiary of which the Participant is an employee in effect at the applicable time, but excluding all overtime earnings, bonus, commissions, and other incentive payments and awards, and all other forms of extra compensation.

2.07. **Eligible Employee.** The term "Eligible Employee" shall mean all employees of the Company and its Participating Subsidiaries (including officers and directors who are also employees of the Company) whose regularly scheduled work week consists of at least twenty (20) hours. Eligible Employees do not include (i) a seasonal or temporary employee, to the extent not customarily employed for more than five months in a calendar year, or (ii) an individual performing services for the Company or any Participating Subsidiary as an independent contractor or as an employee of another company.

2.08. **Excluded Subsidiary.** The term "Excluded Subsidiary" shall mean (i) each Subsidiary whose employees have not been designated as eligible to participate in the Plan by the Plan Administrator, and (ii) each Subsidiary that was not a Participating Subsidiary prior to the Effective Date and whose

employees have not been not been designated as eligible to participate in the Plan by the Plan Administrator.

2.09. **Fair Market Value.** The term “Fair Market Value” as of any date shall mean the value of a Share determined by reference to (i) if Shares are listed on a national securities exchange, the closing sale price on that date on the principal national securities exchange on which such shares are then listed or, if no such reported sale of a Share shall have occurred on such date, on the next preceding date on which there was such a reported sale; or (ii) if such shares are not then listed on a national securities exchange, by reference to the mean between the bid and asked price published in the OTC Link ATS or displayed on the OTC Bulletin Board of a Share for that date or if for any reason no such price is available, in such other manner as the Plan Administrator may in good faith deem appropriate to reflect the then fair market value thereof.

2.10. **Offering and Purchase Dates.** The first Business Day of each Offering Period is the “Offering Date” for that Offering Period and the last Business Day of each Offering Period is the “Purchase Date” for that Offering Period.

2.11. **Offering Periods.** The Plan shall have three-month offering periods to purchase Shares (the “Offering Periods”), with a new Offering Period commencing on February 1, May 1, August 1 and November 1 of each year. Each Offering Period commencing on February 1 shall end on April 30 of the same year; each Offering Period commencing on May 1 shall end on July 31 of the same year; each Offering Period commencing on August 1 shall end on October 31 of the same year; and each Offering Period commencing on November 1 shall end on January 31 of the following year.

2.12. **Participant.** The term “Participant” shall mean an Eligible Employee of the Company or of its Participating Subsidiaries, who has elected to participate in the manner set forth in the Plan.

2.13. **Participating Subsidiaries.** The term “Participating Subsidiaries” shall mean each Subsidiary of the Company that is not an Excluded Subsidiary.

2.14. **Plan.** The term “Plan” shall mean the Deluxe Corporation Amended and Restated 2000 Employee Stock Purchase Plan, the terms and provisions of which are set forth herein.

2.15. **Plan Administrator.** The term “Plan Administrator” shall mean the Compensation Committee of the Board.

2.16. **Shares.** The term “Shares” shall mean the Company’s \$1 par value common shares.

2.17. **Stock Purchase Account.** The term “Stock Purchase Account” means a current bookkeeping record maintained by the Company of cumulative payroll deductions made from the Eligible Compensation of each Participant in the Plan as reduced by amounts applied toward the purchase of Shares under the Plan.

2.18 **Subsidiary.** The term “Subsidiary” shall mean a subsidiary, as defined in Section 424(f) of the Code, of the Company.

Section 3. Election to Participate.

3.01. An Eligible Employee may elect to participate in the Plan by completing the form prescribed by the Plan Administrator or enrolling online to authorize regular payroll deduction from the employee’s Eligible Compensation, beginning with the first payroll period ending after an Offering Date, provided such authorization is received by the Company’s Human Resources Department in such time in advance

of such Offering Date as may be prescribed by the Plan Administrator. Payroll deductions shall continue until the employee decreases his or her payroll deduction rate to zero percent (0%), withdraws from the Plan, or ceases to be eligible to participate in the Plan.

3.02. Notwithstanding the provisions of Section 3.01, no Eligible Employee shall be granted any right to purchase Shares hereunder to the extent that:

- (i) such employee, immediately after such a right to purchase is granted, would own, directly or indirectly, within the meaning of Section 423(b)(3) and Section 424(d) of the Code, Shares possessing five percent (5%) or more of the total combined voting power or value of all the classes of the capital stock of the Company or of its parent, as defined in Section 424(e) of the Code, or a Subsidiary, or
- (ii) such employee's rights to purchase stock under all employee stock purchase plans (within the meaning of Section 423 of the Code) of the Company and its Subsidiaries accrues at a rate that exceeds \$25,000 worth of stock (determined at the Fair Market Value of the Shares at the time such rights are granted) for each calendar year during which the rights to purchase such stock are outstanding at any time.

3.03. Employees of an Excluded Subsidiary shall not be eligible to participate in the Plan unless and until they transfer employment to the Company or a Participating Subsidiary or the Plan Administrator re-designates the Excluded Subsidiary as a Participating Subsidiary. In any such event, the period during which an employee was employed by the Excluded Subsidiary shall be counted toward satisfaction of the three (3) consecutive months of employment required for the employee to be eligible under Section 2.07 to participate in the Plan following such transfer or re-designation.

Section 4. Payroll Deductions and Stock Purchase Account.

4.01. A Participant may elect payroll deductions of any multiple of one percent (1%) and not less than one percent (1%) nor more than ten percent (10%) of his or her Eligible Compensation. A Participant may, at any time, increase or decrease the percentage of his or her payroll deduction within the foregoing limitations, and decrease his or her payroll deductions to zero percent (0%), as described in Section 7.01, by filing such form(s) as may be prescribed by the Plan Administrator indicating the change, such change to become effective with the first payroll period commencing on or after the receipt of the form(s) by the Company's Human Resources Department.

4.02. Payroll deductions shall be credited currently to the Participant's Stock Purchase Account. A Participant may not make any separate cash payment into his or her Stock Purchase Account.

4.03. No interest will be paid upon payroll deductions or upon any amount credited to, or on deposit in, an employee's Stock Purchase Account.

4.04. The Plan Administrator may establish procedures under which, if it is determined that a Participant's payroll deductions are likely to result in a balance in the Participant's Stock Purchase Account that will fund a purchase of Shares in excess of the limits in Section 3.02(ii) or Section 5.01, the Participant's payroll deduction contributions to the Plan may be decreased, including to zero percent (0%), at any time during an Offering Period; any amounts in the Participant's Stock Purchase Account that may not be applied to purchase Shares due to application of these limits will be refunded to the Participant; such Participant's elected payroll deductions will be reinstated in the next Offering Period in which the Plan Administrator determines the share purchases funded by such deductions will not exceed the applicable limits.

Section 5. Purchase of Shares.

5.01. On each Purchase Date, each Participant shall automatically have purchased for him or her that number of whole Shares, not less than one, as can be purchased with the amount in his or her Stock Purchase Account on such Purchase Date, provided that in no event shall the number of Shares purchased during any Offering Period exceed five thousand (5,000).

5.02. With respect to any Offering Period, the per-Share purchase price of Shares purchased shall be eighty-five percent (85%) of the Fair Market Value on the Offering Date or the Purchase Date, whichever is lower (rounded up to the next higher full cent).

Section 6. Stock Purchase Account Balance.

6.01. Subject to Section 7 of the Plan, any funds remaining in a Participant's Stock Purchase Account after the purchase of Shares on a Purchase Date, which funds must be less than the purchase price of one Share on the Purchase Date, shall remain in his or her Stock Purchase Account and be applied toward the purchase of Shares on the next Purchase Date, unless the Participant withdraws from the Plan, in which case, any such funds shall be refunded to the Participant within thirty (30) days.

Section 7. Ending Participation in the Plan.

7.01. A Participant may, at any time, change his or her Eligible Compensation payroll deduction percentage to zero percent (0%) by filing such forms as may be prescribed by the Company's Human Resources Department indicating the change. At the end of an Offering Period, if a Participant's payroll deduction of Eligible Compensation is zero percent (0%) and the Participant's Stock Purchase Account balance is an amount less than the purchase price of one Share on the Purchase Date, such balance shall be refunded to him or her in the next payroll period. An Eligible Employee who has reduced his or her payroll deductions to zero percent (0%), but has not requested a withdrawal of previous deductions, may elect to increase his or her deductions at any time, as described in Section 4.01.

7.02. A Participant may, at any time, by completing the paper or online form(s) prescribed by the Company's Human Resources Department, withdraw from the Plan and cease making any further payroll deductions. In such event, the Company shall refund, within thirty (30) days, the entire balance, if any, in the employee's Stock Purchase Account. An Eligible Employee who has withdrawn from the Plan may elect to re-enroll in the Plan, as described in Section 3.01.

7.03. Participation in the Plan shall cease upon the date of a Participant's termination of employment, death, transfer to status other than an Eligible Employee, transfer to an Excluded Subsidiary or a change in the designation of a Participant's employer to an Excluded Subsidiary, and any amounts theretofore credited to the individual's Stock Purchase Account shall be refunded within thirty (30) days to the former Participant or to his or her estate. The commencement of an approved leave of absence shall not be deemed a termination of employment for purposes of this Section 7.03; rather, a leave of absence shall be deemed to result in a termination of employment for purposes of this Section 7.03 on the later of (i) the date that ninety (90) days after the Participant's commencement of an approved leave of absence, and (ii) the earlier of the date that the Participant's approved leave of absence ends and the date the Participant no longer has a statutory or contractual right to re-employment.

Section 8. Transferability.

8.01. Stock purchase benefits granted hereunder may not be assigned, transferred, pledged or hypothecated (whether by operation of law or otherwise), and shall not be subject to execution, attachment or similar process. Any attempted assignment, transfer, pledge, hypothecation or other disposition or levy of attachment or similar process upon the stock purchase benefits shall be null and void and without effect.

8.02. The funds accumulated in a Stock Purchase Account may not be assigned, transferred, pledged or hypothecated in any way, and any attempted assignment, transfer, pledge, hypothecation or other disposition of the funds accumulated in the Stock Purchase Account shall be null and void and without effect.

8.03. The Plan Administrator may, from time to time, establish or modify minimum required holding periods for Shares purchased by all Participants under the Plan and, in connection therewith, may establish such rules and regulations as it determines to be necessary or appropriate for the administration of such minimum holding periods. Without limiting the generality of the authority herein, the Plan Administrator may require that the Shares issued under the Plan be restricted or bear a legend against transfer or by requiring periodic certifications by Participants concerning compliance with such minimum required holding periods. The establishment of or any change to any minimum required holding period shall be made effective on an Offering Date, and notice thereof shall be given to all Participants at least thirty (30) days prior to such Offering Date by such means as the Plan Administrator determines to be appropriate in the circumstances. The failure of a Participant to receive any such notice shall not affect the establishment of any such minimum holding period or any change thereto with respect to that or any other Participant.

Section 9. Share Certificates; Rights as a Shareholder.

9.01. Shares purchased under the Plan will be originally issued in uncertificated form. Shares issued under the Plan may contain restrictions against transfer (including applicable legends to that effect) as provided in Section 8.03.

9.02. The Company shall not be required to issue or deliver any Shares purchased unless such issuance and delivery comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act of 1933, as amended, the Securities and Exchange Act of 1934, as amended, the rules and regulations promulgated thereunder, applicable state securities laws and the requirements of any stock exchange upon which the Shares may then be listed, and shall be further subject to the approval of counsel for the Company with respect to such compliance.

9.03. Book-entries representing Shares purchased under the Plan shall be registered in the name of the Participant or jointly in the name of the Participant and another person, as the Participant may direct.

9.04. A Participant shall not be entitled to any of the rights or privileges of a shareholder of the Company with respect to Shares offered for purchase under the Plan, including the right to vote or direct the voting or to receive any dividends that may be declared by the Company, until (i) the Participant actually has paid the purchase price for such Shares and (ii) such Shares have been issued and delivered as provided in this Section 9.

Section 10. Effective Date and Amendment or Termination of Plan.

10.01. The Plan was first adopted (but not implemented) by the Board in 2000. The Board approved implementation of the Plan effective as of February 1, 2002, and the Plan was subsequently approved by the shareholders of the Company in compliance with Section 423 of the Code.

10.02. The Board may at any time terminate the Plan, suspend the Plan, or amend the Plan in any respect; provided, however, that, the Plan may not be amended in any way that will cause rights issued under the Plan to fail to meet the requirements for employee stock purchase plans as defined in Section 423 of the Code or any successor thereto, including, without limitation, shareholder approval if required. During any suspension of the Plan, no new Offering Period shall begin, no Eligible Employee shall be offered any opportunity to elect to participate in the Plan, and any existing payroll deductions elections shall be suspended, but any Share purchase rights granted for an Offering Period that began prior to the Plan suspension shall remain subject to the other provisions of this Plan.

Section 11. Plan Administrator.

11.01. In administering the Plan, it will be necessary to follow various laws and regulations. It may be necessary from time to time to change or waive requirements of the Plan to conform with law, to meet special circumstances not anticipated or covered in the Plan, or to carry on successful operations of the Plan. Therefore, the Plan Administrator shall have full power and authority to make variations in the provisions of the Plan for such purposes and to determine any questions which may arise regarding interpretation and application of the provisions of the Plan, including, without limitation, adopting such rules, procedures and sub-plans as may be necessary, desirable or appropriate to permit participation in the Plan by employees who are foreign nationals or employed outside the United States by a non-U.S. Participating Subsidiary, and to achieve tax, securities law and other compliance objectives in particular locations outside the United States, which may include, to the extent permitted by Section 423 of the Code and regulations thereunder, granting options to citizens or residents of a non-U.S. jurisdiction that are less favorable than the terms of purchase rights generally granted under the Plan to employees resident in the United States. Without limiting the generality of the foregoing, the Plan Administrator is specifically authorized to adopt rules and procedures regarding payroll deductions, payment of interest, conversion of local currency, payroll tax, the definition of Eligible Compensation, withholding procedures and handling of book entries that vary with local requirements. The Plan Administrator may promulgate rules regarding the time and manner for submitting any required notice or form contemplated under the Plan, which may include a requirement that the notice be on file with the Company's designated office for a reasonable period before it will be effective. Subject to the terms of the Plan and applicable law, the Plan Administrator may delegate ministerial duties associated with the administration of the Plan to such Company officers, employees or agents as the Plan Administrator may determine. The determination of the Plan Administrator as to the interpretation and operation of the Plan shall be final and conclusive.

Section 12. Stock Dividend or Reclassification or Corporate Transaction.

12.01. Upon the payment of any stock dividend, or the occurrence of a stock split, reverse stock split or reclassification by way of split-up in the number of Shares of the Company, the Plan Administrator shall make such equitable adjustments as it deems appropriate to the total number of Shares authorized by Section 13.01 to be sold under the Plan, to the number of Shares subject to purchase under outstanding share purchase rights, and to the share purchase exercise price or prices applicable to outstanding purchase rights.

12.02. In the event of a Corporate Transaction, appropriate adjustments shall be made to give effect thereto on an equitable basis in terms of issuance of shares of the surviving or successor corporation resulting from the Corporate Transaction (or the parent of such corporation). If such surviving or successor corporation (or the parent thereof) refuses to continue or assume outstanding purchase rights under the Plan, or issue substitute rights for such outstanding rights, then the Plan Administrator may, in its discretion, either terminate the Plan or shorten the Offering Period then in progress by setting a new Purchase Date for a specified date before the date of the consummation of the Corporate Transaction. In the event of a change in the Purchase Date, each Participant shall be notified in writing, prior to any new Purchase Date, that the Purchase Date for the existing Offering has been changed to the new Purchase Date and that the Participant's right to acquire Shares will be exercised automatically on the new Purchase Date unless prior to such date the Participant's employment has been terminated or the Participant has withdrawn from the Plan. In the event of a dissolution or liquidation of the Company, any Offering Period then in progress will terminate immediately prior to the consummation of such action, unless otherwise provided by the Board.

Section 13. Shares to be Sold.

13.01. Subject to the terms of Section 12.01, the number of Shares authorized to be sold under the Plan on or after February 1, 2000 shall not exceed 5 million. If the total number of Shares which may otherwise be sold on any Purchase Date, exceeds the maximum number of Shares authorized to be sold, reduced by the number of Shares previously sold under the Plan, the Company shall make a pro rata allocation of the Shares available for delivery and distribution in a uniform manner, to the extent practicable, and as it shall determine to be equitable, and the balance of payroll deductions credited to the Stock Purchase Account of each Participant shall be returned to him or her as promptly as possible.

Section 14. Notices.

14.01. Notices to the Company pertaining to the Plan may be addressed as follows:

Deluxe Corporation
Attention: Human Resource Department
Post Office Box 64235
St. Paul, MN 55164-0235

**DELUXE CORPORATION
DEFERRED COMPENSATION PLAN
(2020 Restatement)**

DELUXE CORPORATION
DEFERRED COMPENSATION PLAN
(2020 Restatement)

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**DELUXE CORPORATION
DEFERRED COMPENSATION PLAN
(2020 Restatement)**

SECTION 1

RESTATEMENT AND PURPOSE

1.1 **Restatement.** Deluxe Corporation, a Minnesota corporation (hereinafter called the “Company”), established, effective as of November 15, 1983, a deferred compensation plan known as the “DELUXE CORPORATION DEFERRED COMPENSATION PLAN” (hereinafter called the “Plan”). The Plan was subsequently restated effective as of January 1, 1996, restated again effective October 26, 2000 (except as otherwise indicated), restated again effective January 1, 2009, and restated again effective January 1, 2011. The Plan is now again restated effective December 9, 2020 (the “Effective Date”) to respond to changes in the law related to the Tax Cuts and Jobs Act of 2017, update references to other plans, and make certain other clarifying changes.

1.2 **Purpose.** The purpose of the Plan is to provide a means whereby amounts payable by the Company to Participants (as hereinafter defined) may be deferred to some future period. It is also the purpose of the Plan to attract and retain as employees persons whose abilities, experience and judgment will contribute to the growth and profitability of the Company.

1.3 **Effective Date** This restatement of the Plan is generally effective as of December 9, 2020. Certain provisions of the Plan, as set forth herein, became effective as of January 1, 2005, and any other provision of the Plan that is required to be effective as of January 1, 2005, in order to comply with section 409A of the Code shall be effective as of such date. Anything else contained herein to the contrary notwithstanding, the amendments to the Plan made by this restatement (with the exception of the amendments made to Sections 10 and 11 that are administrative in nature) shall not apply to the portion of a Participant’s Deferral Account that consists of amounts credited to the Deferral Account prior to January 1, 2005 and the earnings thereon, and such portion shall be distributed in accordance with the terms of the Plan as in effect prior to this restatement.

1.4 **Merger of Supplemental Plan.** Effective as of December 31, 2008, the Deluxe Corporation Supplemental Benefit Plan (the “Supplemental Plan”) was merged with and into the Plan. Each person who was a participant in the Supplemental Plan on December 31, 2008, automatically became a Participant in the Plan as of such date, and the balance in each Participant’s Supplemental Account (as defined in the Supplemental Plan) as of such date was added to and became part of the balance in such Participant’s Deferral Account and shall thereafter be administered and paid in the same manner as the Deferral Account. Notwithstanding the foregoing, the balance in each Participant’s Supplemental Account that represents amounts credited to the Participant’s balance in the Supplemental Plan prior to January 1, 2005, and the earnings thereon, shall be held in a separate subaccount of the Deferral Account and paid in accordance with the provisions of the Supplemental Plan as in effect on December 31, 2004.

SECTION 2 DEFINITIONS

2.1 **Definitions.** Whenever used in this Plan, the following terms shall have the meanings set forth below:

- a) “Affiliate” means a business entity which is a member of the Controlled Group and is recognized as an Affiliate by the Management Committee for the purposes of this Plan.
- b) “Base Salary” means the base salary scheduled to be paid to a Participant during a Plan Year without regard to any Incentive Compensation, or any portion deferred under this Plan.
- c) “Change in Control” is defined in Section 14.
- d) “Code” means the Internal Revenue Code of 1986, and all regulations, revenue rulings, and other forms of authoritative guidance issued pursuant thereto.
- e) “Controlled Group” means the Company and all other business entities, whether or not incorporated, which, together with the Company, would be considered a single employer under section 414(b) or (c) of the Code.
- f) “Committee” means the Compensation Committee of the Board of Directors of the Company.
- g) “Deferral Account” means the separate bookkeeping account representing the unfunded and unsecured general obligation of Company established with respect to each Participant to which is credited the dollar amounts specified in Section 5 and from which are subtracted payments made pursuant to Sections 6 and 7.
- h) “Disability” means, as to a Participant who is an employee of the Company, a determination of disability under Company’s Long Term Disability Plan. If the Participant is an employee of an Affiliate, “Disability” means as to such Participant, a determination of disability under the Long Term Disability Plan of such Affiliate, or, if no such Plan exists, then under the Long Term Disability Plan of the Company as if such Participant were a participant in such plan. If the Company discontinues its Long Term Disability Plan, then “Disability” shall mean long term disability as defined in any other Plan of the Company which generally defines long term disability for purposes of such other plan. In no event, however, shall a Participant be considered to have a Disability for purposes of this Plan until such time as such Participant is entitled to begin (or would be entitled to begin, if such Participant were a participant in the relevant plan) receipt of benefits under such long term disability or other relevant plan. In all events, a

Participant shall not be considered to have a Disability unless the condition constituting Disability is a medically determinable physical or mental impairment that can be expected to result in death or to last for a continuous period of not less than twelve months, and the Participant either has been receiving disability payments under any plan (including a short-term disability plan or practice) of the Company or an Affiliate for at least three months, or, if he or she is not eligible to participate in any disability plan, is unable to engage in any substantial gainful activity.

- i) “Eligible Employee” means an employee of the Company or its Affiliates who (i) is an officer or assistant officer, or (ii) has significant management or professional responsibilities, and (iii) who is highly compensated. Subject to the limitations contained in Section 3, the Management Committee from time to time may (i) establish rules governing the eligibility of employees of the Company and its Affiliates to participate in the Plan and, such rules, if adopted, shall be deemed to further define or amend, as the case may be, the definition of “Eligible Employee” herein, and (ii) permit certain employees of the Company and its Affiliates, who would not otherwise be eligible to participate in the Plan, to participate in the Plan.
- j) “ERISA” means the Employee Retirement Income Security Act of 1974, and all regulations and other forms of authoritative guidance issued pursuant thereto.
- k) “Event of Maturity” means any of the occurrences described in Section 6.1 by reason of which a Participant or Beneficiary may become entitled to a distribution from the Plan.
- l) “Incentive Compensation” means the incentive, bonus, and similar compensation that is paid to a Participant based on performance or other factors during a Plan Year without regard to any portion deferred under this Plan.
- m) “In-Service Distribution Account” means an account to which a Participant allocates a portion of his or her Deferral Account in accordance with Section 6.2.5. Except for distribution in Section 6.2.5, or as otherwise provided in this Plan, an In-Service Distribution Account shall be treated as part of the Participant’s Deferral Account for all purposes of the Plan.
- n) “Installment Amount” means the portion of a Participant’s Deferral Account that is to be paid during a period designated pursuant to Section 6.2.1 by the Participant in writing at the time of his or her enrollment or otherwise made in accordance with this Plan. Installment Amounts may, with the consent of the Management Committee, be expressed either in dollars or as a percentage of the Participant’s total Deferral Account, and if the Installment Amount is expressed in dollars and is less than the total Deferral Account, the Installment Amount shall be equal to the Deferral Account.

- o) “Management Committee” means the Management Committee formed by the Chief Executive Officer pursuant to Section 11 of the Plan.
- p) “Participant” means any Eligible Employee who is affirmatively selected by the Management Committee and who either elects to participate in the Plan, is eligible to have an amount credited to his Deferral Account pursuant to Section 5.2, or had an account in the Supplemental Plan on December 31, 2008.
- q) “Plan Year” means the twelvemonth period coinciding with the Company’s fiscal year and ending on each December 31.
- r) “Selected Distribution Date” shall mean the date that is designated in accordance with this Plan by the Participant in writing at the time of his or her enrollment as the date for the payment or commencement of payments of his or her Deferral Account. To the extent permitted by the Management Committee, a Participant may designate either the date of his Termination of Employment, January 1 of the year following his or her Termination of Employment as the Selected Distribution Date, January 1 of a specified year (whether or not Termination of Employment has occurred), or any other date permitted by the Management Committee that complies with section 409A of the Code. In the absence of an effective election of any other date, a Participant’s Selected Distribution Date shall be the date of his or her Termination of Employment.
- s) “Supplemental Plan” means the Deluxe Corporation Supplemental Benefit Plan, originally established as of November 8, 1984, restated as of October 26, 2000, and merged into this Plan as of December 31, 2008.
- t) “Termination of Employment” means a complete severance of a Participant’s employment relationship with the Company and all Affiliates. A Participant shall not be considered to have incurred a Termination of Employment until the Participant has incurred a separation from service as determined in accordance with section 409A of the Code. By way of illustration, and without limiting the generality of the foregoing, the following principals shall apply in determining whether a Participant has incurred a separation from service:
 - (i) The Participant shall not be considered to have separated from service so long as the Participant is on military leave, sick leave, or other bona fide leave of absence if the period of such leave does not exceed six months, or if longer, so long as the Participant retains a right to reemployment with the Company under an applicable statute or by contract.
 - (ii) Regardless of whether his or her employment has been formally terminated, the Participant will be considered to have separated from service as of the date it is reasonably anticipated that no further services will be performed by the Participant for the Company, or that the level of bona fide services the Participant will perform after such date will

permanently decrease to less than 50 percent of the average level of bona fide services performed over the immediately preceding 36-month period (or the full period of employment if the Participant has been employed for less than 36 months). For purposes of the preceding test, during any paid leave of absence the Participant shall be considered to have been performing services at the level commensurate with the amount of compensation received, and unpaid leaves of absence shall be disregarded.

- (iii) For purposes of determining whether the Participant has separated from service, all services provided for the Company, or for any entity that is a member of the Controlled Group (including any Affiliate), shall be taken into account, whether provided as an employee or as a consultant or other independent contractor; provided that the Participant shall not be considered to have not separated from service solely by reason of service as a non-employee director of the Company or any other such entity. Solely for purposes of this Section 2.1(r), the term “Controlled Group” shall be modified by substituting “50 percent” for “80 percent” for all purposes of section 414(b) and (c) of the Code (and section 1563 to the extent incorporated therein).
- (iv) A Participant who is employed by an Affiliate, and continues to be employed by the Affiliate following a stock sale, spin-off, or other transaction that causes the Participant’s employer to cease to be a member of the Controlled Group, shall not be considered to have incurred a Termination of Employment as a result of such transaction. A Participant who ceases to be employed by the Company or any member of the Controlled Group as a result of a sale of substantially all of the assets constituting a division, facility, or separate line of business, shall be considered to have incurred a Termination of Employment unless the Company (or Affiliate selling such assets) and the purchaser agree in writing, not later than the closing date of such transaction, that all Participants affected by such transaction shall not be considered to have incurred a Termination of Employment, and that the purchaser agrees to assume the obligation for payment of the Deferral Accounts of all such Participants in accordance with the Plan, unless the transaction constitutes a Change in Control with respect to such Participants and Section 14.1 applies.

SECTION 3

ELIGIBILITY FOR PARTICIPATION

Each Eligible Employee of the Company and its Affiliates shall be eligible to participate in the Plan and shall become a Participant upon selection by the Management Committee. In the event a Participant

ceases to be an Eligible Employee, he or she shall become an inactive Participant, retaining all the rights described under the Plan, except the right to elect any further deferrals. Notwithstanding anything apparently to the contrary in this Plan or in any written communication, summary, resolution or document or oral communication, no individual shall be a Participant in this Plan, develop benefits under this Plan or be entitled to receive benefits under this Plan (either for himself or herself or his or her survivors) unless such individual is a member of a select group of management or highly compensated employees (as that expression is used in ERISA).

SECTION 4

ENROLLMENT AND ELECTIONS

4.1 **Initial Enrollment.** Prior to the first Plan Year that an employee selected for participation becomes a Participant, such employee shall complete such forms and make such elections as required by the Company for effective administration of the Plan. Such initial enrollment:

- (a) Shall specify the form in which distribution of the Deferral Account attributable to that enrollment shall be made under Section 6 (and if such designation is not clearly made to the contrary, shall be deemed to have been an election of a single lump sum distribution).
- (b) Shall specify the time at which distribution shall be made which shall, subject to Section 6 hereof, be the later of such Participant's Selected Distribution Date or such Participant's Termination of Employment.
- (c) Shall be made upon forms furnished by the Company, shall be made at such time as the Company shall determine and shall conform to such other procedural and substantive rules as the Company shall prescribe from time to time.
- (d) Shall be irrevocable once it has been accepted by the Chief Executive Officer of the Company pursuant to Section 4.2(a), except to the extent that a new designation is made effective in accordance with Section 2.2 or 6.2.4.
- (e) Shall contain a deferral election made in accordance with Section 4.2.

4.2 **Election to Defer.** Prior to the first day of any Plan Year, a Participant may make a deferral election for that Plan Year. A separate election shall be made for each Plan Year, subject to the authority of the Management Committee to provide for elections that renew automatically unless changed or revoked prior to the beginning of a subsequent Plan Year. Each such deferral election:

- (a) Shall be irrevocable for the Plan Year with respect to which it is made once it has been accepted by the Chief Executive Officer of the Company or his or her designee; provided that an election for a Plan Year that has not been accepted by the last day of the last day of the preceding Plan Year shall be void.

- (b) Shall designate the amount or portion of the Participant's Incentive Compensation which is earned during that Plan Year (without regard to whether it would be paid during that or a subsequent Plan Year) which shall not be paid to the Participant but instead shall be accumulated in this Plan under Section 5 and distributed from this Plan under Section 6. Such designation shall be in a minimum amount of \$1,000. If expressed as a percentage, such percentage shall not exceed fifty percent (50%) of such Participant's Incentive Compensation. If expressed as a dollar amount, such dollar amount shall not exceed the dollar amount equivalent of fifty percent (50%) of such Participant's targeted Incentive Compensation. If a dollar amount is elected, such election shall be reduced dollar for dollar if the Incentive Compensation declared, net of any applicable tax withholding, is less than the election.
- (c) Shall designate the amount or portion of the Participant's Base Salary which is earned during that Plan Year (without regard to whether it would be paid during that or a subsequent Plan Year) which shall not be paid to the Participant but instead shall be accumulated in this Plan under Section 5 and distributed from this Plan under Section 6. Such designation shall be in a minimum amount of \$1,000, and may be up to 100 percent (100%) of such Participant's Base Salary, less (i) all FICA, federal, state and/or local income tax liabilities, and (ii) all other amounts withheld from the Participant's Base Salary, including without limitation elective deferrals and contributions to any other employee benefit plan, whether before or after tax, and repayment of any loans. The amount withheld pursuant to clause (ii) shall be determined as of the last day of the immediately preceding Plan Year, and by making a deferral election the Participant agrees not to increase the amount of any such withholding if the effect would be to reduce the portion of his or her Base Salary that is deferred.
- (d) Shall be made upon forms furnished by the Company, shall be made at such time as the Company shall determine, shall be made before the beginning of the Plan Year with respect to which it is made and shall conform to such other procedural and substantive rules as the Company shall prescribe from time to time.

4.3 **Mid-Year Eligibility.** For purposes of clarity, Eligible Employees who are selected to become Participants during a Plan Year in progress are not eligible to make a deferral election for that Plan Year. Rather, such Participants must wait to make their elections in accordance with Sections 4.1 and 4.2 for the next following or any later Plan Year.

SECTION 5 DEFERRAL ACCOUNTS

5.1 **Participant Deferral Accounts.** The Company shall establish and maintain a bookkeeping Deferral Account for each Participant. At its discretion the Company may obtain life insurance on the life of any or all Participants to provide all or a substantial portion of the

money needed to pay the amounts deferred under the Plan. Each Participant's Deferral Account shall be credited, as appropriate, with one or more of the following:

- (a) Base Salary deferrals and Incentive Compensation deferrals made pursuant to Section 4, above;
- (b) Employee Benefit Plan Equivalents as provided by Section 5.2 below; and
- (c) Gains or losses on deemed investment options as provided by Section 5.3 below.

5.2 Employee Benefit Plan Equivalent. To the extent the Company's contributions under any compensation-based benefit plan specifically designated by a resolution adopted by the Management Committee are reduced as a result of either the Participant's deferral of compensation under the Plan or the application of Section 401(a)(17) of the Code, or both, the amount of such reduction shall be credited to the Participant's Deferral Account. Any amount credited under this procedure shall be credited as of the last day of the Plan Year during which such compensation was earned without regard to whether it is paid in a subsequent year. Any amount credited to a Deferral Account of a Participant under this Plan shall not be duplicated, directly or indirectly, under any other plan of the Company.

5.3 Investment Options. The Management Committee shall permit a Participant to allocate the Participant's Deferral Account among one or more investment options for purposes of measuring the value of the benefit. That portion of the Deferral Account allocated to an investment option shall be deemed to be invested in such investment option and shall be valued as if so invested, reflecting all earnings, losses and other distributions or charges and changes in value which would have been incurred through such an investment. Neither the Company nor the Plan nor any trust established under the Plan shall have any obligation to invest in any such investment option. The determination of which investment options to make available (each of which shall be either a predetermined actual investment or a reasonable rate of interest as defined for purposes of section 3121(v)(2) of the Code) and the continued availability of selected investment options rests in the Management Committee's sole discretion. A Participant's request to allocate or reallocate among investment options must comply with any procedures established by the Management Committee, which procedures may specify a default investment option for Participants who fail to make an effective election, and must be in such increments as the Management Committee may require. The Participant may reallocate the Participant's Deferral Account among investment options as of any day that the U.S. securities markets are open and conducting business. All requests for allocation or reallocation are subject to acceptance by the Management Committee, at its discretion. If accepted by the Management Committee, an allocation request will be effective as soon as reasonably administratively practicable.

5.4 Charges Against Deferral Accounts. There shall be charged against each Participant's account any payments made to the Participant or his or her Beneficiary in accordance with Sections 6 or 7 of the Plan.

5.5 **Contractual Obligation.** It is intended that the Company or Affiliate by whom the Participant is employed is under a contractual obligation to make payments to a Participant when due. Such payments shall be made out of the general funds of the Company or Affiliate.

5.6 **Unsecured Interest.** The obligation of the Company to make payments under this Plan constitutes only the unsecured (but legally enforceable) promise of the Company to make such payments. The Participant shall have no lien, prior claim or other security interest in any property of the Company. The Company is not required to establish or maintain any fund, trust or account (other than a bookkeeping account or reserve) for the purpose of funding or paying the benefits promised under this Plan. If any such fund, trust (including any rabbi trust) or account is established, no Participant shall have any lien, prior claim, security interest or beneficial interest in any property therein. The Company will pay the cost of this Plan out of its general assets. All references to accounts, accruals, gains, losses, income, expenses, payments, custodial funds and the like are included merely for the purpose of measuring the Company's obligation to Participants in this Plan and shall not be construed to impose on the Employers the obligation to create any separate fund for purposes of this Plan. In the case of a Participant employed by an Affiliate the provisions of this Section 5.6 shall also apply to such Affiliate.

5.1 **Enforcement of Clawbacks.** In the event that a Participant becomes obligated to repay any Incentive Compensation to the Company pursuant to the Company's Incentive Compensation Recovery Policy or any other clawback, recoupment, or similar policy and/or plan adopted by the Company, or any applicable law, then the portion of the Participant's Deferral Account that the Committee determines to be attributable to deferred Incentive Compensation, whether or not the Incentive Compensation that the Participant is obligated to repay is the same as the Incentive Compensation that was deferred (including any investment earnings or benefit plan equivalents attributable to such deferred Incentive Compensation), or such lesser amount as the Committee determines, in its reasonable discretion, to be equitable, shall be forfeited and deducted from the Participant's Deferral Account; provided, that the total amount of deferred Incentive Compensation that is forfeited (not including attributable investment earnings or benefit plan equivalents) shall not exceed the total amount of Incentive Compensation the Participant would have been obligated to repay to the Company if none of the Participant's Incentive Compensation had been deferred, less any Incentive Compensation repaid by the Participant to the Company. To the extent the Participant has previously received any distributions from the Deferral Account, including any hardship withdrawals, such distributions shall be treated as coming first from the portion of the Deferral Account that is not subject to forfeiture pursuant to this Section 5.7.

SECTION 6

PAYMENT OF DEFERRED AMOUNTS

6.1 **Event of Maturity.** A Participant's Deferral Account shall mature and shall become distributable in accordance with Section 6.2 and 6.3 upon the earliest occurrence of any of the following events:

- (a) The Participant's death;
- (b) The Participant's Disability; or
- (c) The occurrence of the Selected Distribution Date. Notwithstanding the foregoing, if a Selected Distribution Date that was elected prior to January 1, 2009, occurs prior to Termination of Employment other than by reason of death or Disability, the Event of Maturity shall be postponed until the Participant's Termination of Employment. Effective for Selected Distribution Dates elected on or after January 1, 2009 (including new Selected Distribution Dates elected pursuant to Section 6.2.4), the preceding sentence shall not apply, and the Event of Maturity shall be the Selected Distribution Date even if the Participant is still employed on the Selected Distribution Date. If the Participant's Selected Distribution Date occurs while the Participant is still employed, and if the Management Committee determines that the Participant is eligible to continue to make deferral elections for Plan Years after the last Plan Year prior to the Selected Distribution Date, a new Deferral Account shall be established for the Participant to which all amounts deferred for such Plan Years, and any earnings thereon, shall be credited, and the Participant may elect a new Selected Distribution Date, and method of distribution, for such new Deferral Account prior to the beginning of the Plan Year that includes the original Selected Distribution Date.

6.2 **Form of Distribution.** Upon the occurrence of an Event of Maturity specified in Section 6.1 effective as to a Participant, the Company shall commence payment of such Participant's Deferral Account (reduced by the amount of any applicable payroll, withholding and other taxes) in the form designated by the Participant in his or her enrollment subject to the rules of this Section 6. A Participant shall not be required to make application to receive payment.

6.2.1 **Form of Payment.** Payment shall be made in whichever of the following forms as the Participant shall have designated in writing at the time of his or her initial enrollment or subsequent effective new designation under Section 6.2.4 (to the extent that such election is consistent with the rules of this Plan):

- (a) **Term Certain Installments to Participant.** Subject to Section 6.2.1(d), below, if the distributee is a Participant and the Installment Amount on the date of the applicable Event of Maturity (without giving effect to any gains or losses under Section 5.1(c) after such date) is at least Fifty Thousand Dollars (\$50,000), in a series of monthly installments payable over a period not less than two (2) years and not more than ten (10) years, commencing as of the day specified in Section 6.2.2 and continuing on the first day of each succeeding month until the Installment Amount is paid in full. If the Participant elects installments, his or her account shall continue to be credited or charged with investment results pursuant to Section 5.3, and the amount of each monthly installment during a year shall be equal to (i) the remaining balance of the Installment Amount on the last day of the preceding year, divided by the number of years for which installments remain to

be paid or, in the case of installments to be paid in the first year to a Participant whose Selected Distribution Date was the day of his or her Termination of Employment, the Installment Amount at the end of the month in which the Termination of Employment occurs, in either case divided by (ii) the number of monthly installments to be paid in such year; provided that the final monthly installment shall be equal to the entire remaining balance of the Installment Amount. The entire series of installments shall be considered a single payment for purposes of section 409A of the Code.

- (b) **Lump Sum.** If the distributee is either a Participant or Beneficiary (except as provided in Section 6.2.1(a)), in a single lump sum payment. Payment to a Beneficiary shall in all events be made in a lump sum, regardless of whether the Participant elected payment in installments and regardless of whether installment payments have begun at the time of death.
- (c) **Lump Sum Distribution Notwithstanding Designation.** If a Participant's total Installment Amount is less than Fifty Thousand Dollars (\$50,000) on the Event of Maturity, then, regardless of whether the Participant elected to have his or her Deferral Account paid in installments pursuant to Section 6.2.1(a), such Participant's entire Deferral Account shall be paid in a single lump sum pursuant to the provisions of Section 6.2.1(b) above.

6.2.2 **Time of Payment.** Payment shall be made or commenced to a Participant or Beneficiary in accordance with the following rules:

- (a) **Selected Distribution Date.** Except as otherwise provided in this Section 6.2.2, payment shall be made or commenced within ninety (90) days after the Participant's Selected Distribution Date.
- (b) **Death.** Upon the death of a Participant before his or her entire Deferral Account has been distributed, payment of the remaining balance of the Deferral Account shall be made to the Beneficiary within ninety (90) days after the Participant's death.
- (c) **Disability.** If the payment is made on account of the Participant's Disability, payment shall be made in a single lump sum as if the Participant had a Termination of Employment as provided in paragraph (a) above, within ninety (90) days of the commencement of such Disability.
- (d) **Selected Distribution Date Designated Before 2009.** If a Selected Distribution Date elected prior to January 1, 2009, occurs prior to the Participant's Termination of Employment, payment shall be made or commenced within ninety (90) days after the Participant's Termination of Employment.
- (e) **Six Month Delay in Distributions to Key Employees.** If a Participant's Event of Maturity is, or is defined by, the Participant's Termination of Employment and

the Participant is a “key employee”, as hereinafter defined, then no distribution shall be made to the Participant until the first business day that is at least six months after the Termination of Employment. If the distribution is to be made in the form of a lump sum, then the Participant’s Deferral Account shall continue to be credited with earnings or losses based upon the investment options elected (which may be changed during such six month period in accordance with Section 5.3) until distributed. If the distribution is to be made in installments, then all installments that would otherwise have been paid during such six month period shall be accumulated and paid in a lump sum, without interest, at the end of such six month period. If the Participant dies during the six month period, the delay required by this Section 6.2.2(e) shall not apply to payments to the Participant’s Beneficiary. For purposes of this Section 6.2.2(e) a “key employee” shall mean any Participant who is a key employee as defined by section 416(i) of the Code (disregarding section 416(i)(5)). Whether a Participant is a key employee shall be determined as of the last day of each Plan Year, based upon the Participant’s total compensation during the Plan Year then ending and the Participant’s status as an officer or shareholder at any time during such Plan Year, and a Participant who is determined to be a key employee on the last day of a Plan Year shall be subject to this Section 6.2.2(e) if the Participant incurs a Termination of Employment during the twelve (12) months commencing on April 1 of the following Plan Year. For purposes of determining a Participant’s status as a key employee, the Participant’s compensation shall mean total compensation required to be reported as taxable income in Box 1 of Form W-2 (or its equivalent), increased by all pre-tax deferrals and contributions pursuant to section 402(g), 125, or 132(f) of the Code, provided that compensation paid to a nonresident alien which is not effectively connected with the conduct of a trade or business within the United States shall not be included. For avoidance of doubt and without limiting the generality of the last sentence of Section 1.3, this Section 6.2.2(e) shall not apply to the portion of a Participant’s Deferral Account that consists of amounts credited to the Deferral Account prior to January 1, 2005 and the earnings thereon, and such portion shall be distributed without the six month delay required by this Section 6.2.2(e).

- (f) **No Election of Year of Payment.** In any case in which the ninety (90) day period during which payment is to be made overlaps two calendar years, the Participant or Beneficiary shall not be permitted to elect, directly or indirectly, the year in which the payment shall be made.

6.2.3 **Default.** If for any reason a Participant shall have failed to make a timely written designation of the form of distribution or of a Selected Distribution Date for payment (including reasons entirely beyond the control of the Participant), the payment shall be made in a single lump sum within ninety (90) days of the Participant’s Termination of Employment. No spouse, former spouse, Beneficiary or other person shall have any right to participate in the Participant’s selection of a form of benefit.

6.2.4 New Designation. At any time and from time to time, each Participant may file with the Chief Executive Officer of the Company (or as otherwise directed by the Management Committee) a new designation of a time and form of payment. Each subsequent designation shall supersede all prior designations and shall be effective as to the Participant's entire Deferral Account (including the portions of the Deferral Account attributable to periods before the new designation is filed) as if the new designation had been made in writing at the time of the Participant's initial enrollment. Notwithstanding the foregoing, any new designation shall be disregarded as if it had never been filed (and the prior effective designation shall be given effect) unless the designation was filed with the Chief Executive Officer of the Company (or as otherwise directed by the Management Committee) at least twelve (12) months before the Participant's Termination of Employment, or before the Participant's Selected Distribution Date if other than his or her Termination of Employment. Effective January 1, 2005, (i) if a Participant designates a new Selected Distribution Date it must be at least five years after the original Selected Distribution Date, (ii) if a Participant whose prior Selected Distribution Date was or defaulted to Termination of Employment designates a Selected Distribution Date the Selected Distribution Date shall be the later of the date so designated or the fifth anniversary of the Participant's Termination of Employment, and (iii) if a Participant makes any new designation (including a new designation that changes the form of payment only), then, unless the Event of Maturity is the Participant's death or Disability, the date for commencement of payment shall be five years after the date specified in Section 6.2.2. For avoidance of doubt and without limiting the generality of the last sentence of Section 1.3, the preceding sentence shall not apply to the portion of a Participant's Deferral Account that consists of amounts credited to the Deferral Account prior to January 1, 2005 and the earnings thereon, and an election that does not satisfy the requirements of the preceding sentence shall apply only to such portion of the Participant's Deferral Account.

6.2.5 In-Service Distribution Accounts. At the same time that a Participant makes a deferral election for any Plan Year pursuant to Section 4.2, the Participant may elect to have a portion of his or her deferrals for that Plan Year or, to the extent permitted by the Management Committee, Benefit Plan Equivalents credited to his or her Deferral Account as of the last day of the Plan Year, credited to an In-Service Distribution Account, which shall be distributed in accordance with the following provisions.

- (a) When a Participant first elects to have an amount credited to an In-Service Distribution Account, the Participant shall specify a distribution date for the In-Service Distribution Account (the "In-Service Distribution Date"), which shall be January 1 of a year that is at least three years after the first amount is credited to the In-Service Distribution Account.
- (b) The balance in an In-Service Distribution Account shall be distributed either in a lump sum on the In-Service Distribution Date, or, if the Participant so elects at the same time the In-Service Distribution date is specified, in a series of monthly installments payable over a period not less than two (2) years and not more than five (5) years commencing on the In-Service Distribution Date, calculated in accordance with Section 6.2.1(a) as if the entire balance in the In-Service

Distribution Account were the Installment Amount (without regard to the requirement that the minimum account balance for installment payments may not be less than \$50,000).

- (c) If a Participant incurs a Termination of Employment for any reason, including death or Disability, either prior to the In-Service Distribution Date, or while an In-Service Distribution Account is being paid in installments, the remaining balance of the In-Service Distribution Account shall be distributed in the same manner as the Participant's Deferral Account.
- (d) A Participant may not elect to have any portion of the deferrals for any Plan Year allocated to an In-Service Distribution Account beginning with the Plan Year that includes the In-Service Distribution Date, and any such election shall be void and the amount of the deferral shall instead be allocated to the Deferral Account.
- (e) A Participant may have up to two separate In-Service Distribution Accounts at any one time, with different In-Service Distribution Dates and/or distribution methods. A Participant may change the In-Service Distribution Date, or the method of distribution of the In-Service Distribution Account, by filing a new designation in accordance with Section 6.2.4 at least one year prior to the original In-Service Distribution Date; provided that if any portion of the In-Service Distribution Account represents amounts deferred on or after January 1, 2005, no change may be made (including changing the form of payment only) unless the new designation changes the In-Service Distribution Date to a date that is at least five years later than the original In-Service Distribution Date.

6.3 **Distribution of Taxable Amounts.** Notwithstanding anything to the contrary in this Plan, in the event that any portion of a Participant's Deferral Account is ever required to be included in the Participant's taxable income prior to its payment to the Participant by reason of section 409A of the Code, the portion of the Deferral Account determined to be included in taxable income shall be distributed to the Participant as soon as practical after such determination is made.

6.4 **Tax Withholding.** All payments under the Plan are subject to, and net of, all applicable federal, state and local tax withholding. To the extent that amounts credited to a Participant's Deferral Account are subject to tax under the Federal Insurance Contributions Act ("FICA") prior to distribution, the Management Committee may direct that all or any portion of the employee's FICA obligation (plus any federal, state or local income tax withholding resulting from such offset) shall be offset against the Participant's Deferral Account.

6.5 **Special Rule for eFunds Participants.** Notwithstanding anything to the contrary in this Plan, the following provisions shall apply to all Participants who as of the spin off of eFunds Corporation ("eFunds") from the Company are employed by eFunds or a subsidiary or affiliated corporation of eFunds ("eFunds Participant"):

- (a) The spin off of eFunds shall not constitute a Termination of Employment for purposes of this Plan and payment shall not be made or commenced to eFunds Participants based on the occurrence of the spin off.
- (b) Unless eligible for distribution before the spin off, eFunds Participants shall not be eligible for payments of Deferral Accounts from the Plan until they have an Event of Maturity occurring after the spin off. Termination of Employment by eFunds (including all of its affiliates, defined as any business entity which is affiliated in ownership with eFunds and is recognized as an affiliate of eFunds by the Management Committee for purposes of this Plan) shall constitute a Termination of Employment for purposes of this Plan with respect to eFunds Participants.
- (c) The deferral elections of eFunds Participants shall immediately and automatically terminate upon occurrence of the spin off and there shall be no further deferrals of compensation for such eFunds Participants into this Plan. There shall also be no further Employee Benefit Plan Equivalents credited to the eFunds Participants' Deferral Accounts after the spin off, except any credits reflecting deferrals occurring before the spin off. Deferrals related to Incentive Compensation earned before the spin off (even if paid after the spin off) will be credited to the eFunds Participants' accounts in accordance with the terms of their deferral elections for the 2000 Plan Year.
- (d) All other provisions of the Plan shall remain in effect as to the eFunds Participants who shall become inactive Participants, including but not limited to the ability to allocate Deferral Accounts among Investment Options as provided at Section 5.3 and the crediting or debiting of such Deferral Accounts to reflect such Investment Options as provided at Section 5.1(c).
- (e) The Company may at any time amend the Plan to terminate the participation of the eFunds Participants and distribute the account balances of all of the eFunds Participants in lump sum payments. In the event that any eFunds Participant is subsequently employed by an Affiliate and becomes a Participant, the balance of his or her account attributable to his or her prior employment by eFunds shall remain separate and shall be governed by the provisions of this Section 6.3. It is the intention of the Company that the accounts of the eFunds Participants, having been fully accrued and vested prior to January 1, 2005, shall be exempt from Section 409A of the Code.

SECTION 7

UNFORESEEABLE EMERGENCY

The Management Committee may alter the manner or timing of payment of a Deferral Account under Section 6 in the event that the Participant establishes, to the satisfaction of the

Management Committee, financial need resulting from an unforeseeable emergency. In such event, the Management Committee may:

- (a) First, reduce the portion of the Participant's Base Salary or Incentive Compensation that the Participant has elected to defer for the Plan Year by the amount reasonably necessary to satisfy such need.
- (b) Second, to the extent that the financial need cannot be satisfied by terminating the Participant's deferral election, provide that all or a portion of the Deferral Account shall be paid immediately in a lump sum payment, in an amount not to exceed the amount necessary to satisfy the remaining financial need, and any taxes imposed upon such payment.
- (c) In the case of a Participant receiving installment payments, provide for the present value of all or a portion of such installments to be paid immediately in a lump sum payment, in an amount not to exceed the amount necessary to satisfy the remaining financial need, and any taxes imposed upon such payment.

An unforeseeable emergency means a severe financial hardship to the Participant resulting from an illness or accident of the Participant, the Participant's spouse, the Participant's Beneficiary, or the Participant's dependent (as defined in section 152 of the Code, without regard to section 152(b)(1), (b)(2), and (d)(1)(B)); loss of the Participant's property due to casualty (including the need to rebuild a home following damage to a home not otherwise covered by insurance, for example, not as a result of a natural disaster); or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant. The imminent foreclosure of or eviction from the Participant's primary residence, the need to pay for medical expenses, including nonrefundable deductibles, as well as for the costs of prescription drug medication, or the need to pay for the funeral expenses of a spouse, a Beneficiary, or a dependent (as defined above) may constitute an unforeseeable emergency. The purchase of a home and the payment of college tuition are generally not unforeseeable emergencies. A distribution on account of unforeseeable emergency may not be made to the extent that such emergency is or may be relieved through reimbursement or compensation from insurance or otherwise, by liquidation of the Participant's assets, to the extent the liquidation of such assets would not cause severe financial hardship, provided that a Participant shall not be required to first take any loans or make any hardship withdrawals permitted by a qualified retirement plan maintained by the Company. The Management Committee's determination as to the occurrence of an unforeseeable emergency of the Participant and the manner in which, if at all, the payment of deferred amounts shall be altered or modified, shall be final.

SECTION 8
BENEFICIARY

A Participant may designate a Beneficiary or Beneficiaries who, upon his or her death, shall receive the distributions that otherwise would have been paid to the Participant. All designations shall be in writing and shall be effective only if and when delivered to the Chief Executive Officer of the Company during the lifetime of the Participant. If a Participant designates a Beneficiary without providing in the designation that the Beneficiary must be living at the time of such distribution, the designation shall vest in the Beneficiary all of the distributions, whether payable before or after the Beneficiary's death, and any distributions remaining upon the Beneficiary's death shall be paid to the Beneficiary's estate.

A Participant may, from time to time, change the Beneficiary or Beneficiaries by a written instrument delivered to the Chief Executive Officer of the Company. In the event a Participant shall not designate a Beneficiary or Beneficiaries pursuant to this Section, or if for any reason such designation shall be ineffective, in whole or in part, the distributions that otherwise would have been paid to such Participant shall be paid to the Participant's estate (or, if a Beneficiary dies while receiving installment payments and no contingent beneficiary has been designated, to the Beneficiary's estate).

SECTION 9
NONTRANSFERABILITY

In no event shall the Company make any payment under the Plan to any assignee or creditor of a Participant or a Beneficiary. Prior to the time of payment hereunder, a Participant or Beneficiary shall have no rights by way of anticipation or otherwise to assign or otherwise dispose of any interest under the Plan nor shall such rights be assigned or transferred by operation of law. Notwithstanding anything to the contrary herein, however, the Management Committee has the discretion to allow an assignment to an alternative payee in order to satisfy the terms of a domestic relations order (as defined in Section 414(p)(1)(B) of the Code).

SECTION 10
DETERMINATIONS — RULES AND REGULATIONS

10.1 **Determinations.** The Management Committee shall make such determinations as may be required from time to time in the administration of the Plan. The Management Committee shall have the discretionary authority and responsibility to interpret and construe the Plan and to determine all factual and legal questions under the Plan, including but not limited to the entitlement of Participants and Beneficiaries, and the amounts of their respective interests. Each

interested party may act and rely upon all information reported to them hereunder and need not inquire into the accuracy thereof, nor be charged with any notice to the contrary. The Management Committee shall make such determinations as may be required from time to time in the administration of the Plan. All determinations by the Management Committee shall be final and binding on all Participants and Beneficiaries and all persons claiming any benefit under the Plan, subject only to the claims procedures set forth below.

10.2 Claims Procedure. Until modified by the Management Committee, the claims procedure set forth in this Section 10 shall be the mandatory claims and review procedure for the resolution of disputes and disposition of claims filed under the Plan on or after January 1, 2002.

10.2.1 Initial Claim. An individual may, subject to Section 10.4, file with the Management Committee a written claim for benefits under the Plan in a form and manner prescribed by the Management Committee.

- (a) If the claim is denied in whole or in part, the Management Committee shall notify the claimant of the adverse benefit determination within ninety (90) days after receipt of the claim.
- (b) The ninety (90) day period for making the claim determination may be extended for ninety (90) days if the Management Committee determines that special circumstances require an extension of time for determination of the claim, provided that the Management Committee notifies the claimant, prior to the expiration of the initial ninety (90) day period, of the special circumstances requiring an extension and the date by which a claim determination is expected to be made.

10.2.2 Notice of Initial Adverse Determination. A notice of an adverse determination shall set forth in a manner calculated to be understood by the claimant:

- (a) the specific reasons for the adverse determination;
- (b) references to the specific provisions of the Plan (or other applicable Plan document) on which the adverse determination is based;
- (c) a description of any additional material or information necessary to perfect the claim and an explanation of why such material or information is necessary; and
- (d) a description of the claims review procedure, including the time limits applicable to such procedure, and a statement of the claimant's right to bring a civil action under section 502(a) of ERISA following an adverse determination on review, subject to Section 10.6.

10.2.3 Request for Review. Within sixty (60) days after receipt of an initial adverse benefit determination notice, the claimant may file with the Management Committee a written request for a review of the adverse determination and may, in connection therewith, submit

written comments, documents, records and other information relating to the claim benefits. Any request for review of the initial adverse determination not filed within sixty (60) days after receipt of the initial adverse determination notice shall be untimely.

10.2.4 Claim on Review. If the claim, upon review, is denied in whole or in part, the Management Committee shall notify the claimant of the adverse benefit determination within sixty (60) days after receipt of such a request for review.

- (a) The sixty (60) day period for deciding the claim on review may be extended for sixty (60) days if the Management Committee determines that special circumstances require an extension of time for determination of the claim, provided that the Management Committee notifies the claimant, prior to the expiration of the initial sixty (60) day period, of the special circumstances requiring an extension and the date by which a claim determination is expected to be made.
- (b) In the event that the time period is extended due to a claimant's failure to submit information necessary to decide a claim on review, the claimant shall have sixty (60) days within which to provide the necessary information and the period for making the claim determination on review shall be tolled from the date on which the notification of the extension is sent to the claimant until the date on which the claimant responds to the request for additional information or, if earlier, the expiration of sixty (60) days.
- (c) The Management Committee's review of a denied claim shall take into account all comments, documents, records, and other information submitted by the claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination.

10.2.5 Notice of Adverse Determination for Claim on Review. A notice of an adverse determination for a claim on review shall set forth in a manner calculated to be understood by the claimant:

- (a) the specific reasons for the denial;
- (b) references to the specific provisions of the Plan (or other applicable Plan document) on which the adverse determination is based;
- (c) a statement that the claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant to the claimant's claim for benefits;
- (d) a statement describing any voluntary appeal procedures offered by the Plan and the claimant's right to obtain information about such procedures; and

- (e) a statement of the claimant's right to bring an action under section 502(a) of ERISA, subject to Section 10.6.

10.3 Rules and Regulations.

10.3.1 **Adoption of Rules.** Any rule not in conflict or at variance with the provisions hereof may be adopted by the Management Committee.

10.3.2 Specific Rules.

- (a) No inquiry or question shall be deemed to be a claim or a request for a review of a denied claim unless made in accordance with the established claim procedures. The Management Committee may require that any claim for benefits and any request for a review of a denied claim be filed on forms to be furnished by the Management Committee upon request.
- (b) All decisions on claims and on requests for a review of denied claims shall be made by the Management Committee unless delegated as provided for in the Plan, in which case references in this Section 10 to the Management Committee shall be treated as references to the Management Committee's delegate.
- (c) Claimants may be represented by a lawyer or other representative at their own expense, but the Management Committee reserves the right to require the claimant to furnish written authorization and establish reasonable procedures for determining whether an individual has been authorized to act on behalf of a claimant. A claimant's representative shall be entitled to copies of all notices given to the claimant.
- (d) The decision of the Management Committee on a claim and on a request for a review of a denied claim may be provided to the claimant in electronic form instead of in writing at the discretion of the Management Committee.
- (e) In connection with the review of a denied claim, the claimant or the claimant's representative shall be provided, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant to the claimant's claim for benefits.
- (f) The time period within which a benefit determination will be made shall begin to run at the time a claim or request for review is filed in accordance with the claims procedures, without regard to whether all the information necessary to make a benefit determination accompanies the filing.
- (g) The claims and review procedures shall be administered with appropriate safeguards so that benefit claim determinations are made in accordance with governing plan documents and, where appropriate, the plan provisions have been applied consistently with respect to similarly situated claimants.

- (h) For the purpose of this Section, a document, record, or other information shall be considered “relevant” if such document, record, or other information: (i) was relied upon in making the benefit determination; (ii) was submitted, considered, or generated in the course of making the benefit determination, without regard to whether such document, record, or other information was relied upon in making the benefit determination; (iii) demonstrates compliance with the administration processes and safeguards designed to ensure that the benefit claim determination was made in accordance with governing plan documents and that, where appropriate, the Plan provisions have been applied consistently with respect to similarly situated claimants; and (iv) constitutes a statement of policy or guidance with respect to the Plan concerning the denied treatment option or benefit for the claimant’s diagnosis, without regard to whether such advice or statement was relied upon in making the benefit determination.
- (i) The Management Committee may, in its discretion, rely on any applicable statute of limitation or deadline as a basis for denial of any claim.

10.4 **Deadline to File Claim.** To be considered timely under the Plan’s claim and review procedure, a claim must be filed with the Management Committee within one (1) year after the claimant knew or reasonably should have known of the principal facts upon which the claim is based.

10.5 **Exhaustion of Administrative Remedies.** The exhaustion of the claim and review procedure is mandatory for resolving every claim and dispute arising under this Plan. In any subsequent legal action all explicit and all implicit determinations by the Management Committee (including, but not limited to, determinations as to whether the claim, or a request for a review of a denied claim, was timely filed) shall be afforded the maximum deference permitted by law.

10.5.1 **Deadline to File Legal Action.** No legal action to recover Plan benefits or to enforce or clarify rights under the Plan under section 502 or section 510 of ERISA or under any other provision of law, whether or not statutory, may be brought by any claimant on any matter pertaining to this Plan unless the legal action is commenced in the proper forum not later than six (6) months following the date of the notice of an adverse determination for a claim on review.

10.6 **Knowledge of Fact by Participant Imputed to Beneficiary.** For the purpose of applying the deadlines to file a claim or a legal action, knowledge of all facts that a Participant knew or reasonably should have known shall be imputed to every claimant who is or claims to be a Beneficiary of the Participant or otherwise claims to derive an entitlement by reference to the Participant for the purpose of applying the previously specified periods.

SECTION 11

ADMINISTRATION

11.1 **Company.** Functions generally assigned in this Plan to the Company are delegated to the Committee, Chief Executive Officer and the Management Committee as follows:

11.1.1 **Chief Executive Officer.** Except as otherwise provided by the Plan and as set forth in Section 11.1.2, below, the Chief Executive Officer of the Company shall delegate to a Management Committee all matters regarding the administration of the Plan.

11.1.2 **Committee.** Notwithstanding the foregoing general delegations to the Chief Executive Officer and the Management Committee, the Committee shall have the exclusive authority, which may not be delegated (subject to Section 11.8), to act for the Company:

- (a) to amend or to terminate this Plan; and
- (b) to consent to the adoption of the Plan by other business entities; to establish conditions and limitations upon such adoption of the Plan by other business entities.

11.1.3 **Management Committee.**

- (a) **Appointment and Removal.** The Management Committee, subject to the direction of the Committee and the Chief Executive Officer, shall have all of the functions and authorities generally assigned in this Plan to the Company. The Management Committee shall consist of one or members as may be determined and appointed from time to time by the Chief Executive Officer of the Company and they shall serve at the pleasure of such Chief Executive Officer and the Committee.
- (b) **Automatic Removal.** If any individual who is a member of the Management Committee is a director, officer or employee when appointed as a member of the Management Committee, then such individual shall be automatically removed as a member of the Management Committee at the earliest time such individual ceases to be a director, officer or employee. This removal shall occur automatically and without any requirement for action by the Chief Executive Officer of the Company or any notice to the individual so removed.
- (c) **Authority.** The Management Committee may elect such officers as the Management Committee may decide upon. In addition to the other authorities delegated elsewhere in this Plan to the Management Committee, the Management Committee shall:

- (i) establish rules for the functioning of the Management Committee, including the times and places for holding meetings, the notices to be given in respect of such meetings and the number of members who shall constitute a quorum for the transaction of business,
 - (ii) organize and delegate to such of its members as it shall select authority to execute or authenticate rules, advisory opinions or instructions, and other instruments adopted or authorized by the Management Committee; adopt such bylaws or regulations as it deems desirable for the conduct of its affairs; appoint a secretary, who need not be a member of the Management Committee, to keep its records and otherwise assist the Management Committee in the performance of its duties; keep a record of all its proceedings and acts and keep all books of account, records and other data as may be necessary for the proper administration of the Plan,
 - (iii) determine from the records of the Company and its Affiliates the compensation, service records, status and other facts regarding Participants and other employees,
 - (iv) cause to be compiled at least annually, from the records of the Management Committee and the reports and accountings of the Company and its Affiliates, a report or accounting of the status of the Plan and the Deferral Accounts of the Participants, and make it available to each Participant who shall have the right to examine that part of such report or accounting (or a true and correct copy of such part) which sets forth the Participant's benefits,
 - (v) prescribe forms to be used for applications for participation, benefits, notifications, etc., as may be required in the administration of the Plan,
 - (vi) set up such rules as are deemed necessary to carry out the terms of this Plan,
 - (vii) resolve all questions of administration of the Plan not specifically referred to in this Section,
 - (viii) delegate or redelegate to one or more persons, jointly or severally, and whether or not such persons are members of the Management Committee or employees of the Company, such functions assigned to the Management Committee hereunder as it may from time to time deem advisable, and
 - (ix) perform all other acts reasonably necessary for administering the Plan and carrying out the provisions of this Plan and performing the duties imposed by the Plan on it.
- (d) **Compliance with Applicable Laws and Listing Requirements.** Nothing in this Plan shall be read to provide authority to the Management Committee if such

authority would conflict with requirements of Section 16 of the Securities and Exchange Act of 1934 or other applicable law, or any listing requirements of any public stock exchange on which the Company's stock is listed.

- (e) **Majority Decisions.** If there shall at any time be three (3) or more members of the Management Committee serving hereunder who are qualified to perform a particular act, the same may be performed, on behalf of all, by a majority of those qualified, with or without the concurrence of the minority. No person who failed to join or concur in such act shall be held liable for the consequences thereof, except to the extent that liability is imposed under ERISA.

11.2 **Conflict of Interest.** If any officer or employee of the Company or an Affiliate, any member of the Committee, or any member of the Management Committee to whom authority has been delegated or redelegated hereunder shall also be a Participant or Beneficiary in the Plan, the individual shall have no authority as such officer, employee, Committee or Management Committee member with respect to any matter specially affecting his or her individual interest hereunder (as distinguished from the interests of all Participants and Beneficiaries or a broad class of Participants and Beneficiaries), all such authority being reserved exclusively to the other officers, employees, Committee or Management Committee members as the case may be, to the exclusion of such Participant or Beneficiary, and such Participant or Beneficiary shall act only in his or her individual capacity in connection with any such matter.

11.3 **Dual Capacity.** Individuals, firms, corporations or partnerships identified herein or delegated or allocated authority or responsibility hereunder may serve in more than one fiduciary capacity.

11.4 **Administrator.** The Company shall be the administrator for purposes of section 3(16)(A) of ERISA.

11.5 **Named Fiduciaries.** The Chief Executive Officer, the Committee and the Management Committee shall be named fiduciaries for the purpose of section 402(a) of ERISA.

11.6 **Service of Process.** In the absence of any designation to the contrary by the Company, the Secretary of the Company is designated as the appropriate and exclusive agent for the receipt of service of process directed to the Plan in any legal proceeding, including arbitration, involving the Plan.

11.7 **Administrative Expenses.** The reasonable expenses of administering the Plan shall be payable by the Company.

11.8 **Rules, Policies and Procedures.** Any rule, policy or procedure necessary or convenient for the administration of the Plan may be adopted by the Management Committee. Any rule, policy or procedure adopted by the Management Committee in connection with the administration of the Plan shall be deemed to be a part of the Plan. In the event that any such rule, policy or procedure conflicts with any provision of this Plan document that is ministerial,

procedural or technical in nature, the Plan shall be deemed amended to the extent of the inconsistency.

11.9 **Method of Executing Instruments.** Information to be supplied or written notices to be made or consents to be given by the Management Committee pursuant to any provision of this Plan may be signed in the name of the Management Committee by any person who has been authorized to make such certification or to give such notices or consents.

11.10 **Information Furnished by Participants.** The Company and its Affiliates shall not be liable or responsible for any error in the computation of the Deferral Account of a Participant resulting from any misstatement of fact made by the Participant, directly or indirectly, to the Company, and used by it in determining the Participant's Deferral Account. The Company shall not be obligated or required to increase the Deferral Account of such Participant which, on discovery of the misstatement, is found to be understated as a result of such misstatement of the Participant. However, the Deferral Account of any Participant which are overstated by reason of any such misstatement shall be reduced to the amount appropriate in view of the truth.

SECTION 12

AMENDMENT AND TERMINATION

The Company expects the Plan to be permanent but since future conditions affecting the Company cannot be anticipated or foreseen, the Company reserves the right to amend, modify or terminate the Plan at any time by action of the Committee. Upon termination of the Plan, all Deferral Accounts shall remain subject to payment in accordance with Sections 6 and 7 of the Plan, provided that the Committee may, in connection with such termination, also amend the Plan to provide for payment of all Deferral Accounts in a lump sum to the extent permitted by section 409A of the Code.

SECTION 13

LIFE INSURANCE CONTRACT

If the Company elects to purchase one or more life insurance contracts to provide it with funds to make payments under the Plan, the Company shall at all times be the sole and complete owner and Beneficiary of such contract(s), and shall have the unrestricted right to use all amounts and exercise all options and privileges under such contract(s) without the knowledge or consent of any Participant or Beneficiary or any other person; neither Participant, Beneficiary nor any other person shall have any right, title or interest whatsoever in or to any such contract(s).

SECTION 14

CHANGE IN CONTROL

14.1 **Distributions upon Change in Control.** Notwithstanding any other provision of this Plan, a Participant will receive a distribution of his or her entire Deferral Account if a Change in Control occurs with respect to such Participant. Distribution the entire Deferral Account shall be made on the date of the Change in Control. Such distribution shall be made in a single lump sum payment. A "Change in Control" shall be deemed to have occurred with respect to all Participants on the date that an event set forth in any one of the following paragraphs shall have occurred with respect to the Company. If such an event occurs with respect to an Affiliate, then a Change in Control shall occur with respect to all Participants employed by such Affiliate or a direct or indirect majority owned subsidiary of such Affiliate.

- (a) The date on which any one person, or more than one person acting as a group, acquires ownership of stock of the Company or Affiliate that, together with stock held by such person or group, constitutes more than 50 percent of the total fair market value or total voting power of the stock of such corporation. If any one person, or more than one person acting as a group, is considered to own more than 50 percent of the total fair market value or total voting power of the stock of the Company or Affiliate, the acquisition of additional stock by the same person or persons is not considered to cause a change in the ownership of the corporation (or to cause a change in the effective control of the corporation pursuant to this paragraph or paragraph (b)). An increase in the percentage of stock owned by any one person, or persons acting as a group, as a result of a transaction in which the corporation acquires its stock in exchange for property will be treated as an acquisition of stock for purposes of this paragraph. This paragraph applies only when there is a transfer or issuance of stock of the Company or Affiliate and stock in such corporation remains outstanding after the transaction.
- (b) The date any one person, or more than one person acting as a group, acquires (or has acquired during the 12-month period ending on the date of the most recent acquisition by such person or persons) ownership of stock of the Company or Affiliate possessing 30 percent or more of the total voting power of the stock of such corporation.
- (c) The date a majority of members of the Company's (but not any Affiliate's) board of directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of the corporation's board of directors before the date of the appointment or election.
- (d) The date that any one person, or more than one person acting as a group, acquires (or has acquired during the 12-month period ending on the date of the most recent

acquisition by such person or persons) assets from the Company or Affiliate that have a total gross fair market value equal to or more than 40 percent of the total gross fair market value of all of the assets of the corporation immediately before such acquisition or acquisitions; provided that a Change in Control shall not result from a transfer of assets by the Company or an Affiliate to (i) a shareholder of the corporation (immediately prior to the transfer) in exchange for or with respect to the corporation's stock, (ii) an entity, 50 percent or more of the total value or voting power of which is owned, directly or indirectly, by the transferor corporation immediately following the transfer, (iii) a person, or more than one person acting as a group, that owns, directly or indirectly, 50 percent or more of the total value or voting power of all the outstanding stock of the transferring corporation immediately following the transfer, or (iv) an entity, at least 50 percent of the total value or voting power of which is owned, directly or indirectly, by a person or group of persons described in clause (iii) For this purpose, gross fair market value means the value of the assets of the corporation, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

14.2 **Definitions and Special Rules.** For purposes of Section 14.1, the following definitions and special rules shall apply.

- (a) Persons will not be considered to be acting as a group solely because they purchase or own stock of the same corporation at the same time, or as a result of the same public offering. However, persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company or Affiliate. If a person, including an entity, owns stock in both corporations that enter into a merger, consolidation, purchase or acquisition of stock, or similar transaction, such shareholder is considered to be acting as a group with other shareholders in a corporation only with respect to the ownership in that corporation before the transaction giving rise to the change and not with respect to the ownership interest in the other corporation.
- (b) If any one person, or more than one person acting as a group, owns stock of the Company or Affiliate possessing 30 percent or more of the total voting power of the stock of such corporation, the acquisition of additional control of the Company or Affiliate by the same person or persons will not be considered to cause a Change in Control pursuant to paragraph (a) or (b) of Section 14.1.
- (c) The definition of Change in Control contained in this Section 14 is intended to conform to the definition of a change in control event as set forth in section 409A and the regulations thereunder, and shall be so construed. To the maximum extent permitted by law, a transaction shall not be considered to constitute a Change in Control unless it also constitutes a change in control event for purposes

of section 409A, and a transaction that constitutes a change in control event for purposes of section 409A shall be considered a Change in Control.

SECTION 15

NO VESTED RIGHTS

The Plan and the elections exercisable hereunder shall not be deemed or construed to be a written contract of employment between any Participant and the Company or any of its Affiliates, nor shall any provision of the Plan restrict the right of the Company or any of its Affiliates to discharge any Participant, nor shall any provision of the Plan in any way whatsoever grant to any Participant the right to receive any scheduled compensation, bonus, or other payment of any nature whatsoever.

SECTION 16

APPLICABLE LAW

This Plan shall be construed and this Plan shall be administered to create an unfunded plan providing deferred compensation to a select group of management or highly compensated employees so that it is exempt from the requirements of Parts 2, 3 and 4 of Title I of ERISA and qualifies for a form of simplified, alternative compliance with the reporting and disclosure requirements of Part 1 of Title I of ERISA. Any reference in this Plan to a statute or regulation shall be considered also to mean and refer to any subsequent amendment or replacement of that statute or regulation. This Plan has been executed and delivered in the State of Minnesota and has been drawn in conformity to the laws of that State and shall be construed and enforced in accordance with the laws of the State of Minnesota.

**DELUXE
CORPORATION**

**RESTRICTED STOCK UNIT
AWARD AGREEMENT
(Bonus Deferral - US)**

AWARDED TO	AWARD DATE	TOTAL NUMBER OF RESTRICTED STOCK UNITS

1. **The Award.** Deluxe Corporation, a Minnesota corporation (“Deluxe”), hereby grants to you as of the above Award Date the above number of restricted stock units (“Units”) on the terms and conditions contained in this Restricted Stock Unit Award Agreement (including the Addendum attached hereto, the “Agreement”), Deluxe’s 2017 Annual Incentive Plan (the “Annual Plan”) and Deluxe’s 2020 Long Term Incentive Plan (the “LTIP”), a copy of each of which has been provided to you. Pursuant to and in accordance with the Annual Plan, you have elected to receive all or a portion of your annual incentive award payment for the 2020 plan year (if and when declared and awarded,) in Units. Each Unit will entitle you to acquire one share of Deluxe common stock, par value \$1.00 (“Common Stock”), when the restrictions applicable to each Unit expire or terminate as provided below. Any capitalized term used but not defined in this Agreement shall have the meaning given to the term in the LTIP as it currently exists or may hereafter be amended.

 2. **Restricted Period and Vesting.** The Units are subject to the restrictions contained in this Agreement, the Annual Plan and the LTIP for the Restricted Period (as defined below). As used herein, “Restricted Period,” shall mean a period commencing on the Award Date and, subject to Section 4, ending on the second anniversary of the Award Date (the “Expiration Date”). Subject to Sections 4 and 5 below, on the Expiration Date the restrictions will lapse, and the Units will vest, so long as your service to Deluxe has not previously ended.

 3. **Restrictions.** The Units shall be subject to the following restrictions during the Restricted Period:
 - (a) The Units shall be subject to forfeiture to Deluxe as provided in this Agreement, the Plan and the LTIP.

 - (b) The Units may not be sold, assigned, transferred or pledged during the Restricted Period. You may not transfer the right to receive the Units, other than by will or the laws of descent and distribution, and any such attempted transfer shall be void.

 - (c) Shares of Common Stock to be issued in settlement of the Units will not be issued until the restrictions lapse and the Units vest.

 - (d) If cash or non-cash dividends or distributions are declared and paid by Deluxe with respect to its Common Stock, then at the same time that such dividends or distributions are paid to the shareholders you will have dividend equivalents credited to your account with respect to your Units. All such dividend equivalents shall be held by Deluxe until the Expiration Date, at which time Deluxe will pay you all such dividends and other distributions, less applicable income tax and social security tax withholding. Any dividend equivalent payments paid with respect to any Units shall be paid when, and only to the extent that, the underlying Units actually vest and are settled in shares of Common Stock. If the Units are forfeited, then all rights to such dividend and distribution payments shall also be forfeited. If you voluntarily resign or are terminated for Cause prior to the Expiration Date all dividend equivalents credited to your account with respect to your Units will be forfeited.
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4. Acceleration of Vesting.

Except as provided below, your rights in and to the Units shall terminate on the termination date of your employment by any company in a group of companies consisting of Deluxe and its Affiliates, which is not followed by your immediate re-employment by any other member of said group, for any reason if that termination occurs prior to the Expiration Date. If your employment is terminated prior to the Expiration Date by action of Deluxe or any Affiliate other than for Cause (as hereinafter defined), you will receive a payment from Deluxe equal to the portion of your cash incentive award that you elected to apply to the acquisition of Units ("Base Amount") plus any earned but unpaid dividend equivalents thereon payable in shares of Common Stock, cash, or a combination of the two in the discretion of the Committee (less any applicable tax withholding), made as expeditiously as practicable, but not more than 75 days, following the date of termination. If you voluntarily resign or are terminated for Cause prior to the Expiration Date, you will receive a payment from Deluxe payable in shares of Common Stock, cash, or a combination of the two in the discretion of the Committee equal to the lesser of (a) the Base Amount or (b) an amount equal to the number of Units attributable to the Base Amount as of the issue date multiplied by the closing price of the Common Stock on the effective date of your resignation or termination for Cause, which payment (less any applicable tax withholding) will be made as expeditiously as practicable, but not more than 75 days, following the effective date of your resignation.

In order to satisfy the requirements of Section 409A of the Internal Revenue Code and the IRS regulations thereunder ("Section 409A"), the following provisions will apply. If your employment is terminated prior to the Expiration Date, but the termination does not constitute a "separation from service" as defined in Section 409A, then you will have the right to receive the payment described in the preceding paragraph, but the payment will be deferred until the earliest of the date on which you incur a separation from service as defined in Section 409A, the Expiration Date, or the date on which a change in control event occurs as defined in Section 409A (as described below). This could occur if, for example, your employment is terminated but you are retained as a consultant or independent contractor to provide services to Deluxe or an Affiliate at a rate which is at least 50% of the rate at which you were providing services as an employee. It is also possible that you may incur a separation from service as defined in Section 409A even though your employment has not been terminated, for example if you become a part-time employee and are providing services at a rate that is less than 50% of the rate at which you provided services as a full-time employee. If this were to occur, you would receive a payment as described in the preceding paragraph calculated as if your employment had been terminated by Deluxe without Cause. The provisions of this paragraph shall also apply to the issuance of shares to which you are entitled upon your Approved Retirement as provided in the next paragraph if your Approved Retirement does not constitute a separation from service.

Prior to the Expiration Date, all restrictions applicable to the Units shall lapse and the Units shall vest fully and the shares of Common Stock represented thereby will be issued to you or your heirs, executors, administrators, estate or representatives, as applicable as expeditiously as practicable, but not more than 75 days, after your death, Disability or Approved Retirement (as such terms are defined in the Addendum).

Prior to the Expiration Date, all restrictions applicable to the Units shall lapse and the Units shall vest fully and the shares of Common Stock represented thereby will be issued to you, subject to the limitations provided herein, if there shall occur a Change of Control (as hereinafter defined) of Deluxe. Such issuance shall be made as expeditiously as practicable, but not more than 75 days, following the Change of Control, subject to the following. If the Change of Control does not constitute a "change in control event" as defined in Section 409A, then your right to receive shares of Common Stock described above will become fully vested, but issuance of the shares shall not occur until the earliest of the date on which you incur a separation from service as defined in Section 409A, the Expiration Date, the date of your Disability or the date on which a change in control event as defined in Section 409A occurs. If as a result of the Change of Control shares of Common Stock are

converted into another form of property, such as stock of a company with which Deluxe is merged, or into the right to a cash payment, then in lieu of the shares of Common Stock you will receive the cash or other property that you would have received had you owned the shares of Common Stock immediately prior to the Change of Control.

Notwithstanding any other provision of this Agreement, if you are a "specified employee" as defined in Section 409A at the time any amount would otherwise become payable to you by reason of a separation from service as defined in Section 409A (including any shares of Common Stock that become issuable upon an Approved Retirement, or upon the occurrence of a Change of Control, but the issuance of which is deferred until a separation from service because the Change of Control did not constitute a change in control event), such payment shall not occur until the first business day that is more than six months following the date of such separation from service (or, if earlier, the date of your death). In general, "specified employees" are the 50 most highly compensated officers and policy making personnel of Deluxe and its Affiliates.

5. **Forfeiture.** The awards granted under this Agreement shall be subject to the recoupment provisions of the Annual Incentive Plan as well as the LTIP, and any recoupment policy dealing with recoupment of awards, which are incorporated into this Agreement by reference.
 6. **Delivery of Shares of Common Stock.** Subject to Section 5, after any Units vest pursuant to Section 2 or Section 4, as applicable, Deluxe shall, as soon as practicable (but no later than 75 days after the applicable vesting date) cause to be issued and delivered to you (or to your personal representative or your designated beneficiary or estate in the event of your death, as applicable) one share of Common Stock in payment and settlement of each vested Unit. Delivery of shares of Common Stock shall be effected by the issuance of a stock certificate to you, by an appropriate entry in the stock register maintained by Deluxe's transfer agent with a notice of issuance provided to you, or by the electronic delivery of the shares of Common Stock to a brokerage account for your benefit, and shall be subject to the tax withholding provisions of Section 8 and compliance with all applicable legal requirements as provided in the LTIP, and shall be in complete satisfaction and settlement of such vested Units. Deluxe will pay any original issue or transfer taxes with respect to the issue and transfer of shares of Common Stock to you pursuant to this Agreement, and all fees and expenses incurred by it in connection therewith. If the Units that vest include a fractional Unit, Deluxe shall round the number of vested Units to the nearest whole Unit prior to issuance of shares of Common Stock as provided herein.
 7. **Rights.** The Units subject to this award do not entitle you to any rights of a holder of Common Stock. You will not have any of the rights of a shareholder of Deluxe in connection with the grant of Units subject to this Agreement unless and until shares of Common Stock are issued to you upon settlement of the Units as provided in Section 2.
 8. **Income Taxes.** You are liable for any federal and state income or other taxes applicable upon the distribution to you of any shares of Common Stock in settlement of vested Units or other payments under this Agreement, and you acknowledge that you should consult with your own tax advisor regarding the applicable tax consequences. Upon the distribution of shares of Common Stock, you shall promptly pay to Deluxe the amount of all applicable taxes required by Deluxe to be withheld or collected upon the distribution of the shares of Common Stock in settlement of the vested Units, such amount to be paid in cash or in previously acquired shares of Deluxe common stock having a fair market value equal to the tax withholding amount. In the alternative, you may direct Deluxe to withhold from shares of Common Stock otherwise to be distributed the number of Deluxe shares having a fair market value equal to the amount of all applicable taxes required by Deluxe to be withheld upon the distribution of the shares of Common Stock. You acknowledge that no shares of Common Stock will be distributed to you unless and until you have satisfied any obligation for withholding taxes as provided in this Agreement.
 9. **Terms and Conditions.** This Agreement and the award of Units and the issuance of shares of Common Stock hereunder are subject to and governed by the provisions of the LTIP and the Annual
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Incentive Plan. In the event there are any inconsistencies between this Agreement and those plans, the provisions of the applicable plan shall govern, as it may be amended or interpreted at Deluxe's discretion, to meet any applicable requirements of Section 409A of the Internal Revenue Code.

By your acceptance of this restricted stock unit award, you agree to all of the terms and conditions contained in this Agreement and in the LTIP and Annual Incentive Plan documents. You acknowledge that you have received and reviewed these documents and that they set forth the entire agreement between you and Deluxe regarding the Units.

DELUXE CORPORATION

By: _____

ADDENDUM TO RESTRICTED STOCK UNIT AWARD AGREEMENT

For the purposes hereof, the terms used herein shall have the following meanings:

“Approved Retirement” shall mean any voluntary termination of employment that occurs on or after the date on which the sum of your age and years of employment with Deluxe and/or its Affiliates equals at least seventy-five (75) and that is approved by the Compensation Committee of the Board.

“Beneficial Owner” shall have the meaning defined in Rule 13d-3 promulgated under the Securities Exchange Act of 1934, as amended.

“Board” means the Board of Directors of the Company.

“Cause” shall mean:

- (i) You have breached your obligations of confidentiality to Deluxe or any of its Affiliates;
- (ii) You have otherwise failed to perform your employment duties and do not cure such failure within thirty (30) days after receipt of written notice thereof;
- (iii) You commit an act, or omit to take action, in bad faith which results in material detriment to Deluxe or any of its Affiliates;
- (iv) You have had excessive absences unrelated to illness or vacation (“excessive” shall be defined in accordance with local employment customs);
- (v) You have committed fraud, misappropriation, embezzlement or other act of dishonesty in connection with Deluxe or any of its Affiliates or its or their businesses;
- (vi) You have been convicted or have pleaded guilty or nolo contendere to a felony or a gross misdemeanor, which gross misdemeanor involves a breach of ethics, moral turpitude, or immoral or other conduct reflecting adversely upon the reputation or interest of Deluxe or its Affiliates;
- (vii) Your unlawful conduct or gross misconduct that is or is reasonably likely to be injurious to the business, finances or reputation of Deluxe; or
- (viii) You are in default under any agreement between you and Deluxe or any of its Affiliates following any applicable notice and cure period.

A “Change of Control” shall be deemed to have occurred if the conditions set forth in any one of the following paragraphs shall have been satisfied:

- (i) any Person becomes the Beneficial Owner, directly or indirectly, of securities of Deluxe representing 30% or more of the combined voting power of Deluxe’s then outstanding securities, excluding, at the time of their original acquisition, from the calculation of securities beneficially owned by such Person any securities acquired directly from Deluxe or its Affiliates or in connection with a transaction described in paragraph (iii) below; or
 - (ii) the individuals who at the date of your award election hereunder constitute the Board and any new director (other than a director whose initial assumption of office occurs within a year of and is in connection with an actual or threatened election contest, including but not limited to a consent solicitation, relating to the election of directors of Deluxe) whose appointment or election by the
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Board or nomination for election by Deluxe's shareholders was approved or recommended by a vote of a majority of the directors then still in office who either were directors at the date of your award election hereunder or whose appointment, election or nomination for election was previously so approved or recommended, cease for any reason to constitute a majority thereof; or

- (iii) the shareholders of Deluxe approve a plan of complete liquidation of Deluxe or there is consummated (A) a merger, consolidation, share exchange or similar transaction involving Deluxe, regardless of whether Deluxe is the surviving corporation or (B) the sale or disposition by Deluxe of all or substantially all Deluxe's assets, other than a sale or disposition by Deluxe of all or substantially all of Deluxe's assets to an entity, unless, immediately following such corporate transaction, all or substantially all of the individuals and entities who were the beneficial owners of Deluxe's voting securities immediately prior to such corporate transaction beneficially own, directly or indirectly, more than 50% of the combined voting power of the then outstanding voting securities of the surviving or acquiring entity resulting from such corporate transaction (including beneficial ownership through any parent of such entity) in substantially the same proportions as their ownership, immediately prior to such corporate transaction, of Deluxe's voting securities.

Notwithstanding the foregoing, a "Change of Control" shall not be deemed to have occurred by virtue of the consummation of any transaction or series of integrated transactions immediately following which the record holders of Common Stock of Deluxe immediately prior to such transaction or series of transactions continue to have substantially the same proportionate ownership in an entity which owns all or substantially all of the assets of Deluxe immediately following such transaction or series of transactions.

"Disability" shall mean that you are suffering from a medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, and that as a result of such impairment either: (i) you have received disability benefits for a period of not less than three months under a long or short-term disability plan or policy (or both), and are eligible for benefits under the long-term disability plan of Deluxe or any Affiliate of which you are employed at the time of such disability; or (ii) in the event that your employer does not have a long-term disability plan in effect at such time, you are unable to engage in any substantial gainful activity.

"Person" shall have the meaning defined in Section 3(a)(9) and 13(d) of the Securities Exchange Act of 1934, as amended, except that such term shall not include (i) Deluxe or any of its subsidiaries, (ii) a trustee or other fiduciary holding securities under an employee benefit plan of Deluxe or any of its Affiliates, (iii) an underwriter temporarily holding securities pursuant to an offering of such securities, or (iv) a corporation owned, directly or indirectly, by the shareholders of Deluxe in substantially the same proportions as their ownership of Common Stock of Deluxe.

For all purposes of this Award Agreement "separation from service", "specified employee", and "change in control event" shall have the meanings set forth in Treasury Regulations §1.409A-1(h), §1.409A-1(i), and §1.409A-3(i)(5), respectively, without regard to any of the optional provisions set forth in such regulations, except that

- (i) for purposes of Treas. Reg. §1.409A-1(h)(1)(ii), an employee shall be considered to have incurred a separation from service on the date on which it is reasonably anticipated that the level of bona fide services the employee will perform after such date (whether as an employee or as an independent contractor) will permanently decrease to less than 50 percent of the average level of bona fide services performed (whether as an employee or an independent contractor) over the immediately preceding 36-month period (or the full period of services to the employer if the employee has been providing services to the employer less than 36 months); and
- (ii) for purposes of identifying specified employees the safe harbor definition of compensation contained in Treas. Reg. §1.415(c)-2(d)(4) (compensation required to be reported on Form W-2 plus elective deferrals) shall be used, and compensation paid to a nonresident alien that is not effectively connected with the conduct of a trade or business within the United States shall be excluded.

**DELUXE
CORPORATION**

**RESTRICTED STOCK UNIT
AWARD AGREEMENT**
(Non-Employee Director)

AWARDED TO	AWARD DATE	NUMBER OF RSUs

1. **The Award.** Deluxe Corporation, a Minnesota corporation (“Deluxe”), hereby grants to you as of the above Award Date the above number of restricted stock units (“Units”) on the terms and conditions contained in this Restricted Stock Unit Award Agreement (including the Addendum attached hereto, the “Agreement”) and Deluxe’s 2020 Long Term Incentive Plan (the “LTIP”), a copy of each of which has been provided to you. Deluxe hereby confirms the grant to you, as of the Award Date and subject to the terms and conditions in this Agreement and the Plan, of the number of Restricted Stock Units specified above (the “Units”). Each Unit represents the right to receive one share of Deluxe’s common stock par value \$1.00 (“Common Stock”), when the restrictions applicable to each Unit expire or terminate as provided below. Prior to their settlement or forfeiture in accordance with the terms of this Agreement, the Units granted to you will be credited to an account in your name maintained by Deluxe. This account shall be unfunded and maintained for book-keeping purposes only, with the Units simply representing an unfunded and unsecured contingent obligation of Deluxe. Any capitalized term used but not defined in this Agreement shall have the meaning given to the term in the LTIP as it currently exists or may hereafter be amended.
2. **Vesting and Restricted Period.** Subject to Section 4, the Units will vest on the date Deluxe holds its annual meeting of shareholders in 2021, so long as your service to Deluxe has not previously ended (the “Vesting Date”); provided that, the Vesting Date shall occur no earlier than April 14, 2021 and no later than April 28, 2021. Prior to the Vesting Date, the Units will be subject to forfeiture to Deluxe as provided in this Agreement and the LTIP. The Units are subject to the restrictions contained in this Agreement and the LTIP for the Restricted Period (as defined below). As used herein, “Restricted Period,” shall mean the one-year period commencing on the Award Date and, subject to Section 4, ending on the Vesting Date.
3. **Restrictions.**
 - (a) All Units will be subject to the following restrictions during the Restricted Period:
 - (i) The Units may not be sold, assigned, transferred or pledged during the Restricted Period. You may not transfer the right to receive the Units, other than by will or the laws of descent and distribution, and any such attempted transfer shall be void.
 - (ii) Shares of Common Stock will not be issued in settlement of the Units until the Restricted Period ends.
 - (b) If cash dividends are declared and paid by Deluxe with respect to its Common Stock, then at the same time that dividends are paid to the shareholders you will have dividend equivalents credited to your account with respect to any portion of your then-unvested Units. Any non-cash dividends or distributions paid or declared with respect to the Units during the Restricted Period shall be held by Deluxe until the end of the Restricted Period, at which time Deluxe will pay you all such dividends and other distributions. Any dividend equivalent payments paid with respect to any Units shall be paid when, and only to the extent that, the underlying Units are actually vested. If

the Units are forfeited, then all rights to such dividend and distribution payments shall also be forfeited.

4. Acceleration of Vesting / Lapse of Restrictions.

Except as provided below, prior to the Vesting Date your rights in and to the Units shall terminate on the termination date of your service to Deluxe and its Affiliates.

Prior to the Expiration Date, all restrictions applicable to the Units shall lapse and any unvested Units shall vest fully and the shares of Common Stock represented thereby will be issued to you or your heirs, executors, administrators, estate or representatives, as applicable as expeditiously as practicable, but not more than 75 days after (i) a Change of Control or (ii) your service as a director ("Service") with Deluxe or any successor entity is terminated due to your death, Disability (as defined in the Addendum) or the Deluxe Board of Director's then current retirement policies as set forth in the Deluxe Corporate Governance Guidelines or your involuntarily termination without Cause (as defined in the Addendum) by Deluxe, and such Service termination must, in each case, constitute a "separation from service" as such term is defined for purposes of Code Section 409A.

In the event of a Change of Control, if as a result of the Change of Control, shares of Common Stock are converted into another form of property, such as stock of a company with which Deluxe is merged, or into the right to a cash payment, then in lieu of the shares of Common Stock you will receive the cash or other property that you would have received had you owned the shares of Common Stock immediately prior to the Change of Control.

5. **Forfeiture.** Subject to the provisions of Section 4, in the event your Service to Deluxe is terminated prior to the first-year anniversary of the Award Date, your rights in any and all Units subject to this Agreement shall be immediately and irrevocably forfeited.
 6. **Delivery of Shares of Common Stock and Payment of Dividend Equivalents.** Deluxe shall cause to be issued and delivered to you, or to your designated beneficiary or estate in the event of your death, one share of Common Stock in payment and settlement of each Unit subject to this Agreement as well as any accrued dividend equivalents thereon as expeditiously as possible, but no later than 75 days after the expiration of the Restricted Period. Delivery of shares of Common Stock in settlement of a Unit subject to this Agreement shall be effected by an appropriate entry in the stock register maintained by Deluxe's transfer agent with a notice of issuance provided to you, or by the electronic delivery of the shares of Common Stock to a brokerage account you designate, and shall be subject to compliance with all applicable legal requirements, including compliance with the requirements of applicable federal and state securities laws.
 7. **Rights.** The Units subject to this Award do not entitle you to any rights of a holder of Common Stock. Except as otherwise provided in Section 3, you will not have any of the rights of a shareholder of Deluxe in connection with the grant of Units subject to this Agreement unless and until shares of Common Stock are issued to you upon settlement of the Units as provided in Section 6.
 8. **Income Taxes.** You are liable for all federal and state income or other taxes applicable to this grant and the vesting of shares of Common Stock, and you acknowledge that you should consult with your own tax advisor regarding the applicable tax consequences.
 9. **Terms and Conditions.** This Award Agreement and the award of Units and the issuance of shares of Common Stock hereunder are subject to and governed by the provisions of the LTIP. In the event there are any inconsistencies between this Award Agreement or those plans, the provisions of the applicable plan shall govern, as it may be amended or interpreted at Deluxe's discretion, to meet any applicable requirements of Section 409A of the Internal Revenue Code.
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By your acceptance of this restricted stock unit award, you agree to all of the terms and conditions contained in this Agreement and in the LTIP. You acknowledge that you have received and reviewed these documents and that they set forth the entire agreement between you and Deluxe regarding the Units.

DELUXE CORPORATION

By: _____

ADDENDUM TO RESTRICTED STOCK UNIT AWARD AGREEMENT

For the purposes hereof, the terms used herein shall have the following meanings:

"Cause" shall mean (i) you have breached your obligations of confidentiality to Deluxe or its Affiliates; (ii) you have otherwise failed to perform your duties and do not cure such failure within thirty (30) days after receipt of written notice thereof; (iii) you commit an act, or omit to take action, in bad faith which results in material detriment to Deluxe or its Affiliates; (iv) you have committed fraud, misappropriation, embezzlement or other act of dishonesty in connection with Deluxe or its Affiliates or its businesses; (v) you have been convicted or have pleaded guilty or nolo contendere to a felony or a gross misdemeanor, which gross misdemeanor involves a breach of ethics, moral turpitude, or immoral or other conduct reflecting adversely upon the reputation or interest of Deluxe or its Affiliates; (vi) your unlawful conduct or gross misconduct that is or is reasonably likely to be injurious to the business, finances or reputation of Deluxe; or (vii) you are in default under any agreement between you and Deluxe or any of its Affiliates following any applicable notice and cure period.

A "Change of Control" shall be deemed to have occurred upon the completion of any transaction or series of transactions that results in a "change in control event" as defined in Section 409A of the Internal Revenue Code and the regulations thereunder.

"Disability" shall mean that you are suffering from a medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, and that as a result of such impairment either: (i) you have received disability benefits for a period of not less than three months under a long or short-term disability plan or policy (or both), and are eligible for benefits under the long-term disability plan of Deluxe or any Affiliate of which you are employed at the time of such disability; or (ii) in the event that your employer does not have a long-term disability plan in effect at such time, you are unable to engage in any substantial gainful activity.

DELUXE CORPORATION SUBSIDIARIES

Anchor Systems Pty Ltd (Australia)
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)
First Manhattan Consulting Group, 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)
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)
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)
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 19, 2021 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 19, 2021

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 19, 2021

/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, Keith A. Bush, 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 19, 2021

/s/ Keith A. Bush

Keith A. Bush

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 Keith A. Bush, 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, 2020 (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 19, 2021

/s/ Barry C. McCarthy

Barry C. McCarthy
President and Chief Executive Officer

/s/ Keith A. Bush

Keith A. Bush
Senior Vice President, Chief Financial Officer