

UNION PACIFIC CORP
Form 10-K
February 09, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 1-6075

UNION PACIFIC CORPORATION

(Exact name of registrant as specified in its charter)

UTAH	13-2626465
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1400 DOUGLAS STREET, OMAHA, NEBRASKA

(Address of principal executive offices)

68179

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(Zip Code)

(402) 544-5000

(Registrant's telephone number, including area code)

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

Title of each Class	Name of each exchange on which registered
Common Stock (Par Value \$2.50 per share)	New York Stock Exchange, Inc.

§ Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

§ Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

§ Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

§ Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

§ Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

§ Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes No

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

§ As of June 30, 2017, the aggregate market value of the registrant's Common Stock held by non-affiliates (using the New York Stock Exchange closing price) was \$87.3 billion.

The number of shares outstanding of the registrant's Common Stock as of February 2, 2018 was 779,305,276.

Documents Incorporated by Reference – Portions of the registrant’s definitive Proxy Statement for the Annual Meeting of Shareholders to be held on May 10, 2018, are incorporated by reference into Part III of this report. The registrant’s Proxy Statement will be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

UNION PACIFIC CORPORATION

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February 9, 2018

Fellow Shareholders:

Looking back at 2017, I can report Union Pacific made progress building long-term value for our four key stakeholders – shareholders, communities, customers, and employees. After two consecutive years of overall volume declines, Union Pacific experienced a 2 percent increase in volume. This increase in volume, coupled with positive pricing and continued productivity improvement, generated reported earnings of \$13.36 per share. After adjusting for the impact of corporate tax reform that was passed prior to year-end, our adjusted earnings were a record \$5.79 per share*. This result is a 14 percent improvement compared to last year’s \$5.07 per share. Our adjusted operating ratio was a record 63.0 percent*, or 0.5 points better than last year’s 63.5 percent.

Carloadings were up in our Industrial Products and Coal business units 12 percent and 6 percent, respectively, driven primarily by a robust increase in frac sand shipments. Automotive shipments were down 3 percent resulting from lower domestic sales and reduced vehicle production, while Chemical and Agricultural Product shipments were both down 2 percent as we experienced declines in our crude oil volumes and grain carloadings. Intermodal volumes were flat compared to 2016.

We faced several operational challenges during 2017, from significant flooding in the western portion of our network, to the unprecedented rain and flooding that accompanied Hurricane Harvey. Despite these challenges, the men and women of Union Pacific worked tirelessly and heroically to safely serve our customers. I am pleased with our results and look forward to continuing to build long-term enterprise value by building our Value Tracks.

Starting with World Class Safety, 2017 was another outstanding year for employee safety performance. Our reportable personal injury rate of 0.79 was off slightly from last year’s all-time record low of 0.75. Our ultimate goal is zero incidents, getting every one of our employees home safely at the end of each day. We will maintain a relentless focus on data-driven processes and root-cause evaluations, as well as on internal safety programs such as Total Safety Culture and Courage to Care.

We have built centers of excellence around game-changing technology and other Innovation initiatives. Our Engaged Team is inspiring passion and dedication while leveraging diverse talents to extract the best ideas that will drive positive results across our Company. The continued implementation and execution of our “Grow to 55 and Zero” initiative drives significant Resource Productivity, from successfully aligning our resources to meet the increase in demand, to being more efficient in virtually everything that we do across the entire organization.

Given the challenges I mentioned above, our service product in 2017 did not meet all our customers’ expectations, but we kept working to create an Excellent Customer Experience, anticipating customer needs, responding quickly, keeping commitments, and offering solutions. Our robust capital program helps provide the necessary resources and network capacity to build these relationships and prepare for future growth. It enables us to handle our business safely

and efficiently, while improving network fluidity. We invested about \$3.1 billion in 2017, including about \$1.9 billion in replacement capital to harden our infrastructure, and to improve the safety and resiliency of our network, as well as nearly \$340 million toward completing our Positive Train Control project.

A Maximized Franchise is much more than our unique physical footprint. It encompasses our employees' skills, our assets, and a strategy that emphasizes the importance of our customers' experiences. It also embraces a thoughtful approach to market penetration, the competitive landscape to determine future service offerings and to identify trade flow opportunities.

This successful execution of our value track strategy to the benefit of all our stakeholders translates into value for our shareholders. Total shareholder return increased 32 percent in 2017, compared with 22 percent for the S&P 500. Our net return on invested capital* of 13.7 percent increased a full percentage point over last year's 12.7 percent. We increased our quarterly declared dividend per share by 10 percent, with dividends paid in 2017 totaling \$2.0 billion. In addition, we repurchased 36 million Union Pacific shares. In total, combining both dividends and share repurchases, Union Pacific returned \$6 billion to our shareholders in 2017.

Looking to 2018, we are optimistic the economy will favor many of the segments which drive our core business, leading us to another year of positive volume growth. We will continue to execute on our Value Tracks to benefit our employees, partner with the communities in which we serve, provide our customers an excellent experience, and generate strong returns for our shareholders.

Chairman, President and Chief Executive Officer

*See Item 7 of this report for reconciliations to U.S. GAAP.

DIRECTORS AND SENIOR MANAGEMENT

BOARD OF DIRECTORS

Andrew H. Card, Jr. Former White House Chief of Staff Board Committees: Audit, Compensation and Benefits	Deborah C. Hopkins Former Chief Executive Officer Citi Ventures Former Chief Innovation Officer Citi Board Committees: Corporate Governance and Nominating, Finance	Thomas F. McLarty III President McLarty Associates Board Committees: Finance (Chair), Corporate Governance and Nominating
Erroll B. Davis, Jr. Former Chairman, President & CEO Alliant Energy Corporation Board Committees: Compensation and Benefits (Chair), Corporate Governance and Nominating	Jane H. Lute President and Chief Executive Officer SICPA North America Board Committees: Audit, Corporate Governance and Nominating	Bhavesh V. Patel Chief Executive Officer and Chairman of the Management Board LyondellBasell Industries N.V. Board Committees: Finance, Compensation and Benefits
David B. Dillon Former Chairman The Kroger Company Board Committees: Audit (Chair), Compensation and Benefits	Michael R. McCarthy Chairman McCarthy Group, LLC Lead Independent Director Board Committees: Corporate Governance and Nominating (Chair), Finance	Steven R. Rogel Former Chairman Weyerhaeuser Company Board Committees: Compensation and Benefits, Corporate Governance and Nominating
Lance M. Fritz Chairman, President and Chief Executive Officer Union Pacific Corporation and Union Pacific Railroad Company	Michael W. McConnell General Partner and Former Managing Partner Brown Brothers Harriman & Co. Board Committees: Audit, Finance	Jose H. Villarreal Advisor Akin, Gump, Strauss, Hauer & Feld, LLP Board Committees: Audit,

SENIOR MANAGEMENT*

Lance M. Fritz
Chairman, President and
Chief Executive Officer

Robert M. Knight, Jr.
Executive Vice President
and Chief Financial Officer

Todd M. Rynaski
Vice President and Controller

Bryan L. Clark
Vice President-Tax

Sherrye L. Hutcherson
Senior Vice President and
Chief Human Resource Officer

Cameron A. Scott
Executive Vice President and
Chief Operating Officer

Rhonda S. Ferguson
Executive Vice President, Chief Legal
Officer and Corporate Secretary

Scott D. Moore
Senior Vice President and
Chief Administrative Officer

Lynden L. Tennison
Senior Vice President and
Chief Information Officer

D. Lynn Kelley
Senior Vice President-Supply and
Continuous Improvement

Jon T. Panzer
Vice President and Treasurer

Elizabeth F. Whited
Executive Vice President and
Chief Marketing Officer

Michael A. Rock
Vice President-External Relations

*Senior management are elected officers of both Union Pacific Corporation and Union Pacific Railroad Company, except Mr. Scott, Ms. Kelley and Ms. Whited are elected officers for Union Pacific Railroad Company.

PART I

Item 1. Business

GENERAL

Union Pacific Railroad Company is the principal operating company of Union Pacific Corporation. One of America's most recognized companies, Union Pacific Railroad Company links 23 states in the western two-thirds of the country by rail, providing a critical link in the global supply chain. The Railroad's diversified business mix includes Agricultural Products, Automotive, Chemicals, Coal, Industrial Products and Intermodal. Union Pacific serves many of the fastest-growing U.S. population centers, operates from all major West Coast and Gulf Coast ports to eastern gateways, connects with Canada's rail systems and is the only railroad serving all six major Mexico gateways. Union Pacific provides value to its roughly 10,000 customers by delivering products in a safe, reliable, fuel-efficient and environmentally responsible manner.

Union Pacific Corporation was incorporated in Utah in 1969 and maintains its principal executive offices at 1400 Douglas Street, Omaha, NE 68179. The telephone number at that address is (402) 544-5000. The common stock of Union Pacific Corporation is listed on the New York Stock Exchange (NYSE) under the symbol "UNP".

For purposes of this report, unless the context otherwise requires, all references herein to "UPC", "Corporation", "Company", "we", "us", and "our" shall mean Union Pacific Corporation and its subsidiaries, including Union Pacific Railroad Company, which we separately refer to as "UPRR" or the "Railroad".

Available Information – Our Internet website is www.up.com. We make available free of charge on our website (under the "Investors" caption link) our Annual Reports on Form 10-K; our Quarterly Reports on Form 10-Q; eXtensible Business Reporting Language (XBRL) documents; our current reports on Form 8-K; our proxy statements; Forms 3, 4, and 5, filed on behalf of our directors and certain executive officers; and amendments to such reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended (the Exchange Act). We provide these reports and statements as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission (SEC). We also make available on our website previously filed SEC reports and exhibits via a link to EDGAR on the SEC's Internet site at www.sec.gov. Additionally, our corporate governance materials, including By-Laws, Board Committee charters, governance guidelines and policies, and codes of conduct and ethics for directors, officers, and employees are available on our website. From time to time, the corporate governance materials on our website may be updated as necessary to comply with rules issued by the SEC and the NYSE or as desirable to promote the effective and efficient governance of our Company. Any security holder wishing to receive, without charge, a copy of any of our SEC filings or corporate governance materials should send a written request to: Secretary, Union Pacific Corporation, 1400 Douglas Street, Omaha, NE 68179.

We have included the Chief Executive Officer (CEO) and Chief Financial Officer (CFO) certifications regarding our public disclosure required by Section 302 of the Sarbanes-Oxley Act of 2002 as Exhibits 31(a) and (b) to this report.

References to our website address in this report, including references in Management's Discussion and Analysis of Financial Condition and Results of Operations, Item 7, are provided as a convenience and do not constitute, and should not be deemed, an incorporation by reference of the information contained on, or available through, the website. Therefore, such information should not be considered part of this report.

OPERATIONS

The Railroad, along with its subsidiaries and rail affiliates, is our one reportable operating segment. Although we provide revenue by commodity group, we analyze the net financial results of the Railroad as one segment due to the integrated nature of our rail network. Additional information regarding our business and operations, including revenue and financial information and data and other information regarding environmental matters, is presented in Risk Factors, Item 1A; Legal Proceedings, Item 3; Selected Financial Data, Item 6; Management's Discussion and Analysis of Financial Condition and Results of Operations, Item 7; and the Financial Statements and Supplementary Data, Item 8 (which include information regarding revenues, statements of income, and total assets).

Operations – UPRR is a Class I railroad operating in the U.S. We have 32,122 route miles, linking Pacific 2017 Coast and Gulf Coast ports with the Midwest and eastern U.S. gateways and providing several corridors to Freight key Mexican gateways. We serve the Western two-thirds of the country and maintain coordinated Revenue schedules with other rail carriers to move freight to and from the Atlantic Coast, the Pacific Coast, the Southeast, the Southwest, Canada, and Mexico. Export and import traffic moves through Gulf Coast and Pacific Coast ports and across the Mexican and Canadian borders. Our freight traffic consists of bulk, manifest, and premium business. Bulk traffic primarily consists of coal, grain, soda ash, ethanol, rock and crude oil shipped in unit trains – trains transporting a single commodity from one origin to one destination. Manifest traffic includes individual carload or less than train-load business involving commodities such as lumber, steel, paper, food and chemicals. The transportation of finished vehicles, auto parts, intermodal containers and truck trailers are included as part of our premium business. In 2017, we generated freight revenues totaling \$19.8 billion from the following six commodity groups:

Agricultural Products – Transportation of grains, commodities produced from these grains, and food and beverage products generated 19% of the Railroad’s 2017 freight revenue. We access most major grain markets, linking the Midwest and Western U.S. producing areas to export terminals in the Pacific Northwest and Gulf Coast ports, as well as Mexico. We also serve significant domestic markets, including grain processors, animal feeders and ethanol producers in the Midwest, West, South and Rocky Mountain states. Unit trains, which transport a single commodity between producers and export terminals or domestic markets, represent approximately 41% of our agricultural shipments.

Automotive – We are the largest automotive carrier west of the Mississippi River and operate or access 38 vehicle distribution centers. The Railroad’s extensive franchise serves five vehicle assembly plants and connects to West Coast ports, all six major Mexico gateways, and the Port of Houston to accommodate both import and export shipments. In addition to transporting finished vehicles, UPRR provides expedited handling of automotive parts in both boxcars and intermodal containers destined for Mexico, the U.S. and Canada. The automotive group generated 10% of Union Pacific’s freight revenue in 2017.

Chemicals – Transporting chemicals generated 18% of our freight revenue in 2017. The Railroad’s unique franchise serves the chemical producing areas along the Gulf Coast, where roughly 55% of the Company’s chemical business originates, travels through, or terminates. Our chemical franchise also accesses chemical producers in the Rocky Mountains and on the West Coast. The Company’s chemical shipments include six categories: industrial chemicals, plastics, fertilizer, petroleum and liquid petroleum gases, crude oil and soda ash. Currently, these products move primarily to and from the Gulf Coast region. Fertilizer movements originate in the Gulf Coast region, the western U.S. and Canada (through interline access) for delivery to major agricultural users in the Midwest, western U.S., as well as abroad. Soda ash originates in southwestern Wyoming and California, destined for chemical and glass producing markets in North America and abroad.

Coal – Shipments of coal, petroleum coke, and biomass accounted for 13% of our freight revenue in 2017. The Railroad’s network supports the transportation of coal, petroleum coke, and biomass to independent and regulated power companies and industrial facilities throughout the U.S. Through interchange gateways and ports, UPRR’s reach extends to eastern U.S. utilities, as well as to Mexico and other international destinations. Coal traffic originating in the Powder River Basin (PRB) area of Wyoming is the largest segment of the Railroad’s coal business.

Industrial Products – Our extensive network facilitates the movement of numerous commodities between thousands of origin and destination points throughout North America. The Industrial Products group consists of several categories, including construction products, minerals, consumer goods, metals, lumber, paper, and other miscellaneous products. In 2017, this group generated 21% of our total freight revenue. Commercial, residential and governmental infrastructure investments drive shipments of steel, aggregates (cement components), cement and wood products. Oil and gas drilling generates demand for raw steel, finished pipe, frac sand, stone and drilling fluid commodities. Industrial and light manufacturing plants

receive steel, nonferrous materials, minerals and other raw materials. Paper and packaging commodities, as well as appliances, move to major metropolitan areas for consumers. Lumber shipments originate primarily in the Pacific Northwest and western Canada and move throughout the U.S. for use in new home construction and repair and remodeling.

Intermodal – Our Intermodal business includes two segments: international and domestic. International business consists of import and export container traffic that mainly passes through West Coast ports served by UPRR’s extensive terminal network. Domestic business includes container and trailer traffic picked up and delivered within North America for intermodal marketing companies (primarily shipper agents and logistics companies), as well as truckload carriers. Less-than-truckload and package carriers with time-sensitive business requirements are also an important part of domestic shipments. Together, our international and domestic Intermodal business generated 19% of our 2017 freight revenue.

Seasonality – Some of the commodities we carry have peak shipping seasons, reflecting either or both the nature of the commodity and the demand cycle for the commodity (such as certain agricultural and food products that have specific growing and harvesting seasons). The peak shipping seasons for these commodities can vary considerably each year depending upon various factors, including the strength of domestic and international economies and currencies and the strength of harvests and market prices for agricultural products.

Working Capital – At December 31, 2017, we had a working capital surplus. We maintain adequate resources, and when necessary, have adequate access to capital markets to meet any foreseeable cash requirements, in addition to sufficient financial capacity to satisfy our current liabilities. At December 31, 2016, we had a working capital deficit, due primarily to a decrease in other current assets related to a tax receivable for the late extension of bonus depreciation at December 31, 2015, along with an increase at December 31, 2016, in accounts payable and upcoming debt maturities.

Competition – We are subject to competition from other railroads, motor carriers, ship and barge operators, and pipelines. Our main railroad competitor is Burlington Northern Santa Fe LLC. Its primary subsidiary, BNSF Railway Company (BNSF), operates parallel routes in many of our main traffic corridors. In addition, we operate in corridors served by other railroads and motor carriers. Motor carrier competition exists for five of our six commodity groups (excluding most coal shipments). Because of the proximity of our routes to major inland and Gulf Coast waterways, barges can be particularly competitive, especially for grain and bulk commodities in certain areas where we operate. In addition to price competition, we face competition with respect to transit times, quality and reliability of service from motor carriers and other railroads. Motor carriers in particular can have an advantage over railroads with respect to transit times and timeliness of service. However, railroads are much more fuel-efficient than trucks, which reduces the impact of transporting goods on the environment and public infrastructure, and we have been making efforts to convert certain truck traffic to rail. Additionally, we must build or acquire and maintain our rail system; trucks and barges are able to use public rights-of-way maintained by public entities. Any of the following could also affect the competitiveness of our transportation services for some or all of our commodities: (i) improvements or expenditures materially increasing the quality or reducing the costs of these alternative modes of transportation, (ii) legislation that eliminates or significantly increases the size or weight limitations applied to motor carriers, or (iii) legislation or regulatory changes that impose operating restrictions on railroads or that adversely affect the profitability of some or all railroad traffic. Finally, many movements face product or geographic competition where our customers can use

different products (e.g. natural gas instead of coal, sorghum instead of corn) or commodities from different locations (e.g. grain from states or countries that we do not serve, crude oil from different regions). Sourcing different commodities or different locations allows shippers to substitute different carriers and such competition may reduce our volume or constrain prices. For more information regarding risks we face from competition, see the Risk Factors in Item 1A of this report.

Key Suppliers – We depend on two key domestic suppliers of high horsepower locomotives. Both suppliers provide parts for locomotives and one also provides maintenance under a service agreement. Due to the capital intensive nature of the locomotive manufacturing business and sophistication of this equipment, potential new suppliers face high barriers of entry into this industry. Therefore, if one of these domestic suppliers discontinues manufacturing locomotives, supplying parts or providing maintenance for any reason, including insolvency or bankruptcy, we could experience a significant cost increase and risk reduced availability of the locomotives that are necessary to our operations. Additionally, for a high percentage of our rail purchases, we utilize two steel producers (one domestic and one international) that meet our specifications. Rail is critical for maintenance, replacement, improvement, and expansion of our network and facilities. Rail manufacturing also has high barriers of entry, and, if one of those suppliers

discontinues operations for any reason, including insolvency or bankruptcy, we could experience cost increases and difficulty obtaining rail.

Employees – Approximately 85% of our 41,992 full-time-equivalent employees are represented by 14 major rail unions. On January 1, 2015, current labor agreements became subject to modification and we began the current round of negotiations with the unions. Existing agreements remain in effect until new agreements are ratified or the Railway Labor Act's (RLA) procedures (which include mediation, potential arbitration, cooling-off periods, and the possibility of Presidential Emergency Boards and Congressional intervention) are exhausted. Through industry and local negotiations, UPRR reached tentative new agreements with 12 of our 14 major rail unions. Nine unions (representing nearly 70% of our agreement work force) have ratified those agreements by significant margins. The tentative agreement failed ratification with two unions in early February 2018 (representing about 10% of our agreement work force) returning any further discussions with them to the jurisdiction of the National Mediation Board. Another small union (less than 1%) is still out for ratification. UPRR and the industry currently continue in active mediation with the remaining coalition of two unions (representing about 20% of our agreement work force). Under the Railway Labor Act, the National Mediation Board controls timing and location of mediation conferences and when to terminate mediation, moving the parties to the next stages of the RLA process. Contract negotiations historically continue for an extended period of time and we rarely experience work stoppages while negotiations are pending.

Railroad Security – Our security efforts consist of a wide variety of measures including employee training, engagement with our customers, training of emergency responders, and partnerships with numerous federal, state, and local government agencies. While federal law requires us to protect the confidentiality of our security plans designed to safeguard against terrorism and other security incidents, the following provides a general overview of our security initiatives.

UPRR Security Measures – We maintain a comprehensive security plan designed to both deter and respond to any potential or actual threats as they arise. The plan includes four levels of alert status, each with its own set of countermeasures. We employ our own police force, consisting of more than 250 commissioned and highly-trained officers. Our employees also undergo recurrent security and preparedness training, as well as federally-mandated hazardous materials and security training. We regularly review the sufficiency of our employee training programs. We maintain the capability to move critical operations to back-up facilities in different locations.

We operate an emergency response management center 24 hours a day. The center receives reports of emergencies, dangerous or potentially dangerous conditions, and other safety and security issues from our employees, the public, law enforcement and other government officials. In cooperation with government officials, we monitor both threats and public events, and, as necessary, we may alter rail traffic flow at times of concern to minimize risk to communities and our operations. We comply with the hazardous materials routing rules and other requirements imposed by federal law. We also design our operating plan to expedite the movement of hazardous material shipments to minimize the time rail cars remain idle at yards and terminals located in or near major population centers. Additionally, in compliance with Transportation Security Agency regulations, we deployed information systems and instructed employees in tracking and documenting the handoff of Rail Security Sensitive Materials with customers and interchange partners.

We also have established a number of our own innovative safety and security-oriented initiatives ranging from various investments in technology to The Officer on Train program, which provides local law enforcement officers with the opportunity to ride with train crews to enhance their understanding of railroad operations and risks. Our staff of information security professionals continually assesses cyber security risks and implements mitigation programs that evolve with the changing technology threat environment. To date, we have not experienced any material disruption of our operations due to a cyber threat or attack directed at us.

Cooperation with Federal, State, and Local Government Agencies – We work closely on physical and cyber security initiatives with government agencies, including the U.S. Department of Transportation (DOT) and the Department of Homeland Security (DHS) as well as local police departments, fire departments, and other first responders. In conjunction with the Association of American Railroads (AAR), we sponsor Ask Rail, a mobile application which provides first responders with secure links to electronic information, including commodity and emergency response information required by emergency personnel to respond to accidents and other situations. We also participate in the National Joint Terrorism Task Force, a multi-agency effort established by the U.S. Department of Justice and the Federal Bureau of Investigation to combat and prevent terrorism.

We work with the Coast Guard, U.S. Customs and Border Protection (CBP), and the Military Transport Management Command, which monitor shipments entering the UPRR rail network at U.S. border crossings and ports. We were the first railroad in the U.S. to be named a partner in CBP's Customs-Trade Partnership Against Terrorism, a partnership designed to develop, enhance, and maintain effective security processes throughout the global supply chain.

Cooperation with Customers and Trade Associations – Through TransCAER (Transportation Community Awareness and Emergency Response) we work with the AAR, the American Chemistry Council, the American Petroleum Institute, and other chemical trade groups to provide communities with preparedness tools, including the training of emergency responders. In cooperation with the Federal Railroad Administration (FRA) and other interested groups, we are also working to develop additional improvements to tank car design that will further limit the risk of releases of hazardous materials.

GOVERNMENTAL AND ENVIRONMENTAL REGULATION

Governmental Regulation – Our operations are subject to a variety of federal, state, and local regulations, generally applicable to all businesses. (See also the discussion of certain regulatory proceedings in Legal Proceedings, Item 3.)

The operations of the Railroad are also subject to the regulatory jurisdiction of the Surface Transportation Board (STB). The STB has jurisdiction over rates charged on certain regulated rail traffic; common carrier service of regulated traffic; freight car compensation; transfer, extension, or abandonment of rail lines; and acquisition of control of rail common carriers. The STB continues its efforts to explore expanding rail regulation and is reviewing proposed rulemaking in various areas, including reciprocal switching, commodity exemptions, and expanding and easing procedures for smaller rate complaints. The STB also continues to develop a methodology for determining railroad revenue adequacy and the possible use of a revenue adequacy constraint in regulating railroad rates. The STB posts quarterly reports on rate reasonableness cases and maintains a database on service complaints, and has the authority to initiate investigations, among other things.

The operations of the Railroad also are subject to the regulations of the FRA and other federal and state agencies. In 2010, the FRA issued initial rules governing installation of Positive Train Control (PTC) that now has a deadline of December 31, 2018. The PTC implementation deadline may be extended to December 31, 2020, provided certain other criteria are satisfied. PTC is a collision avoidance technology intended to override engineer controlled locomotives and stop train-to-train and overspeed accidents, misaligned switch derailments, and unauthorized entry to work zones. Final implementation of PTC will require us to adapt and integrate our system with other railroads whose implementation plan may be different than ours. Through 2017, we have invested approximately \$2.6 billion in the ongoing development of PTC.

DOT, the Occupational Safety and Health Administration, the Pipeline and Hazardous Materials Safety Administration, and DHS, along with other federal agencies, have jurisdiction over certain aspects of safety, movement of hazardous materials and hazardous waste, emissions requirements, and equipment standards. Additionally, various state and local agencies have jurisdiction over disposal of hazardous waste and seek to regulate movement of hazardous materials in ways not preempted by federal law.

Environmental Regulation – We are subject to extensive federal and state environmental statutes and regulations pertaining to public health and the environment. The statutes and regulations are administered and monitored by the Environmental Protection Agency (EPA) and by various state environmental agencies. The primary laws affecting our operations are the Resource Conservation and Recovery Act, regulating the management and disposal of solid and hazardous wastes; the Comprehensive Environmental Response, Compensation, and Liability Act, regulating the cleanup of contaminated properties; the Clean Air Act, regulating air emissions; and the Clean Water Act, regulating waste water discharges.

Information concerning environmental claims and contingencies and estimated remediation costs is set forth in Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies – Environmental, Item 7 and Note 18 to the Consolidated Financial Statements in Item 8, Financial Statements and Supplementary Data.

Item 1A. Risk Factors

The information set forth in this Item 1A should be read in conjunction with the rest of the information included in this report, including Management's Discussion and Analysis of Financial Condition and Results of Operations, Item 7, and Financial Statements and Supplementary Data, Item 8.

We Must Manage Fluctuating Demand for Our Services and Network Capacity – If there are significant reductions in demand for rail services with respect to one or more commodities or changes in consumer preferences that affect the businesses of our customers, we may experience increased costs associated with resizing our operations, including higher unit operating costs and costs for the storage of locomotives, rail cars, and other equipment; work-force adjustments; and other related activities, which could have a material adverse effect on our results of operations, financial condition, and liquidity. If there is significant demand for our services that exceeds the designed capacity of our network, we may experience network difficulties, including congestion and reduced velocity, that could compromise the level of service we provide to our customers. This level of demand may also compound the impact of weather and weather-related events on our operations and velocity. Although we continue to improve our transportation plan, add capacity, improve operations at our yards and other facilities, and improve our ability to address surges in demand for any reason with adequate resources, we cannot be sure that these measures will fully or adequately address any service shortcomings resulting from demand exceeding our planned capacity. We may experience other operational or service difficulties related to network capacity, dramatic and unplanned fluctuations in our customers' demand for rail service with respect to one or more commodities or operating regions, or other events that could negatively impact our operational efficiency, any of which could have a material adverse effect on our results of operations, financial condition, and liquidity.

We Transport Hazardous Materials – We transport certain hazardous materials and other materials, including crude oil, ethanol, and toxic inhalation hazard (TIH) materials, such as chlorine, that pose certain risks in the event of a release or combustion. Additionally, U.S. laws impose common carrier obligations on railroads that require us to transport certain hazardous materials regardless of risk or potential exposure to loss. A rail accident or other incident or accident on our network, at our facilities, or at the facilities of our customers involving the release or combustion of hazardous materials could involve significant costs and claims for personal injury, property damage, and environmental penalties and remediation in excess of our insurance coverage for these risks, which could have a material adverse effect on our results of operations, financial condition, and liquidity.

We Are Subject to Significant Governmental Regulation – We are subject to governmental regulation by a significant number of federal, state, and local authorities covering a variety of health, safety, labor, environmental, economic (as discussed below), and other matters. Many laws and regulations require us to obtain and maintain various licenses, permits, and other authorizations, and we cannot guarantee that we will continue to be able to do so. Our failure to comply with applicable laws and regulations could have a material adverse effect on us. Governments or regulators may change the legislative or regulatory frameworks within which we operate without providing us any recourse to address any adverse effects on our business, including, without limitation, regulatory determinations or rules regarding dispute resolution, increasing the amount of our traffic subject to common carrier regulation, business relationships with other railroads, calculation of our cost of capital or other inputs relevant to computing our revenue adequacy, the prices we charge, and costs and expenses. Significant legislative activity in Congress or regulatory activity by the STB could expand regulation of railroad operations and prices for rail services, which could reduce capital spending on our

rail network, facilities and equipment and have a material adverse effect on our results of operations, financial condition, and liquidity. As part of the Rail Safety Improvement Act of 2008, rail carriers were to implement PTC by the end of 2015 (the Rail Safety Improvement Act). The Surface Transportation Extension Act of 2015 amended the Rail Safety Improvement Act to require implementation of PTC by the end of 2018, which deadline may be extended to December 31, 2020, provided certain other criteria are satisfied. Final implementation of PTC will require us to adapt and integrate our system with other railroads whose implementation plan may be different than ours. This implementation could have a material adverse effect on our results of operations and financial condition. Additionally, one or more consolidations of Class I railroads could also lead to increased regulation of the rail industry.

We May Be Affected by General Economic Conditions – Prolonged severe adverse domestic and global economic conditions or disruptions of financial and credit markets may affect the producers and consumers of the commodities we carry and may have a material adverse effect on our access to liquidity and our results of operations and financial condition.

We Face Competition from Other Railroads and Other Transportation Providers – We face competition from other railroads, motor carriers, ships, barges, and pipelines. In addition to price competition, we face competition with respect to transit times and quality and reliability of service. We must build or acquire and maintain our rail system, while trucks, barges and maritime operators are able to use public rights-of-way maintained by public entities. Any future improvements or expenditures materially increasing the quality or reducing the cost of alternative modes of transportation, or legislation that eliminates or significantly increases the size or weight limitations currently applicable to motor carriers, could have a material adverse effect on our results of operations, financial condition, and liquidity. Additionally, any future consolidation of the rail industry could materially affect the competitive environment in which we operate.

We Rely on Technology and Technology Improvements in Our Business Operations – We rely on information technology in all aspects of our business. If we do not have sufficient capital to acquire new technology or if we are unable to develop or implement new technology such as PTC or the latest version of our transportation control systems, we may suffer a competitive disadvantage within the rail industry and with companies providing other modes of transportation service, which could have a material adverse effect on our results of operations, financial condition, and liquidity. Additionally, if a cyber attack or other event causes significant disruption or failure of one or more of our information technology systems, including computer hardware, software, and communications equipment, we could suffer a significant service interruption, safety failure, security breach, or other operational difficulties, which could have a material adverse impact on our results of operations, financial condition, and liquidity.

We May Be Subject to Various Claims and Lawsuits That Could Result in Significant Expenditures – As a railroad with operations in densely populated urban areas and other cities and a vast rail network, we are exposed to the potential for various claims and litigation related to labor and employment, personal injury, property damage, environmental liability, and other matters. Any material changes to litigation trends or a catastrophic rail accident or series of accidents involving any or all of property damage, personal injury, and environmental liability that exceed our insurance coverage for such risks could have a material adverse effect on our results of operations, financial condition, and liquidity.

We Are Subject to Significant Environmental Laws and Regulations – Due to the nature of the railroad business, our operations are subject to extensive federal, state, and local environmental laws and regulations concerning, among other things, emissions to the air; discharges to waters; handling, storage, transportation, disposal of waste and other materials; and hazardous material or petroleum releases. We generate and transport hazardous and non-hazardous waste in our operations, and we did so in our former operations. Environmental liability can extend to previously owned or operated properties, leased properties, and properties owned by third parties, as well as to properties we currently own. Environmental liabilities have arisen and may also arise from claims asserted by adjacent landowners or other third parties in toxic tort litigation. We have been and may be subject to allegations or findings that we have violated, or are strictly liable under, these laws or regulations. We currently have certain obligations at existing sites for investigation, remediation and monitoring, and we likely will have obligations at other sites in the future. Liabilities for these obligations affect our estimate based on our experience and, as necessary, the advice and assistance of our consultants. However, actual costs may vary from our estimates due to any or all of several factors, including changes to environmental laws or interpretations of such laws, technological changes affecting investigations and remediation, the participation and financial viability of other parties responsible for any such liability and the corrective action or change to corrective actions required to remediate any existing or future sites. We could incur significant costs as a result of any of the foregoing, and we may be required to incur significant expenses to investigate and remediate known, unknown, or future environmental contamination, which could have a material

adverse effect on our results of operations, financial condition, and liquidity.

We May Be Affected by Climate Change and Market or Regulatory Responses to Climate Change – Climate change, including the impact of global warming, could have a material adverse effect on our results of operations, financial condition, and liquidity. Restrictions, caps, taxes, or other controls on emissions of greenhouse gasses, including diesel exhaust, could significantly increase our operating costs. Restrictions on emissions could also affect our customers that (a) use commodities that we carry to produce energy, (b) use significant amounts of energy in producing or delivering the commodities we carry, or (c) manufacture or produce goods that consume significant amounts of energy or burn fossil fuels, including chemical producers, farmers and food producers, and automakers and other manufacturers. Significant cost increases, government regulation, or changes of consumer preferences for goods or services relating to alternative sources of energy or emissions reductions could materially affect the markets for the commodities we carry, which in turn could have a material adverse effect on our results of operations, financial condition, and liquidity. Government incentives encouraging the use of alternative sources of

energy could also affect certain of our customers and the markets for certain of the commodities we carry in an unpredictable manner that could alter our traffic patterns, including, for example, increasing royalties charged to producers of PRB coal by the U.S. Department of Interior and the impacts of ethanol incentives on farming and ethanol producers. Finally, we could face increased costs related to defending and resolving legal claims and other litigation related to climate change and the alleged impact of our operations on climate change. Any of these factors, individually or in operation with one or more of the other factors, or other unforeseen impacts of climate change could reduce the amount of traffic we handle and have a material adverse effect on our results of operations, financial condition, and liquidity.

Severe Weather Could Result in Significant Business Interruptions and Expenditures – As a railroad with a vast network, we are exposed to severe weather conditions and other natural phenomena, including earthquakes, hurricanes, fires, floods, mudslides or landslides, extreme temperatures, and significant precipitation. Line outages and other interruptions caused by these conditions can adversely affect our entire rail network and can adversely affect revenue, costs, and liabilities, which could have a material adverse effect on our results of operations, financial condition, and liquidity.

Strikes or Work Stoppages Could Adversely Affect Our Operations – The U.S. Class I railroads are party to collective bargaining agreements with various labor unions. The majority of our employees belong to labor unions and are subject to these agreements. Disputes with regard to the terms of these agreements or our potential inability to negotiate acceptable contracts with these unions could result in, among other things, strikes, work stoppages, slowdowns, or lockouts, which could cause a significant disruption of our operations and have a material adverse effect on our results of operations, financial condition, and liquidity. Additionally, future national labor agreements, or renegotiation of labor agreements or provisions of labor agreements, could compromise our service reliability or significantly increase our costs for health care, wages, and other benefits, which could have a material adverse impact on our results of operations, financial condition, and liquidity. Labor disputes, work stoppages, slowdowns or lockouts at loading/unloading facilities, ports or other transport access points could compromise our service reliability and have a material adverse impact on our results of operations, financial condition, and liquidity. Labor disputes, work stoppages, slowdowns or lockouts by employees of our customers or our suppliers could compromise our service reliability and have a material adverse impact on our results of operations, financial condition, and liquidity.

The Availability of Qualified Personnel Could Adversely Affect Our Operations – Changes in demographics, training requirements, and the availability of qualified personnel could negatively affect our ability to meet demand for rail service. Unpredictable increases in demand for rail services and a lack of network fluidity may exacerbate such risks, which could have a negative impact on our operational efficiency and otherwise have a material adverse effect on our results of operations, financial condition, and liquidity.

We May Be Affected By Fluctuating Fuel Prices – Fuel costs constitute a significant portion of our transportation expenses. Diesel fuel prices can be subject to dramatic fluctuations, and significant price increases could have a material adverse effect on our operating results. Although we currently are able to recover a significant amount of our fuel expenses from our customers through revenue from fuel surcharges, we cannot be certain that we will always be able to mitigate rising or elevated fuel costs through our fuel surcharges. Additionally, future market conditions or legislative or regulatory activities could adversely affect our ability to apply fuel surcharges or adequately recover increased fuel costs through fuel surcharges. As fuel prices fluctuate, our fuel surcharge programs trail such

fluctuations in fuel price by approximately two months, and may be a significant source of quarter-over-quarter and year-over-year volatility, particularly in periods of rapidly changing prices. International, political, and economic factors, events and conditions affect the volatility of fuel prices and supplies. Weather can also affect fuel supplies and limit domestic refining capacity. A severe shortage of, or disruption to, domestic fuel supplies could have a material adverse effect on our results of operations, financial condition, and liquidity. Alternatively, lower fuel prices could have a positive impact on the economy by increasing consumer discretionary spending that potentially could increase demand for various consumer products we transport. However, lower fuel prices could have a negative impact on other commodities we transport, such as coal and domestic drilling-related shipments, which could have a material adverse effect on our results of operations, financial condition, and liquidity.

We Utilize Capital Markets – Due to the significant capital expenditures required to operate and maintain a safe and efficient railroad, we rely on the capital markets to provide some of our capital requirements. We utilize long-term debt instruments, bank financing and commercial paper from time-to-time, and we pledge certain of our receivables. Significant instability or disruptions of the capital markets, including the credit markets, or deterioration of our financial condition due to internal or external factors could restrict or prohibit

our access to, and significantly increase the cost of, commercial paper and other financing sources, including bank credit facilities and the issuance of long-term debt, including corporate bonds. A significant deterioration of our financial condition could result in a reduction of our credit rating to below investment grade, which could restrict, or at certain credit levels below investment grade may prohibit us, from utilizing our current receivables securitization facility. This may also limit our access to external sources of capital and significantly increase the costs of short and long-term debt financing.

A Significant Portion of Our Revenue Involves Transportation of Commodities to and from International Markets – Although revenues from our operations are attributable to transportation services provided in the U.S., a significant portion of our revenues involves the transportation of commodities to and from international markets, including Mexico and Southeast Asia, by various carriers and, at times, various modes of transportation. Significant and sustained interruptions of trade with Mexico or countries in Southeast Asia, including China, could adversely affect customers and other entities that, directly or indirectly, purchase or rely on rail transportation services in the U.S. as part of their operations, and any such interruptions could have a material adverse effect on our results of operations, financial condition and liquidity. Any one or more of the following could cause a significant and sustained interruption of trade with Mexico or countries in Southeast Asia: (a) a deterioration of security for international trade and businesses; (b) the adverse impact of new laws, rules and regulations or the interpretation of laws, rules and regulations by government entities, courts or regulatory bodies, including modifications to the North American Free Trade Agreement (NAFTA) and actions of taxing authorities that affect our customers doing business in foreign countries; (c) any significant adverse economic developments, such as extended periods of high inflation, material disruptions in the banking sector or in the capital markets of these foreign countries, and significant changes in the valuation of the currencies of these foreign countries that could materially affect the cost or value of imports or exports; (d) shifts in patterns of international trade that adversely affect import and export markets; and (e) a material reduction in foreign direct investment in these countries.

We Are Subject to Legislative, Regulatory, and Legal Developments Involving Taxes – Taxes are a significant part of our expenses. We are subject to U.S. federal, state, and foreign income, payroll, property, sales and use, fuel, and other types of taxes. Changes in tax rates, such as those included in the recently enacted U.S. Tax Cuts and Jobs Act, enactment of new tax laws, revisions of tax regulations, and claims or litigation with taxing authorities could result in a material effect to our results of operations, financial condition, and liquidity. Higher tax rates could have a material adverse effect on our results of operations, financial condition, and liquidity.

We Are Dependent on Certain Key Suppliers of Locomotives and Rail – Due to the capital intensive nature and sophistication of locomotive equipment, parts and maintenance, potential new suppliers face high barriers to entry. Therefore, if one of the domestic suppliers of high horsepower locomotives discontinues manufacturing locomotives, supplying parts or providing maintenance for any reason, including bankruptcy or insolvency, we could experience significant cost increases and reduced availability of the locomotives that are necessary for our operations. Additionally, for a high percentage of our rail purchases, we utilize two steel producers (one domestic and one international) that meet our specifications. Rail is critical to our operations for rail replacement programs, maintenance, and for adding additional network capacity, new rail and storage yards, and expansions of existing facilities. This industry similarly has high barriers to entry, and if one of these suppliers discontinues operations for any reason, including bankruptcy or insolvency, we could experience both significant cost increases for rail purchases and difficulty obtaining sufficient rail for maintenance and other projects.

We May Be Affected by Acts of Terrorism, War, or Risk of War – Our rail lines, facilities, and equipment, including rail cars carrying hazardous materials, could be direct targets or indirect casualties of terrorist attacks. Terrorist attacks, or other similar events, any government response thereto, and war or risk of war may adversely affect our results of operations, financial condition, and liquidity. In addition, insurance premiums for some or all of our current coverages could increase dramatically, or certain coverages may not be available to us in the future.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We employ a variety of assets in the management and operation of our rail business. Our rail network covers 23 states in the western two-thirds of the U.S.

TRACK

Our rail network includes 32,122 route miles. We own 26,042 miles and operate on the remainder pursuant to trackage rights or leases. The following table describes track miles at December 31, 2017, and 2016:

	2017	2016
Route	32,122	32,070
Other main line	7,107	7,070
Passing lines and turnouts	3,255	3,245
Switching and classification yard lines	9,199	9,115
Total miles	51,683	51,500

HEADQUARTERS BUILDING

We own our headquarters building in Omaha, Nebraska. The facility has 1.2 million square feet of space that can accommodate approximately 4,000 employees.

HARRIMAN DISPATCHING CENTER

The Harriman Dispatching Center (HDC), located in Omaha, Nebraska, is our primary dispatching facility. It is linked to regional dispatching and locomotive management facilities at various locations along our network. HDC employees coordinate moves of locomotives and trains, manage traffic and train crews on

our network, and coordinate interchanges with other railroads. Approximately 900 employees currently work on-site in the facility. In the event of a disruption of operations at HDC due to a cyber attack, flooding or severe weather or other event, we maintain the capability to conduct critical operations at back-up facilities in different locations.

RAIL FACILITIES

In addition to our track structure, we operate numerous facilities, including terminals for intermodal and other freight; rail yards for building trains (classification yards), switching, storage-in-transit (the temporary storage of customer goods in rail cars prior to shipment) and other activities; offices to administer and manage our operations; dispatching centers to direct traffic on our rail network; crew quarters to house train crews along our network; and shops and other facilities for fueling, maintenance, and repair of locomotives and repair and maintenance of rail cars and other equipment. The following table includes the major yards and terminals on our system:

Major Classification Yards	Major Intermodal Terminals
North Platte, Nebraska	Joliet (Global 4), Illinois
North Little Rock, Arkansas	East Los Angeles, California
Englewood (Houston), Texas	ICTF (Los Angeles), California
Fort Worth, Texas	Global I (Chicago), Illinois
Livonia, Louisiana	DIT (Dallas), Texas
Proviso (Chicago), Illinois	Mesquite, Texas
Roseville, California	City of Industry, California
West Colton, California	Global II (Chicago), Illinois
Pine Bluff, Arkansas	Marion (Memphis), Tennessee
Neff (Kansas City), Missouri	Lathrop, California

RAIL EQUIPMENT

Our equipment includes owned and leased locomotives and rail cars; heavy maintenance equipment and machinery; other equipment and tools in our shops, offices, and facilities; and vehicles for maintenance, transportation of crews, and other activities. As of December 31, 2017, we owned or leased the following units of equipment:

Average

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Locomotives	Owned	Leased	Total	Age (yrs.)
Multiple purpose	6,392	1,852	8,244	20.0
Switching	213	12	225	36.9
Other	47	57	104	38.5
Total locomotives	6,652	1,921	8,573	N/A

	Owned	Leased	Total	Average Age (yrs.)
Freight cars				
Covered hoppers	13,804	12,629	26,433	20.4
Open hoppers	6,897	2,427	9,324	30.9
Gondolas	5,798	2,772	8,570	26.7
Boxcars	2,957	6,780	9,737	36.1
Refrigerated cars	2,600	3,486	6,086	25.4
Flat cars	2,533	1,147	3,680	32.4
Other	8	353	361	29.9
Total freight cars	34,597	29,594	64,191	N/A

				Average
Highway revenue equipment	Owned	Leased	Total	Age (yrs.)
Containers	38,655	15,327	53,982	8.8
Chassis	23,711	21,771	45,482	10.9
Total highway revenue equipment	62,366	37,098	99,464	N/A

CAPITAL EXPENDITURES

Our rail network requires significant annual capital investments for replacement, improvement, and expansion. These investments enhance safety, support the transportation needs of our customers, and improve our operational efficiency. Additionally, we add new locomotives and freight cars to our fleet to replace older, less efficient equipment, to support growth and customer demand, and to reduce our impact on the environment through the acquisition of more fuel-efficient and low-emission locomotives.

2017 Capital Program – During 2017, our capital program totaled approximately \$3.1 billion. (See the cash capital expenditures table in Management’s Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources, Item 7.)

2018 Capital Plan – In 2018, we expect our capital plan to be approximately \$3.3 billion. The plan includes expenditures to renew and improve our existing infrastructure as well as new capacity investments, including initial construction work on a new classification yard in our Southern Region. In addition, expenditures will be made for PTC, locomotives, intermodal containers and chassis, and freight cars. We may revise our 2018 capital plan if business conditions warrant or if new laws or regulations affect our ability to generate sufficient returns on these investments. (See discussion of our 2018 capital plan in Management’s Discussion and Analysis of Financial Condition and Results of Operations – 2018 Outlook, Item 7.)

OTHER

Equipment Encumbrances – Equipment with a carrying value of approximately \$2.0 billion and \$2.3 billion at December 31, 2017, and 2016, respectively served as collateral for capital leases and other types of equipment obligations in accordance with the secured financing arrangements utilized to acquire or refinance such railroad equipment.

As a result of the merger of Missouri Pacific Railroad Company (MPRR) with and into UPRR on January 1, 1997, and pursuant to the underlying indentures for the MPRR mortgage bonds, UPRR must maintain the same value of assets after the merger in order to comply with the security requirements of the mortgage bonds. As of the merger

date, the value of the MPRR assets that secured the mortgage bonds was approximately \$6.0 billion. In accordance with the terms of the indentures, this collateral value must be maintained during the entire term of the mortgage bonds irrespective of the outstanding balance of such bonds.

Environmental Matters – Certain of our properties are subject to federal, state, and local laws and regulations governing the protection of the environment. (See discussion of environmental issues in Business – Governmental and Environmental Regulation, Item 1, Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies – Environmental, Item 7, and Note 18 of the Consolidated Financial Statements.)

Item 3. Legal Proceedings

From time to time, we are involved in legal proceedings, claims, and litigation that occur in connection with our business. We routinely assess our liabilities and contingencies in connection with these matters based upon the latest available information and, when necessary, we seek input from our third-party advisors when making these assessments. Consistent with SEC rules and requirements, we describe below material pending legal proceedings (other than ordinary routine litigation incidental to our business), material proceedings known to be contemplated by governmental authorities, other proceedings arising under federal, state, or local environmental laws and regulations (including governmental proceedings involving potential fines, penalties, or other monetary sanctions in excess of \$100,000), and such other pending matters that we may determine to be appropriate.

ENVIRONMENTAL MATTERS

We receive notices from the EPA and state environmental agencies alleging that we are or may be liable under federal or state environmental laws for remediation costs at various sites throughout the U.S., including sites on the Superfund National Priorities List or state superfund lists. We cannot predict the ultimate impact of these proceedings and suits because of the number of potentially responsible parties involved, the degree of contamination by various wastes, the scarcity and quality of volumetric data related to many of the sites, and the speculative nature of remediation costs.

On May 2, 2015, a UPRR train en route from Chicago, IL. to St. Louis, MO. experienced an accidental release of diesel fuel in the vicinity of Sidney, IL. It is believed that the release was caused by a puncture to a fuel tank under one or more of the locomotives attached to the train. The impacted fuel tank(s) released the majority of their contents onto the ground, approximately 400 feet from an unnamed creek. Some of the fuel migrated into that creek, which discharges to the Salt Fork River. We immediately notified federal, state and local authorities and dispatched our own emergency response resources to the scene. On May 29, 2015, we entered into an agreed-upon interim order to perform a comprehensive site investigation and remedial measures at the release site. On March 13, 2017, the State of Illinois issued a demand for \$125,000 in civil penalties as part of the ongoing enforcement action. We are currently evaluating the State's demand.

Information concerning environmental claims and contingencies and estimated remediation costs is set forth in Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies – Environmental, Item 7. See also Note 18 of the Consolidated Financial Statements.

OTHER MATTERS

Antitrust Litigation – As we reported in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2007, 20 rail shippers (many of whom are represented by the same law firms) filed virtually identical antitrust lawsuits in various federal district courts against us and four other Class I railroads in the U.S. Currently, UPRR and three other Class I railroads are the named defendants in the lawsuit. The original plaintiff filed the first of these claims in the U.S. District Court in New Jersey on May 14, 2007. The number of complaints reached a total of 30. These suits allege that the named railroads engaged in price-fixing by establishing common fuel surcharges for certain rail traffic.

On June 21, 2012, Judge Friedman issued a decision that certified a class of plaintiffs with eight named plaintiff representatives. The decision included in the class all shippers that paid a rate-based fuel surcharge to any one of the defendant railroads for rate-unregulated rail transportation from July 1, 2003, through December 31, 2008. On July 5, 2012, the defendant railroads filed a petition with the U.S. Court of Appeals for the District of Columbia requesting that the court review the class certification ruling. On August 9, 2013, the Circuit Court vacated the class certification decision and remanded the case to the district court to reconsider the class certification decision in light of a recent Supreme Court case and incomplete consideration of errors in the expert report of the plaintiffs. After reviewing an intervening case, supplemental expert materials and related briefing from the parties, Judge Friedman scheduled and

completed a new class certification hearing during the week of September 26, 2016. On October 10, 2017, the parties received a ruling from Judge Friedman denying class certification. Plaintiffs have sought appellate review of that ruling and on December 20, 2017, were granted the right of an interlocutory appeal by the U.S. Court of Appeals for the District of Columbia Circuit.

As we reported in our Current Report on Form 8-K, filed on June 10, 2011, the Railroad received a complaint filed in the U.S. District Court for the District of Columbia on June 7, 2011, by Oxbow Carbon & Minerals LLC and related entities (Oxbow). The parties are currently conducting discovery in this matter. For additional information on Oxbow, please refer to Item 3. Legal Proceedings, under Other Matters, Antitrust Litigation in our Annual Report on Form 10-K for the year ended December 31, 2016.

We continue to deny the allegations that our fuel surcharge programs violate the antitrust laws or any other laws. We believe that these lawsuits are without merit, and we will vigorously defend our actions. Therefore, we currently believe that these matters will not have a material adverse effect on any of our results of operations, financial condition, and liquidity.

Item 4. Mine Safety Disclosures

Not applicable.

Executive Officers of the Registrant and Principal Executive Officers of Subsidiaries

The Board of Directors typically elects and designates our executive officers on an annual basis at the board meeting held in conjunction with the Annual Meeting of Shareholders, and they hold office until their successors are elected. Executive officers also may be elected and designated throughout the year, as the Board of Directors considers appropriate. There are no family relationships among the officers, nor is there any arrangement or understanding between any officer and any other person pursuant to which the officer was selected. The following table sets forth certain information current as of February 9, 2018, relating to the executive officers.

Name	Position	Age	Business Experience During Past Five Years
Lance M. Fritz	Chairman, President and Chief Executive Officer of UPC and the Railroad	55	[1]
Robert M. Knight, Jr.	Executive Vice President and Chief Financial Officer of UPC and the Railroad	60	Current Position
Rhonda S. Ferguson	Executive Vice President, Chief Legal Officer and Corporate Secretary of UPC and the Railroad	48	[2]
Todd M. Rynaski	Vice President and Controller of UPC and Chief Accounting Officer and Controller of the Railroad	47	[3]
Cameron A. Scott	Executive Vice President and Chief Operating Officer of the Railroad	55	[4]
Elizabeth F. Whited	Executive Vice President and Chief Marketing Officer of the Railroad	52	[5]

[1] On July 30, 2015, Mr. Fritz was named Chairman of the Board of UPC and the Railroad effective October 1, 2015. Mr. Fritz was elected President and Chief Executive Officer of UPC and the Railroad effective February 5, 2015. Previously, Mr. Fritz was President and Chief Operating Officer of the Railroad effective February 6, 2014, Executive Vice President – Operations of the Railroad effective September 1, 2010, and Vice President – Operations of the Railroad effective January 1, 2010.

[2] Ms. Ferguson was elected Corporate Secretary of UPC and the Railroad effective December 1, 2017, and Executive Vice President and Chief Legal Officer of UPC and the Railroad effective July 11, 2016. She previously was Vice President, Corporate Secretary and Chief Ethics Officer of FirstEnergy Corp. since 2007.

[3] Mr. Rynaski was elected Vice President and Controller of UPC and Chief Accounting Officer and Controller of the Railroad effective September 1, 2015. He previously was Assistant Vice President – Accounting of the Railroad effective January 1, 2014, and Assistant Vice President – Financial Reporting and Analysis effective April 1, 2011.

[4] Mr. Scott was elected to his current position effective February 6, 2014. He previously was Vice President Network Planning and Operations effective June 30, 2012.

[5] Ms. Whited was elected Executive Vice President and Chief Marketing Officer effective December 1, 2016. She previously was Vice President and General Manager – Chemicals effective October 1, 2012.

PART II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Our common stock is traded on the New York Stock Exchange (NYSE) under the symbol "UNP". The following table presents the dividends declared and the high and low prices of our common stock for each of the indicated quarters.

2017 - Dollars Per Share	Q1	Q2	Q3	Q4
Dividends	\$ 0.605	\$ 0.605	\$ 0.605	\$ 0.665
Common stock price:				
High	111.38	115.15	116.93	136.32
Low	101.20	104.12	101.06	108.71

2016 - Dollars Per Share	Q1	Q2	Q3	Q4
Dividends	\$ 0.55	\$ 0.55	\$ 0.55	\$ 0.605
Common stock price:				
High	85.30	90.14	98.00	106.62
Low	67.06	77.29	86.01	87.06

At February 2, 2018, there were 779,305,276 shares of common stock outstanding and 30,653 common shareholders of record. On that date, the closing price of the common stock on the NYSE was \$129.36. We paid dividends to our common shareholders during each of the past 118 years. We declared dividends totaling \$1,982 million in 2017 and \$1,879 million in 2016. On February 8, 2018, we increased the quarterly dividend to \$0.73 per share, payable on March 30, 2018, to shareholders of record on February 28, 2018. We are subject to certain restrictions regarding retained earnings with respect to the payment of cash dividends to our shareholders. The amount of retained earnings available for dividends increased to \$16.4 billion at December 31, 2017, from \$12.4 billion at December 31, 2016. (See discussion of this restriction in Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources, Item 7.) We do not believe the restriction on retained earnings will affect our ability to pay dividends, and we currently expect to pay dividends in 2018.

Comparison Over One- and Three-Year Periods – The following table presents the cumulative total shareholder returns, assuming reinvestment of dividends, over one- and three-year periods for the Corporation (UNP), a peer group index

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(comprised of CSX Corporation and Norfolk Southern Corporation), the Dow Jones Transportation Index (DJ Trans), and the Standard & Poor's 500 Stock Index (S&P 500).

Period	UNP	Peer Group	DJ Trans	S&P 500
1 Year (2017)	32.2 %	46.5 %	19.0 %	21.8 %
3 Year (2015 - 2017)	20.7	52.4	21.2	38.3

Five-Year Performance Comparison – The following graph provides an indicator of cumulative total shareholder returns for the Corporation as compared to the peer group index (described above), the DJ Trans, and the S&P 500. The graph assumes that \$100 was invested in the common stock of Union Pacific Corporation and each index on December 31, 2012 and that all dividends were reinvested. The information below is historical in nature and is not necessarily indicative of future performance.

Purchases of Equity Securities – During 2017, we repurchased 37,122,405 shares of our common stock at an average price of \$110.50. The following table presents common stock repurchases during each month for the fourth quarter of 2017:

Period	Total Number of Shares Purchased [a]	Average Price Paid Per Share	Total Number of Shares Purchased as Part of a Publicly Announced Plan or Program [b]	Maximum Number of Shares Remaining Under the Plan or Program [b]
Oct. 1 through Oct. 31	3,831,636	\$ 113.61	3,800,000	89,078,662
Nov. 1 through Nov. 30	3,005,225	117.07	2,937,410	86,141,252
Dec. 1 through Dec. 31	2,718,319	130.76	2,494,100	83,647,152
Total	9,555,180	\$ 119.58	9,231,510	N/A

[a] Total number of shares purchased during the quarter includes approximately 323,670 shares delivered or attested to UPC by employees to pay stock option exercise prices, satisfy excess tax withholding obligations for stock option exercises or vesting of retention units, and pay withholding obligations for vesting of retention shares.

[b] Effective January 1, 2017, our Board of Directors authorized the repurchase of up to 120 million shares of our common stock by December 31, 2020. These repurchases may be made on the open market or through other transactions. Our management has sole discretion with respect to determining the timing and amount of these transactions.

Item 6. Selected Financial Data

The following table presents as of, and for the years ended, December 31, our selected financial data for each of the last five years. The selected financial data should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations, Item 7, and with the Financial Statements and Supplementary Data, Item 8. The information below is historical in nature and is not necessarily indicative of future financial condition or results of operations.

Millions, Except per Share Amounts, Carloads, Employee Statistics, and Ratios	2017[a]	2016	2015	2014	2013
For the Year Ended December 31					
Operating revenues	21,240	\$ 19,941	\$ 21,813	\$ 23,988	\$ 21,963
[b] Operating income	8,061	7,272	8,052	8,753	7,446
Net income	10,712	4,233	4,772	5,180	4,388
Earnings per share - basic	13.42	5.09	5.51	5.77	4.74
[c] Earnings per share - diluted	13.36	5.07	5.49	5.75	4.71
[c] Dividends declared per share	2.48	2.255	2.20	1.91	1.48

[c] Cash provided by operating activities	7,230	7,525	7,344	7,385	6,823
Cash used in investing activities	(3,086)	(3,393)	(4,476)	(4,249)	(3,405)
Cash used in financing activities	(4,146)	(4,246)	(3,063)	(2,982)	(3,049)
Cash used for common share repurchases	(4,013)	(3,105)	(3,465)	(3,225)	(2,218)
At December 31					
Total assets	\$ 57,806	\$ 55,718	\$ 54,600	\$ 52,372	\$ 49,410
Long-term obligations	29,011	32,146	30,692	27,419	24,395
[d] Debt due after one year	16,144	14,249	13,607	10,952	8,820
Common shareholders' equity	24,856	19,932	20,702	21,189	21,225
Additional Data					
Freight revenue	\$ 19,837	\$ 18,601	\$ 20,397	\$ 22,560	\$ 20,684
[b] Revenue carloads (units) (000)	8,588	8,442	9,062	9,625	9,022
Operating ratio (%) [e]	62.0	63.5	63.1	63.5	66.1
Average employees (000)	42.0	42.9	47.5	47.2	46.4

Financial Ratios (%)					
Debt to capital [f]	40.5	43.0	40.7	35.0	31.0
Return on average common shareholders' equity [g]	47.8	20.8	22.8	24.4	21.4

[a] 2017 includes a \$5.9 billion non-cash reduction to income tax expense and \$212 million non-cash reduction to operating expenses related to the Tax Cuts and Jobs Act enacted on December 22, 2017.

[b] Includes fuel surcharge revenue of \$966 million, \$560 million, \$1.3 billion, \$2.8 billion, and \$2.6 billion, for 2017, 2016, 2015, 2014, and 2013, respectively, which partially offsets increased operating expenses for fuel. (See further discussion in Management's Discussion and Analysis of Financial Condition and Results of Operations – Results of Operations – Operating Revenues, Item 7.)

[c] Earnings per share and dividends declared per share are retroactively adjusted to reflect the June 6, 2014 stock split.

[d] Long-term obligations is determined as follows: total liabilities less current liabilities.

[e] Operating ratio is defined as operating expenses divided by operating revenues.

[f] Debt to capital is determined as follows: total debt divided by total debt plus common shareholders' equity.

[g] Return on average common shareholders' equity is determined as follows: Net income divided by average common shareholders' equity.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with the Consolidated Financial Statements and applicable notes to the Financial Statements and Supplementary Data, Item 8, and other information in this report, including Risk Factors set forth in Item 1A and Critical Accounting Policies and Cautionary Information at the end of this Item 7.

The Railroad, along with its subsidiaries and rail affiliates, is our one reportable business segment. Although revenue is analyzed by commodity, we analyze the net financial results of the Railroad as one segment due to the integrated nature of the rail network.

EXECUTIVE SUMMARY

2017 Results

- Safety – During 2017, we continued our focus on safety to reduce risk and eliminate incidents for our employees, our customers and the public. We finished 2017 with a 3% improvement in our reportable derailment incident rate per million train miles compared to 2016. Although reportable personal injury incidents per 200,000 employee-hours increased 5% from last year's record low, it is our second lowest year and a 9% decrease from 2015. Despite our efforts in 2017, our crossing incidents rate increased 5% from 2016. Overall, our 2017 safety results reflect our employees' dedication to our safety initiatives and our efforts to further engage the workforce through programs such as Courage to Care, Total Safety Culture, and UP Way (our continuous improvement culture).
- Network Operations – Our average train speed, as reported to the AAR, decreased 5% compared to 2016, and our average terminal dwell time increased 8% from 2016. Disruptions across our network, including the impact of Hurricane Harvey, negatively impacted network fluidity. Continued implementation and testing of Positive Train Control across a growing number of routes in our network also negatively impacted overall average train speed and terminal dwell. Network operational challenges in the latter part of the year also negatively impacted terminal dwell.
- Tax Reform – The Tax Cuts and Jobs Act (the "Tax Act") was enacted on December 22, 2017. The Tax Act reduced the federal income tax rate from 35% to 21% effective January 1, 2018. As a result, we remeasured our deferred tax assets and liabilities which resulted in a \$5.9 billion non-cash reduction in our income tax expense in 2017. In addition, we recognized a \$212 million non-cash reduction to operating expense related to income tax adjustments recognized at certain equity-method affiliates. See Note 8 of the Consolidated Financial Statements for additional information.

For comparability purposes, the following table reconciles our full year 2017 reported results under accounting principles generally accepted in the U.S. (GAAP) to our 2017 adjusted results (non-GAAP) for the tax related items described above. We believe the adjusted results provide relevant information to our investors as they more accurately reflect on-going financial performance. In addition, these measures should be considered in addition to, and not a substitute for operating income, income taxes, net income, diluted EPS, operating ratio, and effective tax rate.

Millions, Except Per Share Amounts and Percentages	Operating Income	Income Taxes	Net Income	Diluted EPS	Operating Ratio	Effective Tax Rate
2017 Reported results (GAAP)	\$ 8,061	\$ (3,080)	\$ 10,712	\$ 13.36	62.0 %	(40.4) %
Factors Affecting Comparability:						
Adjustments for Tax Cuts and Jobs Act						
Equity-method affiliates	(212)	(73)	(139)	(0.17)	1.0 pts	-
Deferred taxes	-	5,935	(5,935)	(7.40)	-	77.9
2017 Adjusted results (non-GAAP)	\$ 7,849	\$ 2,782	\$ 4,638	\$ 5.79	63.0 %	37.5 %
2016 Reported results (GAAP)	\$ 7,272	\$ 2,533	\$ 4,233	\$ 5.07	63.5 %	37.4 %

- 2017 Adjusted Results Non-GAAP – In 2017, we generated adjusted operating income of more than \$7.8 billion, an 8% increase compared to 2016. Volume growth of 2%, combined with core pricing and productivity gains, generated solid financial performance improvement and more than offset \$86 million of operating expense associated with our workforce reduction plan implemented in the third quarter of 2017. Our 2017 adjusted operating ratio was an all-time record 63.0%, improving 0.5 points from 2016.

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Adjusted net income of \$4.6 billion translated into adjusted earnings of \$5.79 per diluted share, a best-ever performance.

- Freight Revenues – Our freight revenues increased 7% year-over-year to \$19.8 billion driven by volume growth of 2%, higher fuel surcharge revenue, and core pricing gains. Growth in frac sand, coal, and intermodal shipments more than offset declines in grain, crude oil, finished vehicles, and rock shipments.

- Fuel Prices – Our average price of diesel fuel in 2017 was \$1.81 per gallon, an increase of 22% from 2016, as both crude oil and conversion spreads between crude oil and diesel increased in 2017. The higher price resulted in increased operating expenses of \$334 million (excluding any impact from year-over-year volume growth). Gross-ton miles increased 5%, which also drove higher fuel expense. Our fuel consumption rate, computed as gallons of fuel consumed divided by gross ton-miles in thousands, improved 2%.

- Free Cash Flow – Cash generated by operating activities totaled \$7.2 billion, yielding free cash flow of \$2.2 billion after reductions of \$3.1 billion for cash used in investing activities and \$2 billion in dividends, which included a 10% increase in our quarterly dividend per share from \$0.605 to \$0.665 declared and paid in the fourth quarter of 2017. Free cash flow is defined as cash provided by operating activities less cash used in investing activities and dividends paid.

Free cash flow is not considered a financial measure under GAAP by SEC Regulation G and Item 10 of SEC Regulation S-K and may not be defined and calculated by other companies in the same manner. We believe free cash flow is important to management and investors in evaluating our financial performance and measures our ability to generate cash without additional external financings. Free cash flow should be considered in addition to, rather than as a substitute for, cash provided by operating activities. The following table reconciles cash provided by operating activities (GAAP measure) to free cash flow (non-GAAP measure):

Millions	2017	2016	2015
Cash provided by operating activities	\$ 7,230	\$ 7,525	\$ 7,344
Cash used in investing activities	(3,086)	(3,393)	(4,476)
Dividends paid	(1,982)	(1,879)	(2,344)
Free cash flow	\$ 2,162	\$ 2,253	\$ 524

2018 Outlook

- Safety – Operating a safe railroad benefits all our constituents: our employees, customers, shareholders and the communities we serve. We will continue using a multi-faceted approach to safety, utilizing technology, risk assessment, training and employee engagement, quality control, and targeted capital investments. We will continue using and expanding the deployment of Total Safety Culture and Courage to Care throughout our operations, which allows us to identify and implement best practices for employee and operational safety. We will continue our efforts to increase detection of rail defects; improve or close crossings; and educate the public and law enforcement agencies about crossing safety through a combination of our own programs (including risk assessment strategies), industry programs and local community activities across our network.

- Network Operations – In 2018, we will continue to align resources with customer demand, maintain an efficient network, and ensure surge capability of our assets.
 - Fuel Prices – Fuel price projections for crude oil and natural gas continue to fluctuate in the current environment. We again could see volatile fuel prices during the year, as they are sensitive to global and U.S. domestic demand, refining capacity, geopolitical events, weather conditions and other factors. As prices fluctuate, there will be a timing impact on earnings, as our fuel surcharge programs trail increases or decreases in fuel price by approximately two months.

Lower fuel prices could have a positive impact on the economy by increasing consumer discretionary spending that potentially could increase demand for various consumer products that we transport. Alternatively, lower fuel prices could likely have a negative impact on other commodities such as coal and domestic drilling-related shipments.

- **Capital Plan** – In 2018, we expect our capital plan to be approximately \$3.3 billion, up around 5% compared to 2017. The plan includes expenditures to renew and improve our existing infrastructure as well as new capacity investments, including initial construction work on a new classification yard in our Southern Region. In addition, expenditures will be made for PTC, locomotives, intermodal containers and chassis, and freight cars. We expect to take delivery of approximately 60 new locomotives in 2018, which will complete our multi-year purchase commitments. The capital plan may be revised if business conditions warrant or if new laws or regulations affect our ability to generate sufficient returns on these investments. (See further discussion in this Item 7 under Liquidity and Capital Resources – Capital Plan.)
- **Financial Expectations** – Economic conditions in many of our market sectors continue to drive uncertainty with respect to our volume levels. We expect volume to grow in the low single digit range in 2018 compared to 2017, but it will depend on the overall economy and market conditions. One of the more significant uncertainties is the outlook for energy markets, which will bring both challenges and opportunities. In the current environment, we expect continued margin improvement driven by continued pricing opportunities, ongoing productivity initiatives, and the ability to leverage our resources and strengthen our franchise. Over the longer term, we expect the overall U.S. economy to continue to improve at a modest pace, with some markets outperforming others.
- **Tax Reform** – The Tax Act was enacted on December 22, 2017. The Tax Act reduced the federal income tax rate from 35% to 21% effective January 1, 2018. Due to the tax rate change, we expect to generate additional cash from operations in 2018 of approximately \$1 billion, assuming normal business conditions prevail. We will continue to evaluate the best use of that cash, which will include pursuing capital projects with adequate returns, and returning cash to shareholders through share repurchases and dividends.

RESULTS OF OPERATIONS

Operating Revenues

				% Change 2017 v	% Change 2016 v
Millions	2017	2016	2015	2016	2015
Freight revenues	\$ 19,837	\$ 18,601	\$ 20,397	7 %	(9) %
Other revenues	1,403	1,340	1,416	5 %	(5) %
Total	\$ 21,240	\$ 19,941	\$ 21,813	7 %	(9) %

We generate freight revenues by transporting freight or other materials from our six commodity groups. Freight revenues vary with volume (carloads) and average revenue per car (ARC). Changes in price, traffic mix and fuel surcharges drive ARC. We provide some of our customers with contractual incentives for meeting or exceeding specified cumulative volumes or shipping to and from specific locations, which we record as reductions to freight

revenues based on the actual or projected future shipments. We recognize freight revenues as shipments move from origin to destination. We allocate freight revenues between reporting periods based on the relative transit time in each reporting period and recognize expenses as we incur them.

Other revenues include revenues earned by our subsidiaries, revenues from commuter rail operations that we manage, accessorial revenues, which we earn when customers retain equipment owned or controlled by us or when we perform additional services such as switching or storage, and miscellaneous contract revenue. We recognize other revenues as we perform services or meet contractual obligations.

Freight revenues increased 7% year-over-year to \$19.8 billion driven by volume growth of 2%, higher fuel surcharge revenue, and core pricing gains. Growth in frac sand, coal, and intermodal shipments more than offset declines in grain, crude oil, finished vehicles, and rock shipments.

Freight revenues decreased 9% in 2016 compared to 2015 due to a 7% decline in carloadings, and lower fuel surcharge revenue, partially offset by core pricing gains. Volume declines in coal, intermodal, frac sand, crude oil, finished vehicles, and metals shipments more than offset volume growth in grain, automotive parts, and industrial chemicals shipments.

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Our fuel surcharge programs generated freight revenues of \$966 million, \$560 million, and \$1.3 billion in 2017, 2016, and 2015, respectively. Fuel surcharge revenue in 2017 increased \$406 million as a result of a 22% increase in fuel price and 2% growth in carloadings. Fuel surcharge revenue in 2016 decreased \$740 million as a result of a 20% decrease in fuel price, a 7% reduction in carloadings, and the lag impact on fuel surcharge (it can generally take up to two months for changing fuel prices to affect fuel surcharge recoveries).

In 2017, other revenue increased from 2016 due to higher revenues at our subsidiaries, primarily those that broker intermodal, transload, and refrigerated warehousing logistics services.

In 2016, other revenue decreased from 2015 due to lower revenues at our subsidiaries, primarily those that broker intermodal and transload services, and lower intermodal accessorial revenue and demurrage fees.

The following tables summarize the year-over-year changes in freight revenues, revenue carloads, and ARC by commodity type:

				%	%		
Freight Revenues				Change	Change		
				2017 v	2016 v		
Millions	2017	2016	2015	2016	2015		
Agricultural Products	\$ 3,685	\$ 3,625	\$ 3,581	2	% 1	%	
Automotive	1,998	2,000	2,154	-	(7)		
Chemicals	3,596	3,474	3,543	4	(2)		
Coal	2,645	2,440	3,237	8	(25)		
Industrial Products	4,078	3,348	3,808	22	(12)		
Intermodal	3,835	3,714	4,074	3	(9)		
Total	\$ 19,837	\$ 18,601	\$ 20,397	7	% (9)	%	

				%	%		
Revenue Carloads				Change	Change		
				2017 v	2016 v		
Thousands	2017	2016	2015	2016	2015		
Agricultural Products	958	980	941	(2)	% 4	%	
Automotive	838	863	863	(3)	-		
Chemicals	1,055	1,074	1,098	(2)	(2)		

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Coal	1,232	1,166	1,459	6	(20)
Industrial Products	1,227	1,097	1,213	12	(10)
Intermodal [a]	3,278	3,262	3,488	-	(6)
Total	8,588	8,442	9,062	2	% (7) %

				%	%
				Change	Change
				2017 v	2016 v
Average Revenue per Car	2017	2016	2015	2016	2015
Agricultural Products	\$ 3,847	\$ 3,702	\$ 3,805	4	(3) %
Automotive	2,384	2,317	2,498	3	(7)
Chemicals	3,410	3,234	3,227	5	-
Coal	2,146	2,092	2,218	3	(6)
Industrial Products	3,324	3,051	3,139	9	(3)
Intermodal [a]	1,170	1,138	1,168	3	(3)
Average	\$ 2,310	\$ 2,203	\$ 2,251	5	% (2) %

[a] Each intermodal container or trailer equals one carload.

Agricultural Products – Freight revenue from agricultural products increased compared to 2016 driven by core pricing gains and higher fuel surcharge revenue, partially offset by a 2% decrease in volume. Agricultural Grain and grain product shipments decreased 3% in 2017 compared to 2016. Strong export demand for wheat drove volume growth in the first half of the year, which was more than offset by declines of grain shipments in the second half of the year due to an abundance of global supply reducing U.S. grain competitiveness.

Freight revenue from agricultural products increased in 2016 compared to 2015 driven by volume growth and core pricing gains, partially offset by lower fuel surcharge revenue and mix of traffic. Grain shipments increased 11% in 2016 compared to 2015 due to strong export demand in the second half of the year. Market conditions in South America and ample supply of U.S. grains led to competitive U.S. pricing relative to the global market.

Automotive – Freight revenue from automotive shipments was flat compared to 2016 as core pricing gains and higher fuel surcharge revenue were offset by a 3% decline in volume and mix of traffic. Finished vehicle shipments fell 7% for the year resulting from lower domestic sales and reduced production for certain manufacturers. Automotive parts shipments grew 1% driven by continued growth in truck-to-rail conversions.

Freight revenue from automotive shipments decreased in 2016 compared to 2015 as a result of lower fuel surcharge revenue and mix of traffic, partially offset by core pricing gains. Volume was flat compared to 2015 as a 7% growth in automotive parts from truck-to-rail conversions was offset by a 5% decrease in finished vehicles resulting from a partial contract loss during the year. Overall U.S. vehicle production was flat compared to 2015.

Chemicals – Freight revenue from chemical shipments increased in 2017 versus 2016 due to core pricing gains, higher fuel surcharge revenue, and mix of traffic, which were partially offset by a 2% decrease in volume. Crude oil shipments declined significantly through the third quarter, resulting from continued low crude oil prices, regional pricing differences and available pipeline capacity. Conversely, shipments of refined petroleum products grew due to stronger demand. Fertilizer shipments also increased as a result of continued strength in potash exports.

Freight revenue from chemical shipments declined in 2016 versus 2015 due to volume declines and lower fuel surcharge revenue, which were partially offset by core pricing gains. Crude oil shipments declined significantly resulting from continued low crude oil prices, regional pricing differences and available pipeline capacity. Fertilizer shipments also declined due to weak world-wide demand for potash in the first half of the year and the strong U.S. dollar. These decreases were partially offset by growth in industrial chemical and liquid petroleum gas shipments.

Coal – Freight revenue from coal shipments increased in 2017 compared to 2016 driven by volume growth, 2017 Coal mix of traffic, and higher fuel surcharge revenue. Shipments out of the Powder River Basin (PRB) grew Carloads 5% in 2017 driven by strong growth in the first half of the year due to higher year-over-year natural gas prices and lower inventory levels at utilities. Shipments out of Colorado and Utah increased 7% compared to 2016 due to the same drivers, combined with stronger export demand.

Lower volume, lower fuel surcharge revenue, and mix of traffic resulted in a decline in freight revenue from coal shipments in 2016 compared to 2015. Shipments out of the Powder River Basin (PRB) declined 24% in 2016 due to high inventory levels at utilities and competitive natural gas prices. Shipments out of Colorado and Utah declined 15% compared to 2015 due to the same drivers, combined with lower international demand.

Industrial Products – Freight revenue from industrial products shipments increased in 2017 compared to 2016 due to a 12% increase in volume, core pricing gains, higher fuel surcharge revenue, and mix of traffic. Increased shale drilling activity and proppant intensity per drilling well drove substantial volume growth in frac sand shipments. Conversely, rock shipments declined 7% due to inclement weather in the West in the first half of the year, combined with decreased construction activity in Texas. Industrial Products Carloads

Freight revenue from industrial products shipments decreased in 2016 compared to 2015 due to volume declines, lower fuel surcharge revenue, and mix of traffic partially offset by core pricing gains. Declines in shale drilling activity, due to lower oil prices, negatively impacted non-metallic mineral (frac sand) shipments compared to 2015. Rock shipments also decreased as weather events and flooding in the Southern Region during the second and third quarters limited construction activity, thus limiting demand for transportation of materials. In addition, steel shipments declined as a result of reductions in shale drilling activity and strong import levels associated with the strength of the U.S. dollar.

Intermodal – Freight revenue from intermodal shipments increased in 2017 compared to 2016 primarily due to higher fuel surcharge revenue and core pricing gains. Volume was flat versus 2016, as a 1% growth in international shipments was muted by flat domestic shipments due to available truck capacity during most of 2017, offsetting a strong holiday shipping season in the fourth quarter. Intermodal Carloads

Freight revenue from intermodal shipments decreased in 2016 compared to 2015 due to lower volume and lower fuel surcharge revenue, which were partially offset by core pricing gains. Volume levels from international and domestic traffic decreased 11% and 2%, respectively, compared to last year due to weaker global trade activity, softer domestic sales, high retail inventories, and a customer bankruptcy.

Mexico Business – Each of our commodity groups includes revenue from shipments to and from Mexico. Freight revenue from Mexico business was \$2.3 billion in 2017, up 2% compared to 2016. Core pricing gains and higher fuel surcharge revenue more than offset the 1% volume decline. The decrease in volume was driven by lower shipments of automotive parts, partially offset by growth in coal and refined petroleum products shipments.

Freight revenue from Mexico business was \$2.2 billion in 2016, flat with 2015. Lower fuel surcharge revenue and mix of traffic offset the 4% of volume growth and core pricing gains. Volume growth was driven by Agricultural Products, Coal, and automotive parts shipments.

Operating Expenses

Millions	2017	2016	2015	% Change	
				2017 v 2016	2016 v 2015
Compensation and benefits	\$ 4,984	\$ 4,750	\$ 5,161	5 %	(8) %
Purchased services and materials	2,363	2,258	2,421	5	(7)
Depreciation	2,105	2,038	2,012	3	1
Fuel	1,891	1,489	2,013	27	(26)
Equipment and other rents	888	1,137	1,230	(22)	(8)
Other	948	997	924	(5)	8
Total	\$ 13,179	\$ 12,669	\$ 13,761	4 %	(8) %

Operating expenses increased \$510 million in 2017 compared to 2016 driven by higher fuel prices, inflation, \$86 million of expenses related to the third quarter workforce reduction plan, depreciation, contract services, and volume-related costs. Partially offsetting these increases was a \$212 million reduction to operating expense related to income tax adjustments at certain equity-method affiliates, continued productivity gains, lower locomotive and freight car lease expense, and lower environmental, personal injury, and joint facility costs.

2017
Operating
Expenses

Operating expenses decreased \$1.1 billion in 2016 compared to 2015 driven by lower fuel prices, volume-related savings, productivity gains and lower locomotive and freight car maintenance expense. These cost reductions were partially offset by inflation, depreciation, and higher environmental and other costs.

Compensation and Benefits – Compensation and benefits include wages, payroll taxes, health and welfare costs, pension costs, other postretirement benefits, and incentive costs. In 2017, expenses increased 5% compared to 2016, driven by general wage and benefit inflation, \$86 million of expenses associated with the workforce reduction plan, volume-related costs, and higher training expenses for trainmen, which were partially offset by resource productivity gains.

In 2016, expenses decreased 8% compared to 2015, driven by lower volume-related costs, productivity gains, and lower training expense. General wage and benefit inflation partially offset these decreases.

Purchased Services and Materials – Expense for purchased services and materials includes the costs of services purchased from outside contractors and other service providers (including equipment maintenance and contract expenses incurred by our subsidiaries for external transportation services); materials used to maintain the Railroad's lines, structures, and equipment; costs of operating facilities jointly used by UPRR and other railroads; transportation and lodging for train crew employees; trucking and contracting costs for intermodal containers; leased automobile maintenance expenses; and tools and supplies. Purchased services and materials increased 5% in 2017 compared to 2016 primarily due to volume-related costs (including higher subsidiary contract services) and Hurricane Harvey-related contract service costs, which were partially offset by lower joint facility expenses.

Purchased services and materials in 2016 decreased 7% compared to 2015 primarily due to lower volume-related costs and lower locomotive and freight car repair and maintenance expenses.

Fuel – Fuel includes locomotive fuel and gasoline for highway and non-highway vehicles and heavy equipment. Locomotive diesel fuel prices, which averaged \$1.81 per gallon (including taxes and transportation costs) in 2017, compared to \$1.48 per gallon in 2016, increased expenses \$334 million. In addition, fuel costs were higher as gross-ton miles increased 5% compared to 2016. The fuel consumption rate (c-rate), computed as gallons of fuel consumed divided by gross ton-miles in thousands, improved 2% compared to 2016.

Locomotive diesel fuel prices, which averaged \$1.48 per gallon (including taxes and transportation costs) in 2016, compared to \$1.84 per gallon in 2015, reduced expenses \$347 million. In addition, fuel costs were lower as gross-ton miles decreased 8%. The fuel consumption rate (c-rate), computed as gallons of fuel consumed divided by gross ton-miles in thousands, improved 1% compared to 2015.

Depreciation – The majority of depreciation relates to road property, including rail, ties, ballast, and other track material. A higher depreciable asset base, reflecting recent years' higher capital spending, increased depreciation expense in 2017 compared to 2016. This increase was partially offset by our recent depreciation studies that resulted in lower depreciation rates for some asset classes.

A larger depreciable asset base, reflecting higher capital spending in recent years, increased depreciation expense in 2016 compared to 2015. This increase was partially offset by our recent depreciation studies that resulted in lower depreciation rates for some asset classes.

Equipment and Other Rents – Equipment and other rents expense primarily includes rental expense that the Railroad pays for freight cars owned by other railroads or private companies; freight car, intermodal, and locomotive leases; and office and other rent expenses. Equity income from certain equity method investments is also included. Equipment and other rents expense decreased \$249 million compared to 2016. \$212 million of the reduction was due to income tax adjustments at certain equity-method affiliates. Lower locomotive and freight car lease expense also contributed to the year-over-year decrease. Conversely, increased car rent expense due to volume growth in certain markets partially offset these decreases.

Equipment and other rents expense decreased \$93 million in 2016 compared to 2015 as lower volume levels drove a reduction in car hire and locomotive lease expenses.

Other – Other expenses include state and local taxes, freight, equipment and property damage, utilities, insurance, personal injury, environmental, employee travel, telephone and cellular, computer software, bad debt, and other general expenses. Other expenses decreased 5% in 2017 compared to 2016 as a result of lower environmental

and personal injury expenses, and higher bad debt expense in 2016 resulting from a customer bankruptcy. Conversely, increased costs associated with destroyed equipment owned by third parties, and higher property and damaged freight costs partially offset these decreases.

Other expenses increased 8% in 2016 compared to 2015 as a result of higher environmental costs, state and local taxes, bad debt expense (customer bankruptcy), and the write-off of certain in-progress capital projects that were cancelled. These cost increases were partially offset by lower expenses for damaged freight, property, and equipment not owned by the Company.

Non-Operating Items

				%	%
				Change	Change
				2017 v	2016 v
Millions	2017	2016	2015	2016	2015
Other income	\$ 290	\$ 192	\$ 226	51 %	(15) %
Interest expense	(719)	(698)	(622)	3	12
Income tax benefit/(expense)	3,080	(2,533)	(2,884)F		(12) %

Other Income – Other income increased in 2017 compared to 2016 primarily as a result of a \$65 million gain on a litigation settlement for back rent and a \$57 million real estate sale gain, both recognized in the third quarter of 2017. Rental income also increased in 2017 compared to 2016.

Other income decreased in 2016 compared to 2015 primarily due to large real estate transactions: a \$113 million gain from a real estate sale in 2015, partially offset by \$67 million of gains from two real estate sales in 2016.

Interest Expense – Interest expense increased in 2017 compared to 2016 due to an increased weighted-average debt level of \$15.9 billion in 2017 from \$15.0 billion in 2016, partially offset by the impact of a lower effective interest rate of 4.6% in 2017 compared to 4.7% in 2016.

Interest expense increased in 2016 compared to 2015 due to an increased weighted-average debt level of \$15.0 billion in 2016 from \$13.0 billion in 2015, partially offset by the impact of a lower effective interest rate of 4.7% in 2016 compared to 4.8% in 2015.

Income Taxes – Income taxes were a benefit of \$3.1 billion in 2017 compared to expense of \$2.5 billion in 2016. The Tax Cuts and Jobs Act was enacted on December 22, 2017. The Tax Act reduced the federal income tax rate from 35% to 21% effective January 1, 2018. As a result, we remeasured our deferred tax assets and liabilities which resulted in a \$5.9 billion non-cash reduction in our income tax expense in 2017. Higher pre-tax income and an increase in the State of Illinois corporate tax rate effective July 1, 2017 modestly offset the impact of the deferred tax adjustment. Our effective tax rate for 2017 was (40.4%) compared to 37.4% in 2016.

Lower pre-tax income decreased income taxes in 2016 compared to 2015. Our effective tax rate for 2016 was 37.4% compared to 37.7% in 2015.

OTHER OPERATING/PERFORMANCE AND FINANCIAL STATISTICS

We report a number of key performance measures weekly to the Association of American Railroads. We provide this data on our website at www.up.com/investor/aar-stb_reports/index.htm.

Operating/Performance Statistics

Railroad performance measures are included in the table below:

				%	%		
				Change	Change		
				2017 v	2016 v		
	2017	2016	2015	2016	2015		
Average train speed (miles per hour)	25.4	26.6	25.4	(5) %	5 %		
Average terminal dwell time (hours)	30.3	28.1	29.3	8 %	(4) %		
Gross ton-miles (billions)	898.7	856.9	927.7	5 %	(8) %		
Revenue ton-miles (billions)	466.7	440.1	485.0	6 %	(9) %		
Operating ratio	62.0	63.5	63.1	(1.5)pts	0.4 pts		
Employees (average)	41,992	42,919	47,457	(2) %	(10)%		

Average Train Speed – Average train speed is calculated by dividing train miles by hours operated on our main lines between terminals. Average train speed, as reported to the Association of American Railroads, declined 5% in 2017 compared to 2016 as disruptions across our network, including the impact of Hurricane Harvey, negatively impacted network fluidity. Continued implementation and testing of Positive Train Control across a growing number of routes in our network combined with operational challenges also negatively impacted overall average train speed.

Average train speed improved 5% in 2016 compared to 2015. Velocity gains resulted from lower volumes, improved network fluidity and a strong resource position.

Average Terminal Dwell Time – Average terminal dwell time is the average time that a rail car spends at our terminals. Lower average terminal dwell time improves asset utilization and service. Average terminal dwell time increased 8% in 2017 compared to 2016 resulting from network disruptions and operational challenges which negatively impacted network fluidity.

Average terminal dwell time improved 4% in 2016 compared to 2015, reflecting the impact of lower volume and improved network operations.

Gross and Revenue Ton-Miles – Gross ton-miles are calculated by multiplying the weight of loaded and empty freight cars by the number of miles hauled. Revenue ton-miles are calculated by multiplying the

weight of freight by the number of tariff miles. Gross ton-miles and revenue ton-miles increased 5% and 6%, respectively in 2017 compared to 2016, resulting from a 2% increase in carloads. Changes in commodity mix drove the variances in year-over-year increases between gross ton-miles, revenue ton-miles, and carloads.

Gross ton-miles and revenue ton-miles decreased 8% and 9%, respectively in 2016 compared to 2015, resulting from a 7% decrease in carloads. Changes in commodity mix drove the variances in year-over-year declines between gross ton-miles, revenue ton-miles and carloads.

Operating Ratio – Operating ratio is our operating expenses reflected as a percentage of operating revenue. Our operating ratio improved 1.5 points to 62.0% in 2017 compared to 2016. Income tax adjustments at our equity-method affiliates drove one point of the improvement. Core pricing gains, volume leverage, and productivity savings more than offset higher inflation, \$86 million of costs associated with the workforce reduction plan, higher fuel prices, and other expenses to drive 0.5 points of operating ratio improvement.

Our operating ratio increased 0.4 points to 63.5% in 2016 compared to 2015. Core price improvements, network efficiencies, and productivity gains were more than offset by the impact of lower volume, inflation, and other costs.

Employees – Employee levels decreased 2% in 2017 compared to 2016 driven by productivity gains, a smaller capital workforce, and fewer management and administrative personnel, which more than offset the impact of 2% volume growth.

Employee levels decreased 10% in 2016 compared to 2015, driven by lower volume levels, productivity gains, a smaller capital workforce, and fewer transportation employees in training.

Return on Average Common Shareholders' Equity

Millions, Except Percentages	2017	2016	2015
Net income	\$ 10,712	\$ 4,233	\$ 4,772
Average equity	\$ 22,394	\$ 20,317	\$ 20,946
Return on average common shareholders' equity	47.8%	20.8%	22.8%

Return on Invested Capital as Adjusted (ROIC)

Millions, Except Percentages	2017	2016	2015
Net income	\$ 10,712	\$ 4,233	\$ 4,772
Interest expense	719	698	622
Interest on present value of operating leases	105	121	135
Taxes on interest	(309)	(306)	(285)
Net operating profit after taxes as adjusted (a)	\$ 11,227	\$ 4,746	\$ 5,244
Average equity	\$ 22,394	\$ 20,317	\$ 20,946
Average debt	15,976	14,604	12,807
Average present value of operating leases	2,288	2,581	2,814
Average invested capital as adjusted (b)	\$ 40,658	\$ 37,502	\$ 36,567
Return on invested capital as adjusted (a/b)	27.6%	12.7%	14.3%

ROIC is considered a non-GAAP financial measure by SEC Regulation G and Item 10 of SEC Regulation S-K, and may not be defined and calculated by other companies in the same manner. We believe this measure is important to management and investors in evaluating the efficiency and effectiveness of our long-term capital investments. In addition, we currently use ROIC as a performance criteria in determining certain elements of equity compensation for our executives. ROIC should be considered in addition to, rather than as a substitute for, other information provided in accordance with GAAP. The most comparable GAAP measure is Return on Average Common Shareholders' Equity. The tables above provide reconciliations from return on average common shareholders' equity to ROIC. Our 2017 ROIC of 27.6% increased compared to 2016, largely as a result the \$5.9 billion reduction to our deferred tax liability, that was recognized as an income tax benefit in 2017 (See Note 8 of the Consolidated Financial Statements for

additional information). Higher earnings from base operations also contributed to the increase, more than offsetting our higher invested capital base.

Net Return on Invested Capital as Adjusted (Net ROIC)

The table below reconciles ROIC as previously calculated to Net ROIC for items affecting comparability.

	2017	2016	2015
Return on invested capital as adjusted	27.6%	12.7%	14.3%
Factors Affecting Comparability:			
Adjustments for Tax Cuts and Jobs Act [a]	(13.9)	N/A	N/A
Net Return on Invested Capital as Adjusted	13.7%	12.7%	14.3%

[a] Adjustments remove the impact of \$5.9 billion and \$139 million from both 12/31/17 Net Income and 12/31/17 Shareholders' Equity.

Net ROIC is considered a non-GAAP financial measure by SEC Regulation G and Item 10 of SEC Regulation S-K, and may not be defined and calculated by other companies in the same manner. We believe this measure is important to management and investors in evaluating the efficiency and effectiveness of our long-term capital investments. We use Net ROIC to demonstrate year over year comparability for significant items. Net ROIC should be considered in addition to, rather than as a substitute for, other information provided in accordance with GAAP. The most comparable GAAP measure is Return on Average Common Shareholders' Equity.

Debt to Capital

Millions, Except Percentages	2017	2016
Debt (a)	\$ 16,944	\$ 15,007
Equity	24,856	19,932
Capital (b)	\$ 41,800	\$ 34,939
Debt to capital (a/b)	40.5%	43.0%

Adjusted Debt to Capital

Millions, Except Percentages	2017	2016
Debt	\$ 16,944	\$ 15,007
Net present value of operating leases	2,140	2,435
Unfunded pension and OPEB, net of taxes of \$238 and \$261	396	436
Adjusted debt (a)	\$ 19,480	\$ 17,878
Equity	24,856	19,932
Adjusted capital (b)	\$ 44,336	\$ 37,810
Adjusted debt to capital (a/b)	43.9%	47.3%

Adjusted debt to capital is a non-GAAP financial measure under SEC Regulation G and Item 10 of SEC Regulation S-K, and may not be defined and calculated by other companies in the same manner. We believe this measure is important to management and investors in evaluating the total amount of leverage in our capital structure, including off-balance sheet lease obligations, which we generally incur in connection with financing the acquisition of locomotives and freight cars and certain facilities. Operating leases were discounted using 4.6% and 4.7% at December 31, 2017, and 2016, respectively. The discount rate reflects our effective interest rate. We monitor the ratio of adjusted debt to capital as we manage our capital structure to balance cost-effective and efficient access to the capital markets with our overall cost of capital. Adjusted debt to capital should be considered in addition to, rather than as a substitute for, debt to capital. The tables above provide reconciliations from debt to capital to adjusted debt to capital. Our December 31, 2017 debt to capital ratios decreased as a result of a \$4.9 billion increase in equity from December 31, 2016. The increase in equity is largely due to a \$5.9 billion reduction to our deferred tax liability that was recognized as an income tax benefit in 2017.

LIQUIDITY AND CAPITAL RESOURCES

As of December 31, 2017, our principal sources of liquidity included cash, cash equivalents, our receivables securitization facility, and our revolving credit facility, as well as the availability of commercial paper and other sources of financing through the capital markets. We had \$1.7 billion of committed credit available under our credit facility, with no borrowings outstanding as of December 31, 2017. We did not make any borrowings under this facility during 2017. The value of the outstanding undivided interest held by investors under the \$650 million capacity receivables securitization facility was \$500 million as of December 31, 2017. Our access to this receivables securitization facility may be reduced or restricted if our bond ratings fall to certain levels below investment grade. If our bond rating were to deteriorate, it could have an adverse impact on our liquidity. Access to commercial paper as well as other capital market financings is dependent on market conditions. Deterioration of our operating results or financial condition due to internal or external factors could negatively impact our ability to access capital markets as a source of liquidity. Access to liquidity through the capital markets is also dependent on our financial stability. We expect that we will continue to have access to liquidity through any or all of the following sources or activities: (i) increasing the size or utilization of our receivables securitization, (ii) issuing commercial paper, (iii) entering into bank loans, outside of our revolving credit facility, or (iv) issuing bonds or other debt securities to public or private investors based on our assessment of the current condition of the credit markets. The Company's \$1.7 billion revolving credit facility is intended to support the issuance of commercial paper by UPC and also serves as an emergency source of liquidity. The Company currently does not intend to make any borrowings under this facility.

At December 31, 2017, we had a working capital surplus. At December 31, 2016, we had a working capital deficit. The decrease at 2016 year-end was primarily due to a decrease in other current assets related to a tax receivable for the late extension of bonus depreciation at December 31, 2015, along with an increase at December 31, 2016, in accounts payable and upcoming debt maturities. We maintain adequate resources, and when necessary, have adequate access to capital markets to meet any foreseeable cash requirements, in addition to sufficient financial capacity to satisfy our current liabilities.

Cash Flows

Millions	2017	2016	2015
Cash provided by operating activities	\$ 7,230	\$ 7,525	\$ 7,344
Cash used in investing activities	(3,086)	(3,393)	(4,476)
Cash used in financing activities	(4,146)	(4,246)	(3,063)
Net change in cash and cash equivalents	\$ (2)	\$ (114)	\$ (195)

Operating Activities

Cash provided by operating activities decreased in 2017 compared to 2016 due to the timing of tax payments in 2016 related to bonus depreciation on capital spending. The decrease was mostly offset by higher income in 2017

compared to 2016.

Cash provided by operating activities increased in 2016 compared to 2015. The timing of tax payments primarily related to bonus depreciation and changes in working capital more than offset lower net income.

The Tax Act was enacted on December 22, 2017. The Tax Act extended 100% bonus depreciation effective September 27, 2017 through 2022, and phases out bonus depreciation by 2027.

Investing Activities

Lower capital investments and short-term investment purchases decreased cash used in investing activities in 2017 compared to 2016.

Lower capital investments, partially offset by short-term investment purchases, decreased cash used in investing activities in 2016 compared to 2015.

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The following tables detail cash capital investments and track statistics for the years ended December 31, 2017, 2016, and 2015:

Millions	2017	2016	2015
Rail and other track material	\$ 619	\$ 628	\$ 734
Ties	480	494	455
Ballast	231	235	233
Other [a]	503	480	438
Total road infrastructure replacements	1,833	1,837	1,860
Line expansion and other capacity projects	124	153	457
Commercial facilities	189	152	227
Total capacity and commercial facilities	313	305	684
Locomotives and freight cars [b]	607	854	1,436
Positive train control	336	371	381
Technology and other	149	138	289
Total cash capital investments	\$ 3,238	\$ 3,505	\$ 4,650

[a] Other includes bridges and tunnels, signals, other road assets, and road work equipment.

[b] Locomotives and freight cars include early lease buyouts of \$173 million in 2017, \$90 million in 2016, and \$327 million in 2015.

	2017	2016	2015
Track miles of rail replaced	731	791	767
Track miles of rail capacity expansion	11	52	103
New ties installed (thousands)	4,026	4,482	4,178
Miles of track surfaced	11,071	11,764	10,076

Capital Plan – In 2018, we expect our capital plan to be approximately \$3.3 billion, which may be revised if business conditions or the regulatory environment affect our ability to generate sufficient returns on these investments. While asset replacements will fluctuate as part of our renewal strategy, we expect to use around 70% of our capital investments to renew and improve existing capital assets. We will continue to balance investment in our network infrastructure and terminal capacity as appropriate, including initial construction work on a new classification yard in our Southern Region. Significant investments in technology improvements are planned, including PTC. We also will continue commercial investments in rail facilities and equipment, including approximately 60 new locomotives, intermodal containers and chassis, and freight cars.

We expect to fund our 2018 cash capital plan by using some or all of the following: cash generated from operations, proceeds from the sale or lease of various operating and non-operating properties, proceeds from the issuance of long-term debt, and cash on hand. Our annual capital plan is a critical component of our long-term strategic plan. We expect our plan will enhance the long-term value of the Company for our shareholders by providing sufficient resources to (i) replace and improve our existing track infrastructure to provide safe and fluid operations, (ii) increase network efficiency by adding or improving facilities and track, and (iii) make investments that meet customer demand and take advantage of opportunities for long-term growth.

Financing Activities

Cash used in financing activities decreased in 2017 compared to 2016. An increase of \$908 million in common shares purchased and an increase of \$103 million in dividends paid was more than offset by an increase of \$752 million in debt issued, a decrease of \$173 million in debt repaid, and a decrease of \$191 million in debt exchange costs.

Cash used in financing activities increased in 2016 compared to 2015. An increase of \$457 million in debt repaid and a decrease of \$1,345 million in debt issued more than offset a decrease of \$465 million in dividends paid. The decrease in dividends paid was a result of adjusting the dividend payable dates in 2015 to align with the timing of the quarterly dividend declaration and payment dates within the same quarter. Aligning the quarterly dividend declaration and payment resulted in two payments in the first quarter of 2015: the fourth quarter 2014 dividend of \$438 million, which was paid on January 2, 2015, as well as the first quarter 2015 dividend of \$484 million, which was paid on March 30, 2015. The second quarter 2015

dividend of \$479 million was paid on June 30, 2015, the third quarter 2015 dividend of \$476 million was paid on September 30, 2015, and the fourth quarter 2015 dividend of \$467 million was paid on December 31, 2015.

See Note 15 of the Consolidated Financial Statements for a description of all our outstanding financing arrangements and significant new borrowings.

Ratio of Earnings to Fixed Charges

For each of the years ended December 31, 2017, 2016, and 2015, our ratio of earnings to fixed charges was 10.3, 9.6, and 11.6, respectively. The ratio of earnings to fixed charges was computed on a consolidated basis. Earnings represent income from continuing operations, less equity earnings net of distributions, plus fixed charges and income taxes. Fixed charges represent interest charges, amortization of debt discount, and the estimated amount representing the interest portion of rental charges. (See Exhibit 12 to this report for the calculation of the ratio of earnings to fixed charges.)

Common Shareholders' Equity

Dividend Restrictions – Our revolving credit facility includes a debt-to-net worth covenant (discussed in the Credit Facilities section above) that, under certain circumstances, restricts the payment of cash dividends to our shareholders. The amount of retained earnings available for dividends was \$16.4 billion and \$12.4 billion at December 31, 2017, and 2016, respectively.

Share Repurchase Program

Effective January 1, 2017, our Board of Directors authorized the repurchase of up to 120 million shares of our common stock by December 31, 2020, replacing our previous repurchase program. As of December 31, 2017, we repurchased a total of \$23.2 billion of our common stock since the commencement of our repurchase programs in 2007. The table below represents shares repurchased in 2017 under this repurchase program and shares repurchased in 2016 under our previous purchase program.

	Number of Shares Purchased		Average Price Paid	
	2017	2016	2017	2016
First quarter	7,531,300	9,315,807	\$ 106.55	\$ 76.49
Second quarter	7,788,283	7,026,100	109.10	85.66
Third quarter	11,801,755	9,088,613	106.69	93.63
Fourth quarter	9,231,510	9,624,667	119.37	97.60
Total	36,352,848	35,055,187	\$ 110.40	\$ 88.57

Management's assessments of market conditions and other pertinent facts guide the timing and volume of all repurchases. We expect to fund any share repurchases under this program through cash generated from operations, the sale or lease of various operating and non-operating properties, debt issuances, and cash on hand. Repurchased shares are recorded in treasury stock at cost, which includes any applicable commissions and fees.

From January 1, 2018, through February 8, 2018, we repurchased 2.6 million shares at an aggregate cost of approximately \$349 million.

Contractual Obligations and Commercial Commitments

As described in the notes to the Consolidated Financial Statements and as referenced in the tables below, we have contractual obligations and commercial commitments that may affect our financial condition. Based on our assessment of the underlying provisions and circumstances of our contractual obligations and commercial commitments, including material sources of off-balance sheet and structured finance arrangements, other than the risks that we and other similarly situated companies face with respect to the condition of the capital markets (as described in Item 1A of Part II of this report), there is no known trend, demand, commitment, event, or uncertainty that is reasonably likely to occur that would have a material adverse effect on our consolidated results of operations, financial condition, or liquidity. In addition, our commercial obligations, financings, and commitments are customary transactions that are similar to those of other comparable corporations, particularly within the transportation industry.

The following tables identify material obligations and commitments as of December 31, 2017:

Contractual Obligations Millions	Payments Due by December 31,							Other
	Total	2018	2019	2020	2021	2022	After 2022	
Debt [a]	\$ 28,965	\$ 1,325	\$ 1,614	\$ 1,473	\$ 1,098	\$ 1,337	\$ 22,118	\$ -
Operating leases [b]	2,649	398	359	297	259	221	1,115	-
Capital lease obligations [c]	1,079	173	156	164	168	147	271	-
Purchase obligations [d]	2,789	1,573	459	319	247	48	111	32
Other post retirement benefits [e]	479	50	49	49	48	48	235	-
Income tax contingencies [f]	179	56	-	-	-	-	-	123
Total contractual obligations	\$ 36,140	\$ 3,575	\$ 2,637	\$ 2,302	\$ 1,820	\$ 1,801	\$ 23,850	\$ 155

[a] Excludes capital lease obligations of \$892 million, as well as unamortized discount and deferred issuance costs of \$(887) million. Includes an interest component of \$12,026 million.

[b] Includes leases for locomotives, freight cars, other equipment, and real estate.

[c] Represents total obligations, including interest component of \$187 million.

[d] Purchase obligations include locomotive maintenance contracts; purchase commitments for fuel purchases, locomotives, ties, ballast, and rail; and agreements to purchase other goods and services. For amounts where we cannot reasonably estimate the year of settlement, they are reflected in the Other column.

[e] Includes estimated other post retirement, medical, and life insurance payments, payments made under the unfunded pension plan for the next ten years.

[f] Future cash flows for income tax contingencies reflect the recorded liabilities and assets for unrecognized tax benefits, including interest and penalties, as of December 31, 2017. For amounts where the year of settlement is uncertain, they are reflected in the Other column.

Amount of Commitment Expiration per
Period

Other Commercial Commitments								After
Millions	Total	2018	2019	2020	2021	2022	2022	
Credit facilities [a]	\$ 1,700	\$ -	\$ 1,700	\$ -	\$ -	\$ -	\$ -	
Receivables securitization facility [b]	650	-	650	-	-	-	-	
Guarantees [c]	33	11	7	5	5	5	-	
Standby letters of credit [d]	19	19	-	-	-	-	-	
Total commercial commitments	\$ 2,402	\$ 30	\$ 2,357	\$ 5	\$ 5	\$ 5	\$ -	

[a] None of the credit facility was used as of December 31, 2017.

[b] \$500 million of the receivables securitization facility was utilized as of December 31, 2017, which is accounted for as debt. The full program matures in July 2019.

[c] Includes guaranteed obligations related to our affiliated operations.

[d] None of the letters of credit were drawn upon as of December 31, 2017.

Off-Balance Sheet Arrangements

Guarantees – At December 31, 2017, and 2016, we were contingently liable for \$33 million and \$43 million in guarantees. The fair value of these obligations as of both December 31, 2017, and 2016, was \$0. We entered into these contingent guarantees in the normal course of business, and they include guaranteed obligations related to our affiliated operations. The final guarantee expires in 2022. We are not aware of any existing event of default that would require us to satisfy these guarantees. We do not expect that these guarantees will have a material adverse effect on our consolidated financial condition, results of operations, or liquidity.

OTHER MATTERS

Labor Agreements – Approximately 85% of our 41,992 full-time-equivalent employees are represented by 14 major rail unions. On January 1, 2015, current labor agreements became subject to modification and we began the current round of negotiations with the unions. Existing agreements remain in effect until new agreements are ratified or the Railway Labor Act's (RLA) procedures (which include mediation, potential arbitration, cooling-off periods, and the possibility of Presidential Emergency Boards and Congressional intervention) are exhausted. Through industry and local negotiations, UPRR reached tentative new agreements with 12 of our 14 major rail unions. Nine unions (representing nearly 70% of our agreement work force) have ratified those agreements by significant margins. The tentative agreement failed ratification with two unions in early February 2018 (representing about 10% of our agreement work force)

returning any further discussions with them to the jurisdiction of the National Mediation Board. Another small union (less than 1%) is still out for ratification. UPRR and the industry currently continue in active mediation with the remaining coalition of two unions (representing about 20% of our agreement work force). Under the Railway Labor Act, the National Mediation Board controls timing and location of mediation conferences and when to terminate mediation, moving the parties to the next stages of the RLA process. Contract negotiations historically continue for an extended period of time and we rarely experience work stoppages while negotiations are pending.

Inflation – Long periods of inflation significantly increase asset replacement costs for capital-intensive companies. As a result, assuming that we replace all operating assets at current price levels, depreciation charges (on an inflation-adjusted basis) would be substantially greater than historically reported amounts.

Sensitivity Analyses – The sensitivity analyses that follow illustrate the economic effect that hypothetical changes in interest rates could have on our results of operations and financial condition. These hypothetical changes do not consider other factors that could impact actual results.

At December 31, 2017, we had variable-rate debt representing approximately 4.4% of our total debt. If variable interest rates average one percentage point higher in 2018 than our December 31, 2017 variable rate, which was approximately 2.2%, our interest expense would increase by approximately \$7.5 million. This amount was determined by considering the impact of the hypothetical interest rate on the balances of our variable-rate debt at December 31, 2017.

Market risk for fixed-rate debt is estimated as the potential increase in fair value resulting from a hypothetical one percentage point decrease in interest rates as of December 31, 2017, and amounts to an increase of approximately \$2.2 billion to the fair value of our debt at December 31, 2017. We estimated the fair values of our fixed-rate debt by considering the impact of the hypothetical interest rates on quoted market prices and current borrowing rates.

Accounting Pronouncements – See Note 3 to the Consolidated Financial Statements.

Asserted and Unasserted Claims – Various claims and lawsuits are pending against us and certain of our subsidiaries. We cannot fully determine the effect of all asserted and unasserted claims on our consolidated results of operations, financial condition, or liquidity. To the extent possible, we have recorded a liability where asserted and unasserted claims are considered probable and where such claims can be reasonably estimated. We do not expect that any known lawsuits, claims, environmental costs, commitments, contingent liabilities, or guarantees will have a material adverse effect on our consolidated results of operations, financial condition, or liquidity after taking into account liabilities and insurance recoveries previously recorded for these matters.

Indemnities – Our maximum potential exposure under indemnification arrangements, including certain tax indemnifications, can range from a specified dollar amount to an unlimited amount, depending on the nature of the transactions and the agreements. Due to uncertainty as to whether claims will be made or how they will be resolved, we cannot reasonably determine the probability of an adverse claim or reasonably estimate any adverse liability or the total maximum exposure under these indemnification arrangements. We do not have any reason to believe that we will be required to make any material payments under these indemnity provisions.

Climate Change – Although climate change could have an adverse impact on our operations and financial performance in the future (see Risk Factors under Item 1A of this report), we are currently unable to predict the manner or severity of such impact. However, we continue to take steps and explore opportunities to reduce the impact of our operations on the environment, including investments in new technologies, using training programs to reduce fuel consumption, and changing our operations to increase fuel efficiency.

CRITICAL ACCOUNTING POLICIES

Our Consolidated Financial Statements have been prepared in accordance with GAAP. The preparation of these financial statements requires estimation and judgment that affect the reported amounts of revenues, expenses, assets, and liabilities. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. The following critical accounting policies are a subset of our significant accounting policies described in Note 2 to the Financial Statements and Supplementary Data, Item 8. These critical accounting

policies affect significant areas of our financial statements and involve judgment and estimates. If these estimates differ significantly from actual results, the impact on our Consolidated Financial Statements may be material.

Personal Injury – The cost of personal injuries to employees and others related to our activities is charged to expense based on estimates of the ultimate cost and number of incidents each year. We use an actuarial analysis to measure the expense and liability, including unasserted claims. The Federal Employers’ Liability Act (FELA) governs compensation for work-related accidents. Under FELA, damages are assessed based on a finding of fault through litigation or out-of-court settlements. We offer a comprehensive variety of services and rehabilitation programs for employees who are injured at work.

Our personal injury liability is not discounted to present value due to the uncertainty surrounding the timing of future payments. Approximately 95% of the recorded liability is related to asserted claims and approximately 5% is related to unasserted claims at December 31, 2017. Because of the uncertainty surrounding the ultimate outcome of personal injury claims, it is reasonably possible that future costs to settle these claims may range from approximately \$285 million to \$310 million. We record an accrual at the low end of the range as no amount of loss within the range is more probable than any other. Estimates can vary over time due to evolving trends in litigation.

Our personal injury liability activity was as follows:

Millions	2017	2016	2015
Beginning balance	\$ 290	\$ 318	\$ 335
Current year accruals	77	75	89
Changes in estimates for prior years	(7)	(29)	(3)
Payments	(75)	(74)	(103)
Ending balance at December 31	\$ 285	\$ 290	\$ 318
Current portion, ending balance at December 31	\$ 66	\$ 62	\$ 63

Our personal injury claims activity was as follows:

2017 2016 2015

Open claims, beginning balance	2,157	2,404	2,618
New claims	3,024	2,453	2,573
Settled or dismissed claims	(3,091)	(2,700)	(2,787)
Open claims, ending balance at December 31	2,090	2,157	2,404

In conjunction with the liability update performed in 2017, we also reassessed our estimated insurance recoveries. We have recognized an asset for estimated insurance recoveries at December 31, 2017, and 2016. Any changes to recorded insurance recoveries are included in the above table in the Changes in estimates for prior years category.

Asbestos – We are a defendant in a number of lawsuits in which current and former employees and other parties allege exposure to asbestos. We assess our potential liability using a statistical analysis of resolution costs for asbestos-related claims. This liability is updated annually and excludes future defense and processing costs. The liability for resolving both asserted and unasserted claims was based on the following assumptions:

- The ratio of future claims by alleged disease would be consistent with historical averages adjusted for inflation.
- The number of claims filed against us will decline each year.
- The average settlement values for asserted and unasserted claims will be equivalent to historical averages.
- The percentage of claims dismissed in the future will be equivalent to historical averages.

Our liability for asbestos-related claims is not discounted to present value due to the uncertainty surrounding the timing of future payments. Approximately 16% of the recorded liability related to asserted claims and approximately 84% related to unasserted claims at December 31, 2017. Because of the uncertainty

surrounding the ultimate outcome of asbestos-related claims, it is reasonably possible that future costs to settle these claims may range from approximately \$99 million to \$105 million. We record an accrual at the low end of the range as no amount of loss within the range is more probable than any other.

Our asbestos-related liability activity was as follows:

Millions	2017	2016	2015
Beginning balance	\$ 111	\$ 120	\$ 126
Accruals/(Credits)	(1)	12	-
Payments	(11)	(21)	(6)
Ending balance at December 31	\$ 99	\$ 111	\$ 120
Current portion, ending balance at December 31	\$ 9	\$ 8	\$ 6

Our asbestos-related claims activity was as follows:

	2017	2016	2015
Open claims, beginning balance	943	1,089	1,065
New claims	60	164	193
Settled or dismissed claims	(214)	(310)	(169)
Open claims, ending balance at December 31	789	943	1,089

In conjunction with the liability update performed in 2017, we also reassessed our estimated insurance recoveries. We have recognized an asset for estimated insurance recoveries at December 31, 2017, and 2016. The amounts recorded for asbestos-related liabilities and related insurance recoveries were based on currently known facts. However, future events, such as the number of new claims filed each year, average settlement costs, and insurance coverage issues, could cause the actual costs and insurance recoveries to be higher or lower than the projected amounts. Estimates also may vary in the future if strategies, activities, and outcomes of asbestos litigation materially change; federal and state laws governing asbestos litigation increase or decrease the probability or amount of compensation of claimants; and there are material changes with respect to payments made to claimants by other defendants.

Environmental Costs – We are subject to federal, state, and local environmental laws and regulations. We have identified 315 sites at which we are or may be liable for remediation costs associated with alleged contamination or for violations of environmental requirements. This includes 33 sites that are the subject of actions taken by the U.S.

government, 21 of which are currently on the Superfund National Priorities List. Certain federal legislation imposes joint and several liability for the remediation of identified sites; consequently, our ultimate environmental liability may include costs relating to activities of other parties, in addition to costs relating to our own activities at each site.

When we identify an environmental issue with respect to property owned, leased, or otherwise used in our business, we perform, with assistance of our consultants, environmental assessments on the property. We expense the cost of the assessments as incurred. We accrue the cost of remediation where our obligation is probable and such costs can be reasonably estimated. Our environmental liability is not discounted to present value due to the uncertainty surrounding the timing of future payments.

Our environmental liability activity was as follows:

Millions	2017	2016	2015
Beginning balance	\$ 212	\$ 190	\$ 182
Accruals	45	84	61
Payments	(61)	(62)	(53)
Ending balance at December 31	\$ 196	\$ 212	\$ 190
Current portion, ending balance at December 31	\$ 57	\$ 55	\$ 52

Our environmental site activity was as follows:

	2017	2016	2015
Open sites, beginning balance	292	290	270
New sites	77	85	66
Closed sites	(54)	(83)	(46)
Open sites, ending balance at December 31	315	292	290

The environmental liability includes future costs for remediation and restoration of sites, as well as ongoing monitoring costs, but excludes any anticipated recoveries from third parties. Cost estimates are based on information available for each site, financial viability of other potentially responsible parties, and existing technology, laws, and regulations. The ultimate liability for remediation is difficult to determine because of the number of potentially responsible parties, site-specific cost sharing arrangements with other potentially responsible parties, the degree of contamination by various wastes, the scarcity and quality of volumetric data related to many of the sites, and the speculative nature of remediation costs. Estimates of liability may vary over time due to changes in federal, state, and local laws governing environmental remediation. Current obligations are not expected to have a material adverse effect on our consolidated results of operations, financial condition, or liquidity.

Property and Depreciation – Our railroad operations are highly capital intensive, and our large base of homogeneous, network-type assets turns over on a continuous basis. Each year we develop a capital program for the replacement of assets and for the acquisition or construction of assets that enable us to enhance our operations or provide new service offerings to customers. Assets purchased or constructed throughout the year are capitalized if they meet applicable minimum units of property criteria. Properties and equipment are carried at cost and are depreciated on a straight-line basis over their estimated service lives, which are measured in years, except for rail in high-density traffic corridors (i.e., all rail lines except for those subject to abandonment, yard and switching tracks, and electronic yards) for which lives are measured in millions of gross tons per mile of track. We use the group method of depreciation in which all items with similar characteristics, use, and expected lives are grouped together in asset classes, and are depreciated using composite depreciation rates. The group method of depreciation treats each asset class as a pool of resources, not as singular items. We currently have more than 60 depreciable asset classes, and we may increase or decrease the number of asset classes due to changes in technology, asset strategies, or other factors.

We determine the estimated service lives of depreciable railroad property by means of depreciation studies. We perform depreciation studies at least every three years for equipment and every six years for track assets (i.e., rail and other track material, ties, and ballast) and other road property. Our depreciation studies take into account the following factors:

- Statistical analysis of historical patterns of use and retirements of each of our asset classes;
- Evaluation of any expected changes in current operations and the outlook for continued use of the assets;

- Evaluation of technological advances and changes to maintenance practices; and
- Expected salvage to be received upon retirement.

For rail in high-density traffic corridors, we measure estimated service lives in millions of gross tons per mile of track. It has been our experience that the lives of rail in high-density traffic corridors are closely correlated to usage (i.e., the amount of weight carried over the rail). The service lives also vary based on rail weight, rail condition (e.g., new or secondhand), and rail type (e.g., straight or curve). Our depreciation studies for rail in high-density traffic corridors consider each of these factors in determining the estimated service lives. For rail in high-density traffic corridors, we calculate depreciation rates annually by dividing the number of gross ton-miles carried over the rail (i.e., the weight of loaded and empty freight cars, locomotives and maintenance of way equipment transported over the rail) by the estimated service lives of the rail measured in millions of gross tons per mile. Rail in high-density traffic corridors accounts for approximately 70 percent of the historical cost of rail and other track material. Based on the number of gross ton-miles carried over our rail in high density traffic corridors during 2017, the estimated service lives of the majority of this rail ranged from approximately 19 years to approximately 41 years. For all other depreciable assets, we compute depreciation based on the estimated service lives of our assets as determined from the analysis of our depreciation studies. Changes in the estimated service lives of our assets and their related depreciation rates are implemented prospectively.

Estimated service lives of depreciable railroad property may vary over time due to changes in physical use, technology, asset strategies, and other factors that will have an impact on the retirement profiles of our assets. We are not aware of any specific factors that are reasonably likely to significantly change the estimated service lives of our assets. Actual use and retirement of our assets may vary from our current estimates, which would impact the amount of depreciation expense recognized in future periods.

Changes in estimated useful lives of our assets due to the results of our depreciation studies could significantly impact future periods' depreciation expense and have a material impact on our Consolidated Financial Statements. If the estimated useful lives of all depreciable assets were increased by one year, annual depreciation expense would decrease by approximately \$65 million. If the estimated useful lives of all depreciable assets were decreased by one year, annual depreciation expense would increase by approximately \$70 million. Our recent depreciation studies have resulted in lower depreciation rates for some asset classes. These lower rates will partially offset the impact of a projected higher depreciable asset base, resulting in an increase in total depreciation expense by approximately 5% in 2018 versus 2017.

Under group depreciation, the historical cost (net of salvage) of depreciable property that is retired or replaced in the ordinary course of business is charged to accumulated depreciation and no gain or loss is recognized. The historical cost of certain track assets is estimated by multiplying the current replacement cost of track assets by a historical index factor derived from (i) inflation indices published by the Bureau of Labor Statistics and (ii) the estimated useful lives of the assets as determined by our depreciation studies. The indices were selected because they closely correlate with the major costs of the properties comprising the applicable track asset classes. Because of the number of estimates inherent in the depreciation and retirement processes and because it is impossible to precisely estimate each of these variables until a group of property is completely retired, we continually monitor the estimated service lives of our assets and the accumulated depreciation associated with each asset class to ensure our depreciation rates are appropriate. In addition, we determine if the recorded amount of accumulated depreciation is deficient (or in excess) of the amount indicated by our depreciation studies. Any deficiency (or excess) is amortized as a component of depreciation expense over the remaining service lives of the applicable classes of assets.

For retirements of depreciable railroad properties that do not occur in the normal course of business, a gain or loss may be recognized if the retirement meets each of the following three conditions: (i) it is unusual, (ii) it is material in amount, and (iii) it varies significantly from the retirement profile identified through our depreciation studies. During the last three fiscal years, no gains or losses were recognized due to the retirement of depreciable railroad properties. A gain or loss is recognized in other income when we sell land or dispose of assets that are not part of our railroad operations.

Income Taxes – We account for income taxes by recording taxes payable or refundable for the current year and deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our financial statements or tax returns. These expected future tax consequences are measured based on current tax law; the effects of future tax legislation are not anticipated. Future tax legislation, such as a change in the corporate tax rate, could have a material impact on our financial condition, results of operations, or liquidity. For example, a permanent 1% increase in future income tax rates would increase our deferred tax liability by approximately \$430 million. Similarly, a permanent 1% decrease in future income tax rates would decrease our deferred tax liability by approximately \$430 million.

When appropriate, we record a valuation allowance against deferred tax assets to reflect that these tax assets may not be realized. In determining whether a valuation allowance is appropriate, we consider whether it is more likely than not that all or some portion of our deferred tax assets will not be realized, based on management's judgments using available evidence for purposes of estimating whether future taxable income will be sufficient to realize a deferred tax asset. In 2018 and 2017, there were no valuation allowances.

We recognize tax benefits that are more likely than not to be sustained upon examination by tax authorities. The amount recognized is measured as the largest amount of benefit that is greater than 50 percent likely to be realized upon settlement. A liability for "unrecognized tax benefits" is recorded for any tax benefits claimed in our tax returns that do not meet these recognition and measurement standards.

Pension and Other Postretirement Benefits – We use an actuarial analysis to measure the liabilities and expenses associated with providing pension and medical and life insurance benefits (OPEB) to eligible employees. In order to use actuarial methods to value the liabilities and expenses, we must make several assumptions. The critical assumptions used to measure pension obligations and expenses are the discount

rates and expected rate of return on pension assets. For OPEB, the critical assumptions are the discount rates and health care cost trend rate.

We evaluate our critical assumptions at least annually, and selected assumptions are based on the following factors:

- Beginning in 2016, we measure the service cost and interest cost components of our net periodic benefit cost by using individual spot rates matched with separate cash flows for each future year. Discount rates are based on a Mercer yield curve of high quality corporate bonds (rated AA by a recognized rating agency).
- Expected return on plan assets is based on our asset allocation mix and our historical return, taking into consideration current and expected market conditions.
- Health care cost trend rate is based on our historical rates of inflation and expected market conditions.

The following tables present the key assumptions used to measure net periodic pension and OPEB cost/(benefit) for 2018 and the estimated impact on 2018 net periodic pension and OPEB cost/(benefit) relative to a change in those assumptions:

Assumptions	Pension	OPEB
Discount rate for benefit obligations	3.62%	3.53%
Discount rate for interest on benefit obligations	3.27%	3.12%
Discount rate for service cost	3.77%	3.72%
Discount rate for interest on service cost	3.72%	3.65%
Expected return on plan assets	7.00%	N/A
Compensation increase	4.13%	N/A
Health care cost trend rate:		
Pre-65 current	N/A	6.31%
Pre-65 level in 2038	N/A	4.50%

Sensitivities	Increase in Expense	
Millions	Pension	OPEB
0.25% decrease in discount rates	\$ 12	\$ -
0.25% increase in compensation scale	\$ 8	N/A
0.25% decrease in expected return on plan assets	\$ 9	N/A
1% increase in health care cost trend rate	N/A	\$ 3

The following table presents the net periodic pension and OPEB cost for the years ended December 31:

Millions	Est.			
	2018	2017	2016	2015
Net periodic pension cost	\$ 69	\$ 115	\$ 43	\$ 120
Net periodic OPEB cost	22	22	13	19

CAUTIONARY INFORMATION

Certain statements in this report, and statements in other reports or information filed or to be filed with the SEC (as well as information included in oral statements or other written statements made or to be made by us), are, or will be, forward-looking statements as defined by the Securities Act of 1933 and the Securities Exchange Act of 1934. These forward-looking statements and information include, without limitation, (A) statements in the Chairman’s letter preceding Part I; statements regarding planned capital expenditures under the caption “2018 Capital Plan” in Item 2 of Part I; statements regarding dividends in Item 5 of Part II; and statements and information set forth under the captions “2018 Outlook”; “Liquidity and Capital Resources”; and “Pension and Other Postretirement Benefits” in this Item 7 of Part II, and (B) any other statements or information in this report (including information incorporated herein by reference) regarding: expectations as to financial performance, revenue growth and cost savings; the time by which goals, targets, or objectives will be achieved; projections, predictions, expectations, estimates, or forecasts as to our business, financial and operational results, future economic performance, and general economic conditions; expectations as to operational or service performance or improvements; expectations as to the effectiveness of steps taken or to be taken to improve operations and/or service, including capital

expenditures for infrastructure improvements and equipment acquisitions, any strategic business acquisitions, and modifications to our transportation plans, including implementation of PTC; expectations as to existing or proposed new products and services; expectations as to the impact of any new regulatory activities or legislation on our operations or financial results; estimates of costs relating to environmental remediation and restoration; estimates and expectations regarding tax matters; expectations that claims, litigation, environmental costs, commitments, contingent liabilities, labor negotiations or agreements, or other matters will not have a material adverse effect on our consolidated results of operations, financial condition, or liquidity and any other similar expressions concerning matters that are not historical facts. Forward-looking statements may be identified by their use of forward-looking terminology, such as “believes,” “expects,” “may,” “should,” “would,” “will,” “intends,” “plans,” “estimates,” “anticipates,” “p” similar words, phrases or expressions.

Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times that, or by which, such performance or results will be achieved. Forward-looking statements and information are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the statements and information. Forward-looking statements and information reflect the good faith consideration by management of currently available information, and may be based on underlying assumptions believed to be reasonable under the circumstances. However, such information and assumptions (and, therefore, such forward-looking statements and information) are or may be subject to variables or unknown or unforeseeable events or circumstances over which management has little or no influence or control. The Risk Factors in Item 1A of this report could affect our future results and could cause those results or other outcomes to differ materially from those expressed or implied in any forward-looking statements or information. To the extent circumstances require or we deem it otherwise necessary, we will update or amend these risk factors in a Form 10-Q, Form 8-K or subsequent Form 10-K. All forward-looking statements are qualified by, and should be read in conjunction with, these Risk Factors.

Forward-looking statements speak only as of the date the statement was made. We assume no obligation to update forward-looking information to reflect actual results, changes in assumptions or changes in other factors affecting forward-looking information. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect thereto or with respect to other forward-looking statements.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Information concerning market risk sensitive instruments is set forth under Management’s Discussion and Analysis of Financial Condition and Results of Operations – Other Matters, Item 7.

Item 8. Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Union Pacific Corporation

Omaha, Nebraska

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Union Pacific Corporation and Subsidiary Companies (the "Corporation") as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, changes in common shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and the schedule listed in the Table of Contents at Part IV, Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Corporation as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Corporation's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 9, 2018, expressed an unqualified opinion on the Corporation's internal control over financial reporting.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our

audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP

Omaha, Nebraska

February 9, 2018

We have served as the Corporation's auditor since 1967.

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CONSOLIDATED STATEMENTS OF INCOME

Union Pacific Corporation and Subsidiary Companies

Millions, Except Per Share Amounts, for the Years Ended December 31,	2017	2016	2015
Operating revenues:			
Freight revenues	\$ 19,837	\$ 18,601	\$ 20,397
Other revenues	1,403	1,340	1,416
Total operating revenues	21,240	19,941	21,813
Operating expenses:			
Compensation and benefits	4,984	4,750	5,161
Purchased services and materials	2,363	2,258	2,421
Depreciation	2,105	2,038	2,012
Fuel	1,891	1,489	2,013
Equipment and other rents	888	1,137	1,230
Other	948	997	924
Total operating expenses	13,179	12,669	13,761
Operating income	8,061	7,272	8,052
Other income (Note 7)	290	192	226
Interest expense	(719)	(698)	(622)
Income before income taxes	7,632	6,766	7,656
Income tax benefit/(expense) (Note 8)	3,080	(2,533)	(2,884)
Net income	\$ 10,712	\$ 4,233	\$ 4,772
Share and Per Share (Note 9):			
Earnings per share - basic	\$ 13.42	\$ 5.09	\$ 5.51
Earnings per share - diluted	\$ 13.36	\$ 5.07	\$ 5.49
Weighted average number of shares - basic	798.4	832.4	866.2
Weighted average number of shares - diluted	801.7	835.4	869.4
Dividends declared per share	\$ 2.48	\$ 2.255	\$ 2.20

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Union Pacific Corporation and Subsidiary Companies

Millions, 2017 2016 2015
for the Years
Ended

December 31,			
Net income	\$ 10,712	\$ 4,233	\$ 4,772
Other comprehensive income/(loss):			
Defined benefit plans	103	(29)	58
Foreign currency translation	28	(48)	(43)
Total other comprehensive income/(loss)	131	(77)	15
[a] Comprehensive income	\$ 10,843	\$ 4,156	\$ 4,787

[a] Net of deferred taxes of \$(61) million, \$49 million, \$(8) million, and during 2017, 2016, and 2015, respectively. The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

Union Pacific Corporation and Subsidiary Companies

Millions, Except Share and Per Share Amounts
as of December 31,

	2017	2016
Assets		
Current assets:		
Cash and cash equivalents	\$ 1,275	\$ 1,277
Short-term investments (Note 14)	90	60
Accounts receivable, net (Note 11)	1,493	1,258
Materials and supplies	749	717
Other current assets	399	284
Total current assets	4,006	3,596
Investments	1,809	1,457
Net properties (Note 12)	51,605	50,389
Other assets	386	276
Total assets	\$ 57,806	\$ 55,718
Liabilities and Common Shareholders' Equity		
Current liabilities:		
Accounts payable and other current liabilities (Note 13)	\$ 3,139	\$ 2,882
Debt due within one year (Note 15)	800	758
Total current liabilities	3,939	3,640
Debt due after one year (Note 15)	16,144	14,249
Deferred income taxes (Note 8)	10,936	15,996
Other long-term liabilities	1,931	1,901
Commitments and contingencies (Notes 17 and 18)		
Total liabilities	32,950	35,786
Common shareholders' equity:		
Common shares, \$2.50 par value, 1,400,000,000 authorized; 1,111,371,304 and 1,110,986,415 issued; 780,917,756 and 815,824,413 outstanding, respectively	2,778	2,777
Paid-in-surplus	4,476	4,421
Retained earnings	41,317	32,587
Treasury stock	(22,574)	(18,581)
Accumulated other comprehensive loss (Note 10)	(1,141)	(1,272)
Total common shareholders' equity	24,856	19,932
Total liabilities and common shareholders' equity	\$ 57,806	\$ 55,718

The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

Union Pacific Corporation and Subsidiary Companies

Millions, for the Years Ended December 31,	2017	2016	2015
Operating Activities			
Net income	\$ 10,712	\$ 4,233	\$ 4,772
Adjustments to reconcile net income to cash provided			
by operating activities:			
Depreciation	2,105	2,038	2,012
Deferred and other income taxes	(5,067)	831	765
Net gain on non-operating asset dispositions	(111)	(94)	(144)
Other operating activities, net	(282)	(228)	116
Changes in current assets and liabilities:			
Accounts receivable, net	(235)	98	255
Materials and supplies	(32)	19	(24)
Other current assets	9	22	(47)
Accounts payable and other current liabilities	182	232	(276)
Income and other taxes	(51)	374	(85)
Cash provided by operating activities	7,230	7,525	7,344
Investing Activities			
Capital investments	(3,238)	(3,505)	(4,650)
Proceeds from asset sales	168	129	251
Purchases of short-term investments (Note 14)	(120)	(580)	-
Maturities of short-term investments (Note 14)	90	520	-
Other investing activities, net	14	43	(77)
Cash used in investing activities	(3,086)	(3,393)	(4,476)
Financing Activities			
Common share repurchases (Note 19)	(4,013)	(3,105)	(3,465)
Debt issued	2,735	1,983	3,328
Dividends paid	(1,982)	(1,879)	(2,344)
Debt repaid	(840)	(1,013)	(556)
Debt exchange	-	(191)	-
Other financing activities, net	(46)	(41)	(26)
Cash used in financing activities	(4,146)	(4,246)	(3,063)
Net change in cash and cash equivalents	(2)	(114)	(195)
Cash and cash equivalents at beginning of year	1,277	1,391	1,586
Cash and cash equivalents at end of year	\$ 1,275	\$ 1,277	\$ 1,391
Supplemental Cash Flow Information			
Non-cash investing and financing activities:			
Capital investments accrued but not yet paid	\$ 366	\$ 223	\$ 100
Capital lease financings	19	-	13
Cash paid during the year for:			
Income taxes, net of refunds	\$ (2,112)	\$ (1,347)	\$ (2,156)

Interest, net of amounts capitalized	(666)	(652)	(592)
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The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CHANGES IN COMMON SHAREHOLDERS' EQUITY

Union Pacific Corporation and Subsidiary Companies

Millions	Common Shares	Treasury Shares	Common Shares	Paid-in-Surplus	Retained Earnings	Treasury Stock	AOCI [a]	Total
Balance at January 1, 2015	1,110.1	(226.7)	\$ 2,775	\$ 4,321	\$ 27,367	\$ (12,064)	\$ (1,210)	\$ 21,189
Net income			-	-	4,772	-	-	4,772
Other comprehensive income			-	-	-	-	15	15
Conversion, stock option exercises, forfeitures, and other	0.3	0.8	1	96	-	-	-	97
Share repurchases (Note 19)	-	(35.3)	-	-	-	(3,465)	-	(3,465)
Cash dividends declared (\$2.20 per share)	-	-	-	-	(1,906)	-	-	(1,906)
Balance at December 31, 2015	1,110.4	(261.2)	\$ 2,776	\$ 4,417	\$ 30,233	\$ (15,529)	\$ (1,195)	\$ 20,702
Net income			-	-	4,233	-	-	4,233
Other comprehensive loss			-	-	-	-	(77)	(77)
Conversion, stock option exercises, forfeitures, and other	0.6	1.1	1	4	-	53	-	58
Share repurchases (Note 19)	-	(35.1)	-	-	-	(3,105)	-	(3,105)
Cash dividends declared (\$2.255 per share)	-	-	-	-	(1,879)	-	-	(1,879)
Balance at December 31, 2016	1,111.0	(295.2)	\$ 2,777	\$ 4,421	\$ 32,587	\$ (18,581)	\$ (1,272)	\$ 19,932
Net income			-	-	10,712	-	-	10,712
			-	-	-	-	131	131

Other comprehensive income								
Conversion, stock option exercises, forfeitures, and other	0.4	1.1	1	55	-	20	-	76
Share repurchases (Note 19)	-	(36.4)	-	-	-	(4,013)	-	(4,013)
Cash dividends declared (\$2.48 per share)	-	-	-	-	(1,982)	-	-	(1,982)
Balance at December 31, 2017	1,111.4	(330.5)	\$ 2,778	\$ 4,476	\$ 41,317	\$ (22,574)	\$ (1,141)	\$ 24,856

[a] AOCI = Accumulated Other Comprehensive Income/(Loss) (Note 10)
The accompanying notes are an integral part of these Consolidated Financial Statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Union Pacific Corporation and Subsidiary Companies

For purposes of this report, unless the context otherwise requires, all references herein to the “Corporation”, “Company”, “UPC”, “we”, “us”, and “our” mean Union Pacific Corporation and its subsidiaries, including Union Pacific Railroad Company, which will be separately referred to herein as “UPRR” or the “Railroad”.

1. Nature of Operations

Operations and Segmentation – We are a Class I railroad operating in the U.S. Our network includes 32,122 route miles, linking Pacific Coast and Gulf Coast ports with the Midwest and Eastern U.S. gateways and providing several corridors to key Mexican gateways. We own 26,042 miles and operate on the remainder pursuant to trackage rights or leases. We serve the western two-thirds of the country and maintain coordinated schedules with other rail carriers for the handling of freight to and from the Atlantic Coast, the Pacific Coast, the Southeast, the Southwest, Canada, and Mexico. Export and import traffic is moved through Gulf Coast and Pacific Coast ports and across the Mexican and Canadian borders.

The Railroad, along with its subsidiaries and rail affiliates, is our one reportable operating segment. Although we provide and analyze revenue by commodity group, we treat the financial results of the Railroad as one segment due to the integrated nature of our rail network. The following table provides freight revenue by commodity group:

Millions	2017	2016	2015
Agricultural Products	\$ 3,685	\$ 3,625	\$ 3,581
Automotive	1,998	2,000	2,154
Chemicals	3,596	3,474	3,543
Coal	2,645	2,440	3,237
Industrial Products	4,078	3,348	3,808
Intermodal	3,835	3,714	4,074
Total freight revenues	\$ 19,837	\$ 18,601	\$ 20,397
Other revenues	1,403	1,340	1,416
Total operating revenues	\$ 21,240	\$ 19,941	\$ 21,813

Although our revenues are principally derived from customers domiciled in the U.S., the ultimate points of origination or destination for some products we transport are outside the U.S. Each of our commodity groups includes revenue from shipments to and from Mexico. Included in the above table are freight revenues from our Mexico business which

amounted to \$2.3 billion in 2017, \$2.2 billion in 2016, and \$2.2 billion in 2015.

Basis of Presentation – The Consolidated Financial Statements are presented in accordance with accounting principles generally accepted in the U.S. (GAAP) as codified in the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC).

2. Significant Accounting Policies

Principles of Consolidation – The Consolidated Financial Statements include the accounts of Union Pacific Corporation and all of its subsidiaries. Investments in affiliated companies (20% to 50% owned) are accounted for using the equity method of accounting. All intercompany transactions are eliminated. We currently have no less than majority-owned investments that require consolidation under variable interest entity requirements.

Cash and Cash Equivalents – Cash equivalents consist of investments with original maturities of three months or less.

Accounts Receivable – Accounts receivable includes receivables reduced by an allowance for doubtful accounts. The allowance is based upon historical losses, credit worthiness of customers, and current economic conditions. Receivables not expected to be collected in one year and the associated allowances are classified as other assets in our Consolidated Statements of Financial Position.

Investments – Investments represent our investments in affiliated companies (20% to 50% owned) that are accounted for under the equity method of accounting and investments in companies (less than 20% owned) accounted for under the cost method of accounting. The results of operations for our equity method investments that are integral to our operations are recorded in operating expenses.

Materials and Supplies – Materials and supplies are carried at the lower of average cost or market.

Property and Depreciation – Properties and equipment are carried at cost and are depreciated on a straight-line basis over their estimated service lives, which are measured in years, except for rail in high-density traffic corridors (i.e., all rail lines except for those subject to abandonment, yard and switching tracks, and electronic yards), for which lives are measured in millions of gross tons per mile of track. We use the group method of depreciation in which all items with similar characteristics, use, and expected lives are grouped together in asset classes, and are depreciated using composite depreciation rates. The group method of depreciation treats each asset class as a pool of resources, not as singular items. We determine the estimated service lives of depreciable railroad assets by means of depreciation studies. Under the group method of depreciation, no gain or loss is recognized when depreciable property is retired or replaced in the ordinary course of business.

Impairment of Long-lived Assets – We review long-lived assets, including identifiable intangibles, for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If impairment indicators are present and the estimated future undiscounted cash flows are less than the carrying value of the long-lived assets, the carrying value is reduced to the estimated fair value as measured by the discounted cash flows.

Revenue Recognition – We recognize freight revenues as freight moves from origin to destination. The allocation of revenue between reporting periods is based on the relative transit time in each reporting period with expenses recognized as incurred. Other revenues, which include revenues earned by our subsidiaries, revenues from our commuter rail operations, and accessorial revenue, are recognized as service is performed or contractual obligations are met. Customer incentives, which are primarily provided for shipping a specified cumulative volume or shipping to/from specific locations, are recorded as a reduction to operating revenues based on actual or projected future customer shipments.

Translation of Foreign Currency – Our portion of the assets and liabilities related to foreign investments are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Revenue and expenses are translated at the average rates of exchange prevailing during the year. Unrealized gains or losses are reflected within common shareholders' equity as accumulated other comprehensive income or loss.

Fair Value Measurements – We use a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The level in the fair value hierarchy within which the fair value measurement in its entirety falls is determined based on the lowest level input that is significant to the fair value

measurement in its entirety. These levels include:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market-based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

We have applied fair value measurements to our short term investments, pension plan assets and short- and long-term debt.

Stock-Based Compensation – We have several stock-based compensation plans under which employees and non-employee directors receive stock options, nonvested retention shares, and nonvested stock units. We refer to the nonvested shares and stock units collectively as “retention awards”. We have elected to issue treasury shares to cover option exercises and stock unit vestings, while new shares are issued when retention shares are granted.

We measure and recognize compensation expense for all stock-based awards made to employees and directors, including stock options. Compensation expense is based on the calculated fair value of the awards as measured at the grant date and is expensed ratably over the service period of the awards (generally the vesting period). The fair value of retention awards is the closing stock price on the date of grant, while the fair value of stock options is determined by using the Black-Scholes option pricing model.

Earnings Per Share – Basic earnings per share are calculated on the weighted-average number of common shares outstanding during each period. Diluted earnings per share include shares issuable upon exercise of outstanding stock options and stock-based awards where the conversion of such instruments would be dilutive.

Income Taxes – We account for income taxes by recording taxes payable or refundable for the current year and deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our financial statements or tax returns. These expected future tax consequences are measured based on current tax law; the effects of future tax legislation are not anticipated. Future tax legislation, such as a change in the corporate tax rate, could have a material impact on our financial condition, results of operations, or liquidity.

When appropriate, we record a valuation allowance against deferred tax assets to reflect that these tax assets may not be realized. In determining whether a valuation allowance is appropriate, we consider whether it is more likely than not that all or some portion of our deferred tax assets will not be realized, based on management's judgments using available evidence for purposes of estimating whether future taxable income will be sufficient to realize a deferred tax asset.

We recognize tax benefits that are more likely than not to be sustained upon examination by tax authorities. The amount recognized is measured as the largest amount of benefit that is greater than 50 percent likely to be realized upon settlement. A liability for "unrecognized tax benefits" is recorded for any tax benefits claimed in our tax returns that do not meet these recognition and measurement standards.

Pension and Postretirement Benefits – We incur certain employment-related expenses associated with pensions and postretirement health benefits. In order to measure the expense associated with these benefits, we must make various assumptions including discount rates used to value certain liabilities, expected return on plan assets used to fund these expenses, compensation increases, employee turnover rates, anticipated mortality rates, and expected future health care costs. The assumptions used by us are based on our historical experience as well as current facts and circumstances. We use an actuarial analysis to measure the expense and liability associated with these benefits.

Personal Injury – The cost of injuries to employees and others on our property is charged to expense based on estimates of the ultimate cost and number of incidents each year. We use an actuarial analysis to measure the expense and liability. Our personal injury liability is not discounted to present value. Legal fees and incidental costs are expensed as incurred.

Asbestos – We estimate a liability for asserted and unasserted asbestos-related claims based on an assessment of the number and value of those claims. We use a statistical analysis to assist us in properly measuring our potential liability. Our liability for asbestos-related claims is not discounted to present value due to the uncertainty surrounding the timing of future payments. Legal fees and incidental costs are expensed as incurred.

Environmental – When environmental issues have been identified with respect to property currently or formerly owned, leased, or otherwise used in the conduct of our business, we perform, with the assistance of our consultants, environmental assessments on such property. We expense the cost of the assessments as incurred. We accrue the cost of remediation where our obligation is probable and such costs can be reasonably estimated. We do not discount our environmental liabilities when the timing of the anticipated cash payments is not fixed or readily determinable. Legal fees and incidental costs are expensed as incurred.

Use of Estimates – The preparation of our Consolidated Financial Statements in conformity with GAAP requires management to make estimates and assumptions that affect certain reported assets and liabilities, and the disclosure of certain contingent assets and liabilities as of the date of the consolidated financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual future results may differ from such estimates.

3. Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update No. 2014-09 (ASU 2014-09), Revenue from Contracts with Customers (Topic 606). ASU 2014-09 supersedes the revenue recognition guidance in Topic 605, Revenue Recognition. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods and services to customers in an amount that reflects the

consideration to which the entity expects to be entitled in the exchange for those goods or services. This may require the use of more judgment and estimates in order to correctly recognize the revenue expected as an outcome of each specific performance obligation. Additionally, this guidance will require the disclosure of the nature, amount, and timing of revenue arising from contracts so as to aid in the understanding of the users of financial statements.

This standard is effective for annual reporting periods beginning after December 15, 2017. The Company has analyzed our freight and other revenues and we expect to continue to recognize freight revenues as freight moves from origin to destination and to recognize other revenues as identified performance obligations are satisfied. We have also analyzed freight and other revenues in the context of the new guidance on principal versus agent considerations and evaluated the required new disclosures. Effective January 1, 2018, the Company adopted ASU 2014-09 using the modified retrospective transition method. The ASU did not have an impact on our consolidated financial position, results of operations, or cash flows.

In January 2016, the FASB issued Accounting Standards Update No. 2016-01 (ASU 2016-01), Recognition and Measurement of Financial Assets and Financial Liabilities (Subtopic 825-10). ASU 2016-01 provides guidance for the recognition, measurement, presentation, and disclosure of financial instruments. This guidance is effective for annual and interim periods beginning after December 15, 2017, and early adoption is not permitted. ASU 2016-01 is not expected to have a material impact on our consolidated financial position, results of operations, or cash flows.

In March 2017, the FASB issued Accounting Standards Update No. 2017-07 (ASU 2017-07), Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost (Topic 715). ASU 2017-07 requires the service cost component be reported separately from the other components of net benefit costs in the income statement, provides explicit guidance on the presentation of the service cost component and the other components of net benefit cost in the income statement, and allows only the service cost component of net benefit cost to be eligible for capitalization. This standard is effective for annual and interim reporting periods beginning after December 15, 2017, and we intend to adopt the standard beginning in 2018 using retrospective adoption. The Company currently records service costs and net benefit costs within compensation and benefits expense. Upon adoption, the service cost will be recorded within compensation and benefits expense, and the other components of net benefit costs, including \$69 million related to the 2017 workforce reduction plan as described in Note 4, will be recorded in other income. The retrospective impact of future adoption is shown in the table below:

Millions	2017	2016	2015
Increase/(decrease) in operating income	\$ 45	\$ (29)	\$ 30
Increase/(decrease) in other income	(45)	29	(30)

In February 2016, the FASB issued Accounting Standards Update No. 2016-02 (ASU 2016-02), Leases (Subtopic 842). ASU 2016-02 will require companies to recognize lease assets and lease liabilities on the balance sheet and disclose key information about leasing arrangements. For public companies, this standard is effective for annual reporting periods beginning after December 15, 2018, and early adoption is permitted. Management is currently evaluating the impact of this standard on our consolidated financial position, results of operations, and cash flows, and

expects that the adoption will result in an increase in the Company's assets and liabilities of over \$2 billion.

On December 22, 2017 the SEC staff issued Staff Accounting Bulletin 118 (SAB 118), which provides guidance on accounting for the tax effects of the Tax Cuts and Jobs Act (the "Tax Act"). SAB 118 provides a measurement period that should not extend beyond one year from the enactment date for companies to complete the accounting under Accounting Standards Codification (ASC) 740. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete but for which they are able to determine a reasonable estimate, it must record a provisional amount in the financial statements. Provisional treatment is proper in light of anticipated additional guidance from various taxing authorities, the SEC, the FASB, and even the Joint Committee on Taxation. Provisional treatment is also necessary if the company is waiting for final financial information from domestic and foreign equity investments. If a company cannot determine a provisional amount to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Tax Act.

4. Workforce Reduction Plan

On August 16, 2017, the Company approved and commenced a management and administrative personnel reorganization plan (the “Plan”) furthering its on-going efforts to increase efficiency and more effectively align Company resources. The Plan implemented productivity initiatives identified during a recently completed Company-wide organizational review that included the reduction of approximately 460 management positions and 250 agreement positions. The Plan resulted in a pretax charge recognized in the third quarter of 2017 within compensation and benefits expense in our Consolidated Statements of Income. This charge consisted of management employee termination benefits, including pension expenses, severance costs, and acceleration of equity compensation expense as shown in the table below. The actions associated with the Plan are substantially complete, and we do not expect to incur additional charges for the Plan in subsequent years.

Millions for the Year Ended December 31, 2017	Compensation and Benefits Expense
Pension	\$ 69
Severance	12
Equity Compensation	5
Total	\$ 86

5. Stock Options and Other Stock Plans

In April 2000, the shareholders approved the Union Pacific Corporation 2000 Directors Plan (Directors Plan) whereby 2,200,000 shares of our common stock were reserved for issuance to our non-employee directors. Under the Directors Plan, each non-employee director, upon his or her initial election to the Board of Directors, receives a grant of 4,000 retention shares or retention stock units. Prior to December 31, 2007, each non-employee director received annually an option to purchase at fair value a number of shares of our common stock, not to exceed 20,000 shares during any calendar year, determined by dividing 60,000 by 1/3 of the fair market value of one share of our common stock on the date of such Board of Directors meeting, with the resulting quotient rounded up or down to the nearest 50 shares. In September 2007, the Board of Directors eliminated the annual payment of options for 2008 and all future years. As of December 31, 2017, 44,000 restricted shares and no options were outstanding under the Directors Plan.

The Union Pacific Corporation 2004 Stock Incentive Plan (2004 Plan) was approved by shareholders in April 2004. The 2004 Plan reserved 84,000,000 shares of our common stock for issuance, plus any shares subject to awards made under previous plans that were outstanding on April 16, 2004, and became available for regrant pursuant to the terms of the 2004 Plan. Under the 2004 Plan, non-qualified options, stock appreciation rights, retention shares, stock units, and incentive bonus awards may be granted to eligible employees of the Corporation and its subsidiaries. Non-employee directors are not eligible for awards under the 2004 Plan. As of December 31, 2017, 1,557,350 options and 962 retention shares and stock units were outstanding under the 2004 Plan. We no longer grant any stock options

or other stock or unit awards under this plan.

The Union Pacific Corporation 2013 Stock Incentive Plan (2013 Plan) was approved by shareholders in May 2013. The 2013 Plan reserved 78,000,000 shares of our common stock for issuance, plus any shares subject to awards made under previous plans as of February 28, 2013, that are subsequently cancelled, expired, forfeited or otherwise not issued under previous plans. Under the 2013 Plan, non-qualified options, incentive stock options, retention shares, stock units, and incentive bonus awards may be granted to eligible employees of the Corporation and its subsidiaries. Non-employee directors are not eligible for awards under the 2013 Plan. As of December 31, 2017, 4,072,514 options and 3,450,600 retention shares and stock units were outstanding under the 2013 Plan. Pursuant to the above plans 72,151,415; 73,745,250; and 76,548,520; shares of our common stock were authorized and available for grant at December 31, 2017, 2016, and 2015, respectively.

Stock-Based Compensation – We have several stock-based compensation plans under which employees and non-employee directors receive stock options, nonvested retention shares, and nonvested stock units. We refer to the nonvested shares and stock units collectively as “retention awards”. We have elected to issue treasury shares to cover option exercises and stock unit vestings, while new shares are issued when retention shares are granted.

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Information regarding stock-based compensation appears in the table below:

Millions	2017	2016	2015
Stock-based compensation, before tax:			
Stock options	\$ 19	\$ 16	\$ 17
Retention awards	84	66	81
Total stock-based compensation, before tax	\$ 103	\$ 82	\$ 98
Excess tax benefits from equity compensation plans	\$ 44	\$ 28	\$ 62

Stock Options – We estimate the fair value of our stock option awards using the Black-Scholes option pricing model. The table below shows the annual weighted-average assumptions used for valuation purposes:

Weighted-Average Assumptions	2017	2016	2015
Risk-free interest rate	2.0%	1.3%	1.3%
Dividend yield	2.3%	2.9%	1.8%
Expected life (years)	5.3	5.1	5.1
Volatility	21.7%	23.2%	23.4%
Weighted-average grant-date fair value of options granted	\$ 18.19	\$ 11.36	\$ 22.30

The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant; the expected dividend yield is calculated as the ratio of dividends paid per share of common stock to the stock price on the date of grant; the expected life is based on historical and expected exercise behavior; and expected volatility is based on the historical volatility of our stock price over the expected life of the option.

A summary of stock option activity during 2017 is presented below:

Options (thous.)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
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					(millions)
Outstanding at January 1, 2017	6,162	\$ 73.13	5.9	yrs.	\$ 205
Granted	1,086	107.30	N/A		N/A
Exercised	(1,448)	56.69	N/A		N/A
Forfeited or expired	(170)	92.18	N/A		N/A
Outstanding at December 31, 2017	5,630	\$ 83.37	5.8	yrs.	\$ 286
Vested or expected to vest at December 31, 2017	5,607	\$ 83.25	5.8	yrs.	\$ 285
Options exercisable at December 31, 2017	3,466	\$ 75.96	4.2	yrs.	\$ 201

Stock options are granted at the closing price on the date of grant, have ten-year contractual terms, and vest no later than three years from the date of grant. None of the stock options outstanding at December 31, 2017, are subject to performance or market-based vesting conditions.

At December 31, 2017, there was \$19 million of unrecognized compensation expense related to nonvested stock options, which is expected to be recognized over a weighted-average period of 1.1 years. Additional information regarding stock option exercises appears in the following table:

Millions	2017	2016	2015
Intrinsic value of stock options exercised	\$ 88	\$ 52	\$ 50
Cash received from option exercises	59	39	27
Treasury shares repurchased for employee payroll taxes	(18)	(15)	(12)
Tax benefit realized from option exercises	34	20	19
Aggregate grant-date fair value of stock options vested	20	19	19

Retention Awards – The fair value of retention awards is based on the closing price of the stock on the grant date. Dividends and dividend equivalents are paid to participants during the vesting periods.

Changes in our retention awards during 2017 were as follows: