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 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.

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			