PITNEY BOWES INC /DE/
Form 10-K
February 20, 2019
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, 2018 Commission file number: 1-3579
PITNEY BOWES INC.
Incorporated in Delaware I.R.S. Employer Identification No. 06-0495050
3001 Summer Street, Stamford, CT 06926
(203) 356-5000
Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $1 par value per share	New York Stock Exchange
$2.12 Convertible Cumulative Preference Stock (no par value)	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: 4% Convertible Cumulative Preferred Stock ($50 par value)
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes þ 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 þ
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 þ No ¨
Indicate by check marks whether the registrant has submitted electronically on its corporate website, if any, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (section 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 þ No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨
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 definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer þ Accelerated filer ¨ Non-accelerated filer ¨
Smaller reporting company ¨ Emerging growth company ¨
If an emerging growth company, indicate by check mark whether the registrant has elected not to use the extended transition period for complying with new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ¨
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ¨ No þ
As of June 30, 2018, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $1.6 billion based on the closing sale price as reported on the New York Stock Exchange.
Number of shares of common stock, $1 par value, outstanding as of close of business on January 31, 2019: 188,243,432 shares.
DOCUMENTS INCORPORATED BY REFERENCE
Portions of the registrant's proxy statement to be filed with the Securities and Exchange Commission (the Commission) no later than 120 days after our fiscal year end and to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held May 6, 2019, are incorporated by reference in Part III of this Form

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K (Annual Report) contains statements that are forward-looking. We want to caution readers that any forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 may change based on various factors. These forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties and actual results could differ materially. Words such as "estimate," "target," "project," "plan," "believe," "expect," "anticipate," "intend" and similar expressions may identify such forward-looking statements. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Forward-looking statements in this Annual Report on Form 10-K speak only as of the date hereof, and forward-looking statements in documents attached that are incorporated by reference speak only as of the date of those documents.

Although we believe that the expectations reflected in any of our forward-looking statements are reasonable, actual results could differ materially from those projected or assumed in any of our forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to change and to inherent risks and uncertainties, such as those disclosed or incorporated by reference in our filings with the Securities and Exchange Commission. Factors which could cause future financial performance to differ materially from the expectations as expressed in any forward-looking statement made by or on our behalf include, without limitation:

- declining physical mail volumes
- changes in postal regulations or changes in, or loss of, our contractual relationships with the U.S. Postal Service (USPS) or posts in other major markets
- competitive factors, including pricing pressures; technological developments and the introduction of new products and services by competitors
- the United Kingdom's likely exit from the European Union (Brexit)
- our success in developing and marketing new products and services and obtaining regulatory approvals, if required
- changes in banking regulations or the loss of our Industrial Bank charter
- changes in labor conditions and transportation costs
- macroeconomic factors, including global and regional business conditions that adversely impact customer demand, foreign currency exchange rates and interest rates
- changes in global political conditions and international trade policies, including the imposition or expansion of trade tariffs
- the continued availability and security of key information technology systems and the cost to comply with information security requirements and privacy laws
- a breach of security, including a cyber-attack or other comparable event
- third-party suppliers' ability to provide products and services required by our clients
- our success at managing the relationships with outsource providers, including the costs of outsourcing functions and operations
- capital market disruptions or credit rating downgrades that adversely impact our ability to access capital markets at reasonable costs
- our success at managing customer credit risk
- integrating newly acquired businesses, including operations and product and service offerings
- the loss of some of our larger clients in our Commerce Services group
- intellectual property infringement claims
- significant changes in pension, health care and retiree medical costs
- income tax adjustments or other regulatory levies from tax audits and changes in tax laws, rulings or regulations
- the use of the postal system for transmitting harmful biological agents, illegal substances or other terrorist attacks
- acts of nature

Further information about factors that could materially affect us, including our results of operations and financial condition, is contained in Item 1A. "Risk Factors" in this Annual Report.

ITEM 1. BUSINESS

General
Pitney Bowes Inc. (we, us, our, or the company), is a global technology company offering innovative products and solutions that help our clients navigate the complex world of commerce. We offer customer information management, location intelligence and customer engagement products and solutions to help our clients market to their customers, and shipping, mailing, fulfillment, returns and cross-border ecommerce products and solutions that enable the sending of parcels and packages across the globe. Clients around the world rely on our products, solutions and services. Pitney Bowes Inc. was incorporated in the state of Delaware in 1920. For more information about us, our products, services and solutions, visit www.pb.com.

Business Segments
Our business is organized around three distinct sets of solutions -- Commerce Services, Small and Medium Business Solutions (SMB Solutions), and Software Solutions.

Commerce Services
Our Commerce Services group includes our cross-border solutions, shipping solutions, fulfillment, delivery and return services and presort services. The Commerce Services group includes our Global Ecommerce and Presort Services segments.

Global Ecommerce
Global Ecommerce includes our cross-border ecommerce solutions, domestic retail and ecommerce shipping solutions and fulfillment, delivery and return services. Global Ecommerce provides a full suite of domestic and cross-border solutions that help businesses of all sizes conduct commerce and participate in the parcel journey from “Anywhere to Everywhere™”. It is our technology, services and industry expertise that have made us an industry leader in global ecommerce. We offer a unified ecommerce platform of capabilities for cross-border, marketplaces and shipping that center around the consumer, from simple solutions that allow a customer to print shipping labels to full service solutions from time of order to time of delivery and return. With our proprietary technology, we are able to manage all aspects of the international shopping and shipping experience, including multi-currency pricing, payment processing, fraud management, calculation of all duty, tax and shipping costs at checkout, compliance with product restrictions, export complexities and documentation requirements for customs clearance and brokerage and global logistics services. Our cross-border ecommerce software platforms are utilized by direct merchants as well as major online marketplaces enabling millions of parcels to be shipped worldwide. Our platform also connects retailers to marketplaces around the world, opening new markets and expanding existing markets for their goods.
Our shipping management solutions enable clients to reduce transportation and logistics costs, select the best carrier based on need and cost, improve delivery times and track packages in real-time. Powered by our shipping application programming interface (API) technology, an integral part of the Pitney Bowes Commerce Cloud, we can provide easy access to shipping and tracking services that can be easily integrated into any web application such as online shopping carts or ecommerce sites and provide guaranteed delivery times and flexible payment options. We do not perform the physical shipping function; however, our technology allows users to select the best shipper based on need and cost.

Presort Services
We are a workshare partner of the USPS and national outsource provider of mail sortation services that allow clients to qualify large volumes of First-Class Mail, Marketing Mail and Bound and Packet Mail (Standard Flats and Bound Printed Matter) for postal worksharing discounts. We process over 16 billion pieces of mail annually through our network of operating centers throughout the United States. Our Presort Services network and fully-customized proprietary technology provides clients with end-to-end solutions from pick up at their location to delivery into the postal system network, expedited mail delivery and optimal postage savings.

Small and Medium Business Solutions

We are a global leader in providing a full range of equipment, technology, supplies and services that enable our clients to efficiently create mail, evidence postage and help simplify and save on the sending, tracking and receiving of mail, flats and parcels. We are a leading global provider of sending systems and technology. Our cloud enabled infrastructure provides software-as-a-service (SaaS) offerings delivered online and via connected or mobile devices. Our latest offerings are designed on an open platform architecture that leverages partnerships with other innovative companies as well as an ecosystem of developers to deliver new value to our clients. Within the SMB Solutions group is the North America Mailing segment, comprised of the sending operations in the U.S. and Canada, and the International Mailing segment, comprised of all other sending businesses globally.

We will begin offering expanded third-party leasing solutions to our existing SMB client base in the United States in 2019. Under this program, in addition to leasing options for our mailing equipment products, we will offer leasing alternatives for our existing SMB client base to lease other manufacturers' equipment to meet their business needs.

Software Solutions

Within Software Solutions, we offer data, customer information management, location intelligence and customer engagement solutions. These solutions are delivered as on-premise licenses or on-demand/SaaS applications.

Data solutions enable businesses to identify addresses, locations, businesses and individuals. Our address-centric approach provides us the ability to verify, standardize, locate and enrich both physical and digital addresses with actionable insights. The quality and accuracy of data is foundational to many business processes, including the identification and mitigation of risk and fraud, the onboarding of and marketing to customers and potential customers, and helping organizations better serve their customers.

Customer information management solutions help businesses identify high-value customers and prospects, develop a deep and broad understanding of their customers and provide a single view of the customer in context to their location, relationships and influence. By understanding who their customers are, and what they do, businesses can in turn understand preferences and purchasing behaviors, detect fraudulent activity and increase marketing effectiveness and services. We are one of the market leaders in the data quality segment. Large corporations and government agencies rely on our products in complex, high-volume, transactional environments to support their business processes.

Location intelligence solutions enable businesses to understand the complex relationships between location, geographic and other forms of data to drive business decisions and customer experiences. Our location intelligence solutions use predictive analytics and location, geographic and socio-demographic data to add context and insight, making it possible to pinpoint the best placement for retail sites, improve risk assessment and efficiently deploy infrastructure resources to better serve their customers, solve business problems, deliver location-based services and drive business growth.

Customer engagement solutions enable businesses to communicate with their customers in more personalized and relevant ways that enhance customer interactions across the entire customer lifecycle. Through personalized, impactful and timely physical and digital interactions, businesses can improve customer satisfaction, reduce support costs and drive sales. Our customer engagement solutions enable businesses to create connected experiences that positively influence future consumer behavior and generate business growth.

Seasonality

As our business continues to transform and shipping becomes a bigger part of our financial performance, a larger percentage of our revenue and earnings will be earned in the fourth quarter relative to the other quarters, driven primarily by the impact of the holiday season on Commerce Services.

Client Service

We provide call-center, online and on-site support services for our products and solutions. Most of our support services are provided under maintenance contracts.

Sales and Marketing

We market our products, solutions and services through a direct and inside sales force, global and regional partner channels, direct mailings and web-based offerings.

Competition

All of our businesses face competition from a number of companies. Our competitors range from large, multinational companies that compete against many of our businesses to smaller, more narrowly focused regional and local firms. We compete on the basis of technology and innovation; breadth of product offerings; our ability to design and tailor solutions to specific client needs; performance; client service and support; price; quality and brand.

We must continue to invest in our current technologies, products and solutions, and in the development of new technologies, products and solutions in order to maintain and improve our competitive position. We will encounter new competitors as we transition to higher value markets and offerings and enter new markets.

A summary of the competitive environment for each of our business segments is as follows:

Global Ecommerce
The market for international ecommerce software and fulfillment services is highly fragmented and includes competitors of various sizes, including companies with greater financial resources than us. Some of these competitors specialize in point solutions or freight forwarding services, are full-service ecommerce business process outsourcers and online marketplaces with international logistic support, or major global delivery services companies. We also see a competitive threat from companies who can offer both domestic and cross-border solutions in a single package which creates leverage for those competitors on pricing. The principal competitive factors include reliability, functionality, ease of integration and use, scalability, innovation, support services and price. We compete based on the accuracy, reliability and scalability of our platform and logistics services, our ability to provide clients and their customers a one-stop full-service ecommerce experience and the ability to provide a more customized shipping solution to smaller businesses than some of our larger competitors in the industry. We also compete, within shipping solutions, with a wide range of technology providers who help make shipping easier and more cost-effective. There are established players in the marketplace as well as many small companies offering negotiated carrier rates (primarily with the USPS). The principal competitive factors include technology stability and reliability, innovation, access to preferred shipping rates and ease of integration with existing systems.

Presort Services
We face competition from regional and local presort providers, cooperatives of multiple local presort providers, consolidators and service bureaus that offer presort solutions as part of a larger bundle of outsourcing services. While not necessarily competitors in the traditional sense, large mail owners have the capability to presort their own mailings in-house. The principal competitive factors include innovative service, delivery speed, tracking and reporting, industry expertise and economies of scale. Our competitive advantages include our extensive network of presort facilities capable of processing significant volumes and our innovative and proprietary technology that enables us to provide our clients with reliable, secure and precise services offering maximum postage discounts.

North America Mailing and International Mailing
We face significant competition from other mail equipment and software providers, companies that offer products and services as alternative means of message communications and those that offer shipping and mailing products and services through on-line solutions. Additionally, as competitive alternative communication methods in comparison to mail grow, our SMB Solutions operations could be affected. We differentiate ourselves in many areas including: software and hardware solutions; pricing; available financing and payment offerings; product reliability; support services; industry knowledge and expertise and attractiveness of alternative communication methods. Our competitive advantage includes our breadth of physical and web-based digital offerings, customer service and our extensive knowledge of the shipping and mailing industry. Through our wholly owned subsidiary, The Pitney Bowes Bank (the Bank), we offer a revolving credit solution to our clients in the United States that enables them to pay the rental fee for certain mailing equipment and to purchase postage, services and supplies. The Bank also provides an interest-bearing deposit solution to those clients who prefer to prepay postage. We also provide similar revolving credit solutions to our clients in Canada and the U.K., but not through the Bank. Our financing operations face competition, in varying degrees, from large, diversified financial institutions, including leasing companies, commercial finance companies and commercial banks, as well as small, specialized firms. Not all our competitors are able to offer these financing and payment solutions to their customers and we believe these solutions differentiate us from our competitors and are a source of competitive advantage. The Bank is chartered as an Industrial Bank under the laws of the State of Utah, and is regulated by the Federal Deposit Insurance Corporation (FDIC) and the Utah Department of Financial Institutions.

Software Solutions
We operate in several highly competitive and rapidly evolving markets and face competition ranging from large global companies that offer a broad suite of solutions to smaller, more narrowly-focused companies that can design very targeted solutions. The principal competitive factors include reliability, functionality, ease of integration and use,

scalability, innovation, support and price. We compete based on the accuracy, breadth, scalability and processing speed of our products and solutions, our geocoding and reverse geocoding capabilities, our expertise in address validation, and our ability to identify rapidly changing customer needs and develop technologies and solutions to meet these changing needs.

Financing Solutions
We offer a variety of solutions that enable clients to finance equipment and product purchases, make rental and lease payments, replenish postage and purchase supplies. As product and service offerings evolve, we continually evaluate whether there are appropriate financing solutions to offer our clients. We establish credit approval limits and procedures based on the credit quality of the client and the type of product or service provided to control risk in extending credit to clients. In addition, we utilize a systematic decision program for certain leases. This program is designed to facilitate low dollar transactions by utilizing historical payment patterns and behaviors of clients with

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similar credit characteristics. This program defines criteria under which we will accept a client without performing a more detailed credit investigation, such as maximum equipment cost, a client's time in business and payment experience.
We closely monitor the portfolio by analyzing industry sectors and delinquency trends by product line, industry and client to ensure reserve levels and credit policies reflect current trends. Management continues to closely monitor credit lines and collection resources and revise credit policies as necessary to be more selective in managing the portfolio.
In 2019, we will begin offering expanded third-party leasing solutions to our existing SMB client base in the United States. Under this program, we will offer leasing alternatives for our existing SMB client base to lease other manufacturers' equipment to meet their business needs. By offering this program to our existing SMB clients, we will be able to leverage our extensive credit review and history of these clients to establish credit limits and control risk.

Research, Development and Intellectual Property
We invest in research and development activities to develop new products and solutions, enhance the effectiveness and functionality of existing products and solutions and deliver high value technology, innovative software and differentiated services in high value segments of the market. As a result of our historical research and development efforts, we have been awarded a number of patents with respect to several of our innovations and products. However, as we transition our business to more software and service-based offerings and patent laws make it more difficult to obtain patent protection, we now rely more on trade secrets and confidentiality. Our businesses are not materially dependent on any one patent or license or group of related patents or licenses.

Third-party Suppliers
We depend on third-party suppliers for a variety of services and product components and other vendors to enable our product and shipping solutions. In certain instances, we rely on single-sourced or limited-sourced suppliers and vendors around the world because the relationship is advantageous due to quality, price, or there are no alternative sources. We believe that our available sources for services, components, supplies and manufacturing are adequate.

Regulatory Matters
We are subject to the regulations of postal authorities worldwide related to product specifications of our postage meters. Our Presort Services business practices are also subject to regulations of the USPS. The operations of the Bank and certain company affiliates that provide services to the Bank are subject to the regulations of the Utah Department of Financial Institutions and the FDIC. We are also subject to transportation, customs and trade regulations worldwide related to our cross-border shipping services and regulations concerning data privacy and security for our businesses that use, process and store certain personal, confidential or proprietary data.

Employees and Employee Relations
At December 31, 2018, we have approximately 13,300 employees worldwide. We believe that we maintain strong relationships with our employees. Management keeps employees informed of decisions and encourages and implements employee suggestions whenever practicable.

Available Information
Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments thereto filed with, or furnished to, the Securities and Exchange Commission (the SEC), are available, free of charge, through the Investor Relations section of our website at www.pb.com/investorrelations or from the SEC's website at www.sec.gov, as soon as reasonably practicable after these reports are electronically filed with, or furnished to, the SEC. The other information found on our website is not part of this or any other report we file with or furnish to the SEC.

Executive Officers of the Registrant
Our executive officers are:

Name	Age	Title	Executive Officer Since
Marc B. Lautenbach	57	President and Chief Executive Officer	2012
Jason C. Dies	49	Executive Vice President and President, SMB Solutions	2017
Daniel J. Goldstein	57	Executive Vice President and Chief Legal Officer and Corporate Secretary	2010
Robert Guidotti	61	Executive Vice President and President, Software Solutions	2016
Roger J. Pilc	51	Executive Vice President and Chief Innovation Officer	2013
Lila Snyder	46	Executive Vice President and President, Commerce Services	2016
Christoph Stehmann	56	Executive Vice President, International SMB Solutions	2016
Stanley J. Sutula III	53	Executive Vice President and Chief Financial Officer	2017
Johnna G. Torsone	68	Executive Vice President and Chief Human Resources Officer	1993

There are no family relationships among the above officers. All of the officers have served in various executive positions with the company for at least the past five years except as described below:

Mr. Dies was appointed to the office of Executive Vice President and President, SMB Solutions in October 2017. He joined the company in 2015 as President, Document Messaging Technologies (DMT). Prior to joining the company, Mr. Dies was employed at IBM where he held several leadership positions in North America, Europe, and Asia across diverse business units.

Mr. Guidotti was appointed Executive Vice President and President, Software Solutions in January 2016. Before joining Pitney Bowes, Mr. Guidotti held a series of executive positions at IBM including General Manager, Software Sales where he was responsible for the $23 billion worldwide Software portfolio.

Ms. Snyder was elected to the office of Executive Vice President and President, Commerce Services in January 2016. She joined the company in November 2013 as President, DMT and became President, Global Ecommerce in June 2015. Prior to joining Pitney Bowes, Ms. Snyder was a Partner at McKinsey & Company, Inc. In her 15 years at McKinsey, she focused on serving clients in the technology, media and communications sectors and was the leader of McKinsey's Stamford office.

Mr. Sutula joined the company as Executive Vice President and Chief Financial Officer in February 2017. Prior to joining the company, Mr. Sutula was employed at IBM for 28 years where he held several leadership positions in the United States and Europe. Most recently, Mr. Sutula was Vice President and Controller.

ITEM 1A. RISK FACTORS

Our operations face certain risks that should be considered in evaluating our business. We manage and mitigate these risks on a proactive basis, including through the use of an enterprise risk management program. Nevertheless, the following risk factors, some of which may be beyond our control, could materially impact our business, financial condition, results of operations, brand and reputation, and may cause future results to be materially different than our current expectations. These risk factors are not intended to be all inclusive.

Significant disruptions to postal operations or adverse changes to our relationships with posts in the United States or elsewhere could adversely affect our financial results.
We are dependent on a healthy postal sector in the geographic markets where we operate both our mailing and shipping businesses, particularly in the United States. A significant portion of our revenue also depends on our contractual relationships with posts. Changes in the financial viability of the major posts, or the statutes and regulations determining how they operate, or changes in our contractual relationships with these posts, could

materially adversely affect the financial performance of the businesses we conduct with them.

We are subject to postal regulations and processes, which could adversely affect our financial results.
A significant portion of our business is subject to regulation and oversight by the USPS and posts in other major markets. These postal authorities have the power to regulate our current products and services and regulate and approve many of our new or future product and service offerings. If our new or future product and service offerings are not approved, if there are significant conditions to approval or, if regulations on our existing products or services are changed, our financial performance could be adversely impacted.

If we are not able to respond to the continuing decline in the volume of physical mail delivered via traditional postal services, our financial performance could be adversely impacted.
Traditional mail volumes continue to decline and impact our current and future financial results. However, we have employed, and will continue to employ, strategies to stabilize the mailing business, including introducing new digital product and service offerings and providing clients broader access to products and services through online and direct sales channels. There is no guarantee that these offerings will be widely accepted in the marketplace, and they will likely face competition from existing and emerging alternative products and services.
Further, an accelerated or sudden decline in physical mail volumes could have an adverse effect on our mailing business. An accelerated or sudden decline could result from, among other things, changes in communication behavior, technologies, reductions to the Universal Service Obligation (USO) under which national posts, including the USPS, deliver to every address in a country with similar pricing and frequency, and legislation or regulations that mandate electronic substitution, prohibit certain types of mailings, increase the difficulty of using information or materials in the mail, or impose higher taxes or fees on postal services.
If we are not successful at meeting the continuing challenges faced in our mailing business, or if physical mail volumes were to experience an accelerated or sudden decline, our financial performance could be adversely impacted.

If we or our suppliers are unable to protect our information technology systems against misappropriation of data, or breaches of security resulting from cyberattacks or other similar events, our operations could be disrupted, our reputation may be harmed, the confidentiality of our data and intellectual property may be violated, and we could be subject to legal liability or regulatory enforcement action.
We depend on the security of our and our suppliers' information technology systems to support numerous business processes and activities, to support and service our clients and to support consumer transactions and postal services. Several of our businesses use, process and store proprietary information and personal, sensitive or confidential data relating to consumers and our businesses, clients and employees. Privacy laws and similar regulations in many jurisdictions where we do business require that we take significant steps to safeguard such information, and legal requirements continue to evolve. The scope of the laws that may be applicable to us is often uncertain and may be conflicting, particularly with respect to foreign laws. For example, the European Union's General Data Protection Regulation (GDPR), which became effective in May 2018, greatly increases the jurisdictional reach of European Union law and adds a broad array of requirements for handling personal data, including the public disclosure of significant data breaches to supervisory authorities and affected parties. Other countries have enacted or are enacting data localization laws that require data to stay within their borders. All of these evolving compliance and operational requirements impose significant costs that are likely to increase over time.
There are numerous risks to cybersecurity and privacy, including individual and groups of criminal hackers, industrial espionage, denial of service attacks, computer viruses, vandalism and employee errors and/or malfeasance. These cyber threats are constantly evolving, thereby increasing the difficulty of detecting and successfully defending against them. We have security systems and procedures in place designed to ensure the continuous and uninterrupted performance of our information technology systems and to protect against unauthorized access to information. We also require our suppliers who host our information technology systems or have access to sensitive data to have appropriate security measures in place. However, there is no guarantee that these security measures will prevent or detect the unauthorized access by experienced computer programmers, hackers or others. Successful breaches could, among other things, result in the unauthorized disclosure, theft and misuse of company, client, consumer and employee sensitive and confidential information, disrupt the performance of our information technology systems and deny services to our clients. Additionally, we could be exposed to potential liability, litigation, governmental

inquiries, investigations or regulatory enforcement actions, our brand and reputation damaged, and we could be subject to the payment of fines or other penalties, legal claims by our clients and significant remediation costs. Although we maintain insurance coverage relating to cybersecurity incidents, we may incur costs or financial losses that are either not insured against or not fully covered through our insurance.

As we increase our reliance on cloud-based applications for both our internal and external services, if we or our suppliers encounter unforeseen interruptions or difficulties in the operation of those applications, our operations could be disrupted, our reputation and relationships may be harmed and our financial performance may be impacted.
Our business relies upon the continuous and uninterrupted performance of our, and our suppliers', cloud-based applications and systems to support numerous business processes, to service our clients and to support consumer transactions and postal services. Our applications and systems, and those of our partners, may be subject to interruptions due to technological errors, system capacity constraints, software

errors or defects, human errors, computer or communications failures, power loss, adverse acts of nature and other unexpected events. We have business continuity and disaster recovery plans in place to protect our business operations in case of such events and we also require our suppliers to have the same. Nonetheless, there can be no guarantee that these plans will function as designed. If we are unable to limit interruptions or successfully correct them in a timely manner or at all, it could result in lost revenue, loss of critical data, significant expenditures of capital, a delay or loss in market acceptance of our services and damage to our reputation, brand and relationships, any of which could have an adverse effect on our business and financial performance.

We depend on third-party suppliers and outsource providers and our business could be adversely affected if we fail to manage these vendors effectively.
We depend on third-party suppliers and outsource providers for a variety of services and product components, the hosting of our software-as-a-service offerings, the logistics portion of our ecommerce business, and some non-core functions and operations. Some of our suppliers may also be our competitors in other contexts. In certain instances, we rely on single-sourced or limited-sourced suppliers and outsourcing vendors around the world because doing so is advantageous due to quality, price or lack of alternative sources. If production or services were interrupted, or these third-party suppliers choose to terminate their relationship with us or make material changes to their businesses or if certain of their costs were to increase and we were not able to find alternate suppliers, we could experience significant disruptions in manufacturing and operations (including product shortages, higher freight costs and re-engineering costs) as well as increased costs in the logistics portion of our ecommerce business. If outsourcing services were interrupted, not performed, or the performance was poor, our ability to process, record and report transactions with our clients, consumers and other constituents could be impacted. Such interruptions, including a cybersecurity event, in the provision of supplies and/or services could impact our ability to meet client demand, damage our reputation and client relationships and adversely affect our financial performance.

The transformation of our businesses to more digital and commerce services will result in a decline in our overall profit margins. If we cannot increase our volumes while at the same time reduce our costs, our financial performance could be impacted.
As we transform our businesses to more digital and commerce services, the revenue contribution from our Commerce Services segments have increased relative to our SMB Solutions and Software Solutions segments and is expected to continue to increase in the future. The profit margins in Commerce Services are lower than the profit margins in SMB Solutions and Software Solutions. Additionally, rising labor and transportation costs have a bigger impact on profit margins in Commerce Services as compared to SMB Solutions and Software Solutions because in Commerce Services we rely on a significant number of hourly workers at our facilities and on third parties to transport packages on behalf of our clients. Margin improvement within Commerce Services is highly dependent on increasing volumes and lowering costs. Accordingly, if we cannot obtain sufficient scale by increasing our volumes while at the same time reducing our costs in Commerce Services significantly enough to improve profit margins, our overall financial performance could be adversely impacted.

Future credit rating downgrades or capital market disruptions could adversely affect our ability to maintain adequate liquidity to provide competitive financing services to our clients and to fund various discretionary priorities.
Our financing activities include, among other things, providing competitive financing offerings to our clients and funding various discretionary priorities, such as business investments, strategic acquisitions, dividend payments and share repurchases. We fund these activities through a combination of cash generated from operations, deposits held at the Bank and access to capital markets. Our ability to access the U.S. capital markets and the associated cost of borrowing is dependent upon our credit ratings and is subject to capital market volatility. Given our current credit rating, we may not have immediate or sufficient access to the U.S. capital markets, and when we do access the U.S. capital markets, we may experience reduced financial or strategic flexibility as well as higher costs. To support our long-term strategic initiatives, our leverage may continue to increase, which could result in further credit rating downgrades. A significant decline in cash flows, further credit rating downgrades, material capital market disruptions, significant withdrawals by depositors at the Bank, adverse changes to our industrial loan charter or an increase in our

credit default swap spread could impact our ability to maintain adequate liquidity to provide competitive finance offerings to our clients, refinance maturing debt and fund other financing activities, which in turn, could adversely affect our financial performance.

The international nature of our Global Ecommerce business exposes us to increased customs and regulatory risks from cross-border transactions and foreign exchange rate fluctuations. The loss of any of our largest clients in our Global Ecommerce segment could have a material adverse effect on the segment.

Our Global Ecommerce segment is subject to significant trade regulations, taxes, and duties throughout the world. Any changes to these regulations could potentially impose increased documentation and delivery requirements, increase costs, delay delivery times, and subject us to additional liabilities, which could negatively impact our ability to compete in international markets and adversely impact our financial performance.

The sales generated from many of our clients' internationally focused websites running on our platform are exposed to foreign exchange rate fluctuations. Currently, our platforms are located in the U.S., U.K. and Australia and a majority of consumers making purchases

through these platforms are in a limited number of foreign countries. A strengthening of the U.S. Dollar or British Pound relative to currencies in the countries where we do the most business impacts our ability to compete internationally as the cost of similar international products improves relative to the cost of U.S. and U.K. retailers' products. A strong U.S. Dollar or British Pound would likely result in a decrease in international sales volumes, which would adversely affect the segment's revenue and profitability.
The Global Ecommerce segment receives a large portion of its revenue from a relatively small number of clients and business partners. The loss of any of these larger clients or business partners, or a substantial reduction in their use of our products or services, could have a material adverse effect on the revenue and profitability of the segment. There can be no assurance that our larger clients and business partners will continue to utilize our products or services at current levels, or that we would be able to replace any of these clients or business partners with others who can generate revenue at current levels.

Our international operations may be adversely impacted by the United Kingdom's likely exit from the European Union.
In March 2017, the U.K. issued a formal notification of its intention to leave the European Union (EU). The U.K. is expected to exit the EU (Brexit) on March 29, 2019, unless an extension is agreed upon by the parties. Approximately 12% of our consolidated revenue is generated from counties in the EU, including the U.K. Although the ultimate outcome of Brexit is unknown, the effects of Brexit may adversely impact global economic conditions, contribute to instability in global financial and foreign exchange markets, impact trade and commerce, including the imposition of additional tariffs and duties and require additional documentation and inspection checks of the movement of goods between the U.K. and EU countries, leading to delays at ports of entry and departure. In particular, Brexit may have an adverse effect on cross-border ecommerce both into and out of the U.K. Brexit may also affect our supply chain for our International Mailing segment. Any of these and other changes, implications or consequences of Brexit could adversely affect our financial performance.

Our operations may be negatively impacted by the recent developments in trade policies and tariffs.
We source certain parts and components used in our mailing products from manufacturers located outside of the U.S. and we sell certain of our products to customers located outside the U.S. The U.S. Administration has increased tariffs on certain goods imported into the U.S. from countries that we source parts and components from and has raised the possibility of imposing significant additional tariff increases. The announcement of tariffs on imported goods has triggered actions by certain foreign governments and may trigger additional actions by those and other foreign governments. These types of bilateral tariffs could materially increase the cost of certain import products, impact or limit the availability of such products, and/or decrease demand for certain of our products, which could adversely affect our financial performance. The tariffs already imposed have increased our costs and if such tariffs are increased any further, it will increase our costs even more.

Our business depends on our ability to attract and retain employees at a reasonable cost to meet the needs of our business and to consistently deliver highly differentiated competitive offerings.
Given the rapid growth of the ecommerce industry, there has been intense competition for employees in the shipping, transportation and logistics industry, including drivers and factory employees. There is also significant competition for the talent needed to continue to develop our products. If we are unable to find and retain sufficient employees at a reasonable cost, or if the compensation required grows too rapidly, it may adversely affect our financial performance.

Our inability to obtain and protect our intellectual property and defend against claims of infringement by others may negatively impact our financial performance.
Our businesses are not materially dependent on any one patent or license or group of related patents and licenses; however, our business success depends in part upon protecting our intellectual property rights, including proprietary technology developed or obtained through acquisitions. We rely on copyrights, patents, trademarks and trade secrets and other intellectual property laws to establish and protect our proprietary rights. As we transition our business to more software and service-based offerings, product clearance and patent protection of these innovations are more

difficult to obtain and we face increased risk of patent infringement assertions. If we are unable to protect our intellectual property rights, our competitive position may suffer which could adversely affect our revenue and profitability. The continued evolution of patent law and the nature of our innovation work may affect the number of patents we are able to receive for our development efforts.

From time to time, third-parties may claim that we, our clients, or our suppliers, have infringed their intellectual property rights. These claims, if successful, may require us to redesign affected products, enter into costly settlement or license agreements, pay damage awards, or face a temporary or permanent injunction prohibiting us from marketing or selling certain products.

If we fail to comply with government contracting regulations, our financial performance, brand name and reputation could suffer.

We have a significant number of contracts with governmental entities, including the USPS. Government contracts are subject to extensive and complex procurement laws and regulations, along with regular audits and investigations by government agencies. If one or more government agencies discovers contractual noncompliance in the course of an audit or investigation, we may be subject to various civil or criminal penalties and administrative sanctions, which could include the termination of the contract, reimbursement of payments received, fines and debarment from doing business with one or more governments. Any of these events could not only affect us financially, but also adversely affect our brand and reputation.

We may not fully realize the anticipated benefits of strategic acquisitions and divestitures which may harm our financial performance.

As we transition our business to sustainable long-term growth, we may make strategic acquisitions or divest certain businesses. These actions may involve significant risks and uncertainties, which could have an adverse effect on our financial performance, including:

- difficulties in achieving anticipated benefits or synergies;
- difficulties in integrating any newly acquired businesses and operations, including combining product and service offerings and entering new markets, or reducing fixed costs previously associated with divested businesses;
- the loss of key employees or clients of businesses acquired or divested;
- significant charges for employee severance and other restructuring costs, legal, accounting and financial advisory fees; and
- possible goodwill and asset impairment charges as divestitures and changes in our business model may adversely affect the recoverability of certain long-lived assets and valuation of our operating segments.

Our capital investments to develop new products and offerings or expand our current operations may not yield the anticipated benefits.

As we transform the company’s businesses, we are making significant capital investments in new products, services, and facilities. If we are not successful in these new product or service introductions at the levels anticipated when making the investments, there may be an adverse effect on our financial performance.

Our operational costs could increase from changes in environmental regulations, or we could be subject to significant liabilities.

We are subject to various federal, state, local and foreign environmental protection laws and regulations around the world, including without limitation, those related to the manufacture, distribution, use, packaging, labeling, recycling or disposal of our products or the products of our clients for whom we perform services. Environmental rules concerning products and packaging can have a significant impact on the cost of operations or affect our ability to do business in certain countries. We are also subject to laws concerning use, discharge or disposal of materials. All of these laws are complex, change frequently and have tended to become more stringent over time. If we are found to have violated these laws, we could be fined, criminally charged, otherwise sanctioned by regulators, or we could be subject to liability and clean-up costs. These risks can apply to both current and legacy operations and sites. From time to time, we may be involved in litigation over these issues. The amount and timing of costs under environmental laws are difficult to predict and there can be no assurance that these costs will not have an adverse effect on our financial performance.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We own or lease numerous facilities worldwide, which house general offices, including our corporate headquarters located in Stamford, Connecticut, sales offices, service locations, data centers, call centers and parcel and mail processing facilities. Our research and development facilities are located in Noida and Pune, India and Shelton, Connecticut. Management believes that our facilities are in good operating condition and adequate for our current business needs.

ITEM 3. LEGAL PROCEEDINGS

In the ordinary course of business, we are routinely defendants in, or party to, a number of pending and threatened legal actions. These may involve litigation by or against us relating to, among other things, contractual rights under vendor, insurance or other contracts; intellectual property or patent rights; equipment, service, payment or other disputes with clients; or disputes with employees. Some of these actions may be brought as a purported class action on behalf of a purported class of employees, clients or others.

In August 2018, the Company, certain of its directors, officers and several banks who served as underwriters, were named as defendants in City of Livonia Retiree Health and Disability Benefits Plan v. Pitney Bowes Inc. et al., a putative class action lawsuit filed in Connecticut state court. The complaint asserts claims under the Securities Act of 1933, as amended, on behalf of those who purchased notes issued by the Company in connection with a September 13, 2017 offering, alleging, among other things, that the Company failed to make certain disclosures relating to components of its third quarter 2017 performance at the time of the notes offering. The complaint seeks compensatory damages and other relief. In addition, in December 2018 and then in February 2018 certain of the Company's officers and directors were named as defendants in two virtually identical derivative actions purportedly brought on behalf of the Company, Clem v. Lautenbach et al. and Devolin v. Lautenbach et al. These two actions, both filed by the same counsel in Connecticut state court allege, among other things, breaches of fiduciary duty relating to these same disclosures, and seek compensatory damages and other relief derivatively for the benefit of the Company. Although litigation outcomes are inherently unpredictable, we believe these matters are without merit and intend to defend them vigorously. A reasonable estimate of the amount of any possible loss or range of loss cannot be made at this time.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR THE COMPANY'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded under the symbol "PBI" and is principally traded on the New York Stock Exchange (NYSE). At January 31, 2019, we had 14,808 common stockholders of record.

Share Repurchases

We periodically repurchase shares of our common stock to manage the dilution created by shares issued under employee stock plans and for other purposes. During 2018, we did not repurchase any shares of our common stock. On February 4, 2019, the Board of Directors authorized an additional $100 million share repurchase giving us the ability to repurchase up to $121 million of our common stock.

Stock Performance Graph

Our peer group is comprised of: Alliance Data Systems Corporation, Deluxe Corporation, Diebold, Incorporated, EchoStar Corp., Fidelity National Information Services, Inc., Fiserv, Inc., NCR Corp., NetApp Inc., Pitney Bowes Inc., R.R. Donnelley & Sons Company, Rockwell Automation Inc., Teradata Corp., Unisys Corporation, The Western Union Company and Xerox Corporation.

The accompanying graph shows the annual change in the value of a $100 investment in Pitney Bowes Inc., the Standard and Poor's (S&P) 500 Composite Index, the S&P MidCap 400 and the peer group over a five-year period assuming the reinvestment of dividends. On a total return basis, a $100 investment on December 31, 2013 in Pitney Bowes Inc., the S&P 500 Composite Index, the S&P MidCap 400 and the peer group would have been worth $33, $150, $134, and $126 respectively, on December 31, 2018.

All information is based upon data independently provided to us by Standard & Poor's Corporation and is derived from their official total return calculation. Total return for the S&P 500 and S&P MidCap 400 Composite Indexes and each peer group is based on market capitalization, weighted for each year. The stock price performance is not necessarily indicative of future stock price performance.

ITEM 6. SELECTED FINANCIAL DATA

The following table of selected financial data should be read in conjunction with the more detailed consolidated financial statements and related notes thereto included in Item 8 of this Form 10-K. Effective January 1, 2018, we adopted ASU 2014-09, Revenue from Contracts with Customers on a modified retrospective basis with a cumulative effect adjustment at the date of initial application. Accordingly, periods prior to January 1, 2018, have not been restated and are presented under the prior guidance (see Note 1 to the Consolidated Financial Statements). Also during 2018, we sold our Document Messaging Technology production mail business and supporting software (the Production Mail Business) and the operating results of the Production Mail Business have been reclassified as a discontinued operation (see Note 4 to the Consolidated Financial Statements).

	Years Ended December 31,				
	2018	2017	2016	2015	2014
Total revenue	$3,522,380	$3,123,272	$2,981,323	$3,135,234	$3,326,373
Amounts attributable to common stockholders:					
Income from continuing operations	$199,978	$221,362	$75,769	$363,623	$246,951
Income from discontinued operations	23,687	39,978	17,036	44,320	86,804
Net income - Pitney Bowes Inc.	$223,665	$261,340	$92,805	$407,943	$333,755
Basic earnings per share attributable to common stockholders (1):					
Continuing operations	$1.07	$1.19	$0.40	$1.82	$1.22
Discontinued operations	0.13	0.21	0.09	0.22	0.43
Net income - Pitney Bowes Inc.	$1.19	$1.40	$0.49	$2.04	$1.65
Diluted earnings per share attributable to common stockholders (1):					
Continuing operations	$1.06	$1.18	$0.40	$1.81	$1.21
Discontinued operations	0.13	0.21	0.09	0.22	0.43
Net income - Pitney Bowes Inc.	$1.19	$1.39	$0.49	$2.03	$1.64
Cash dividends paid per share of common stock	$0.75	$0.75	$0.75	$0.75	$0.75

Balance sheet data:

	December 31,				
	2018	2017	2016	2015	2014
Total assets	$5,972,903	$6,687,420	$5,837,133	$6,123,132	$6,476,599
Long-term debt	$3,066,073	$3,559,278	$2,750,405	$2,489,583	$2,904,024
Total debt	$3,265,608	$3,830,335	$3,364,890	$2,950,668	$3,228,903
Noncontrolling interests (Preferred stockholders' equity in subsidiaries)	$—	$—	$—	$296,370	$296,370

(1) The sum of earnings per share may not equal the totals due to rounding.

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

The following discussion and analysis should be read in conjunction with our risk factors, consolidated financial statements and related notes. This discussion and analysis contains forward-looking statements based on management's current expectations, estimates and projections and involves risks and uncertainties. Actual results may differ significantly from those currently expressed in our forward-looking statements as a result of various factors, including those factors described under "Forward-Looking Statements" and "Risk Factors" contained elsewhere in this Annual Report. All table amounts are presented in millions of dollars, except per share data.

Overview

We continue to make solid progress in our transformation to higher growth markets that align with our focus on reducing the complexity of mailing and shipping. In line with our transformation and strategic focus on shipping, we sold our Production Mail Business in July 2018. Proceeds from the sale were approximately $340 million and were used primarily to repay debt.

Financial Results Summary - Twelve Months Ended December 31:

	2018	2017	Change
Revenue	$3,522	$3,123	13 %
Segment earnings before interest and taxes (EBIT)	$623	$661	(6)%
Income from continuing operations	$200	$221	(10)%
Net income	$224	$261	(14)%
Earnings per share from continuing operations - diluted	$1.06	$1.18	(10)%
Net cash provided by operations	$392	$496	(21)%

Revenue increased 13% over the prior year, representing the second consecutive year of overall revenue growth. The increase in revenue was driven by growth of 47% in Commerce Services, as Global Ecommerce increased 85% and Presort Services grew 4%. Revenue in our SMB Solutions business declined 6%, but we continue to see stabilization in the decline in recurring stream revenues. Software Solutions revenue increased 3%, primarily due to higher data license revenue.

Segment earnings before interest and taxes declined 6% largely due to the overall portfolio shift to higher growth, but lower margin, digital and shipping solutions and continued investments in Commerce Services. Commerce Services EBIT declined 48% primarily due to higher labor and transportation costs and the cost of a marketing mail pilot program in Presort Services. SMB EBIT declined 2% primarily due to declining revenues partially offset by cost savings. Software Solutions EBIT increased 39% primarily due to higher data license revenue and cost savings.

Segment EBIT is determined by deducting from segment revenue the related costs and expenses attributable to the segment. Segment EBIT excludes interest, taxes, general corporate expenses, restructuring charges and other items not allocated to a particular business segment. See Note 3 to the Consolidated Financial Statements for a reconciliation of Segment EBIT to net income reported on a GAAP basis.

Income from continuing operations declined 10% from the prior year driven by lower overall margins as our portfolio continues to shift to higher growth, but lower margin businesses, and a $32 million non-cash pension settlement charge, partially offset by lower selling, general and administrative costs and lower restructuring costs.

During the year, we received net proceeds of $270 million from the sale of the Production Mail Business and repatriated $550 million of cash from our foreign subsidiaries. Cash was used to repay $570 million of debt, pay dividends of $140 million to our stockholders, and invest $191 million in capital expenditures. Cash and cash equivalents at December 31, 2018 was $867 million.

Outlook

We will continue to execute our transformation strategy around our three core principles: invest in offerings that reduce the complexity of mailing and shipping for our clients; continue to focus on operational excellence initiatives to reduce costs; and integrate and leverage technologies across the enterprise.

We expect revenue to grow as we continue to transform the portfolio to higher growth businesses. Within Global Ecommerce, we expect revenue growth from the expansion of our domestic parcel and fulfillment business, growth in domestic shipping solutions and cross sale opportunities of our cross-border products. Higher volumes of bound and packet mail are expected to generate revenue growth at Presort Services.

In SMB Solutions, we expect continued declines in revenue due to lower mail volumes and lower lease opportunities. However, we expect the magnitude of the decline to be mitigated by the continued success of our SendPro C-Series product in North America and planned launches in several international markets and the introduction of new services and products, including expanded third-party finance offerings and value-added shipping capabilities.
Within Software Solutions, revenue growth will be driven by a combination of sales opportunities from our indirect channel, software and data license deals, SaaS revenue and maintenance revenue.
We will begin offering expanded third-party finance offerings to our existing SMB client base in the United States in 2019. Under this program, in addition to leasing options for our mailing equipment products, we will offer financing alternatives to lease other manufacturers' equipment to meet their business needs. We expect that cash flows will be reduced by $50 million to $70 million in 2019 as we invest in the origination of third-party equipment leases and build a finance receivable portfolio.
We expect continued progress in our efforts to improve productivity and reduce spend. Over the last five years, we have transformed to a more digital operating model and have reduced our cost structure. Last year, we announced our intention to reduce gross spend by $200 million over a 24-month period. We recognized over $150 million of this target in 2018 and expect to recognize the remainder in 2019. A large portion of these gross savings has been, and will continue to be, reinvested in the business, particularly in Commerce Services and our third-party financing initiative. We are also addressing immediate challenges such as higher labor and transportation costs.
In January 2019, we sold the direct operations and moved to a dealer model in six smaller markets within International Mailing. The impact on 2019 revenue is estimated to be about $40 million and the impact on earnings will not be significant. Proceeds from the sale were not material.
As our business continues to transform to higher growth markets, we need to increase our financial flexibility to be able to pursue opportunities in growth markets and create value for our shareholders. Accordingly, our Board of Directors approved a first quarter 2019 dividend on our common stock of $0.05 per share; down from our historical $0.1875 quarterly dividend per share, and authorized an incremental $100 million share repurchase. These changes in our capital allocation strategy more appropriately reflect our business profile today and are designed to provide a competitive return to our shareholders while ensuring financial flexibility to support our long-term growth strategy.

RESULTS OF OPERATIONS

Revenue by source and the related cost of revenue are shown in the following tables:

	Revenue Years Ended December 31,			% change Actual		Constant Currency	
	2018	2017	2016	2018	2017	2018	2017
Equipment sales	$430	$477	$480	(10)%	(1)%	(10)%	(1)%
Supplies	218	231	242	(6)%	(4)%	(7)%	(4)%
Software	341	332	326	3 %	2 %	3 %	2 %
Rentals	363	384	410	(5)%	(6)%	(6)%	(7)%
Financing	315	331	366	(5)%	(10)%	(5)%	(10)%
Support services	293	300	329	(2)%	(9)%	(3)%	(9)%
Business services	1,562	1,068	828	46 %	29 %	46 %	29 %
Total revenue	$3,522	$3,123	$2,981	13 %	5 %	12 %	5 %

	Cost of Revenue Years Ended December 31, 2018		2017		2016	
	$	% of revenue	$	% of revenue	$	% of revenue
Cost of equipment sales	$182	42.2 %	$201	42.2 %	$203	42.3 %
Cost of supplies	61	27.9 %	66	28.7 %	66	27.1 %
Cost of software	101	29.5 %	95	28.6 %	96	29.5 %
Cost of rentals	86	23.8 %	83	21.5 %	74	18.1 %
Financing interest expense	49	15.5 %	51	15.3 %	55	15.1 %
Cost of support services	168	57.3 %	164	54.7 %	166	50.5 %
Cost of business services	1,246	79.8 %	773	72.4 %	569	68.7 %
Total cost of revenue	$1,893	53.7 %	$1,433	45.9 %	$1,229	41.2 %

The discussion below may also refer to revenue growth on a constant currency basis. Constant currency measures exclude the impact of changes in foreign currency exchange rates since the prior period under comparison and are intended to provide a better understanding of the underlying revenue performance excluding the impacts of currency exchange rates on reported revenue. Constant currency change is calculated by converting the current period non-U.S. dollar denominated revenue using the prior year's exchange rate. Where constant currency measures are not provided, the actual change and constant currency change are the same.

Equipment sales

Equipment sales decreased 10% in 2018 compared to 2017, primarily due to:

- 8% from lower equipment sales in North America Mailing reflecting a decline in sales of our higher-end products; and
- 2% from lower equipment sales in International Mailing, primarily due to lower sales in the U.K. and France.

Cost of equipment sales as a percentage of equipment sales revenue of 42.2% was flat to prior year.

Equipment sales decreased 1% in 2017 compared to 2016 primarily due to:

- 2% from lower equipment sales in International Mailing particularly in Europe; partially offset by
- 1% from higher equipment sales in North America Mailing reflecting a favorable comparison to the 2016 period, which was impacted by the implementation of the enterprise business platform.

Cost of equipment sales as a percentage of equipment sales revenue of 42.2% was consistent with the prior year.

Supplies

Supplies revenue decreased 6% on a reported basis and 7% on a constant currency basis in 2018 compared to 2017, driven by a 4% decline North America Mailing and 3% decline in International Mailing due to a global decline in installed mailing equipment and postage volumes. Cost of supplies as a percentage of supplies revenue improved to

27.9% in 2018 compared to 28.7% due to a favorable mix of sales in North America Mailing.

Supplies revenue decreased 4% in 2017 compared to 2016 primarily from a decline in installed mailing equipment and postage volumes in North America Mailing. Cost of supplies as a percentage of supplies revenue increased to 28.7% primarily due to higher mix of lower margin products.

Software

Software revenue increased 3% in 2018 compared to 2017 primarily due to higher data licensing revenue. Cost of software as a percentage of software revenue increased to 29.5% in 2018 as data licenses have slightly lower margins than traditional software licenses due to royalty payments that are made on data licenses.

Software revenue increased 2% in 2017 compared to 2016 primarily due to higher software licensing, data and SaaS revenue. Cost of software as a percentage of software revenue decreased to 28.6% primarily due to the increase in high margin licensing revenue and cost reduction initiatives.

Rentals

Rentals revenue decreased 5% (6% on a constant currency basis) in 2018 compared to 2017 and 6% (7% on a constant currency basis) in 2017 compared to 2016 primarily due to a declining meter population.

Cost of rentals as a percentage of rentals revenue increased to 23.8% in 2018 and increased to 21.5% in 2017 primarily due to higher scrapping costs associated with retiring aging meters.

Financing

Financing revenue decreased 5% in 2018 compared to 2017 and 10% in 2017 compared to 2016 primarily due to a declining portfolio and lower fees.

We allocate a portion of our total borrowing costs to financing interest expense. In computing financing interest expense, we assume an 8:1 debt to equity leverage ratio and apply our overall effective interest rate to the average outstanding finance receivables.

Support Services

Support services revenue decreased 2% (3% on a constant currency basis) in 2018 compared to 2017 and 9% in 2017 compared to 2016 primarily due to a worldwide decline in installed mailing equipment. Cost of support services as a percentage of support services revenue increased to 57.3% in 2018 and increased to 54.7% in 2017 primarily due to the decline in support services revenue.

Business Services

Business services revenue increased 46% in 2018 compared to 2017 primarily due to:

- 39% from the acquisition of Newgistics;
- 5% from growth in Global Ecommerce driven by higher revenue from shipping solutions, partially offset by lower cross-border revenue due to lower volumes; and
- 2% from higher volumes of mail processed in Presort Services.

Cost of business services as a percentage of business services revenue increased to 79.8% in 2018 primarily due to continued investment in Global Ecommerce, higher labor and transportation costs in Commerce Services of $40 million driven by increased competition for labor and transportation resources due to the rapid growth in Ecommerce and $8 million from the launch of a marketing mail pilot program in Presort Services.

Business services revenue increased 29% in 2017 compared to 2016 primarily due to:

- 17% from the acquisition of Newgistics;
- 9% from growth in Global Ecommerce due to higher cross-border and retail volumes; and
- 3% from higher volumes of mail processed in Presort Services.

Cost of business services as a percentage of business services revenue increased to 72.4% in 2017 primarily due to continued investment in our Global Ecommerce segment and the additional costs of Newgistics.

Selling, general and administrative (SG&A)

SG&A expense decreased 4%, or $48 million, in 2018 compared to 2017, despite $51 million of incremental expenses from the acquisition of Newgistics. The underlying decrease in SG&A was primarily due to lower employee related expenses of $38 million, lower marketing and advertising spend of $34 million, and other operating expense cost reductions as a result of our cost savings initiatives.

SG&A expense increased 3%, or $31 million, in 2017 compared to 2016. Contributing to this increase was higher compensation-related costs of $28 million due to the reinstatement of our annual variable compensation program and higher stock-based compensation expense. Each of these programs are tied to our performance against pre-established targets and costs in 2016 were significantly lower than in

2017. Additionally, expenses in Global Ecommerce were $21 million higher as we continue to invest in the business, we incurred $17 million of additional expense from Newgistics, $9 million of higher marketing expenses, $9 million of higher residual losses on leased equipment due to the timing of trade-up activity and $9 million of acquisition transaction costs, primarily related to Newgistics. Offsetting these increases was approximately $63 million of benefits from productivity initiatives and a $6 million pre-tax gain from the sale of technology. Additionally, 2017 included loan forgiveness income of $10 million and a favorable state sales tax adjustment of $5 million.

Restructuring charges and asset impairments, net
In 2018, restructuring charges and asset impairments of $27 million consisted of $25 million of restructuring related charges and $2 million of asset impairment charges. In 2017, restructuring charges and asset impairments of $56 million consisted of $52 million of restructuring related charges and $4 million of asset impairment charges. In 2016, restructuring charges and asset impairments of $60 million consisted of $45 million of restructuring related charges and $15 million of asset impairment charges, primarily from a loss of $5 million from the sale of a facility and an impairment charge of $4 million related to another facility.

Goodwill impairment
In 2016, we recorded a non-cash goodwill impairment charge of $148 million associated with our Software Solutions reporting unit.

Other components of net pension and postretirement cost
In connection with the disposition of the Production Mail Business and certain other actions, we incurred a pre-tax, non-cash pension settlement charge of $45 million in the fourth quarter of 2018. We recognized $32 million of this charge in other components of net pension and postretirement cost and the remaining $13 million in income from discontinued operations, net of tax.

Other expense
Other expense for 2018 and 2017 represents a loss on the early extinguishment of debt.

Income taxes
The effective tax rate was 5.8% and 0.2% for the year ended December 31, 2018 and 2017, respectively. On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Act) was signed into law making significant changes to the Internal Revenue Code. Changes included, but were not limited to, a federal corporate income tax rate decrease from 35% to 21% effective January 1, 2018, the transition of U.S. international taxation from a worldwide tax system to a territorial system by creating a minimum tax on earnings of foreign subsidiaries and a one-time transition tax on the mandatory deemed repatriation of post-1986 cumulative foreign earnings.
In accordance with the Act, the tax provision at December 31, 2017 included a net provisional one-time non-cash benefit of $39 million, comprised of a provisional $130 million benefit from the remeasurement of net U.S. deferred tax liabilities arising from a lower U.S. tax rate, offset by a provisional $91 million charge related primarily to the U.S. tax on unremitted post-1986 earnings of our foreign subsidiaries. The effective tax rate for 2017 also included tax benefits of $30 million from the resolution of certain tax examinations.
Staff Accounting Bulletin No. 118 (SAB 118) was issued to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. SAB 118 provided registrants up to one year to complete the analysis, computations and accounting for the impact of the Act on their consolidated financial statements.
We completed our analysis and measurement of the impact of the Act. Our tax provision for the year ended December 31, 2018 includes an adjustment to the provisional tax recorded of $37 million, comprised of a $13 million benefit related to the remeasurement of certain deferred tax assets and liabilities and a $24 million decrease in the U.S. tax on unremitted post-1986 earnings of our foreign subsidiaries. The effective tax rate for 2018 also includes a benefit of $17 million from the resolution of certain tax examinations.

See Note 15 to the Consolidated Financial Statements for further information.

Income from discontinued operations

Income from discontinued operations includes net income and a gain on sale of our Production Mail Business. See Note 4 to the Consolidated Financial Statements for further information.

Preferred stock dividends of subsidiaries attributable to noncontrolling interests

We redeemed all of the PBIH Preferred Stock in November 2016.

Business Segments

In January 2018, we revised our business reporting groups to reflect how we manage these groups and clients served in each market. We formed the Commerce Services group to include our Global Ecommerce and Presort Services segments. Additionally, we classified the operating results of the Production Mail Business to discontinued operations and have recast segment operating results for prior years to conform to the current year presentation. The principal products and services of each of our reportable segments are as follows:
Commerce Services:
Global Ecommerce: Includes the worldwide revenue and related expenses from cross-border ecommerce transactions, domestic retail and ecommerce shipping solutions and fulfillment, delivery and return services.
Presort Services: Includes revenue and related expenses from sortation services that allow clients to qualify large volumes of First Class Mail, Marketing Mail and Bound and Packet Mail (Standard Flats and Bound Printed Matter) for postal worksharing discounts.
Small & Medium Business (SMB) Solutions:
North America Mailing: Includes the revenue and related expenses from mailing and shipping solutions, financing, services and supplies for small and medium businesses to efficiently create mail, evidence postage and help simplify and save on the sending, tracking and receiving of letters, parcels and flats in the U.S. and Canada.
International Mailing: Includes the revenue and related expenses from mailing and shipping solutions, financing, services and supplies for small and medium businesses to efficiently create mail, evidence postage and help simplify and save on the sending, tracking and receiving of letters, parcels and flats in areas outside the U.S. and Canada.
Software Solutions:
Includes the worldwide revenue and related expenses from the licensing of customer engagement, customer information, location intelligence software, data solutions and related support services.
Management uses segment earnings before interest and taxes (EBIT) to measure profitability and performance at the segment level and believes that it provides a useful measure of operating performance and underlying trends of the businesses. We determine segment EBIT by deducting from segment revenue the related costs and expenses attributable to the segment. Segment EBIT excludes interest, taxes, general corporate expenses, restructuring charges and other items not allocated to a particular business segment. Segment EBIT may not be indicative of our overall consolidated performance and should be read in conjunction with our consolidated results of operations. Due to acquisition activity in Commerce Services, we are also providing segment earnings before interest, taxes, depreciation and amortization (EBITDA) as a supplemental non-GAAP measure of profit and operational performance for each segment. See Note 3 to the Consolidated Financial Statements for a reconciliation of segment EBIT to net income.
Revenue and EBIT by business segment are presented in the tables below. The sum of the individual segments in the tables above may not equal the totals due to rounding.

	Revenue			% change			
	Years Ended December 31,			Actual		Constant Currency	
	2018	2017	2016	2018	2017	2018	2017
Global Ecommerce	$1,023	$552	$339	85 %	63 %	85 %	63 %
Presort Services	516	498	476	4 %	5 %	4 %	5 %
Commerce Services	1,539	1,050	815	47 %	29 %	46 %	29 %
North America Mailing	1,275	1,357	1,429	(6)%	(5)%	(6)%	(5)%
International Mailing	368	384	412	(4)%	(7)%	(7)%	(6)%
SMB Solutions	1,643	1,742	1,841	(6)%	(5)%	(6)%	(5)%
Software Solutions	341	332	325	3 %	2 %	3 %	2 %
Total Revenue	$3,522	$3,123	$2,981	13 %	5 %	12 %	5 %

	EBIT Years Ended December 31,			% change	
	2018	2017	2016	2018	2017
Global Ecommerce	$(32)	$(18)	$3	(81)%	>(100)%
Presort Services	74	98	95	(24)%	2 %
Commerce Services	41	80	98	(48)%	(19)%
North America Mailing	470	499	595	(6)%	(16)%
International Mailing	64	49	45	32 %	7 %
SMB Solutions	534	547	640	(2)%	(15)%
Software Solutions	47	34	22	39 %	53 %
Total segment EBIT	$623	$661	$761	(6)%	(13)%

	EBITDA Years Ended December 31,			% change	
	2018	2017	2016	2018	2017
Global Ecommerce	$29	$19	$34	53 %	(44)%
Presort Services	101	124	123	(19)%	1 %
Commerce Services	129	143	157	(9)%	(9)%
North America Mailing	539	563	655	(4)%	(14)%
International Mailing	80	67	65	19 %	3 %
SMB Solutions	618	630	720	(2)%	(12)%
Software Solutions	57	43	37	32 %	16 %
Total segment EBITDA	804	816	913	(1)%	(11)%
Less: Segment depreciation and amortization	182	156	153	17 %	2 %
Total segment EBIT	$623	$661	$761	(6)%	(13)%

Global Ecommerce

Global Ecommerce revenue increased 85% in 2018 compared to 2017. Excluding Newgistics, Global Ecommerce revenue increased 13% driven by higher revenue from shipping solutions, partially offset by lower cross-border revenue due to lower volumes.

EBIT in 2018 was a loss of $32 million compared to a loss of $18 million in 2017. The increase in EBIT loss was primarily due to higher amortization expense of $12 million due to a full year of amortization related to Newgistics, higher transportation and labor costs of $6 million due to increased competition for labor and transportation resources as a result of the rapid growth in Ecommerce, partially offset by higher revenue.

Global Ecommerce revenue increased 63% in 2017 compared to 2016 primarily due to:

- 41% from the acquisition of Newgistics;
- 12% from higher domestic ecommerce shipping revenues;
- 6% from higher cross-border marketplace volumes, particularly in the UK; and
- 4% from higher retail volumes.

EBIT was a loss of 18 million in 2017 primarily due to investments in market growth opportunities and additional amortization expense from the acquisition of Newgistics.

Presort Services

Presort Services revenue increased 4% in 2018 compared to 2017 primarily due to higher volumes of First Class mail, Standard Class mail and bound and packet mail processed. Revenue increased 5% in 2017 compared to 2016 primarily due to higher volumes and revenue per piece of mail processed.

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EBIT decreased 24% in 2018 compared to 2017 primarily due to higher labor and transportation costs of $34 million due to increased competition for labor and transportation resources and $8 million from the launch of a marketing mail pilot program. EBIT increased 2% in 2017 compared to 2016 primarily due to higher revenue.

North America Mailing

North America Mailing revenue decreased 6% in 2018 compared to 2017 primarily due to:

- 3% from lower equipment sales due to a decline in top of the line products;
- 2% from declines in rentals and support services revenue; and
- 1% from lower financing revenue.

EBIT decreased 6% primarily due to the decline in revenue and sales of top of the line products partially offset by lower expenses.

North America Mailing revenue decreased 5% in 2017 compared to 2016 primarily due to:

- 3% from declines in rentals and support services revenue due to a decline in installed mailing equipment and lower postage volumes; and
- 2% from lower financing revenue primarily due to a declining lease portfolio and lower fee income.

EBIT decreased 16% primarily due to the decline in revenue and margins.

International Mailing

International Mailing revenue declined 4% in 2018 compared to 2017. On a constant currency basis, revenue declined 7% primarily due to:

- 4% from lower stream revenues resulting from a lower installed meter base, declining postage volumes and a declining lease portfolio; and
- 3% from lower equipment sales, primarily in the U.K., France and Italy, partly offset by higher sales in Germany.

EBIT increased 32% in 2018 compared to 2017 primarily due to lower expenses.

International Mailing revenue declined 7% in 2017 compared to 2016. On a constant currency basis, revenue decreased 6% primarily due to:

- 3% from lower equipment sales particularly in Europe; and
- 3% from declines in rentals, financing and support services revenue resulting from a decline in installed mailing equipment and the lease portfolio.

EBIT increased 7% in 2017 compared to 2016, primarily due to higher equipment margins and lower expenses.

Software Solutions

Software revenue increased 3% in 2018 compared to 2017 primarily due to higher data licensing revenue. EBIT increased 39% primarily due to lower expenses resulting from cost saving initiatives.

Software revenue increased 2% in 2017 compared to 2016 primarily due to higher software licensing, data and SaaS revenue. EBIT increased 53% primarily due to an increase in high margin licensing revenue.

LIQUIDITY AND CAPITAL RESOURCES

We believe that existing cash and investments, cash generated from operations and borrowing capacity through the capital markets will be sufficient to support our current cash needs, including discretionary uses such as capital investments, strategic acquisitions, dividends and share repurchases. Cash and cash equivalents and short-term investments were $927 million at December 31, 2018 and $1,058 million at December 31, 2017. We continuously review our credit profile through published credit ratings and the credit default swap market. We also monitor the creditworthiness of those banks acting as derivative counterparties, depository banks or credit providers.

Cash and cash equivalents held by our foreign subsidiaries were $189 million and $608 million at December 31, 2018 and December 31, 2017, respectively. During 2018, we repatriated over $550 million of cash to the U.S. from our foreign subsidiaries and used a portion of these proceeds to repay debt. Cash and cash equivalents held by our foreign subsidiaries are generally used to support the liquidity needs of these subsidiaries.

Cash Flow Summary

The change in cash and cash equivalents is as follows:

	Years Ended December 31,		
	2018	2017	2016
Net cash provided by operating activities	$392	$496	$496
Net cash provided by (used in) investing activities	260	(663)	(116)
Net cash (used in) provided by financing activities	(766)	368	(230)
Effect of exchange rate changes on cash and cash equivalents	(25)	44	(27)
Change in cash and cash equivalents (1)	$(140)	$244	$124

(1) Amounts may not foot due to rounding.

Operating activities

Cash flows from operations decreased $104 million in 2018 compared to 2017, primarily due to:

- Lower cash from discontinued operations of $58 million; and
- Lower cash of $45 million from changes in working capital.

Cash flows from operations were flat in 2017 compared to 2016 as lower restructuring and pension contribution payments were offset by changes in working capital.

Investing activities

In 2018, investing activities provided $260 million of cash. Sources of cash include gross proceeds of $340 million from the sale of the Production Mail Business and $106 million from investment activities as we liquidated a portion of our investment portfolio to raise cash to support the launch of our enhanced third-party financing offerings. Cash was used to fund capital expenditures of $191 million. The increase in capital expenditures in 2018 compared to 2017 was primarily due to investments in Commerce Services to build new fulfillment and returns distribution facilities and increase automation at our Presort facilities.

In 2017, we used $663 million of cash in investing activities primarily for the acquisition of Newgistics for $471 million and capital expenditures of $168 million.

In 2016, we used $116 million of cash investing activities primarily for capital expenditures of $159 million and acquisitions of $38 million. These uses were offset by a source of $75 million from the timing of investment activities.

Financing activities

In 2018, we used $766 million of cash in financing activities primarily to repay $570 million of debt, pay dividends of $140 million and the settlement of a $46 million timing difference between our investing excess cash at the subsidiary level and the funding of an intercompany cash transfer at December 31, 2017. In 2017, cash from financing activities was $368 million primarily from the issuance of debt of $1,437 million partially offset by debt repayments of $965 million and dividend payments of $139 million. In 2016, cash of $230 million was used in financing activities primarily to repay debt of $461 million, redeem noncontrolling interests for $300 million, repurchase stock for $197 million and pay dividends of $141 million. We also received proceeds of $895 million from the issuance of debt.

Debt and Capitalization

We are a "Well-Known Seasoned Issuer" within the meaning of Rule 405 under the Securities Act, which allows us to issue debt securities, preferred stock, preference stock, common stock, purchase contracts, depositary shares, warrants and units in an expedited fashion. We have a committed credit facility of $1 billion that expires in January 2021. As of December 31, 2018 we have not drawn upon the credit facility.

A portion of our debt financing requires compliance with certain financial covenants. The agreements associated with these financial obligations have been amended on occasion to adjust the terms of those covenants for limited time periods. At December 31, 2018, we were in compliance with all financial covenants. For more information on our financial covenants refer to our exhibits.

We have term loans of $200 million maturing in 2019 and a total of $2.3 billion of debt maturing within the next five years. We fully expect to be able to fund these maturities with cash or by refinancing through the U.S. capital markets. However, our ability to access the U.S. capital markets is dependent upon our credit ratings and is subject to capital market volatility. Given our current credit rating, we may not have immediate or sufficient access to the U.S. capital markets, and when we do access the U.S. capital markets, we may experience reduced flexibility and higher costs.

2018 Activity

In the second quarter of 2018, Standard & Poor's lowered our corporate credit rating from BBB- to BB+. As a result, the stated interest rate on certain of our long term debt issuances increased 0.25% (see Note 13 to the Consolidated Financial Statements).

During 2018, we redeemed the $300 million 6.25% notes due March 2019 and recorded an $8 million loss on the early redemption of debt. We also repaid the $250 million 5.6% notes that matured in March 2018 and $20 million of principal on our term loans. Finally, pursuant to an extension option, the maturity of our $150 million term loan was extended to August 2019.

2017 Activity

In September 2017, we issued $300 million of 3.625% Notes due September 2020 and $400 million of 4.7% Notes due April 2023. Interest is payable semi-annually and is subject to adjustment from time to time based on changes in our credit ratings. Both of these notes may be redeemed, at our option, in whole or in part, at any time at par plus accrued, unpaid interest and a make-whole amount, if any.

In September 2017, we also borrowed $350 million under term loan agreements. The new term loans consist of a $200 million term loan that bears interest at the applicable Eurodollar Rate plus 1.5% and matures in September 2020 and a $150 million term loan that bears interest at the applicable Eurodollar Rate plus 1.125% and matures in August 2018, but includes an option to extend the maturity by one year. For the fourth quarter of 2017, the effective interest rate for the $200 million term loan was 2.78% and the effective interest rate for the $150 million term loan was 2.49%. The interest rates on these term loans are subject to adjustment from time to time based on changes in our credit ratings.

In May 2017, we issued $400 million of 3.875% Notes. Interest is payable semi-annually and is subject to adjustment based on changes in our credit ratings. The notes mature in May 2022, but may be redeemed, at our option, in whole or in part, at any time at par plus accrued, unpaid interest and a make-whole amount, if any. Subsequent to the issuance of these notes, we experienced a change in our credit rating, resulting in an increase in the fixed rate of 0.25% to 4.125%.

In 2017, we repaid a $150 million term loan, the $385 million of 5.75% Notes due in September 2017 and early redeemed the $350 million 4.75% Notes that were due May 2018. Additionally, bondholders of the 5.25% Notes due 2037 caused us to redeem $79 million of the outstanding notes.

Share Repurchases and Dividends

We did not repurchase shares during 2018 or 2017 and repurchased $197 million of our common shares during 2016. We paid dividends to our common stockholders of $140 million ($0.75 per share), $139 million ($0.75 per share) and $141 million ($0.75 per share) in 2018, 2017 and 2016, respectively. Each quarter, our Board of Directors considers our recent and projected earnings and other capital needs and priorities in deciding whether to approve the payment, as well as the amount of a dividend. There are no material restrictions on our ability to declare dividends.

In February 2019, the Board of Directors approved a first quarter dividend of $0.05 per share and authorized an additional $100 million share repurchase giving us the ability to repurchase up to $121 million of our shares. Subject to market conditions, we will begin to opportunistically repurchase shares as soon as practical and intend to utilize approximately half of this authorization within the first half of 2019.

Contractual Obligations

The following table summarizes our known contractual obligations at December 31, 2018 and the effect that such obligations are expected to have on our liquidity and cash flow in future periods:

	Payments due in				
	Total	2019	2020-2021	2022-2023	After 2023
Debt maturities	$3,296	$200	$ 1,330	$ 800	$966
Interest payments on debt (1)	1,120	154	251	139	576
Noncancelable operating lease obligations	231	48	76	45	62
Purchase obligations (2)	168	163	4	1	—
Pension plan contributions (3)	22	22	—	—	—
Retiree medical payments (4)	137	17	32	28	60
Total	$4,974	$604	$ 1,693	$ 1,013	$1,664

The amount and period of future payments related to our income tax uncertainties cannot be reliably estimated and are not included in the above table. See Note 15 to the Consolidated Financial Statements for further details.

(1) Assumes all debt is held to maturity.

(2) Includes unrecorded agreements to purchase goods and services that are enforceable and legally binding upon us and that specify all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. Purchase obligations exclude agreements that are cancelable without penalty.

(3) Represents the amount of contributions we anticipate making to our pension plans during 2019. We will assess our funding alternatives as the year progresses and this amount is subject to change.

(4) Our retiree health benefit plans are nonfunded plans and cash contributions are made each year to cover medical claims costs incurred. The amounts reported in the above table represent our estimate of future payments.

Off-Balance Sheet Arrangements

At December 31, 2018, we had no off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, results of operations or liquidity.

Critical Accounting Estimates

The preparation of our financial statements in conformity with GAAP requires management to make estimates and assumptions about certain items that affect the reported amounts of assets, liabilities, revenues, expenses and accompanying disclosures, including the disclosure of contingent assets and liabilities. The accounting policies below have been identified by management as those accounting policies that are most critical to our financial statements due to the estimates and assumptions required. Management believes that the estimates and assumptions used are reasonable and appropriate based on the information available at the time the financial statements were prepared; however, actual results could differ from those estimates and assumptions. See Note 1 to the Consolidated Financial Statements for a summary of our accounting policies.

Revenue recognition

We derive revenue from multiple sources including sales, rentals, financing and services. Certain transactions are consummated at the same time and can therefore generate revenue from multiple sources. The most common form of these arrangements involve a sale or noncancelable lease of equipment, a meter rental and an equipment maintenance agreement. We are required to determine whether each product and service within the contract should be treated as separate performance obligation (unit of accounting) for revenue recognition purposes. We recognize revenue for performance obligations when control of the products or services is transferred to the customer. Transfer of control may occur at a point in time or over time, depending on the nature of the contract and the performance obligation. Revenue is allocated among performance obligations based on relative "standalone selling prices" (SSP), which is the price we would sell the good or service to a customer on a separate basis. SSP are established for each performance obligation at the inception of the contract and can be observable prices or estimated. Revenue is allocated to the meter rental and equipment maintenance agreement elements using their respective observable selling prices charged in standalone and renewal transactions. For a sale transaction, the SSP of the equipment is based on a range of observable selling prices in standalone transactions. For a lease transaction, revenue is allocated to the equipment based on the present value of the remaining minimum lease payments accounted for as a sales type lease at inception. The amount allocated to equipment is compared to the range of selling prices in standalone transactions during the period to ensure the allocated equipment amount approximates average selling prices. We recognize revenue on non-lease transactions when control of the equipment transfers to the customer, which is upon delivery for customer installable models and upon installation or customer acceptance for other models.

We also have contracts that contain only performance obligations to deliver software licenses and software related products and services, which may include maintenance and support services, data, training and integration services. As a majority of our software and data license products are considered “right to use”, we recognize revenue when control is transferred to the customer, which is generally upon delivery or acceptance for those licenses requiring significant integration or customization. Revenue from license renewals is recognized at the beginning of the license term. Revenue for software maintenance is recognized on a ratable basis over the contract term. We allocate the transaction price based on relative standalone selling prices, which are generally based on observable selling prices in standalone transactions for our data products, maintenance and professional services. We estimate the standalone selling prices for our software licenses using the residual approach, as the selling prices are highly variable and observable standalone selling prices exist for the other goods and services in the contract.

Pension benefits

The valuation of our pension assets and obligations and the calculation of net periodic pension expense are dependent on assumptions and estimates relating to, among other things, the discount rate (interest rate used to discount the future estimated liability) and the expected rate of return on plan assets. These assumptions are evaluated and updated annually.

The discount rate for our largest plan, the U.S. Qualified Pension Plan (the U.S. Plan) is determined by matching the expected cash flows associated with our benefit obligation to a pool of corporate long-term, high-quality fixed income debt instruments available as of the measurement date. The discount rate for our largest foreign plan, the U.K. Qualified Pension Plan (the U.K. Plan), is determined by using a model that discounts each year's estimated benefit payments by an applicable spot rate derived from a yield curve created from a large number of high quality corporate bonds. The discount rate used in the determination of net periodic pension expense for 2018 was 3.69% for the U.S. Plan and 2.4% for the U.K. Plan. For 2019, the discount rate used in the determination of net periodic pension expense for the U.S. Plan and the U.K. Plan will be 4.34% and 2.65%, respectively. A 0.25% change in the discount rate would impact annual pension expense by less than $1 million for both the U.S. Plan and the U.K. Plan, and the projected benefit obligation of the U.S. Plan and U.K. Plan by $38 million and $22 million, respectively.

Pension assets are exposed to various risks such as interest rate, market and credit risks. We invest our pension plan assets in a variety of investment securities in accordance with our strategic asset allocation policy. The expected return on plan assets is based on historical and expected future returns for current and targeted asset allocations for each asset class in the investment portfolio, adjusted for historical and expected experience of active portfolio management results, as compared to the benchmark returns. The expected rate of return on plan assets used in the determination of net periodic pension expense for 2018 was 7.0% for the U.S. Plan and 6.25% for the U.K. Plan.

For 2019, the expected rate of return on plan assets used in the determination of net periodic pension expense for the U.S. Plan will be 6.75% and the U.K. Plan will be 6.25%. A 0.25% change in the expected rate of return on plan assets would impact annual pension expense for the U.S. Plan by $3 million and the U.K. Plan by $1 million.
Actual pension plan results that differ from our assumptions and estimates are accumulated and amortized primarily over the life expectancy of plan participants and affect future pension expense. Net pension expense is also based on a market-related valuation of plan assets where differences between the actual and expected return on plan assets are recognized in the calculation of the market-related value of assets over a five-year period. Plan benefits for participants in a majority of our U.S. and foreign pension plans are frozen.
See Note 14 to the Consolidated Financial Statements for further information about our pension plans.

Residual value of leased assets
Equipment residual values are determined at the inception of the lease using estimates of fair value at the end of the lease term. Residual value estimates impact the determination of whether a lease is classified as an operating lease or a sales-type lease. Fair value estimates of equipment at the end of the lease term are based on historical experience, forecasted supply and demand for our products, product retirement and product launch plans, client behavior, regulatory changes, remanufacturing strategies, used equipment markets, competition and technological changes.

We evaluate residual values on an annual basis or sooner if circumstances warrant. Declines in estimated residual values considered "other-than-temporary" are recognized immediately. Increases in estimated future residual values are not recognized until the equipment is remarketed. If the actual residual value of leased assets were 10% lower than management's current estimates, pre-tax income would be $7 million lower.

Allowances for doubtful accounts and credit losses
Finance receivables are comprised of sales-type lease receivables and unsecured revolving loan receivables. We provide an allowance for probable credit losses based on historical loss experience, the nature and volume of our portfolios, adverse situations that may affect a client's ability to pay, prevailing economic conditions and our ability to manage the collateral.
Total allowance for credit losses as a percentage of finance receivables was 1% at both December 31, 2018 and 2017. Holding all other assumptions constant, a 0.25% change in the allowance rate at December 31, 2018 would have reduced pre-tax income by $4 million.
Accounts receivable are generally due within 30 days after the invoice date. Accounts deemed uncollectible are written off against the allowance after all collection efforts have been exhausted and management deems the account to be uncollectible. We believe that our accounts receivable credit risk is low because of the geographic and industry diversification of our clients and small account balances for most of our clients.
The allowance for doubtful accounts as a percentage of receivables was 4% at December 31, 2018 and 3% at December 31, 2017. Holding all other assumptions constant, a 0.25% change in the allowance rate at December 31, 2018 would have reduced pre-tax income by $1 million.

Income taxes and valuation allowance
We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Our annual tax rate is based on income, statutory tax rates, tax reserve changes and tax planning opportunities available to us in the various jurisdictions in which we operate. Significant judgment is required in determining the annual tax rate and in evaluating our tax positions. We regularly assess the likelihood of tax adjustments in each of the tax jurisdictions in which we have operations and account for the related financial statement implications. Tax reserves have been established that we believe to be appropriate given the possibility of tax adjustments. Determining the appropriate level of tax reserves requires us to exercise judgment regarding the uncertain application of tax laws. The amount of reserves is adjusted when information becomes available or when an event occurs indicating a change in the reserve is appropriate. Future changes in tax reserve requirements could have a material impact on our financial condition or results of operations.

Significant judgment is also required in determining the amount of deferred tax assets that will ultimately be realized and corresponding deferred tax asset valuation allowance. When estimating the necessary valuation allowance, we consider all available evidence for each jurisdiction including historical operating results, estimates of future taxable income and the feasibility of ongoing tax planning strategies. If new information becomes available that would alter our estimate of the amount of deferred tax assets that will ultimately be realized, we adjust the valuation allowance through income tax expense.

Impairment review
Long-lived and finite-lived intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. The estimated future undiscounted cash flows expected to result from the use and eventual disposition of the assets is compared to the carrying value. We derive the cash flow estimates from our long-term business plans and historical experience. If the sum of the undiscounted cash flows is less than the asset's carrying value, an impairment charge is recorded for an amount by which the carrying value exceeds its fair value. The fair value of the impaired asset is determined using probability weighted expected cash flow estimates, quoted market prices when available and appraisals, as appropriate. Changes in the estimates and assumptions incorporated in our impairment assessment could materially affect the determination of fair value and the associated impairment charge.
Goodwill is tested annually for impairment at the reporting unit level during the fourth quarter or sooner when circumstances indicate an impairment may exist. The impairment test for goodwill determines the fair value of each reporting unit and compares it to the reporting unit's carrying value, including goodwill. If the fair value of a reporting unit is less than its carrying value, an impairment loss is recognized for the difference, not to exceed the carrying amount of goodwill.
Significant estimates and assumptions are used in our goodwill impairment review including the identification of reporting units, assigning assets and liabilities, including goodwill, to reporting units and determining the fair value of each reporting unit. The fair value of each reporting unit is determined based on a combination of techniques, including the present value of future cash flows, multiples of competitors and multiples from sales of like businesses. The assumptions used to estimate fair value are based on projections incorporated in our current operating plans as well as other available information. Our operating plans include significant assumptions and estimates associated with sales growth, profitability, cash flows and capital spending. The determination of fair value also incorporates a risk-adjusted discount rate and other assumptions that market participants may use. Changes in any of these estimates or assumptions could materially affect the determination of fair value and the associated goodwill impairment assessment for each reporting unit. Potential events and circumstances, such as the inability to acquire new clients, downward pressures on pricing and rising interest rates could have an adverse impact on our assumptions and result in non-cash impairment charges in future periods.
During the fourth quarter, we conducted our annual impairment review of all our reporting units. Based on the results of this review, we concluded that the estimated fair value of each of our reporting units were substantially in excess of their respective carrying values.

Stock-based compensation expense
We recognize compensation cost for stock-based awards based on the estimated fair value of the award. The fair value of certain stock awards is determined using a Black-Scholes valuation model or Monte Carlo simulation model. These models require assumptions regarding the expected stock price volatility, risk-free interest rate, expected life of the award and dividend yield. The expected stock price volatility is based on historical price changes of our stock. The risk-free interest rate is based on U.S. Treasuries with a term equal to the expected life of the stock award. The expected life of the award and dividend yield are based on historical experience.
We believe that the valuation techniques and the underlying assumptions are appropriate in determining the fair value of stock-based awards. If factors change causing our assumptions to change, our stock-based compensation expense could be different in the future. In addition, we estimate an expected forfeiture rate and recognize expense only for those shares expected to vest. If the actual forfeiture rate is different from our estimate, stock-based compensation expense recorded in the period could be adversely impacted.

Restructuring
We make estimates and assumptions in determining the amount and timing of expenses related to our restructuring actions. If the actual amounts differ from our estimates, the amount and timing of the restructuring charges could be impacted. On a quarterly basis, we update our estimates of future remaining obligations and costs associated with all restructuring actions and compare these updated estimates to our current restructuring reserves, and make adjustments if necessary.

Loss contingencies

In the ordinary course of business, we are routinely defendants in, or party to, a number of pending and threatened legal actions. On a quarterly basis, we review the status of each significant matter and assess the potential financial exposure. If the potential loss from any claim or legal action is considered probable and can be reasonably estimated, we establish a liability for the estimated loss. The assessment of the ultimate outcome of each claim or legal action and the determination of the potential financial exposure requires significant judgment. Estimates of potential liabilities for claims or legal actions are based only on information that is available at that time. As additional information becomes available, we may revise our estimates, and these revisions could have a material impact on our results of operations and financial position.

Legal and Regulatory Matters
See Legal Proceedings in Item 3 for information regarding our legal proceedings and Other Tax Matters in Note 15 to the Consolidated Financial Statements for regulatory matters regarding our tax returns.

Foreign Currency Exchange
During 2018, 19% of our consolidated revenue was from operations outside the United States. The functional currency for most of our foreign operations is the local currency. Changes in the value of the U.S. dollar relative to the currencies of countries in which we operate impact our reported assets, liabilities, revenue and expenses. Exchange rate fluctuations can also impact the settlement of intercompany receivables and payables between our subsidiaries in different countries. The translation of foreign currencies to the U.S. dollar did not have a material impact on revenues for the years ended December 31, 2018, 2017 and 2016.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK
We are exposed to the impact of interest rate changes and foreign currency fluctuations. Our objective in managing exposure to foreign currency is to reduce the volatility in earnings and cash flows associated with fluctuations in foreign currency exchange rates on transactions denominated in foreign currencies. Accordingly, we enter into forward contracts, which change in value as foreign currency exchange rates change, and are intended to offset the corresponding change in value of the underlying external and intercompany transactions. The principal currencies actively hedged are the British Pound, Canadian Dollar and the Euro.
At December 31, 2018, 81% of our debt was fixed rate obligations with a weighted average interest rate of 4.7%. Variable rate debt had a weighted average interest rate of 4.0% at December 31, 2018. A one-percentage point change in the effective interest rate of our variable rate debt would not have had a material impact on our 2018 pre-tax income.
We employ established policies and procedures governing the use of financial instruments to manage our exposure to such risks and do not enter into foreign currency or interest rate transactions for speculative purposes.
We utilize a "Value-at-Risk" (VaR) model to determine the potential loss in fair value from changes in market conditions. The VaR model utilizes a "Monte Carlo" simulation approach and assumes normal market conditions, a 95% confidence level and a one-day holding period. The model includes all of our public debt and foreign exchange derivative contracts. The model excludes all anticipated transactions, firm commitments and accounts receivables and payables denominated in foreign currencies, which certain of these instruments are intended to hedge. The VaR model is a risk analysis tool and does not purport to represent actual losses in fair value that will be incurred, nor does it consider the potential effect of favorable changes in market factors.
During 2018 and 2017, our maximum potential one-day loss in fair value of our exposure to foreign exchange rates and interest rates, using the Monte Carlo simulation approach and the variance/co-variance technique, respectively, was not material.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA
See "Index to Consolidated Financial Statements and Supplemental Data" in this Form 10-K.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE
None.

ITEM 9A. CONTROLS AND PROCEDURES
Evaluation of Disclosure Controls and Procedures
We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)), that are designed to reasonably assure that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms, and to

reasonably assure that such information is accumulated and communicated to management, including our Chief Executive Officer (CEO) and Chief Financial Officer (CFO), to allow timely decisions regarding required disclosure.

Any system of controls and procedures, no matter how well designed and operated, can provide only reasonable (and not absolute) assurance of achieving the desired control objectives. Management, under the direction of our CEO and CFO, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as required by Rule 13a-15 or Rule 15d-15 under the Exchange

Act. Notwithstanding this caution, the CEO and CFO have reasonable assurance that the disclosure controls and procedures were effective as of December 31, 2018.

Management's Report on Internal Control over Financial Reporting
Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Management assessed the effectiveness of the internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control - Integrated Framework (2013). Based on its assessment, management concluded that, as of December 31, 2018, the internal control over financial reporting was effective based on the criteria issued by COSO in Internal Control - Integrated Framework (2013).

The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report in this Form 10-K.

Changes in Internal Control over Financial Reporting
There have been no changes in our internal control over financial reporting during the three months ended December 31, 2018, that have materially affected, or are reasonably likely to materially affect, such internal control over financial reporting.

ITEM 9B. OTHER INFORMATION
None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE
Other than information regarding our executive officers disclosed in Part I of this Annual Report, the information required by this Item is incorporated by reference to our Proxy Statement to be filed in connection with the 2019 Annual Meeting of Stockholders.

Code of Ethics
We have Business Practices Guidelines (BPG) that apply to all our officers and other employees and a Code of Business Conduct and Ethics (the Code) that applies to our Board of Directors. The BPG and the Code are posted on our corporate governance website located at www.pb.com/us/our-company/leadership-and-governance/corporate-governance.html. Amendments to either the BPG or the Code and any waiver from a provision of the BPG or the Code requiring disclosure will be disclosed on our corporate governance website.

Audit Committee - Audit Committee Financial Expert
The information regarding the Audit Committee, its members and the Audit Committee financial experts is incorporated by reference to our Proxy Statement to be filed in connection with the 2019 Annual Meeting of Stockholders.

ITEM 11. EXECUTIVE COMPENSATION
The information required by this Item is incorporated by reference to our Proxy Statement to be filed in connection with the 2019 Annual Meeting of Stockholders.

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

EQUITY COMPENSATION PLAN INFORMATION TABLE

The following table provides information as of December 31, 2018 regarding the number of shares of common stock that may be issued under our equity compensation plans.

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans excluding securities reflected in column (a)
Equity compensation plans approved by security holders	13,593,156	$15.30	14,411,742
Equity compensation plans not approved by security holders	—	—	—
Total	13,593,156	$15.30	14,411,742

Other than information regarding securities authorized for issuance under equity compensation plans, the information required by this Item is incorporated by reference to our Proxy Statement to be filed in connection with the 2019 Annual Meeting of Stockholders.

ITEM 13. CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated by reference to our Proxy Statement to be filed in connection with the 2019 Annual Meeting of Stockholders.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item is incorporated by reference to our Proxy Statement to be filed in connection with the 2019 Annual Meeting of Stockholders.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(2) Exhibits

Reg. S-K exhibits	Description	Status or incorporation by reference
3(a)	Restated Certificate of Incorporation of Pitney Bowes Inc.	Incorporated by reference to Exhibit 3(c) to Form 8-K filed with the Commission on May 12, 2011 (Commission file number 1-3579)
3(b)	Pitney Bowes Inc. Amended and Restated By-laws (effective May 10, 2013)	Incorporated by reference to Exhibit 3(d) to Form 8-K filed with the Commission on May 13, 2013 (Commission file number 1-3579)
4(a)	Form of Indenture between the Company and SunTrust Bank, as Trustee	Incorporated by reference to Exhibit 4.4 to Registration Statement on Form S-3 (No. 333-72304) filed with the Commission on October 26, 2001
4(b)	Supplemental Indenture No. 1 dated April 18, 2003 between the Company and SunTrust Bank, as Trustee	Incorporated by reference to Exhibit 4.1 to Form 8-K filed with the Commission on August 18, 2004
4(d)	First Supplemental Indenture, by and among Pitney Bowes Inc., The Bank of New York, and Citibank, N.A., to the Indenture, dated as of February 14, 2005, by and between the Company and Citibank	Incorporated by reference to Exhibit 4.1 to Form 8-K filed with the Commission on October 24, 2007 (Commission file number 1-3579)
10(a) *	Retirement Plan for Directors of Pitney Bowes Inc.	Incorporated by reference to Exhibit 10(a) to Form 10-K filed with the Commission on March 30, 1993 (Commission file number 1-3579)
10(b.3) *	Pitney Bowes Inc. Directors' Stock Plan (Amended and Restated effective May 12, 2014)	Incorporated by reference to Exhibit 10(b.3) to Form 10-K filed with the Commission on February 22, 2016 (Commission file number 1-3579)
10(c) *	Pitney Bowes Stock Plan (as amended and restated as of January 1, 2002)	Incorporated by reference to Annex 1 to the Definitive Proxy Statement for the 2002 Annual Meeting of Stockholders filed with the Commission on March 26, 2002 (Commission file number 1-3579)
10(d) *	Pitney Bowes Inc. 2007 Stock Plan (as amended November 7, 2009)	Incorporated by reference to Exhibit (v) to Form 10-K filed with the Commission on February 26, 2010 (Commission file number 1-3579)
10(e) *		Exhibit 10(e)

	Pitney Bowes Inc. Key Employees' Incentive Plan (as amended and restated February 4, 2019)	
10(f) *	Pitney Bowes Severance Plan (as amended and restated as of January 1, 2008)	Incorporated by reference to Exhibit 10(e) to Form 10-K filed with the Commission on February 29, 2008 (Commission file number 1-3579)
10(g) *	Pitney Bowes Senior Executive Severance Policy (as amended and restated as of February 4, 2019)	Exhibit 10(g)
10(h) *	Pitney Bowes Inc. Deferred Incentive Savings Plan for the Board of Directors, as amended and restated effective January 1, 2009	Incorporated by reference to Exhibit 10(g) to Form 10-K filed with the Commission on February 26, 2009 (Commission file number 1-3579)
10(i) *	Pitney Bowes Inc. Deferred Incentive Savings Plan as amended and restated effective January 1, 2009	Incorporated by reference to Exhibit 10(h) to Form 10-K filed with the Commission on February 26, 2009 (Commission file number 1-3579)

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Reg. S-K exhibits	Description	Status or incorporation by reference
10(j) *	Pitney Bowes Inc. 1998 U.K. S.A.Y.E. Stock Option Plan	Incorporated by reference to Annex II to the Definitive Proxy Statement for the 2006 Annual Meeting of Stockholders filed with the Commission on March 23, 2006 (Commission file number 1-3579)
10(k) *	Form of Long Term Incentive Award Agreement	Incorporated by reference to Exhibit 10(k) to Form 10-K filed with the Commission on February 25, 2013 (Commission file number 1-3579)
10(l) **	Agreement and Plan of Merger, dated as of September 6, 2017, among Pitney Bowes Inc., Neutron Acquisition Corp., NGS Holdings, Inc. and Littlejohn Fund IV, L.P., solely in its capacity as stockholder representative	Incorporated by reference to Exhibit 2.1 to Form 8-K filed with the Commission on September 7, 2017 (Commission file number 1-3579)
10(m)*	Pitney Bowes Director Equity Deferral plan dated November 8, 2013 (effective May 12, 2014)	Incorporated by reference to Exhibit 10(o) to Form 10-K filed with the Commission on February 22, 2016 (Commission file number 1-3579)
10(o)*	Pitney Bowes Executive Equity Deferral Plan dated November 7, 2014	Incorporated by reference to Exhibit 10(p) to Form 10-K filed with the Commission on February 22, 2016 (Commission file number 1-3579)
10(p)*	Pitney Bowes Inc. 2013 Stock Plan	Incorporated by reference to Annex A to the Definitive Proxy Statement for the 2013 Annual Meeting of Stockholders filed with the Commission on March 25, 2013 (Commission file number 1-3579)
10(q)*	Pitney Bowes Inc. 2018 Stock Plan	Incorporated by reference to Annex A to the Definitive Proxy Statement for the 2018 Annual Meeting of Stockholders file with the Commission on March 23, 2018 (Commission file number 1-3579)
10(r)	Credit Agreement $1,000,000,000, dated as of January 6, 2015, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto (the “Revolving Credit Agreement”).	Incorporated by reference to Exhibit 10.1 to Form 10-Q filed with the Commission on November 2, 2017 (Commission file number 1-3579)
10(s)	First Amendment to the Revolving Credit Agreement, dated as of May 31, 2017, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	Incorporated by reference to Exhibit 10.2 to Form 10-Q filed with the Commission on November 2, 2017 (Commission file number 1-3579)
10(t)	Second Amendment to the Revolving Credit Agreement, dated as of September 12, 2017, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	Incorporated by reference to Exhibit 10.3 to Form 10-Q filed with the Commission on November 2, 2017 (Commission file number 1-3579)
10(u)	Third Amendment to the Revolving Credit Agreement, dated as of December 14, 2018, by and among the company, JPMorgan Chase Bank, N.A. as administrative agent, and the lenders party thereto.	Exhibit 10(u)

10(v)	Credit Agreement $300,000,000, dated as of January 5, 2016, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto (the “$300M Term Loan”).	Incorporated by reference to Exhibit 10.4 to Form 10-Q filed with the Commission on November 2, 2017 (Commission file number 1-3579)
10(w)	First Amendment to the $300M Term Loan, dated as of September 12, 2017, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	Incorporated by reference to Exhibit 10.5 to Form 10-Q filed with the Commission on November 2, 2017 (Commission file number 1-3579)
10(x)	Second Amendment to the $300M Term Loan, dated as of December 14, 2018, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	Exhibit 10(x)
10(y)	Credit Agreement $200,000,000, dated as of September 12, 2017, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	Incorporated by reference to Exhibit 10.6 to Form 10-Q filed with the Commission on November 2, 2017 (Commission file number 1-3579)
10(z)	First Amendment to the $200,000,000 Term Loan, dated as of December 14, 2018, by and among the company, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto.	Exhibit 10(z)
10(aa)	Term Loan Facility $150,000,000, dated as of August 30, 2017, by and between the company and The Bank of Tokyo-Mitsubishi-UFJ, Ltd. ("$150M Term Loan")	Incorporated by reference to Exhibit 10.7 to Form 10-Q filed with the Commission on November 2, 2017 (Commission file number 1-3579)
10(bb)	First Amendment to the $150M Term Loan, dated as of December 14, 2018, by and between the company and the Bank of Tokyo-Mitsubishi-UFJ, Ltd.	Exhibit 10(bb)
10(cc)	Asset Purchase Agreement, dated April 27, 2018, between the company and Stark Acquisition Corporation (the "Asset Purchase Agreement")	Incorporated by reference to Exhibit 2.1 to Form 8-K filed with the Commission on May 1, 2018 (Commission file number 1-3579)
10(dd)	Amendment and Supplement to Asset Purchase Agreement, dated as of July 1, 2018, between the company and DMT Solutions Global Corporation (f/k/a Stark Acquisition Corporation)	Incorporated by reference to Exhibit 10a to Form 10-Q filed with the Commission on August 2, 2018 (Commission file number 1-3579)

Reg. S-K exhibits	Description	Status or incorporation by reference
21	Subsidiaries of the registrant	Exhibit 21
23	Consent of independent registered accounting firm	Exhibit 23
31.1	Certification of Chief Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended.	Exhibit 31.1
31.2	Certification of Chief Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended.	Exhibit 31.2
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350	Exhibit 32.1
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350	Exhibit 32.2
101.INS	XBRL Report Instance Document	
101.SCH	XBRL Taxonomy Extension Schema Document	
101.CAL	XBRL Taxonomy Calculation Linkbase Document	
101.DEF	XBRL Taxonomy Definition Linkbase Document	
101.LAB	XBRL Taxonomy Label Linkbase Document	
101.PRE	XBRL Taxonomy Presentation Linkbase Document	

* The Exhibits identified above with an asterisk (*) are management contracts or compensatory plans or arrangements.
** Pursuant to Item 601(b)(2) of Regulation S-K, certain exhibits and schedules have been omitted. The registrant hereby agrees to furnish a supplementary copy of any omitted attachment to the SEC upon request.

The Company has outstanding certain other long-term indebtedness. Such long-term indebtedness does not exceed 10% of the total assets of the Company; therefore, copies of instruments defining the rights of holders of such indebtedness are not included as exhibits. The Company agrees to furnish copies of such instruments to the SEC upon request.

ITEM 16. FORM 10-K SUMMARY

None

Report of Independent Registered Public Accounting Firm
To the Board of Directors and Stockholders of Pitney Bowes Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Pitney Bowes Inc. and its subsidiaries (the “Company”) as of December 31, 2018 and December 31, 2017, and the related consolidated statements of income, of comprehensive income, of stockholders’ equity (deficit) and of cash flows for each of the three years in the period ended December 31, 2018, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(1) (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2018, 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, 2018 and December 31, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 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, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Notes 1 and 2 to the consolidated financial statements, the Company changed the manner in which it accounts for revenues from contracts with customers in 2018.

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 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.

/s/PricewaterhouseCoopers LLP
PricewaterhouseCoopers LLP
Stamford, CT
February 20, 2019

We have served as the Company’s auditor since 1934.

PITNEY BOWES INC.
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share amounts)

	Years Ended December 31,		
	2018	2017	2016
Revenue:			
Equipment sales	$430,451	$476,691	$480,031
Supplies	218,304	231,412	241,950
Software	340,855	331,843	325,577
Rentals	363,057	384,123	410,241
Financing	314,778	330,985	366,424
Support services	293,413	299,792	329,424
Business services	1,561,522	1,068,426	827,676
Total revenue	3,522,380	3,123,272	2,981,323
Costs and expenses:			
Cost of equipment sales	181,766	201,116	203,220
Cost of supplies	60,960	66,302	65,509
Cost of software	100,681	95,033	96,151
Cost of rentals	86,330	82,703	74,457
Financing interest expense	48,857	50,665	55,241
Cost of support services	168,271	163,889	166,247
Cost of business services	1,246,084	773,052	568,509
Selling, general and administrative	1,123,116	1,170,905	1,140,100
Research and development	125,588	118,703	107,378
Restructuring charges and asset impairments, net	27,077	56,223	60,295
Goodwill impairment	—	—	148,181
Interest expense, net	110,900	113,497	88,970
Other components of net pension and postretirement cost	22,425	5,413	5,276
Other expense	7,964	3,856	—
Total costs and expenses	3,310,019	2,901,357	2,779,534
Income from continuing operations before income taxes	212,361	221,915	201,789
Provision for income taxes	12,383	553	106,975
Income from continuing operations	199,978	221,362	94,814
Income from discontinued operations, net of tax	23,687	39,978	17,036
Net income	223,665	261,340	111,850
Less: Preferred stock dividends of subsidiaries attributable to noncontrolling interests	—	—	19,045
Net income - Pitney Bowes Inc.	$223,665	$261,340	$92,805
Amounts attributable to common stockholders:			
Income from continuing operations	$199,978	$221,362	$75,769
Income from discontinued operations, net of tax	23,687	39,978	17,036
Net income - Pitney Bowes Inc.	$223,665	$261,340	$92,805
Basic earnings per share attributable to common stockholders [1]:			
Continuing operations	$1.07	$1.19	$0.40
Discontinued operations	0.13	0.21	0.09
Net income - Pitney Bowes Inc.	$1.19	$1.40	$0.49
Diluted earnings per share attributable to common stockholders [1]:			
Continuing operations	$1.06	$1.18	$0.40
Discontinued operations	0.13	0.21	0.09
Net income - Pitney Bowes Inc.	$1.19	$1.39	$0.49

(1) The sum of the earnings per share amounts may not equal the totals due to rounding.

See Notes to Consolidated Financial Statements

PITNEY BOWES INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Years Ended December 31,		
	2018	2017	2016
Net income	$223,665	$261,340	$111,850
Other comprehensive income (loss), net of tax:			
Foreign currency translations, net of tax of $(6,289) in 2018	(54,531)	106,391	(4,464)
Net unrealized gain on cash flow hedges, net of tax of $232, $678, and $1,513, respectively	684	1,079	2,427
Net unrealized gain (loss) on available for sale securities, net of tax of $(1,545), $944 and $(244), respectively	(5,002)	1,477	(416)
Adjustments to pension and postretirement plans, net of tax of $(13,058), $3,089 and $(17,550), respectively	(46,170)	12,185	(73,141)
Amortization of pension and postretirement costs, net of tax of $21,675, $13,936, and $14,430, respectively	64,999	26,828	24,096
Other comprehensive (loss) income	(40,020)	147,960	(51,498)
Comprehensive income	183,645	409,300	60,352
Less: Preferred stock dividends attributable to noncontrolling interests	—	—	19,045
Comprehensive income - Pitney Bowes Inc.	$183,645	$409,300	$41,307

See Notes to Consolidated Financial Statements

PITNEY BOWES INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share amounts)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 867,262	$ 1,009,021
Short-term investments	59,391	48,988
Accounts receivable (net of allowance of $17,617 and $14,786 respectively)	455,807	427,022
Short-term finance receivables (net of allowance of $12,454 and $12,187, respectively)	789,661	828,003
Inventories	41,964	40,769
Current income taxes	5,947	58,439
Other current assets and prepayments	99,332	83,293
Assets of discontinued operations	4,854	334,848
Total current assets	2,324,218	2,830,383
Property, plant and equipment, net	410,114	373,503
Rental property and equipment, net	178,099	183,956
Long-term finance receivables (net of allowance of $7,768 and $6,446, respectively)	592,165	652,087
Goodwill	1,766,511	1,774,645
Intangible assets, net	227,137	272,186
Noncurrent income taxes	61,420	59,909
Other assets	413,239	540,751
Total assets	$ 5,972,903	$ 6,687,420
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued liabilities	$ 1,401,635	$ 1,458,854
Current portion of long-term debt	199,535	271,057
Advance billings	237,529	257,766
Current income taxes	15,165	8,823
Liabilities of discontinued operations	3,276	72,808
Total current liabilities	1,857,140	2,069,308
Deferred taxes on income	295,808	249,143
Tax uncertainties and other income tax liabilities	39,548	102,051
Long-term debt	3,066,073	3,559,278
Other noncurrent liabilities	474,862	519,079
Total liabilities	5,733,431	6,498,859
Commitments and contingencies (See Note 16)		
Stockholders' equity:		
Cumulative preferred stock, $50 par value, 4% convertible	1	1
Cumulative preference stock, no par value, $2.12 convertible	396	441
Common stock, $1 par value (480,000,000 shares authorized; 323,337,912 shares issued)	323,338	323,338
Additional paid-in capital	121,475	138,367
Retained earnings	5,416,777	5,229,584
Accumulated other comprehensive loss	(948,426)	(792,173)
Treasury stock, at cost (135,662,830 and 136,734,174 shares, respectively)	(4,674,089)	(4,710,997)
Total stockholders' equity	239,472	188,561

Total liabilities and stockholders’ equity	$ 5,972,903	$ 6,687,420

See Notes to Consolidated Financial Statements

PITNEY BOWES INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31, 2018	2017	2016
Cash flows from operating activities:			
Net income	$223,665	$ 261,340	$111,850
Income from discontinued operations	(23,687)	(39,978)	(17,036)
Restructuring payments	(52,974)	(37,454)	(62,071)
Adjustments to reconcile net income to net cash provided by operating activities:			
Restructuring charges and asset impairments, net	27,077	56,223	60,295
Goodwill impairment	—	—	148,181
Depreciation and amortization	203,293	179,650	174,065
Pension plan settlement	31,329	—	—
Special pension plan contribution	—	—	(36,731)
Loss on sale of businesses	—	—	5,786
Gain on sale of technology	—	(6,085)	—
Gain on debt forgiveness	—	—	(10,000)
Stock-based compensation	21,042	24,389	14,882
Deferred tax (benefit) provision	56,981	(25,390)	3,467
Changes in operating assets and liabilities, net of acquisitions/divestitures:			
(Increase) decrease in accounts receivable	(35,565)	(15,923)	27,794
Decrease in finance receivables	79,918	125,991	119,883
Decrease (increase) in inventories	93	7,324	(2,880)
(Increase) decrease in other current assets and prepayments	(22,609)	9,118	(717)
Decrease in accounts payable and accrued liabilities	(3,180)	(13,238)	(97,783)
Increase (decrease) in current and non-current income taxes	(24,807)	(14,581)	(1,661)
Decrease in advance billings	(21,506)	(21,193)	(48,432)
Other, net	(37,705)	(23,384)	14,017
Net cash provided by operating activities: continuing operations	421,365	466,809	402,909
Net cash (used in) provided by operating activities: discontinued operations	(29,103)	29,004	93,213
Net cash provided by operating activities	392,262	495,813	496,122
Cash flows from investing activities:			
Purchases of available-for-sale securities	(81,527)	(125,055)	(212,810)
Proceeds from sales/maturities of available-for-sale securities	175,820	113,501	211,696
Net change in short-term and other investments	11,838	(8,285)	75,654
Capital expenditures	(191,444)	(168,097)	(159,232)
Proceeds from sale of assets	—	5,458	17,671
Reserve account deposits	21,008	10,954	(2,183)
Acquisitions, net of cash acquired	(10,484)	(482,853)	(37,842)
Other investing activities	(4,250)	(5,750)	(6,908)
Net cash used in investing activities: continuing operations	(79,039)	(660,127)	(113,954)
Net cash provided by (used in) investing activities: discontinued operations	338,783	(2,893)	(1,599)
Net cash provided by (used in) investing activities	259,744	(663,020)	(115,553)
Cash flows from financing activities:			
Proceeds from issuance of long-term debt	—	acquisition of World Color Press, the	

Company changed the tax status of certain entities within the Quad/Graphics legal structure from S corporation to C corporation status under the provisions of the Internal Revenue Code of 1986, as amended. Subsequent to July 2, 2010, these entities are subject to federal and state income taxes. The effective tax rate for the three months ended June 30, 2011 was 25.5%, as compared to 3.9% for the same period in 2010, reflecting the change in tax status, partially offset by losses in foreign countries that could not be benefited.

(5) Operating income increased $31.2 million primarily due to the World Color Press acquisition and the synergy savings from the integration of World Color Press. Operating margin increased due to the World Color Press

acquisition, which benefited from synergy savings related to the integration of World Color Press' operations. Partially offsetting a portion of the synergy savings were the impacts of continued pricing pressures and labor productivity decreases due to the size and complexity of the plant consolidation process. The following discussion provides additional details.

Consolidated

The following table sets forth certain information from the Company's condensed consolidated statements of operations on an absolute dollar basis and as a relative percentage of total net sales for each noted period, together with the relative percentage change in such information between the periods set forth below:

	Three Months Ended June 30,								
	2011			2010					
	(dollars in millions)								
	Amount	% of Sales		Amount	% of Sales		$ Change	% Change	
Net Sales:									
Products	$952.4	89.0	%	$345.5	87.6	%	$606.9	175.7	%
Services	118.1	11.0	%	48.8	12.4	%	69.3	142.0	%
Total Net Sales	1,070.5	100.0	%	394.3	100.0	%	676.2	171.5	%
Cost of Sales:									
Products	737.5	68.9	%	255.4	64.8	%	482.1	188.8	%
Services	94.5	8.8	%	33.8	8.6	%	60.7	179.6	%
Total Cost of Sales	832.0	77.7	%	289.2	73.4	%	542.8	187.7	%
Selling, General & Administrative Expenses	112.0	10.5	%	49.3	12.5	%	62.7	127.2	%
Restructuring, Impairment and Transaction-Related Charges	23.4	2.2	%	31.3	7.9	%	(7.9)	(25.2	)%
Depreciation and Amortization	87.7	8.2	%	48.2	12.2	%	39.5	82.0	%
Total Operating Expenses	1,055.1	98.6	%	418.0	106.0	%	637.1	152.4	%
Operating Income (Loss)	$15.4	1.4	%	$(23.7)	(6.0	)%	$39.1	165.0	%

Net Sales

Product sales increased for the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to the World Color Press acquisition, and to a lesser extent higher paper and byproduct sales, increased volumes for the legacy Quad customers and a favorable impact from foreign exchange rates on net sales. These increases were partially offset by lower pricing due to continued pricing pressure from excess manufacturing capacity in the printing industry.

Service sales, which primarily consist of imaging, logistics and distribution services, increased in the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to the World Color Press acquisition and higher fuel surcharges on logistics and distribution revenues.

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Cost of Sales

Cost of product sales increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to the World Color Press acquisition, including the Company re-establishing a retirement benefit for the World Color Press employees. Additionally, cost of product sales increased as a result of: (1) decreased labor productivity associated with integration and restructuring activities related to hiring and training additional employees to prepare certain plants to receive transferred volumes from manufacturing facilities that were closed as part of the World Color Press integration, (2) increased paper sales volume and (3) increased energy and commodity costs. These cost increases were partially offset by acquisition synergy savings related to purchasing and distribution efficiencies realized, as well as labor cost reductions as a result of plant closures.

Cost of product sales as a percentage of net sales increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to higher operating costs for the acquired World Color Press business, decreased labor productivity associated with integration and restructuring activities, increased paper sales and increased energy and commodity costs. Paper is generally billed to customers at pass-through rates, and thus when paper sales increase during a period, the cost of product sales, as well as the cost of product sales as a percentage of net sales, increases.

Cost of service sales increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to the World Color Press acquisition and higher fuel prices.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to the World Color Press acquisition, including the Company re-establishing a retirement benefit for the World Color Press employees, as well as a result of the compliance and support costs associated with the Company's status as a publicly traded entity starting on July 6, 2010. Selling, general and administrative expenses as a percentage of net sales decreased between periods due to synergy savings from the integration of World Color Press.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges of $23.4 million incurred in the three months ended June 30, 2011 include: (1) $5.1 million of employee termination costs related to 523 headcount reductions for the Buffalo, NY plant closure as well as from other workforce reductions, (2) $1.0 million of transaction costs incurred primarily in connection with the transaction with Transcontinental, (3) $8.9 million of costs incurred in connection with the integration of World Color Press and (4) $8.4 million of various other restructuring charges including costs to maintain and exit closed facilities, as well as lease exit charges.

Restructuring, impairment and transaction-related charges of $31.3 million incurred in the three months ended June 30, 2010 include: (1) $1.2 million of employee termination costs related to 707 headcount reductions for the Pila, Poland plant closure, (2) $24.4 million of impairment charges on assets related to the Pila, Poland plant closure, (3) $2.7 million of transaction costs incurred primarily in connection with the acquisition of World Color Press, (4) $2.2 million of costs incurred in connection with the integration of World Color Press and (5) $0.8 million of lease exit charges.

Depreciation and Amortization

Depreciation and amortization increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 due to the World Color Press acquisition.

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EBITDA and EBITDA Margin

EBITDA and EBITDA margin for the three months ended June 30, 2011 compared to the three months ended June 30, 2010 was as follows:

	Three Months Ended June 30,					
	2011			2010		
	Amount	% of Net Sales		Amount	% of Net Sales	
	(dollars in millions)					
EBITDA and EBITDA margin	$103.3	9.6	%	$26.0	6.6	%

EBITDA increased $77.3 million for the three months ended June 30, 2011 primarily due to the World Color Press acquisition and the related synergy savings from integrating World Color Press. EBITDA margin increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 due to synergy savings and decreased restructuring, impairment and transaction-related costs.

EBITDA represents net loss attributable to Quad/Graphics common shareholders, plus (i) interest expense and (ii) depreciation and amortization, and less (iii) income tax benefit. EBITDA margin represents EBITDA as a percentage of net sales. EBITDA and EBITDA margin are presented to provide additional information regarding Quad/Graphics' performance and because both are important measures by which Quad/Graphics gauges the profitability and assesses the performance of its business. EBITDA and EBITDA margin are not measures of financial performance in accordance with GAAP. EBITDA and EBITDA margin should not be considered alternatives to net loss as a measure of operating performance or to cash flows from operating activities as a measure of liquidity. Quad/Graphics' calculation of EBITDA and EBITDA margin may be different from the calculation used by other companies and therefore comparability may be limited. A reconciliation of EBITDA to net loss follows:

	Three Months Ended June 30,			
	2011		2010	
	(dollars in millions)			
Net Loss Attributable to Quad/Graphics Common Shareholders[(1)]	$(10.3	)	$(35.7	)
Interest Expense	29.5		15.0	
Income Tax Benefit	(3.6	)	(1.5	)
Depreciation and Amortization	87.7		48.2	
EBITDA	$103.3		$26.0	

(1) Net loss attributable to Quad/Graphics common shareholders includes the effects of restructuring, impairment and transaction-related charges of $23.4 million and $31.3 million for the three months ended June 30, 2011 and 2010, respectively.

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North America Print and Related Services

The following table summarizes net sales, operating income, operating margin and certain items impacting comparability, within the North America Print and Related Services segment:

	Three Months Ended June 30, 2011 (dollars in millions) Amount	2010 Amount	$ Change	% Change
Net Sales:				
Products	$837.9	$290.0	$547.9	188.9 %
Services	114.9	46.0	68.9	149.8 %
Operating Income (including Restructuring, Impairment and Transaction-Related Charges)	45.2	11.7	33.5	286.3 %
Operating Margin	4.7 %	3.5 %	N/A	N/A
Restructuring, Impairment and Transaction-Related Charges	$11.2	$0.8	$10.4	1,300.0 %

Net Sales

Product sales for the North American Print and Related Services segment increased for the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to the World Color Press acquisition. Additionally, product sales increased due to increased paper and byproduct sales, partially offset by lower pricing due to continued pricing pressures related to industry overcapacity.

Service sales for the North American Print and Related Services segment increased for the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to the World Color Press acquisition. Additionally, service sales increased as a result of higher fuel surcharges to customers.

Operating Income

Operating income for the North America Print and Related Services segment increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to the World Color Press acquisition, partially offset by increased restructuring and integration expenses. Operating margin increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to synergy savings from the integration of World Color Press, partially offset by an increase in restructuring, impairment and transaction-related costs from the integration of World Color Press.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges for the North America Print and Related Services segment for the three months ended June 30, 2011 were $11.2 million, consisting of $3.7 million of employee termination costs related to 514 headcount reductions for the Buffalo, New York plant closure and other workforce reductions announced through the second quarter of 2011, as well as from 2010 workforce reductions, and $7.5 million of various other restructuring charges including costs to maintain and exit closed facilities, as well as lease exit charges.

Restructuring, impairment and transaction-related charges for the North America Print and Related Services segment for the three months ended June 30, 2010 were $0.8 million for lease exit charges.

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International

The following table summarizes net sales, operating loss, operating margin, certain items impacting comparability and equity in earnings of unconsolidated entities, within the International segment:

	Three Months Ended June 30,			
	2011	2010		
	(dollars in millions)			
	Amount	Amount	$ Change	% Change
Net Sales:				
Products	$114.5	$55.5	$59.0	106.3 %
Services	3.2	2.8	0.4	14.3 %
Operating Loss (including Restructuring, Impairment and Transaction-Related Charges)	(6.0)	(28.9)	22.9	(79.2)%
Operating Margin	(5.1)%	(49.6)%	N/A	N/A
Restructuring, Impairment and Transaction-Related Charges	$0.9	$25.6	$(24.7)	(96.5)%
Equity in Earnings of Unconsolidated Entities	0.3	1.2	(0.9)	(75.0)%

Net Sales

Product sales for the International segment increased for the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to the World Color Press acquisition, and to a lesser extent due to a favorable impact from foreign exchange rates on net sales. These increases were partially offset by declines in print volumes at the Company's Poland location.

Operating Loss

Operating loss for the International segment decreased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to the decreased restructuring expenses in connection with the Pila, Poland announced plant closure in June 2010 as well as due to the World Color Press acquisition, partially offset by a negative impact from foreign exchange rates on the operating loss in Poland.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges for the International segment for the three months ended June 30, 2011 were $0.9 million, consisting of $0.1 million of employee termination costs related to 9 headcount reductions in Latin America and $0.8 million of other restructuring and integration charges.

Restructuring, impairment and transaction-related charges for the International segment for the three months ended June 30, 2010 were $25.6 million, consisting of $1.2 million of employee termination costs related to 707 headcount reductions and $24.4 million of impairment charges on assets related to the Pila, Poland plant closure.

Equity in Earnings of Unconsolidated Entities

Investments in entities where Quad/Graphics has both the ability to exert significant influence but not control and has an ownership interest of 50% or less but more than 20% are accounted for using the equity method of accounting. The Company holds a 49% ownership interest in Plural, a commercial printer based in São Paulo, Brazil, as well as a 50% interest in Chile that was acquired as part of the World Color Press acquisition. The equity in earnings of unconsolidated entities in the International segment decreased during the three months ended June 30, 2011 due to a $1.0 million loss incurred during the three months ended June 30, 2011 at Chile.

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Corporate

The following table summarizes unallocated operating expenses presented as Corporate:

	Three Months Ended June 30,	
	2011	2010
	(dollars in millions)	
Operating Expenses (including Restructuring, Impairment and Transaction-Related Charges)	$23.8	$6.5
Restructuring, Impairment and Transaction-Related Charges	11.3	4.9

Corporate operating expenses increased for the three months ended June 30, 2011 compared with the three months ended June 30, 2010 primarily due to the World Color Press acquisition and higher restructuring and integration costs. Additional corporate expenses were incurred due to the compliance and support costs associated with the Company's new status as a publicly traded entity, which includes increased levels of administrative staff (information technology, finance, legal, human resources, treasury and other administrative labor), and increased costs incurred in connection with the integration of World Color Press.

Corporate restructuring, impairment and transaction-related charges for the three months ended June 30, 2011 were $11.3 million, consisting of: (1) $1.3 million of employee termination costs related to workforce reductions that commenced in 2010, (2) $1.0 million of transaction costs incurred primarily in connection with the transaction with Transcontinental, (3) $8.9 million of costs incurred in connection with the integration of World Color Press and (4) $0.1 million of other restructuring charges.

Corporate restructuring, impairment and transaction-related charges for the three months ended June 30, 2010 were $4.9 million, consisting of $2.7 million of transaction costs and $2.2 million of integration costs incurred in connection with the acquisition of World Color Press.

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Results of Operations for the Six Months Ended June 30, 2011 Compared to the Six Months Ended June 30, 2010

Summary Results

The Company's operating income (loss), operating margin and diluted loss per share attributable to Quad/Graphics common shareholders for the six months ended June 30, 2011 changed from the six months ended June 30, 2010 as follows (dollars in millions, except per share data):

	Operating Income (Loss)	Operating Margin	Loss Per Share Attributable to Quad/Graphics Common Shareholders—Diluted
For the Six Months Ended June 30, 2010	$(19.7)	(2.5)%	$ (1.57)
2011 Restructuring, Impairment and Transaction-Related Charges(1)	(58.2)	(2.7)%	(0.78)
2010 Restructuring, Impairment and Transaction-Related Charges(2)	37.6	4.7 %	1.34
Increase in Interest Expense(3)	N/A	N/A	(0.15)
Increase in Income Tax Benefit(4)	N/A	N/A	0.19
Increase in Operating Income(5)	70.3	1.9 %	0.60
For the Six Months Ended June 30, 2011	$30.0	1.4 %	$ (0.37)

(1) Restructuring, impairment and transaction-related charges of $58.2 million incurred during the six months ended June 30, 2011 included:

a. $20.2 million of employee termination costs related to 904 headcount reductions for plant closures and other workforce reductions announced through the second quarter of 2011, as well as from workforce reductions that commenced in 2010;

b. $1.0 million of transaction costs incurred through June 30, 2011 primarily in connection with the transaction with Transcontinental;

c. $16.1 million of costs incurred in connection with the integration of World Color Press into Quad/Graphics (net of a $7.1 million gain on the collection of a previously written off note receivable for the June 2008 sale of World Color Press' European operations); and

d. $20.9 million of various other restructuring charges including costs to maintain and exit closed facilities, as well as lease exit charges.

(2) Restructuring, impairment and transaction-related charges of $37.6 million incurred during the six months ended June 30, 2010 included:

a. $1.2 million of employee termination costs related to 707 headcount reductions for the Pila, Poland plant closure;

b. $24.4 million of impairment charges on assets related to the Pila, Poland plant closure;

c. $8.9 million of transaction costs incurred primarily in connection with the acquisition of World Color Press;

d. $2.2 million of costs incurred in connection with the integration of World Color Press into Quad/Graphics; and

e. $0.9 million of lease exit charges.

(3) Interest expense increased $29.1 million during the six months ended June 30, 2011 to $59.4 million. This change is due to the increased overall debt levels since the World Color Press acquisition.

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(4) Income tax benefit increased $9.2 million during the six months ended June 30, 2011 to a $10.8 million income tax benefit due to an increase in the effective income tax rate from the Company's change to C corporation tax status, partially offset by a decrease in the pre-tax loss. As a result of the July 2, 2010 acquisition of World Color Press, the Company changed the tax status of certain entities within the Quad/Graphics legal structure from S corporation to C corporation status under the provisions of the Internal Revenue Code of 1986, as amended. Subsequent to July 2, 2010, these entities are subject to federal and state income taxes. The effective tax rate for the six months ended June 30, 2011 was 36.7%, as compared to 3.2% for the same period in 2010, reflecting the change in tax status.

(5) Operating income increased $70.3 million primarily due to the World Color Press acquisition and the synergy savings from the integration of World Color Press. Operating margin increased due to the World Color Press acquisition, which benefited from synergy savings related to the integration of World Color Press' operations. Partially offsetting a portion of the synergy savings were the impacts of continued pricing pressures and labor productivity decreases due to the size and complexity of the plant consolidation process. The following discussion provides additional details.

Consolidated

The following table sets forth certain information from the Company's condensed consolidated statements of operations on an absolute dollar basis and as a relative percentage of total net sales for each noted period, together with the relative percentage change in such information between the periods set forth below:

	Six Months Ended June 30,					
	2011		2010			
	(dollars in millions)					
	Amount	% of Sales	Amount	% of Sales	$ Change	% Change
Net Sales:						
Products	$1,933.2	89.0 %	$696.8	87.3 %	$1,236.4	177.4 %
Services	239.6	11.0 %	101.1	12.7 %	138.5	137.0 %
Total Net Sales	2,172.8	100.0 %	797.9	100.0 %	1,374.9	172.3 %
Cost of Sales:						
Products	1,501.0	69.1 %	515.7	64.6 %	985.3	191.1 %
Services	184.4	8.5 %	69.9	8.8 %	114.5	163.8 %
Total Cost of Sales	1,685.4	77.6 %	585.6	73.4 %	1,099.8	187.8 %
Selling, General & Administrative Expenses	221.0	10.2 %	96.9	12.1 %	124.1	128.1 %
Restructuring, Impairment and Transaction-Related Charges	58.2	2.7 %	37.6	4.7 %	20.6	54.8 %
Depreciation and Amortization	178.2	8.2 %	97.5	12.2 %	80.7	82.8 %
Total Operating Expenses	2,142.8	98.7 %	817.6	102.4 %	1,325.2	162.1 %
Operating Income (Loss)	$30.0	1.4 %	$(19.7)	(2.5)%	$49.7	252.3 %

Net Sales

Product sales increased for the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the World Color Press acquisition, and to a lesser extent higher paper and byproduct sales, increased volumes for the legacy Quad customers and a favorable impact from foreign exchange rates on net sales. These increases were partially offset by lower pricing due to continued pricing pressure from excess manufacturing capacity in the printing industry.

Service sales, which primarily consist of imaging, logistics and distribution services, increased in the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the World Color Press acquisition and higher fuel surcharges on logistics and distribution revenues.

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Cost of Sales

Cost of product sales increased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to the World Color Press acquisition, including the Company re-establishing a retirement benefit for the World Color Press employees. Additionally, cost of product sales increased as a result of: (1) decreased labor productivity associated with integration and restructuring activities related to hiring and training additional employees to prepare certain plants to receive transferred volumes from manufacturing facilities that were closed as part of the World Color Press integration, (2) increased paper sales volume and (3) increased energy and commodity costs. These cost increases were partially offset by acquisition synergy savings related to purchasing and distribution efficiencies realized, as well as labor cost reductions as a result of plant closures.

Cost of product sales as a percentage of net sales increased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to higher operating costs for the acquired World Color Press business, decreased labor productivity associated with integration and restructuring activities, increased paper sales and increased energy and commodity costs. Paper is generally billed to customers at pass-through rates, and thus when paper sales increase during a period, the cost of product sales, as well as the cost of product sales as a percentage of net sales, increases.

Cost of service sales increased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to the World Color Press acquisition and higher fuel prices.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to the World Color Press acquisition, including the Company re-establishing a retirement benefit for World Color Press employees, as well as a result of the compliance and support costs associated with the Company's status as a publicly traded entity starting on July 6, 2010. Selling, general and administrative expenses as a percentage of net sales decreased between periods due to synergy savings from the integration of World Color Press.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges of $58.2 million incurred in the six months ended June 30, 2011 include: (1) $20.2 million of employee termination costs related to 904 headcount reductions for plant closures and other workforce reductions, (2) $1.0 million of transaction costs incurred primarily in connection with the transaction with Transcontinental, (3) $16.1 million of costs incurred in connection with the integration of World Color Press (net of a $7.1 million gain on the collection of a previously written off note receivable for the June 2008 sale of World Color Press' European operations) and (4) $20.9 million of various other restructuring charges including costs to maintain and exit closed facilities, as well as lease exit charges.

Restructuring, impairment and transaction-related charges of $37.6 million incurred in the six months ended June 30, 2010 include: (1) $1.2 million of employee termination costs related to 707 headcount reductions for the Pila, Poland plant closure, (2) $24.4 million of impairment charges on assets related to the Pila, Poland plant closure, (3) $8.9 million of transaction costs incurred primarily in connection with the acquisition of World Color Press, (4) $2.2 million of integration costs incurred related to the acquisition of World Color Press and (5) $0.9 million of lease exit charges.

Depreciation and Amortization

Depreciation and amortization increased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 due to the World Color Press acquisition.

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EBITDA and EBITDA Margin

EBITDA and EBITDA margin for the six months ended June 30, 2011 compared to the six months ended June 30, 2010 was as follows:

	Six Months Ended June 30,			
	2011		2010	
	Amount	% of Net Sales	Amount	% of Net Sales
	(dollars in millions)			
EBITDA and EBITDA margin	$209.2	9.6 %	$82.0	10.3 %

EBITDA increased $127.2 million for the six months ended June 30, 2011 primarily due to the World Color Press acquisition and the related synergy savings from integrating World Color Press. EBITDA margin decreased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to increased restructuring, impairment and transaction-related costs.

EBITDA represents net loss attributable to Quad/Graphics common shareholders, plus (i) interest expense and (ii) depreciation and amortization, and less (iii) income tax benefit. EBITDA margin represents EBITDA as a percentage of net sales. EBITDA and EBITDA margin are presented to provide additional information regarding Quad/Graphics' performance and because both are important measures by which Quad/Graphics gauges the profitability and assesses the performance of its business. EBITDA and EBITDA margin are not measures of financial performance in accordance with GAAP. EBITDA and EBITDA margin should not be considered alternatives to net loss as a measure of operating performance or to cash flows from operating activities as a measure of liquidity. Quad/Graphics' calculation of EBITDA and EBITDA margin may be different from the calculation used by other companies and therefore comparability may be limited. A reconciliation of EBITDA to net loss follows:

	Six Months Ended June 30,	
	2011	2010
	(dollars in millions)	
Net Loss Attributable to Quad/Graphics Common Shareholders[1]	$(17.6)	$(44.2)
Interest Expense	59.4	30.3
Income Tax Benefit	(10.8)	(1.6)
Depreciation and Amortization	178.2	97.5
EBITDA	$209.2	$82.0

(1) Net loss attributable to Quad/Graphics common shareholders includes the effects of restructuring, impairment and transaction-related charges of $58.2 million and $37.6 million for the six months ended June 30, 2011 and 2010, respectively.

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North America Print and Related Services

The following table summarizes net sales, operating income, operating margin and certain items impacting comparability, within the North America Print and Related Services segment:

	Six Months Ended June 30,						
	2011		2010				
	(dollars in millions)						
	Amount		Amount		$ Change	% Change	
Net Sales:							
Products	$1,706.3		$588.7		$1,117.6	189.8	%
Services	233.6		95.6		138.0	144.4	%
Operating Income (including Restructuring, Impairment and Transaction-Related Charges)	81.7		29.5		52.2	176.9	%
Operating Margin	4.2	%	4.3	%	N/A	N/A	
Restructuring, Impairment and Transaction-Related Charges	$38.7		$0.9		$37.8	4,200.0	%

Net Sales

Product sales for the North America Print and Related Services segment increased for the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the World Color Press acquisition. Additionally, product sales increased due to increased paper and byproduct sales, partially offset by lower pricing due to continued pricing pressures related to industry overcapacity.

Service sales for the North America Print and Related Services segment increased for the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the World Color Press acquisition. Additionally, service sales increased as a result of higher fuel surcharges to customers.

Operating Income

Operating income for the North America Print and Related Services segment increased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to the World Color Press acquisition, partially offset by increased restructuring and integration expenses. Operating margin decreased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to an increase in restructuring, impairment and transaction-related costs from the integration of World Color Press. Excluding restructuring, impairment and transaction-related costs, operating margin would have increased primarily as a result of synergy savings from integrating World Color Press.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges for the North America Print and Related Services segment for the six months ended June 30, 2011 were $38.7 million, consisting of: (1) $18.1 million of employee termination costs related to 835 headcount reductions for plant closures and various workforce reductions announced through the second quarter of 2011, as well as from 2010 workforce reductions, (2) $1.6 million of costs incurred in connection with the integration of World Color Press and (3) $19.0 million of various other restructuring charges including costs to maintain and exit closed facilities, as well as lease exit charges.

Restructuring, impairment and transaction-related charges for the North America Print and Related Services segment for the six months ended June 30, 2010 were $0.9 million for lease exit charges.

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International

The following table summarizes net sales, operating loss, operating margin, certain items impacting comparability and equity in earnings of unconsolidated entities, within the International segment:

	Six Months Ended June 30, 2011	2010		
	(dollars in millions)			
	Amount	Amount	$ Change	% Change
Net Sales:				
Products	$226.9	$108.1	$118.8	109.9 %
Services	6.0	5.5	0.5	9.1 %
Operating Loss (including Restructuring, Impairment and Transaction-Related Charges)	(10.8)	(33.7)	22.9	(68.0)%
Operating Margin	(4.6)%	(29.7)%	N/A	N/A
Restructuring, Impairment and Transaction-Related Charges	$2.4	$25.6	$(23.2)	(90.6)%
Equity in Earnings of Unconsolidated Entities	1.1	3.8	(2.7)	(71.1)%

Net Sales

Product sales for the International segment increased for the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the World Color Press acquisition, and to a lesser extent due to a favorable impact from foreign exchange rates on net sales. These increases were partially offset by declines in print volumes at the Company's Poland location.

Operating Loss

Operating loss for the International segment decreased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to the decreased restructuring expenses in connection with the Pila, Poland announced plant closure in June 2010, partially offset by a negative impact from foreign exchange rates on the operating loss in Poland.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges for the International segment for the six months ended June 30, 2011 were $2.4 million, consisting of $0.7 million of employee termination costs related to 69 headcount reductions in Latin America and $1.7 million of other restructuring and integration charges.

Restructuring, impairment and transaction-related charges for the International segment for the six months ended June 30, 2010 were $25.6 million, consisting of $1.2 million of employee termination costs related to 707 headcount reductions and $24.4 million of impairment charges on assets related to the Pila, Poland plant closure.

Equity in Earnings of Unconsolidated Entities

Investments in entities where Quad/Graphics has both the ability to exert significant influence but not control and has an ownership interest of 50% or less but more than 20% are accounted for using the equity method of accounting. The Company holds a 49% ownership interest in Plural, a commercial printer based in São Paulo, Brazil, as well as a

50% interest in Chile that was acquired as part of the World Color Press acquisition. The equity in earnings of unconsolidated entities in the International segment decreased during the six months ended June 30, 2011 due to increased labor costs at Plural as labor productivity declined due to start up costs associated with recently added press capacity to meet growing demand. Equity method earnings also decreased due to a $1.3 million loss incurred during the six months ended June 30, 2011 at Chile.

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Corporate

The following table summarizes unallocated operating expenses presented as Corporate:

	Six Months Ended June 30,	
	2011	2010
	(dollars in millions)	
Operating Expenses (including Restructuring, Impairment and Transaction-Related Charges)	$40.9	$15.5
Restructuring, Impairment and Transaction-Related Charges	17.1	11.1

Corporate operating expenses increased for the six months ended June 30, 2011 compared with the six months ended June 30, 2010 primarily due to the World Color Press acquisition and higher restructuring and integration costs. Additional corporate expenses were incurred due to the compliance and support costs associated with the Company's new status as a publicly traded entity, which includes increased levels of administrative staff (information technology, finance, legal, human resources, treasury and other administrative labor), and increased costs incurred in connection with the integration of World Color Press.

Corporate restructuring, impairment and transaction-related charges for the six months ended June 30, 2011 were $17.1 million, consisting of: (1) $1.4 million of employee termination costs related to workforce reductions that commenced in 2010, (2) $1.0 million of transaction costs incurred primarily in connection with the transaction with Transcontinental, (3) $14.5 million of costs incurred in connection with the integration of World Color Press (net of a $7.1 million gain on the collection of a previously written off note receivable for the June 2008 sale of World Color Press' European operations) and (4) $0.2 million of other restructuring charges.

Corporate restructuring, impairment and transaction-related charges for the six months ended June 30, 2010 were $11.1 million, consisting of $8.9 million of transaction costs primarily incurred in connection with the acquisition of World Color Press and $2.2 million of costs incurred in connection with the integration of World Color Press.

Liquidity and Capital Resources

The Company utilizes cash flows from operations and borrowings under its credit facilities to satisfy its liquidity and capital requirements. The Company believes its expected future cash flows from operations and unused available capacity under its revolving credit facilities provide sufficient resources to fund ongoing operating requirements and the integration and restructuring requirements related to the acquired World Color Press operations, as well as future capital expenditures, debt service requirements, World Color Press single employer pension plan contributions, World Color Press multiemployer pension plans withdrawal liabilities, investments in future growth to create value for its shareholders and shareholder dividends. The Company's borrowing capacity has been increased, and the ongoing cost of borrowings reduced, with the execution of a $1.5 billion debt financing agreement on July 26, 2011, as further discussed below in Debt Obligations.

Cash Flows Provided by Operating Activities

Six Months Ended June 30, 2011 Compared to Six Months Ended June 30, 2010

Net cash provided by operating activities was $116.7 million for the six months ended June 30, 2011, compared to $74.3 million for the six months ended June 30, 2010, resulting in a $42.4 million increase. The increase in cash flows provided by operating activities was primarily due to a reduction in net loss, partially offset by higher working capital. Working capital increased primarily due to increased cash payments in 2011 for pension and postretirement contributions related to benefit plans assumed in the World Color Press acquisition and for increased income tax payments (due to the Company's change in tax status to a C corporation in July 2010).

Cash Flows Used in Investing Activities

Six Months Ended June 30, 2011 Compared to Six Months Ended June 30, 2010

Net cash used in investing activities was $73.0 million for the six months ended June 30, 2011, compared to $52.0 million for the six months ended June 30, 2010, resulting in a $21.0 million increase. The increase in cash flows used in investing activities was primarily due to a $56.0 million increase in capital expenditures related to the increased requirements of the Company with the World Color Press acquisition, partially offset by a reduction of $17.3 million in restricted cash and a $10.0 million equity investment in HGI Company, LLC made in 2010.

Cash Flows Used in Financing Activities

Six Months Ended June 30, 2011 Compared to Six Months Ended June 30, 2010

Net cash used in financing activities was $43.0 million for the six months ended June 30, 2011, compared to $21.5 million for the six months ended June 30, 2010, resulting in a $21.5 million increase. The increase in cash flows used in financing activities was primarily due to a $38.9 million increase in net debt payments ($23.8 million of net payments in the six months ended June 30, 2011 compared to $15.1 million of net borrowings in the same period in 2010) and $8.0 million of bankruptcy claim payments on the unsecured notes to be issued in 2011, partially offset by $13.7 million of debt issuance costs paid in 2010 and $9.5 million of decreased dividend payments in 2011.

Debt Obligations

Through June 30, 2011, the Company utilized a combination of debt instruments to fund working capital and other cash requirements, including:

- Senior notes ($645.1 million outstanding as of June 30, 2011);
- $700.0 million term loan ($684.0 million outstanding as of June 30, 2011);
- $530.0 million revolving credit facility ($85.7 million outstanding as of June 30, 2011) — this $530.0 million revolving credit facility and the $700.0 million term loan are collectively referred to as the "$1.23 billion debt financing agreement";
- A $100.8 million foreign currency denominated facilities agreement including both term loan and revolving credit facility components (total of $92.4 million outstanding as of June 30, 2011).

In addition to the foregoing debt instruments, there are certain other debt agreements totaling $5.8 million outstanding as of June 30, 2011. There were no material changes in any of the existing debt facilities between December 31, 2010 and June 30, 2011.

On July 26, 2011, the Company entered into a $1.5 billion debt financing agreement with certain lenders. The $1.5 billion debt financing agreement includes three different loan facilities. The first is a revolving facility in the amount of $850.0 million with a term of five years maturing on July 25, 2016. The second facility is a Term Loan A in the aggregate amount of $450.0 million with a term of five years maturing on July 25, 2016. The third facility is a Term Loan B in the amount of $200.0 million with a term of seven years maturing on July 25, 2018, subject to certain required amortization. At any time when the Company's total leverage is 3.00 to 1.00 or greater, the Company is obligated to prepay the two term loan facilities from the net proceeds of asset sales, casualty losses, and certain indebtedness for borrowed money, or from a portion of its excess cash flow, subject to certain exceptions.

Borrowings under the revolving facility and Term Loan A loans made under the $1.5 billion debt financing agreement will initially bear interest at 2.25% in excess of reserve adjusted LIBOR, or 1.25% in excess of an alternate base rate, and Term Loan B loans will bear interest at 3.00% in excess of reserve adjusted LIBOR Rate, with a LIBOR floor of 1.00%, or 2.00% in excess of an alternative base rate at the Company's option.

This debt financing agreement was entered into to reduce the Company's borrowing costs with lower interest rates and to create more financial flexibility with a higher revolving credit capacity. The proceeds from the Term Loan A, Term Loan B and revolving credit facility were used to repay all outstanding balances on the Company's then outstanding $1.23 billion debt financing agreement, which terminated, and new debt issuance costs incurred.

The $1.5 billion debt financing agreement is secured by substantially all of the unencumbered assets of the Company. The $1.5 billion debt financing agreement also requires the Company to provide additional collateral to the lenders in certain limited circumstances.

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This $1.5 billion debt financing agreement subjects the Company to certain quarterly financial covenants and also includes certain limitations on acquisitions, indebtedness, liens, dividends and repurchases of capital stock. If the Company's total leverage ratio is greater than 3.00 to 1.00 (total leverage ratio as defined in the debt financing agreement), the Company is prohibited from making greater than $120.0 million of annual dividend payments, capital stock repurchases and certain other payments. If the total leverage ratio is less than 3.00 to 1.00, there are no such restrictions.

The quarterly financial covenants are as follows (all financial terms, numbers and ratios are as defined in the $1.5 billion debt financing agreement):

- On a rolling twelve-month basis, the total leverage ratio, defined as total consolidated debt to consolidated EBITDA, shall not exceed 3.50 to 1.00. In the previous $1.23 billion debt financing agreement, the total leverage ratio was 3.75 to 1.00, and then was to step down to 3.50 to 1.00 on December 31, 2012 and further step down to 3.25 to 1.00 on December 31, 2013.

- On a rolling twelve-month basis, the minimum interest coverage ratio, defined as consolidated EBITDA to consolidated cash interest expense, shall not be less than 3.00 to 1.00. This ratio will step up to 3.25 to 1.00 on December 31, 2011 and further step up to 3.50 to 1.00 on December 31, 2012. This covenant is unchanged from the $1.23 billion debt financing agreement.

- Consolidated net worth of at least $745.8 million plus 40% of positive consolidated net income cumulatively for each year. This covenant is unchanged from the $1.23 billion debt financing agreement.

Covenants and Compliance

Prior to the July 26, 2011 debt refinancing discussed above, the Company's various lending arrangements included certain financial covenants (all financial terms, numbers and ratios in this Covenants and Compliance section are as defined in the Company's debt agreements). Among these covenants, the Company was required to maintain the following as of June 30, 2011 (for each covenant, the most restrictive measurement has been included below):

- On a rolling twelve-month basis, the total leverage ratio, defined as total consolidated debt to consolidated EBITDA, shall not exceed 3.75 to 1.00 (for the twelve months ended June 30, 2011, the Company's leverage ratio was 2.39 to 1.00).

- On a rolling twelve-month basis, the minimum interest coverage ratio, defined as consolidated EBITDA to consolidated cash interest expense, shall not be less than 3.00 to 1.00 (for the twelve months ended June 30, 2011, the Company's interest coverage ratio was 6.05 to 1.00).

- On a rolling twelve-month basis, the fixed charge coverage ratio, defined as consolidated EBITDA and rent expense to interest and rent expense, shall not be less than 1.50 to 1.00 (for the twelve months ended June 30, 2011, the Company's fixed charge coverage ratio was 3.01 to 1.00).

- Consolidated net worth of at least $745.8 million plus 40% of positive consolidated net income cumulatively for each year (as of June 30, 2011, the Company's consolidated net worth under the most restrictive covenant per the various lending arrangements was $1.41 billion).

The covenants also included certain limitations on acquisitions, indebtedness, liens, dividends and repurchases of capital stock. As of and for the rolling twelve-month period ended June 30, 2011, the Company was in compliance with all debt covenants. While the Company currently expects to be in compliance in future periods with the remaining covenants from the senior notes and the new covenants from the $1.5 billion debt financing agreement discussed above in Debt Obligations, there can be no assurance that financial covenants will continue to be met. The Company's failure to maintain compliance with these financial covenants could prevent the Company from borrowing additional amounts and could result in a default under any of the debt agreements. Such default could cause the outstanding indebtedness to become immediately due and payable, by virtue of cross-acceleration or cross-default provisions.

Risk Management

For a discussion of the Company's exposure to market risks and management of those market risks, see Item 3. Quantitative and Qualitative Disclosures About Market Risk of this Quarterly Report on Form 10-Q.

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Contractual Obligations and Off-Balance Sheet Arrangements

As of June 30, 2011, the only off-balance sheet arrangements that existed were lease obligations, which have not changed materially from that listed in the Contractual Obligations and Other Commitments table in the Company's Annual Report on Form 10-K filed on March 24, 2011. As of June 30, 2011, the Company's contractual obligations have not changed materially from the table and related notes to the table listed in such Form 10-K. Subsequent to June 30, 2011, the Company entered into the $1.5 billion debt financing agreement discussed above.

New Accounting Pronouncements

In June 2011, the FASB issued new guidance on the presentation of comprehensive income. This new guidance requires the components of net income and other comprehensive income to be either presented in one continuous statement, referred to as the statement of comprehensive income, or in two separate, but consecutive statements. This new guidance eliminates the current option to report other comprehensive income and its components in the statement of shareholders' equity. While the new guidance changes the presentation of comprehensive income, there are no changes to the components that are recognized in net income or other comprehensive income under current accounting guidance. This new guidance is effective for the Company beginning January 1, 2012. As this guidance only amends the presentation of the components of comprehensive income, the adoption will not have an impact on our consolidated financial positions, results of operations or cash flows.

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ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

The Company is exposed to a variety of market risks which may adversely affect the Company's results of operations and financial condition, including changes in interest and foreign currency exchange rates, changes in the economic environment that would impact credit positions and changes in the prices of certain commodities. The Company's management takes an active role in the risk management process and has developed policies and procedures that require specific administrative and business functions to assist in the identification, assessment and control of various risks. These risk management strategies may not fully insulate the Company from adverse effects due to market risks.

Interest Rate Risk

The Company is exposed to interest rate risk on variable rate debt obligations and price risk on fixed rate debt and capital leases. As of June 30, 2011, the Company had fixed rate debt and capital leases outstanding of $694.0 million at a current weighted average interest rate of 7.4% and variable rate debt outstanding of $867.9 million at a current weighted average interest rate of 5.1%. The variable rate debt outstanding at June 30, 2011 is primarily comprised of the $1.23 billion variable rate debt financing agreement entered into in connection with the acquisition of World Color Press, including $684.0 million outstanding on the $700.0 million term loan and $85.7 million outstanding on the $530.0 million revolving credit facility. The term loan bears interest primarily based on the LIBOR; however, it is subject to a 1.5% LIBOR minimum rate and thus the interest rate on the term loan will not begin to fluctuate until LIBOR exceeds that percentage. At June 30, 2011, LIBOR was significantly lower than that 1.5% LIBOR minimum rate. Considering that the interest rate on the largest portion of the variable rate debt obligations would not fluctuate if market interest rates increased 10%, a hypothetical change in the interest rate of 10% from the Company's current weighted average interest rate on variable rate debt obligations (excluding the term loan) of 4.07% would not have a material impact on the Company's interest expense. A hypothetical 10% change in market interest rates would change the fair value of fixed rate debt at June 30, 2011 by approximately $21.4 million.

Foreign Currency Risk and Translation Exposure

The Company is exposed to the impact of foreign currency fluctuations in certain countries in which it operates. The exposure to foreign currency movements is limited in most countries because the operating revenues and expenses of its various subsidiaries and business units are substantially in the local currency of the country in which they operate. Although operating in local currencies may limit the impact of currency rate fluctuations on the results of operations of the Company's non-U.S. subsidiaries and business units, fluctuations in such rates may affect the translation of these results into the Company's consolidated financial statements. To the extent revenues and expenses are not in the applicable local currency, the Company may enter into foreign exchange contracts to hedge the currency risk. The Company's hedging operations have not been material, and gains or losses from these operations have not been material to the Company's cash flows, financial position or results of operations. The Company does not use derivative financial instruments for trading or speculative purposes.

These international operations are subject to risks typical of international operations, including, but not limited to, differing economic conditions, changes in political climate, potential restrictions on the movement of funds, differing tax structures, and other regulations and restrictions. Accordingly, future results could be adversely impacted by changes in these or other factors.

Credit Risk

Credit risk is the possibility of loss from a customer's failure to make payments according to contract terms. Prior to granting credit, each customer is evaluated in an underwriting process, taking into consideration the prospective customer's financial condition, past payment experience, credit bureau information and other financial and qualitative factors that may affect the customer's ability to pay. Specific credit reviews and standard industry credit scoring models are used in performing this evaluation. Customers' financial condition is continuously monitored as part of the normal course of business. Some of the Company's customers may be highly leveraged or otherwise subject to their own operating and regulatory risks. Based on those customer account reviews and due to the continued uncertainty of the global economy, the Company has established an allowance for doubtful accounts of $78.5 million as of June 30, 2011, and during the three and six months ended June 30, 2011 the Company recorded provisions for doubtful accounts of $2.1 and $4.4 million, respectively.

The Company had a large, diverse customer base prior to the acquisition of World Color Press; however, the credit risk from customer concentration has further decreased after the acquisition with the addition of new customers, geographies and products the Company now produces. The Company does not have a high degree of concentration with any single customer account. During the three and six months ended June 30, 2011, the Company's largest customer accounted for less than 5% of

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the Company's net sales. Even if the Company's credit review and analysis mechanisms work properly, the Company may experience financial losses in its dealings with customers and other parties. Any increase in the nonpayment or nonperformance by customers could adversely affect the Company's results of operations and financial condition. Economic disruptions could result in significant future charges.

Commodity Risk

The primary raw materials used by the Company are paper, ink and fuel. At this time, the Company's supply of raw materials is readily available from numerous suppliers; however, based on market conditions, that could change in the future. The majority of paper used in the printing process is supplied by the Company's customers. For those customers who do not supply paper, the Company will generally include price adjustment clauses in sales contracts, which it also does for other critical raw materials in the printing process. As a result, management believes a hypothetical 10% change in the price of paper and other raw materials would not have a significant direct impact on the Company's consolidated annual results of operations or cash flows; however, significant increases in commodity pricing could influence future customer print volumes. Inflation has not had a significant impact on the Company historically.

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ITEM 4. Controls and Procedures

Disclosure controls and procedures

The Company's management, with the participation of the Company's principal executive officer and principal financial officer, has evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report and has concluded that, as of the end of such period, the Company's disclosure controls and procedures were effective.

Changes in internal control over financial reporting

This Quarterly Report on Form 10-Q does not include a discussion of changes in the Company's internal controls over financial reporting due to a transition period established by rules of the SEC for newly public companies.

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PART II — OTHER INFORMATION

ITEM 1A. Risk Factors

Risk factors relating to the Company are contained in Part I, Item 1A of the Company's 2010 Annual Report on Form 10-K, filed with the SEC on March 24, 2011. No material change to such risk factors occurred during the period from January 1, 2011 through June 30, 2011.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

(a) None.

(b) Not applicable.

(c) Not applicable.

See "Management's Discussion And Analysis Of Financial Condition And Results Of Operations — Liquidity and Capital Resources — Debt Obligations," included elsewhere in this Quarterly Report on Form 10-Q, for a discussion of covenants under the Company's debt agreements that may restrict the Company's ability to pay dividends.

ITEM 6. Exhibits

The exhibits listed in the accompanying index of exhibits are filed as part of this Quarterly Report on Form 10-Q.

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SIGNATURES

Pursuant to the requirements 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.

QUAD/GRAPHICS, INC.

Date:	August 11, 2011	By:	/s/ J. Joel Quadracci J. Joel Quadracci Chairman, President and Chief Executive Officer (Principal Executive Officer)
Date:	August 11, 2011	By:	/s/ John C. Fowler John C. Fowler Executive Vice President and Chief Financial Officer (Principal Financial Officer)

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QUAD/GRAPHICS, INC.

Exhibit Index to Quarterly Report on Form 10-Q
For the Quarterly Period ended June 30, 2011

Exhibits

(3.1)	Amendment to the Amended Bylaws of Quad/Graphics, Inc. effective April 27, 2011 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated April 27, 2011 and filed on May 3, 2011).
(3.2)	Amended Bylaws of Quad/Graphics, Inc., as amended through April 27, 2011 (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K dated April 27, 2011 and filed on May 3, 2011).
(4)	Amended and Restated Credit Agreement dated as of July 26, 2011 by and among Quad/Graphics, Inc., as the Borrower, the Lenders party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. and U.S. Bank National Association, as Co-Syndication Agents, and PNC Bank, National Association and SunTrust Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 4 to the Company's Current Report on Form 8-K dated and filed on July 27, 2011).
(31.1)	Certification by the Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934.
(31.2)	Certification by the Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934.
(32)	Written Statement of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350.
(101*)	Financial statements from the Quarterly Report on Form 10-Q of Quad/Graphics, Inc. for the quarter ended June 30, 2011 formatted in eXtensible Business Reporting Language (XBRL): (i) the Condensed Consolidated Statements of Operations (Unaudited), (ii) the Condensed Consolidated Balance Sheets (Unaudited), (iii) the Condensed Consolidated Statements of Cash Flows (Unaudited), (iv) the Notes to Condensed Consolidated Financial Statements (Unaudited), and (v) document and entity information.

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* In accordance with Rule 406T of Regulation S-T, the information in these exhibits shall not be deemed to be "filed" for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended, or otherwise subject to liability under that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act of 1933, as amended, except as expressly set forth by specific reference in such filing.