

NORFOLK SOUTHERN CORP
Form 10-Q
July 26, 2017
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the quarterly period ended JUNE 30, 2017

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 1-8339

NORFOLK SOUTHERN CORPORATION

(Exact name of registrant as specified in its charter)

Virginia 52-1188014
(State or other jurisdiction of incorporation) (IRS Employer Identification No.)

Three Commercial Place 23510-2191
Norfolk, Virginia (Zip Code)

(Address of principal executive offices)
(757) 629-2680
(Registrant's telephone number, including area code)

No Change
(Former name, former address and former fiscal year, if changed since last report)

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

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

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

| Class | Outstanding at June 30, 2017 |
|---|--|
| Common Stock (\$1.00 par value per share) | 288,181,852 (excluding 20,320,777 shares held by the registrant's consolidated subsidiaries) |

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements.

Norfolk Southern Corporation and Subsidiaries
 Consolidated Statements of Income
 (Unaudited)

| | Second Quarter | | First Six Months | |
|----------------------------------|--|---------|---------------------|---------|
| | 2017 | 2016 | 2017 | 2016 |
| | (\$ in millions, except per share amounts) | | | |
| Railway operating revenues | \$2,637 | \$2,454 | \$5,212 | \$4,874 |
| Railway operating expenses: | | | | |
| Compensation and benefits | 703 | 667 | 1,446 | 1,390 |
| Purchased services and rents | 392 | 384 | 769 | 763 |
| Fuel | 190 | 174 | 403 | 323 |
| Depreciation | 264 | 257 | 523 | 509 |
| Materials and other | 200 | 202 | 410 | 396 |
| Total railway operating expenses | 1,749 | 1,684 | 3,551 | 3,381 |
| Income from railway operations | 888 | 770 | 1,661 | 1,493 |
| Other income – net | 32 | 4 | 56 | 20 |
| Interest expense on debt | 140 | 138 | 282 | 277 |
| Income before income taxes | 780 | 636 | 1,435 | 1,236 |
| Provision for income taxes | 283 | 231 | 505 | 444 |
| Net income | \$497 | \$405 | \$930 | \$792 |
| Per share amounts: | | | | |
| Net income | | | | |
| Basic | \$1.72 | \$1.37 | \$3.20 | \$2.67 |
| Diluted | 1.71 | 1.36 | 3.18 | 2.65 |
| Dividends | 0.61 | 0.59 | 1.22 | 1.18 |

See accompanying notes to consolidated financial statements.

Norfolk Southern Corporation and Subsidiaries
 Consolidated Statements of Comprehensive Income
 (Unaudited)

| | Second Quarter | | First Six Months | |
|--|-------------------|-------|---------------------|-------|
| | 2017 | 2016 | 2017 | 2016 |
| | (\$ in millions) | | | |
| Net income | \$497 | \$405 | \$930 | \$792 |
| Other comprehensive income, before tax: | | | | |
| Reclassification adjustments for costs included in net income | 7 | 6 | 14 | 13 |
| Other comprehensive income (loss) of equity investees | 1 | 1 | (1) | — |
| Other comprehensive income, before tax | 8 | 7 | 13 | 13 |
| Income tax expense related to reclassification adjustments for costs included in net income | (3) | (2) | (6) | (5) |
| Other comprehensive income, net of tax | 5 | 5 | 7 | 8 |
| Total comprehensive income | \$502 | \$410 | \$937 | \$800 |

See accompanying notes to consolidated financial statements.

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Norfolk Southern Corporation and Subsidiaries
Consolidated Balance Sheets
(Unaudited)

June 30, December 31,
2017 2016
(\$ in millions)

Assets

Current assets:

| | | |
|---------------------------|-------|--------|
| Cash and cash equivalents | \$642 | \$ 956 |
| Accounts receivable – net | 926 | 945 |
| Materials and supplies | 289 | 257 |
| Other current assets | 79 | 133 |
| Total current assets | 1,936 | 2,291 |

Investments

| | | |
|---|--------|--------|
| Investments | 2,848 | 2,777 |
| Properties less accumulated depreciation of \$11,984 and \$11,737, respectively | 30,033 | 29,751 |
| Other assets | 105 | 73 |

Total assets \$34,922 \$ 34,892

Liabilities and stockholders' equity

Current liabilities:

| | | |
|--------------------------------------|---------|----------|
| Accounts payable | \$1,223 | \$ 1,215 |
| Short-term debt | — | 100 |
| Income and other taxes | 268 | 245 |
| Other current liabilities | 252 | 229 |
| Current maturities of long-term debt | 600 | 550 |
| Total current liabilities | 2,343 | 2,339 |

Long-term debt

| | | |
|-----------------------|--------|--------|
| Long-term debt | 9,273 | 9,562 |
| Other liabilities | 1,385 | 1,442 |
| Deferred income taxes | 9,259 | 9,140 |
| Total liabilities | 22,260 | 22,483 |

Stockholders' equity:

| | | |
|--|--------|--------|
| Common stock \$1.00 per share par value, 1,350,000,000 shares authorized; outstanding 288,181,852 and 290,417,610 shares, respectively, net of treasury shares | 290 | 292 |
| Additional paid-in capital | 2,228 | 2,179 |
| Accumulated other comprehensive loss | (480) | (487) |
| Retained income | 10,624 | 10,425 |

Total stockholders' equity 12,662 12,409

Total liabilities and stockholders' equity \$34,922 \$ 34,892

See accompanying notes to consolidated financial statements.

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Norfolk Southern Corporation and Subsidiaries
Consolidated Statements of Cash Flows
(Unaudited)

| | First Six Months | |
|--|---------------------|--------|
| | 2017 | 2016 |
| | (\$ in millions) | |
| Cash flows from operating activities: | | |
| Net income | \$930 | \$792 |
| Reconciliation of net income to net cash provided by operating activities: | | |
| Depreciation | 525 | 511 |
| Deferred income taxes | 114 | 101 |
| Gains and losses on properties | (20) | (7) |
| Changes in assets and liabilities affecting operations: | | |
| Accounts receivable | (12) | (17) |
| Materials and supplies | (32) | (35) |
| Other current assets | 48 | 103 |
| Current liabilities other than debt | 93 | 25 |
| Other – net | (70) | (41) |
| Net cash provided by operating activities | 1,576 | 1,432 |
| Cash flows from investing activities: | | |
| Property additions | (883) | (932) |
| Property sales and other transactions | 60 | 40 |
| Investment purchases | (4) | (23) |
| Investment sales and other transactions | 3 | 3 |
| Net cash used in investing activities | (824) | (912) |
| Cash flows from financing activities: | | |
| Dividends | (354) | (350) |
| Common stock transactions | 42 | 1 |
| Purchase and retirement of common stock | (402) | (400) |
| Proceeds from borrowings – net | 298 | 594 |
| Debt repayments | (650) | (600) |
| Net cash used in financing activities | (1,066) | (755) |
| Net decrease in cash and cash equivalents | (314) | (235) |
| Cash and cash equivalents: | | |
| At beginning of year | 956 | 1,101 |
| At end of period | \$642 | \$866 |
| Supplemental disclosures of cash flow information: | | |

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Cash paid during the period for:

| | | |
|---------------------------------------|-------|-------|
| Interest (net of amounts capitalized) | \$270 | \$260 |
| Income taxes (net of refunds) | 341 | 251 |

See accompanying notes to consolidated financial statements.

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Norfolk Southern Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

In the opinion of management, the accompanying unaudited interim consolidated financial statements contain all adjustments (consisting of normal recurring accruals) necessary to present fairly Norfolk Southern Corporation (Norfolk Southern) and subsidiaries' (collectively, NS, we, us, and our) financial position at June 30, 2017, and December 31, 2016, our results of operations and comprehensive income for the second quarters and first six months of 2017 and 2016, and our cash flows for the first six months of 2017 and 2016 in conformity with U.S. generally accepted accounting principles (GAAP).

These consolidated financial statements should be read in conjunction with the consolidated financial statements and notes included in our latest Annual Report on Form 10-K.

1. Stock-Based Compensation

| | Second Quarter 2017 | First Six Months 2017 | Second Quarter 2016 | First Six Months 2016 |
|----------------------------------|---------------------------|-----------------------------|---------------------------|-----------------------------|
| | (\$ in millions) | | | |
| Stock-based compensation expense | \$ 5 | \$ 8 | \$ 32 | \$ 35 |
| Total tax benefit | 4 | 5 | 34 | 19 |

During 2017, a committee of nonemployee members of our Board of Directors (or the Chief Executive Officer when delegated authority by such committee) granted stock options, restricted stock units (RSUs) and performance share units (PSUs) pursuant to the Long-Term Incentive Plan (LTIP) and granted stock options pursuant to the Thoroughbred Stock Option Plan (TSOP), as follows:

| | Second Quarter | | First Six Months | |
|-------------------------|------------------|-----------------------|------------------|-----------------------|
| | Weighted-Average | | Weighted-Average | |
| | Granted | Grant-Date Fair Value | Granted | Grant-Date Fair Value |
| Stock options: | | | | |
| LTIP | — | \$ — | 341,120 | \$ 37.73 |
| TSOP | — | — | 144,440 | 31.33 |
| Total | — | — | 485,560 | |
| Restricted stock units | 2,970 | 117.75 | 83,330 | 120.16 |
| Performance share units | 10,648 | 116.48 | 295,601 | 87.97 |

Stock Options

The options granted under the LTIP and the TSOP have a term that will not exceed ten years and may not be exercised prior to the fourth and third anniversaries of the date of grant, respectively, or if the optionee retires or dies before that anniversary date, may not be exercised before the later of one year after the grant date or the date of the optionee's retirement or death. Holders of the options granted under the LTIP who remain actively employed receive cash dividend equivalent payments for four years in an amount equal to the regular quarterly dividends paid on Norfolk

Southern common stock (Common Stock). Dividend equivalent payments are not made on the TSOP options.

The fair value of each option award was measured on the date of grant using a binomial lattice-based option valuation model. Expected volatility is based on implied volatility from traded options on, and historical volatility of, Common Stock. Historical data is used to estimate option exercises within the valuation model. The average

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expected option life is derived from the output of the valuation model and represents the period of time that all options granted are expected to be outstanding, including the branches of the model that result in options expiring unexercised. The average risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. A dividend yield of zero was used for the LTIP options during the vesting period. A dividend yield of 2.04% was used for all vested LTIP options and all TSOP options.

The assumptions for the 2017 LTIP and TSOP grants are shown in the following table:

| | |
|-------------------------------------|--------------|
| Average expected volatility | 26% |
| Average risk-free interest rate | 2.51% |
| Average expected option term LTIP | 8.6 years |
| Average expected option term TSOP | 8.3 years |
| Per-share grant price LTIP and TSOP | \$120.25 |

| | Second Quarter 2017 | 2016 | First Six Months 2017 | 2016 |
|------------------------------|---------------------------|------|-----------------------------|-------|
| | (\$ in millions) | | | |
| Stock options exercised | 125,956 | 1003 | 1,011,365 | 917 |
| Cash received upon exercise | \$ 8 | \$ 8 | \$ 57 | \$ 18 |
| Related tax benefit realized | \$ 3 | \$ 1 | \$ 19 | \$ 2 |

Restricted Stock Units

RSUs primarily have a five-year restriction period and will be settled through the issuance of shares of Common Stock. The RSU grants include cash dividend equivalent payments during the restriction period in an amount equal to the regular quarterly dividends paid on Common Stock. The total related tax benefits were less than \$1 million for the second quarter of 2017 and \$1 million for the second quarter of 2016. No RSUs vested or were paid out during the second quarters of 2017 or 2016.

| | First Six Months 2017 | 2016 |
|--|-----------------------------|---------|
| | (\$ in millions) | |
| RSUs vested | 137,200 | 105,500 |
| Common Stock issued net of tax withholding | 81,318 | 103,936 |
| Related tax benefit realized | \$ 3 | \$ 1 |

Performance Share Units

PSUs provide for awards based on the achievement of certain predetermined corporate performance goals at the end of a three-year cycle and are settled through the issuance of shares of Common Stock. All PSUs will earn out based on the achievement of performance conditions and some will also earn out based on a market condition. The market condition fair value was measured on the date of grant using a Monte Carlo simulation model. No PSUs were earned or paid out during the second quarters of 2017 or 2016.

| First Six Months 2017 | 2016 |
|-----------------------------|------|
|-----------------------------|------|

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| | (\$ in millions) |
|--|---------------------|
| PSUs earned | 171,080,038 |
| Common Stock issued net of tax withholding | 99,803,757 |
| Related tax benefit realized | \$ 1 \$ 3 |

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2. Earnings Per Share

The following table sets forth the calculation of basic and diluted earnings per share:

| | Basic Second Quarter | | Diluted Second Quarter | |
|---|--|--------|-----------------------------|--------|
| | 2017 | 2016 | 2017 | 2016 |
| | (\$ in millions, except per share amounts, shares in millions) | | | |
| Net income | \$497 | \$405 | \$497 | \$405 |
| Dividend equivalent payments | (1) | (1) | — | (1) |
| Income available to common stockholders | \$496 | \$404 | \$497 | \$404 |
| Weighted-average shares outstanding | 289.0 | 294.7 | 289.0 | 294.7 |
| Dilutive effect of outstanding options and share-settled awards | | | 2.2 | 1.9 |
| Adjusted weighted-average shares outstanding | | | 291.2 | 296.6 |
| Earnings per share | \$1.72 | \$1.37 | \$1.71 | \$1.36 |
| | | | | |
| | Basic First Six Months | | Diluted First Six Months | |
| | 2017 | 2016 | 2017 | 2016 |
| | (\$ in millions, except per share amounts, shares in millions) | | | |
| Net income | \$930 | \$792 | \$930 | \$792 |
| Dividend equivalent payments | (2) | (2) | (1) | (2) |
| Income available to common stockholders | \$928 | \$790 | \$929 | \$790 |
| Weighted-average shares outstanding | 289.6 | 296.0 | 289.6 | 296.0 |
| Dilutive effect of outstanding options and share-settled awards | | | 2.4 | 1.7 |
| Adjusted weighted-average shares outstanding | | | 292.0 | 297.7 |
| Earnings per share | \$3.20 | \$2.67 | \$3.18 | \$2.65 |

During the second quarters and first six months of 2017 and 2016, dividend equivalent payments were made to holders of LTIP stock options and RSUs. For purposes of computing basic earnings per share, dividend equivalent payments made to holders of these stock options and RSUs were deducted from net income to determine income available to common stockholders. For purposes of computing diluted earnings per share, we evaluate on a grant-by-grant basis those stock options and RSUs receiving dividend equivalent payments under the two-class and treasury stock methods to determine which method is the more dilutive for each grant. For those grants for which the two-class method was more dilutive, net income was reduced by dividend equivalent payments to determine income

available to common stockholders. The dilution calculations exclude options having exercise prices

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exceeding the average market price of Common Stock as follows: 0.5 million in each of the first and second quarters of 2017 and 1.5 million in each of the first and second quarters of 2016.

3. Accumulated Other Comprehensive Loss

The changes in the cumulative balances of “Accumulated other comprehensive loss” reported in the Consolidated Balance Sheets consisted of the following:

| | Balance at Beginning of Year (\$ in millions) | Net Loss | Reclassification Adjustments | Balance at End of Period |
|---|--|-------------|---------------------------------|-----------------------------------|
| Six months ended June 30, 2017 | | | | |
| Pensions and other postretirement liabilities | \$ (414) | \$ — | \$ 8 | (1) \$ (406) |
| Other comprehensive loss of equity investees | (73) | (1) | — | (74) |
| Accumulated other comprehensive loss | \$ (487) | \$ (1) | \$ 8 | \$ (480) |
| Six months ended June 30, 2016 | | | | |
| Pensions and other postretirement liabilities | \$ (367) | \$ — | \$ 8 | (1) \$ (359) |
| Other comprehensive loss of equity investees | (78) | — | — | (78) |
| Accumulated other comprehensive loss | \$ (445) | \$ — | \$ 8 | \$ (437) |

(1) These items are included in the computation of net periodic pension and postretirement benefit costs. See Note 7, “Pensions and Other Postretirement Benefits,” for additional information.

4. Stock Repurchase Program

We repurchased and retired 3.4 million and 5.0 million shares of Common Stock under our stock repurchase program in the first six months of 2017 and 2016, respectively, at a cost of \$402 million and \$400 million, respectively. Since the beginning of 2006, we have repurchased and retired 163.7 million shares at a total cost of \$10.7 billion.

5. Investments

Investment in Conrail

Through a limited liability company, we and CSX Corporation (CSX) jointly own Conrail Inc. (Conrail), whose primary subsidiary is Consolidated Rail Corporation (CRC). We have a 58% economic and 50% voting interest in the jointly owned entity, and CSX has the remainder of the economic and voting interests. Our investment in Conrail was \$1.2 billion at both June 30, 2017, and December 31, 2016.

CRC owns and operates certain properties (the Shared Assets Areas) for the joint and exclusive benefit of Norfolk Southern Railway Company (NSR) and CSX Transportation, Inc. (CSXT). The costs of operating the Shared Assets Areas are borne by NSR and CSXT based on usage. In addition, NSR and CSXT pay CRC a fee for access to the Shared Assets Areas. “Purchased services and rents” and “Fuel” include amounts payable to CRC for the operation of the Shared Assets Areas totaling \$37 million and \$36 million for the second quarters of 2017 and 2016,

respectively, and \$72 million and \$75 million for the first six months of 2017 and 2016, respectively. Our equity in the earnings of Conrail, net of amortization, included in “Purchased services and rents” was \$10 million and \$11 million for the second quarters of 2017 and 2016, respectively, and \$20 million and \$22 million for the first six months of 2017 and 2016, respectively.

“Other liabilities” includes \$280 million at both June 30, 2017, and December 31, 2016, for long-term advances from Conrail, maturing 2044, that bear interest at an average rate of 2.9%.

Investment in TTX

NS and eight other North American railroads jointly own TTX Company (TTX). NS has a 19.65% ownership interest in TTX, a railcar pooling company that provides its owner-railroads with standardized fleets of intermodal, automotive, and general use railcars at stated rates.

Amounts payable to TTX for use of equipment are included in “Purchased services and rents” and amounted to \$58 million and \$56 million of expense for the second quarters of 2017 and 2016, respectively, and \$115 million and \$114 million for the first six months of 2017 and 2016, respectively. Our equity in the earnings of TTX, also included in “Purchased services and rents,” totaled \$10 million and \$5 million for the second quarters of 2017 and 2016, respectively, and \$18 million and \$10 million for the first six months of 2017 and 2016, respectively.

6. Debt

During the second quarter of 2017, NS issued \$300 million of 3.15% senior notes due 2027.

We have in place a \$350 million receivables securitization facility which expires in June 2018. At June 30, 2017, the amount outstanding under the facility was \$100 million and was included within “Long-term debt” due to our intent to refinance \$100 million of these borrowings on a long-term basis, which is supported by our \$750 million credit agreement.

7. Pensions and Other Postretirement Benefits

We have both funded and unfunded defined benefit pension plans covering principally salaried employees. We also provide specified health care and life insurance benefits to eligible retired employees; these plans can be amended or terminated at our option. Under our self-insured retiree health care plan, for those participants who are not Medicare-eligible, a defined percentage of health care expenses is covered for retired employees and their dependents, reduced by any deductibles, coinsurance, and, in some cases, coverage provided under other group insurance policies. Those participants who are Medicare-eligible are not covered under the self-insured retiree health care plan, but instead are provided with an employer-funded health reimbursement account which can be used for reimbursement of health insurance premiums or eligible out-of-pocket medical expenses.

Pension and postretirement benefit cost components for the second quarter and first six months are as follows:

| | Pension Benefits | | Other Postretirement Benefits | |
|---------------------------------------|---------------------|-------|-------------------------------------|-------|
| | Second Quarter | | | |
| | 2017 | 2016 | 2017 | 2016 |
| | (\$ in millions) | | | |
| Service cost | \$10 | \$9 | \$2 | \$2 |
| Interest cost | 20 | 21 | 4 | 4 |
| Expected return on plan assets | (43) | (43) | (4) | (5) |
| Amortization of net losses | 13 | 12 | — | — |
| Amortization of prior service benefit | — | — | (6) | (6) |
| Net benefit | \$— | \$(1) | \$(4) | \$(5) |

| | Pension Benefits | | Other Postretirement Benefits | |
|---------------------------------------|---------------------|-------|-------------------------------------|--------|
| | First Six Months | | | |
| | 2017 | 2016 | 2017 | 2016 |
| | (\$ in millions) | | | |
| Service cost | \$19 | \$18 | \$4 | \$3 |
| Interest cost | 40 | 41 | 8 | 8 |
| Expected return on plan assets | (86) | (86) | (8) | (9) |
| Amortization of net losses | 26 | 25 | — | — |
| Amortization of prior service benefit | — | — | (12) | (12) |
| Net benefit | \$(1) | \$(2) | \$(8) | \$(10) |

8. Fair Values of Financial Instruments

The fair values of “Cash and cash equivalents,” “Accounts receivable,” “Accounts payable,” and “Short-term debt” approximate carrying values because of the short maturity of these financial instruments. The carrying value of corporate-owned life insurance is recorded at cash surrender value and, accordingly, approximates fair value. Other than these assets and liabilities that approximate fair value, there are no other assets or liabilities measured at fair

value on a recurring basis at June 30, 2017, or December 31, 2016. The carrying amounts and estimated fair values

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for the remaining financial instruments, excluding investments accounted for under the equity method, consisted of the following:

| | June 30, 2017 | | December 31, 2016 | |
|--|------------------|------------|-------------------|------------|
| | Carrying Amount | Fair Value | Carrying Amount | Fair Value |
| | (\$ in millions) | | | |
| Long-term investments | \$115 | \$139 | \$116 | \$141 |
| Long-term debt, including current maturities | (9,873) | (11,675) | (10,112) | (11,626) |

Underlying net assets and future discounted cash flows were used to estimate the fair value of investments. The fair values of long-term debt were estimated based on quoted market prices or discounted cash flows using current interest rates for debt with similar terms, credit rating, and remaining maturity.

The following table sets forth the fair value of long-term investment and long-term debt balances disclosed above by valuation technique level, within the fair value hierarchy (there were no level 3 valued assets or liabilities).

| | Level 1 | Level 2 | Total |
|--|------------------|---------|----------|
| | (\$ in millions) | | |
| June 30, 2017 | | | |
| Long-term investments | \$4 | \$135 | \$139 |
| Long-term debt, including current maturities | (11,479) | (197) | (11,675) |
| December 31, 2016 | | | |
| Long-term investments | \$4 | \$137 | \$141 |
| Long-term debt, including current maturities | (11,429) | (299) | (11,626) |

9. Commitments and Contingencies

Lawsuits

We and/or certain subsidiaries are defendants in numerous lawsuits and other claims relating principally to railroad operations. When we conclude that it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, it is accrued through a charge to earnings. While the ultimate amount of liability incurred in any of these lawsuits and claims is dependent on future developments, in our opinion, the recorded liability is adequate to cover the future payment of such liability and claims. However, the final outcome of any of these lawsuits and claims cannot be predicted with certainty, and unfavorable or unexpected outcomes could result in additional accruals that could be significant to results of operations in a particular year or quarter. Any adjustments to the recorded liability will be reflected in earnings in the periods in which such adjustments become known.

One of our chemical customers, Sunbelt Chlor Alkali Partnership (Sunbelt), filed a rate reasonableness complaint before the Surface Transportation Board (STB) alleging that our tariff rates for transportation of regulated movements are unreasonable. Since April 1, 2011, we have been billing and collecting amounts based on the challenged tariff rates. In 2014, the STB resolved this rate reasonableness complaint in our favor, and in June 2016, the STB resolved petitions for reconsideration. The matter remains decided in our favor; however, the findings are still subject to appeal. We believe the estimate of any reasonably possible loss will not have a material effect on our financial

position, results of operations, or liquidity. With regard to rate cases, we record adjustments to revenues in the periods if and when such adjustments are probable and reasonably estimable.

On November 6, 2007, various antitrust class actions filed against us and other Class I railroads in various Federal district courts regarding fuel surcharges were consolidated in the District of Columbia by the Judicial Panel on Multidistrict Litigation. On June 21, 2012, the court certified the case as a class action. The defendant railroads appealed this certification, and the Court of Appeals for the District of Columbia vacated the District Court's decision and remanded the case for further consideration. We believe the allegations in the complaints are without merit and intend to vigorously defend the cases. We do not believe the outcome of these proceedings will have a material effect on our financial position, results of operations, or liquidity.

Casualty Claims

Casualty claims include employee personal injury and occupational claims as well as third-party claims, all exclusive of legal costs. To aid in valuing our personal injury liability and determining the amount to accrue with respect to such claims during the year, we utilize studies prepared by an independent consulting actuarial firm. Job-related accidental injury and occupational claims are subject to the Federal Employers' Liability Act (FELA), which is applicable only to railroads. FELA's fault-based system produces results that are unpredictable and inconsistent as compared with a no-fault workers' compensation system. The variability inherent in this system could result in actual costs being different from the liability recorded. While the ultimate amount of claims incurred is dependent on future developments, in our opinion, the recorded liability is adequate to cover the future payments of claims and is supported by the most recent actuarial study. In all cases, we record a liability when the expected loss for the claim is both probable and reasonably estimable.

Employee personal injury claims – The largest component of casualties and other claims expense is employee personal injury costs. The independent actuarial firm engaged by us provides quarterly studies to aid in valuing our employee personal injury liability and estimating personal injury expense. The actuarial firm studies our historical patterns of reserving for claims and subsequent settlements, taking into account relevant outside influences. The actuarial firm uses the results of these analyses to estimate the ultimate amount of liability. We adjust the liability quarterly based upon our assessment and the results of the study. Our estimate of the liability is subject to inherent limitation given the difficulty of predicting future events such as jury decisions, court interpretations, or legislative changes. As a result, actual claim settlements may vary from the estimated liability recorded.

Occupational claims – Occupational claims (including asbestosis and other respiratory diseases, as well as conditions allegedly related to repetitive motion) are often not caused by a specific accident or event but rather allegedly result from a claimed exposure over time. Many such claims are being asserted by former or retired employees, some of whom have not been employed in the rail industry for decades. The independent actuarial firm provides an estimate of the occupational claims liability based upon our history of claim filings, severity, payments, and other pertinent facts. The liability is dependent upon judgments we make as to the specific case reserves as well as judgments of the actuarial firm in the quarterly studies. The actuarial firm's estimate of ultimate loss includes a provision for those claims that have been incurred but not reported. This provision is derived by analyzing industry data and projecting our experience. We adjust the liability quarterly based upon our assessment and the results of the study. However, it is possible that the recorded liability may not be adequate to cover the future payment of claims. Adjustments to the recorded liability are reflected in operating expenses in the periods in which such adjustments become known.

Third-party claims – We record a liability for third-party claims, including those for highway crossing accidents, trespasser and other injuries, automobile liability, property damage, and lading damage. The actuarial firm assists us with the calculation of potential liability for third-party claims, except lading damage, based upon our experience including the number and timing of incidents, amount of payments, settlement rates, number of open claims, and legal defenses. We adjust the liability quarterly based upon our assessment and the results of the study. Given the inherent uncertainty in regard to the ultimate outcome of third-party claims, it is possible that the actual loss may differ from the estimated liability recorded.

Environmental Matters

We are subject to various jurisdictions' environmental laws and regulations. We record a liability where such liability or loss is probable and reasonably estimable. Environmental engineers regularly participate in ongoing evaluations of all known sites and in determining any necessary adjustments to liability estimates.

Our Consolidated Balance Sheets include liabilities for environmental exposures of \$65 million and \$67 million at June 30, 2017, and December 31, 2016, respectively (of which \$15 million are classified as current liabilities at both dates). At June 30, 2017, the liability represents our estimates of the probable cleanup, investigation, and remediation costs based on available information at 131 known locations and projects compared with 134 locations and projects at December 31, 2016. At June 30, 2017, 16 sites accounted for \$42 million of the liability, and no individual site was considered to be material. We anticipate that much of this liability will be paid out over five years; however, some costs will be paid out over a longer period.

At ten locations, one or more of our subsidiaries in conjunction with a number of other parties have been identified as potentially responsible parties under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 or comparable state statutes that impose joint and several liability for cleanup costs. We calculate our estimated liability for these sites based on facts and legal defenses applicable to each site and not solely on the basis of the potential for joint liability.

With respect to known environmental sites (whether identified by us or by the Environmental Protection Agency or comparable state authorities), estimates of our ultimate potential financial exposure for a given site or in the aggregate for all such sites can change over time because of the widely varying costs of currently available cleanup techniques, unpredictable contaminant recovery and reduction rates associated with available cleanup technologies, the likely development of new cleanup technologies, the difficulty of determining in advance the nature and full extent of contamination and each potential participant's share of any estimated loss (and that participant's ability to bear it), and evolving statutory and regulatory standards governing liability.

The risk of incurring environmental liability, for acts and omissions, past, present, and future, is inherent in the railroad business. Some of the commodities we transport, particularly those classified as hazardous materials, pose special risks that we work diligently to reduce. In addition, several of our subsidiaries own, or have owned, land used as operating property, or which is leased and operated by others, or held for sale. Because environmental problems that are latent or undisclosed may exist on these properties, there can be no assurance that we will not incur environmental liabilities or costs with respect to one or more of them, the amount and materiality of which cannot be estimated reliably at this time. Moreover, lawsuits and claims involving these and potentially other unidentified environmental sites and matters are likely to arise from time to time. The resulting liabilities could have a significant effect on our financial position, results of operations, or liquidity in a particular year or quarter.

Based on our assessment of the facts and circumstances now known, we believe we have recorded the probable and reasonably estimable costs for dealing with those environmental matters of which we are aware. Further, we believe that it is unlikely that any known matters, either individually or in the aggregate, will have a material adverse effect on our financial position, results of operations, or liquidity.

Insurance

We obtain, on behalf of ourself and our subsidiaries, insurance for potential losses for third-party liability and first-party property damages. We are currently self-insured up to \$50 million and above \$1.1 billion (\$1.5 billion for specific perils) per occurrence and/or policy year for bodily injury and property damage to third parties and up to \$25 million and above \$200 million per occurrence and/or policy year for property owned by us or in our care, custody, or control.

10. New Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, "Revenue from Contracts with Customers." This update will replace most existing revenue recognition guidance in GAAP and require an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The new standard will be effective for our annual and interim reporting periods beginning January 1, 2018. ASU 2014-09 permits the use of either the retrospective or cumulative effect transition method. We are still evaluating the effects of ASU 2014-09, but we do not currently expect that adoption of the standard will have a material effect on our consolidated financial statements. There will be no change to our pattern of revenue recognition related to transportation revenue, which will continue to be recognized proportionally as a shipment moves from origin to destination. Certain additional financial statement disclosure requirements are mandated by the new standard including disclosure of contract assets and contract liabilities as well as a disaggregated view of revenue, which we expect to be similar to our current disclosures within the "Railway Operating Revenues" section of Item 2, "Management's Discussion and Analysis of Financial Condition and Results of Operations." We do not plan to adopt the standard early and we have not yet determined which transition method we will use.

In February 2016, the FASB issued ASU 2016-02, "Leases." This update, effective for our annual and interim reporting periods beginning January 1, 2019, will replace existing lease guidance in GAAP and will require lessees to recognize lease assets and lease liabilities on the balance sheet for all leases greater than twelve months and disclose key information about leasing arrangements. When implemented, lessees and lessors will be required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. We are currently evaluating the effects ASU 2016-02 will have on our consolidated financial statements and related disclosures. We disclosed \$614 million in operating lease obligations in our lease commitments footnote in our most recent Form 10-K and we will evaluate those contracts as well as other existing arrangements to determine if they qualify for lease accounting under the new standard. We do not plan to adopt the standard early.

In June 2016, the FASB issued ASU 2016-13, "Credit Losses - Measurement of Credit Losses on Financial Instruments," which replaces the current incurred loss impairment method with a method that reflects expected credit losses. The new standard is effective as of January 1, 2020, and early adoption is permitted as of January 1, 2019. Because credit losses associated from our trade receivables have historically been insignificant, we do not expect this standard to have a material effect on our financial statements.

In March 2017, the FASB issued ASU No. 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost." This update, effective for annual and interim reporting periods beginning January 1, 2018, will require segregation of these net benefit costs between operating and non-operating expenses. Currently, we report the net benefit costs associated with our defined benefit and postretirement plans in the "Compensation and benefits" line item of the Consolidated Statements of Income, as disclosed in Note 7, "Pensions and Other Postretirement Benefits." When the ASU is implemented, only the service cost component of defined benefit pension cost and postretirement benefit cost will be reported within compensation costs, while all other components of net benefit cost will be presented within the "Other income - net" line item on the Consolidated Statements of Income. The standard requires retrospective application, and as such the adoption of this standard will result in offsetting increases in "Compensation and benefits" expense and "Other income - net" of the Consolidated Statements of Income for all periods of 2017 and 2016, with no impact on net income. We did not adopt the standard early.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Norfolk Southern Corporation and Subsidiaries

The following discussion and analysis should be read in conjunction with the Consolidated Financial Statements and Notes.

OVERVIEW

We are one of the nation's premier transportation companies. Our Norfolk Southern Railway Company subsidiary operates approximately 19,500 miles of road in 22 states and the District of Columbia, serves every major container port in the eastern United States, and provides efficient connections to other rail carriers. We operate the most extensive intermodal network in the East and are a major transporter of coal, automotive, and industrial products.

Our strong second quarter results demonstrated continued success in the execution of our strategic plan. We achieved an all-time record low operating ratio (a measure of the amount of operating revenues consumed by operating expenses) of 66.3% in the second quarter, and first six-month records for both operating ratio and diluted earnings per share. Through the focused execution of our plan, we were able to sustain revenue growth and disciplined cost control to mitigate the effects of volume and inflation-related expenses.

SUMMARIZED RESULTS OF OPERATIONS

(\$ in millions, except per share amounts)

| | Second Quarter | | | First Six Months | | |
|--------------------------------|----------------|--------|----------|------------------|---------|----------|
| | 2017 | 2016 | % change | 2017 | 2016 | % change |
| Income from railway operations | \$888 | \$770 | 15% | \$1,661 | \$1,493 | 11% |
| Net income | \$497 | \$405 | 23% | \$930 | \$792 | 17% |
| Diluted earnings per share | \$1.71 | \$1.36 | 26% | \$3.18 | \$2.65 | 20% |
| Railway operating ratio | 66.3 | 68.6 | (3%) | 68.1 | 69.4 | (2%) |

Higher net income for both periods was driven by increased income from railway operations, a result of higher railway operating revenues, offset in part by increases in railway operating expenses. Traffic volume was up 6% for both comparisons, and average revenue per unit growth was driven by pricing gains and higher fuel surcharge revenues in each period.

DETAILED RESULTS OF OPERATIONS

Railway Operating Revenues

The following tables present a comparison of revenues (\$ in millions), volumes (units in thousands), and average revenue per unit (\$ per unit) by market group.

| Revenues | Second Quarter | | | First Six Months | | |
|---------------------|----------------|---------|----------|------------------|---------|----------|
| | 2017 | 2016 | % change | 2017 | 2016 | % change |
| Merchandise: | | | | | | |
| Chemicals | \$406 | \$426 | (5%) | \$833 | \$845 | (1%) |
| Agr./consumer/gov't | 384 | 383 | — | 768 | 769 | — |
| Metals/construction | 371 | 334 | 11% | 711 | 634 | 12% |
| Automotive | 249 | 248 | — | 495 | 502 | (1%) |
| Paper/clay/forest | 187 | 186 | 1% | 374 | 376 | (1%) |
| Merchandise | 1,597 | 1,577 | 1% | 3,181 | 3,126 | 2% |
| Intermodal | 593 | 538 | 10% | 1,164 | 1,060 | 10% |
| Coal | 447 | 339 | 32% | 867 | 688 | 26% |
| Total | \$2,637 | \$2,454 | 7% | \$5,212 | \$4,874 | 7% |

Units

Merchandise:

| | | | | | | |
|---------------------|---------|---------|------|---------|---------|------|
| Chemicals | 114.8 | 122.8 | (7%) | 233.4 | 243.4 | (4%) |
| Agr./consumer/gov't | 145.7 | 148.0 | (2%) | 295.2 | 299.4 | (1%) |
| Metals/construction | 193.4 | 183.6 | 5% | 361.8 | 338.5 | 7% |
| Automotive | 111.4 | 112.7 | (1%) | 221.9 | 226.0 | (2%) |
| Paper/clay/forest | 70.3 | 71.6 | (2%) | 140.9 | 144.6 | (3%) |
| Merchandise | 635.6 | 638.7 | — | 1,253.2 | 1,251.9 | — |
| Intermodal | 1,009.1 | 951.8 | 6% | 1,978.5 | 1,880.9 | 5% |
| Coal | 266.1 | 210.0 | 27% | 525.7 | 424.8 | 24% |
| Total | 1,910.8 | 1,800.5 | 6% | 3,757.4 | 3,557.6 | 6% |

Revenue per Unit

Merchandise:

| | | | | | | |
|---------------------|---------|---------|----|---------|---------|----|
| Chemicals | \$3,536 | \$3,467 | 2% | \$3,568 | \$3,471 | 3% |
| Agr./consumer/gov't | 2,637 | 2,587 | 2% | 2,602 | 2,568 | 1% |
| Metals/construction | 1,919 | 1,822 | 5% | 1,966 | 1,874 | 5% |
| Automotive | 2,244 | 2,198 | 2% | 2,232 | 2,220 | 1% |
| Paper/clay/forest | 2,653 | 2,603 | 2% | 2,652 | 2,603 | 2% |
| Merchandise | 2,514 | 2,469 | 2% | 2,538 | 2,497 | 2% |
| Intermodal | 587 | 565 | 4% | 588 | 564 | 4% |
| Coal | 1,679 | 1,611 | 4% | 1,649 | 1,619 | 2% |
| Total | 1,380 | 1,362 | 1% | 1,387 | 1,370 | 1% |

Second-quarter railway operating revenues increased \$183 million over the same period last year. For the first six months, railway operating revenues increased \$338 million. The table below reflects the components of the revenue change by commodity over the same period last year (\$ in millions).

| | Second Quarter | | | First Six Months | | |
|------------------------|---------------------|------------|-------|---------------------|------------|-------|
| | Increase (Decrease) | | | Increase (Decrease) | | |
| | Merch | Intermodal | Coal | Merch | Intermodal | Coal |
| Volume | \$(8) | \$ 32 | \$90 | \$3 | \$ 55 | \$163 |
| Fuel surcharge revenue | 10 | 19 | 6 | 15 | 41 | 10 |
| Rate, mix and other | 18 | 4 | 12 | 37 | 8 | 6 |
| Total | \$20 | \$ 55 | \$108 | \$55 | \$ 104 | \$179 |

Most of our contracts include negotiated fuel surcharges, typically tied to either On-Highway Diesel (OHD) or West Texas Intermediate Crude Oil (WTI). Approximately 90% of our revenue base is covered by these negotiated fuel surcharges, with more than half tied to OHD. In the second quarter and first six months of 2017, contracts tied to OHD accounted for about 90% of our fuel surcharge revenue, as price levels were below most of our surcharge trigger points in contracts tied to WTI. Revenues associated with these surcharges totaled \$85 million and \$50 million in the second quarters of 2017 and 2016, respectively, and \$165 million and \$99 million for the first six months of 2017 and 2016, respectively.

Merchandise

Merchandise revenue increases for both periods were primarily the result of higher average revenue per unit, driven by pricing gains and higher fuel surcharges. Total merchandise volumes were relatively flat as gains in the metals and construction group were offset by declines in the remaining groups.

Chemicals volume declined in both periods, driven by reduced shipments of crude oil from the Bakken oil fields and lower shipments of liquefied petroleum gas. The decrease in the first six months was partially offset by more shipments of higher-rated plastics, and increased rock salt shipments due to weather and replenishing of stockpiles.

One of our chemical customers, Sunbelt, filed a rate reasonableness complaint before the STB alleging that our tariff rates for transportation of regulated movements are unreasonable. Since April 1, 2011, we have been billing and collecting amounts based on the challenged tariff rates. In 2014, the STB resolved this rate reasonableness complaint in our favor and in June 2016, the STB resolved petitions for reconsideration. The matter remains decided in our favor; however, the findings are still subject to appeal. We believe the estimate of any reasonably possible loss will not have a material effect on our financial position, results of operations, or liquidity. With regard to rate cases, we record adjustments to revenues in the periods if and when such adjustments are probable and reasonably estimable.

Agriculture, consumer products, and government volume was down in both periods, reflecting lower ethanol shipments, partially offset by increased corn shipments.

Metals and construction volume grew in both periods, a result of increased frac sand shipments for use in natural gas drilling in the Marcellus and Utica regions and higher iron and steel shipments driven by continued improvement in construction activity. These increases were partially offset by declines in cement traffic due to customer sourcing changes.

Automotive volume declined in both periods, driven mainly by decreases in U.S. light vehicle production.

Paper, clay, and forest products volume declined in both periods, a result of lower pulpboard and woodchip shipments, primarily due to customer sourcing changes and truck competition. This was partially offset by more shipments of miscellaneous waste driven by growth with existing customers.

Merchandise revenues for the remainder of the year are expected to increase compared to last year, reflecting higher average revenue per unit (driven by pricing gains and increased fuel surcharge revenues) as volumes are expected to be slightly lower compared with the second half of 2016.

Intermodal

Intermodal revenues increased for both periods, largely the result of higher traffic volumes and average revenue per unit, primarily driven by higher fuel surcharges.

Intermodal units (in thousands) by market were as follows:

| | Second Quarter | | | First Six Months | | |
|---------------|----------------|-------|----------|------------------|---------|----------|
| | 2017 | 2016 | % change | 2017 | 2016 | % change |
| Domestic | 627.1 | 589.3 | 6% | 1,228.0 | 1,159.6 | 6% |
| International | 382.0 | 362.5 | 5% | 750.5 | 721.3 | 4% |
| Total | 1,009.1 | 951.8 | 6% | 1,978.5 | 1,880.9 | 5% |

Domestic volume increases in both periods were the result of continued highway conversions, growth in existing accounts, and market share gains. International volume grew in both periods due to increased demand from existing customers.

Intermodal revenues for the remainder of the year are expected to increase compared to last year driven by higher average revenue per unit (due to higher fuel surcharge revenues and pricing gains) and volume growth.

Coal

Coal revenues increased in both periods, a result of higher volumes, primarily in the export and utility markets, and higher average revenue per unit, reflecting pricing gains and increased fuel surcharges.

Coal tonnage (in thousands) by market was as follows:

| | Second Quarter | | | First Six Months | | |
|------------------------|----------------|--------|----------|------------------|--------|----------|
| | 2017 | 2016 | % change | 2017 | 2016 | % change |
| Utility | 17,587 | 14,336 | 23% | 35,189 | 29,740 | 18% |
| Export | 6,566 | 3,683 | 78% | 12,909 | 7,382 | 75% |
| Domestic metallurgical | 3,982 | 3,580 | 11% | 7,349 | 6,539 | 12% |
| Industrial | 1,331 | 1,521 | (12%) | 2,802 | 3,196 | (12%) |
| Total | 29,466 | 23,120 | 27% | 58,249 | 46,857 | 24% |

Utility coal tonnage increases in both periods were driven by a market share gain and higher natural gas prices. Export coal tonnage grew significantly over prior periods, as a continued tightening of international coal supply drove incremental production increases and higher demand for U.S. coals. Domestic metallurgical coal tonnage rose as customer-specific gains more than offset supply issues driven by increased demand in the export markets in both periods. Industrial coal tonnage fell in both periods, reflecting continued pressure from natural gas conversions and

customer sourcing changes.

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Coal revenues for the remainder of the year are expected to be higher than last year primarily due to export volume increases and improving average revenue per unit driven by pricing gains.

Railway Operating Expenses

Railway operating expenses (\$ in millions) summarized by major classifications were as follows:

| | Second Quarter | | | First Six Months | | |
|------------------------------|----------------|----------------|-----------|------------------|----------------|-----------|
| | 2017 | 2016 | % change | 2017 | 2016 | % change |
| Compensation and benefits | \$703 | \$667 | 5% | \$1,446 | \$1,390 | 4% |
| Purchased services and rents | 392 | 384 | 2% | 769 | 763 | 1% |
| Fuel | 190 | 174 | 9% | 403 | 323 | 25% |
| Depreciation | 264 | 257 | 3% | 523 | 509 | 3% |
| Materials and other | 200 | 202 | (1)% | 410 | 396 | 4% |
| Total | \$1,749 | \$1,684 | 4% | \$3,551 | \$3,381 | 5% |

Compensation and benefits expense increased in both periods, reflecting changes in:

- incentive and stock-based compensation (up \$21 million for the quarter and \$23 million for the first six months),
- pay rates (up \$20 million for the quarter and \$36 million for the first six months),
- health and welfare benefit rates for agreement employees (up \$15 million for the quarter and \$30 million for the first six months), and
- employment levels (down \$16 million for the quarter and \$31 million for the first six months).

Average rail headcount for the quarter was down by about 800 compared with second-quarter 2016. We expect employment levels to remain fairly steady for the remainder of the year.

Purchased services and rents increased for both periods as follows (\$ in millions):

| | Second Quarter | | | First Six Months | | |
|--------------------|----------------|--------------|-----------|------------------|--------------|-----------|
| | 2017 | 2016 | % change | 2017 | 2016 | % change |
| Purchased services | \$318 | \$309 | 3% | \$622 | \$609 | 2% |
| Equipment rents | 74 | 75 | (1)% | 147 | 154 | (5)% |
| Total | \$392 | \$384 | 2% | \$769 | \$763 | 1% |

Purchased services increases reflected higher intermodal volume-related costs, while the declines in equipment rents were mostly due to lower automotive volume.

Fuel expense, which includes the cost of locomotive fuel as well as other fuel used in railway operations, increased for both periods, due to higher locomotive fuel prices (up 11% in the second quarter and 27% in the first six months), offset in part by improved locomotive fuel efficiency (consumption was 2% lower during both the second quarter and first six months despite the 6% increase in traffic volume in both periods).

Materials and other expenses declined in the second quarter, but increased for the first six months as follows (\$ in millions):

| | Second Quarter | | | First Six Months | | |
|-----------------------------|----------------|-------|----------|------------------|-------|----------|
| | 2017 | 2016 | % change | 2017 | 2016 | % change |
| Materials | \$87 | \$91 | (4)% | \$179 | \$171 | 5% |
| Casualties and other claims | 35 | 32 | 9% | 75 | 65 | 15% |
| Other | 78 | 79 | (1)% | 156 | 160 | (3)% |
| Total | \$200 | \$202 | (1)% | \$410 | \$396 | 4% |

Material usage costs, largely associated with locomotive and freight car repairs, declined in the second quarter but rose in the first six months. Casualties and other claims expenses include the estimates of costs related to personal injury, property damage, and environmental remediation matters. Cost associated with personal injury increased in the second quarter and first six months as a result of less favorable experience with respect to personal injury reserves, including \$9 million of case-specific third-party injury accruals recorded in the first quarter of 2017.

Other Income – Net

Other income – net increased \$28 million in the second quarter and \$36 million for the first six months compared with the same periods last year. The increases in both periods were due to higher returns from corporate-owned life insurance, increased income associated with our coal mining properties. Both periods further benefited from the absence of advisory fees incurred last year.

Provision for Income Taxes

The second-quarter and year-to-date effective income tax rates were 36.3% and 35.2%, compared with 36.3% and 35.9% for the same periods last year. The lower six-month effective tax rate this year reflects more tax benefits on stock-based compensation, offset in part by the absence of certain tax credits.

On July 6, 2017, Illinois enacted legislation increasing their corporate tax rate that will cause an increase to deferred tax expense of approximately \$13 million in the third quarter. We expect our full-year effective income tax rate to be around 37%.

FINANCIAL CONDITION AND LIQUIDITY

Cash provided by operating activities, our principal source of liquidity, was \$1.6 billion for the first six months of 2017, compared with \$1.4 billion for the same period of 2016, reflecting improved operating results. We had working capital deficits of \$407 million at June 30, 2017, compared with \$48 million at December 31, 2016. Cash and cash equivalents totaled \$642 million at June 30, 2017. We expect cash on hand combined with cash provided by operating activities will be sufficient to meet our ongoing obligations.

During the second quarter of 2017, we issued \$300 million of 3.15% senior notes due 2027. Other than this item, there have been no material changes to the information on future obligations contained in our Form 10-K for the year ended December 31, 2016.

Cash used in investing activities was \$824 million for the first six months of 2017, compared with \$912 million in the same period last year, primarily due to decreased property additions and increased property sale proceeds. Cash used in financing activities was \$1.1 billion in the first six months of 2017, compared with \$755 million in the same period last year, the result of lower debt proceeds. We repurchased 3.4 million shares of Common Stock,

totaling \$402 million, in the first six months of 2017, compared to 5.0 million shares, totaling \$400 million, in the same period last year. The timing and volume of future share repurchases will be guided by our assessment of

market conditions and other pertinent factors. Any near-term purchases under the program are expected to be made with internally generated cash, cash on hand, or proceeds from borrowings. We anticipate repurchasing shares totaling \$1.0 billion during 2017.

Our total debt-to-total capitalization ratio was 43.8% at June 30, 2017, and 45.1% at December 31, 2016.

We have in place and available a \$750 million credit agreement expiring in May 2021, which provides for borrowings at prevailing rates and includes covenants. We had no amounts outstanding under this facility at both June 30, 2017 and December 31, 2016, and are in compliance with all of its covenants. We have a \$350 million accounts receivable securitization program with a two-year term expiring June 2018. There was \$100 million and \$200 million outstanding under this program at June 30, 2017, and December 31, 2016, respectively.

APPLICATION OF CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in accordance with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. These estimates and assumptions may require significant judgment about matters that are inherently uncertain, and future events are likely to occur that may require us to make changes to these estimates and assumptions. Accordingly, we regularly review these estimates and assumptions based on historical experience, changes in the business environment, and other factors we believe to be reasonable under the circumstances. We regularly discuss the development, selection, and disclosures concerning critical accounting estimates with the Audit Committee of our Board of Directors. There have been no significant changes to the application of critical accounting estimates disclosure contained in our Form 10-K at December 31, 2016.

OTHER MATTERS

Labor Agreements

Approximately 80% of our railroad employees are covered by collective bargaining agreements with various labor unions. Pursuant to the Railway Labor Act (the Act), these agreements remain in effect until new agreements are reached, or until the bargaining procedures mandated by the Act are completed. We largely bargain nationally in concert with other major railroads, represented by the National Carriers Conference Committee (NCCC). Moratorium provisions in the labor agreements govern when the railroads and unions may propose changes to the agreements.

Beginning in late 2014, the NCCC and the various unions exchanged new proposals to begin the current round of national negotiations. The unions have formed three separate bargaining coalitions and negotiations with each are ongoing with the assistance of mediators from the National Mediation Board. Separately, in January 2015 we reached an agreement covering wages and work rules through 2019 with the Brotherhood of Locomotive Engineers and Trainmen (BLET) which represents approximately 20% of our union workforce. Changes to the BLET benefit plan will be bargained nationally through the NCCC.

New Accounting Pronouncements

For a detailed discussion of new accounting pronouncements, see Note 10.

Inflation

In preparing financial statements, GAAP requires the use of historical cost that disregards the effects of inflation on the replacement cost of property. We are a capital-intensive company with most of our capital invested in long-lived

assets. The replacement cost of these assets, as well as the related depreciation expense, would be substantially greater than the amounts reported on the basis of historical cost.

FORWARD-LOOKING STATEMENTS

Certain statements in Management’s Discussion and Analysis of Financial Condition and Results of Operations are “forward-looking statements” within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995, as amended. These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or our achievements or those of our industry to be materially different from those expressed or implied by any forward-looking statements. In some cases, forward-looking statements can be identified by terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “project,” “consider,” “potential,” “feel,” or other comparable terminology. We have based these forward-looking statements on our current expectations, assumptions, estimates, beliefs, and projections. While we believe these expectations, assumptions, estimates, beliefs, and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risks and uncertainties, many of which involve factors or circumstances that are beyond our control. These and other important factors, including those discussed under “Risk Factors” in our latest Form 10-K, as well as our subsequent filings with the Securities and Exchange Commission, may cause actual results, performance, or achievements to differ materially from those expressed or implied by these forward-looking statements. The forward-looking statements herein are made only as of the date they were first issued, and unless otherwise required by applicable securities laws, we disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise. Copies of our press releases and additional information about us is available at www.norfolksouthern.com, or you can contact Norfolk Southern Corporation Investor Relations by calling 757-629-2861.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

The information required by this item is included in Part I, Item 2, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” under the heading “Financial Condition and Liquidity.”

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer and Chief Financial Officer, with the assistance of management, evaluated the effectiveness of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act)) at June 30, 2017. Based on such evaluation, our officers have concluded that, at June 30, 2017, our disclosure controls and procedures were effective in alerting them on a timely basis to material information required to be included in our periodic filings under the Exchange Act.

Changes in Internal Control Over Financial Reporting

During the second quarter of 2017, we have not identified any changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings.

On November 6, 2007, various antitrust class actions filed against us and other Class I railroads in various Federal district courts regarding fuel surcharges were consolidated in the District of Columbia by the Judicial Panel on Multidistrict Litigation. On June 21, 2012, the court certified the case as a class action. The defendant railroads appealed this certification, and the Court of Appeals for the District of Columbia vacated the District Court's decision and remanded the case for further consideration. We believe the allegations in the complaints are without merit and intend to vigorously defend the cases. We do not believe the outcome of these proceedings will have a material effect on our financial position, results of operations, or liquidity.

Item 1A. Risk Factors.

The risk factors included in our 2016 Form 10-K remain unchanged and are incorporated herein by reference.

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

| Period | (a) Total Number of Shares (or Units) Purchased ⁽¹⁾ | (b) Average Price Paid per Share (or Unit) | (c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs ⁽²⁾ | (d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that may yet be purchased under the Plans or Programs ⁽²⁾ |
|------------------|--|--|--|--|
| April 1-30, 2017 | 504,254 | 115.15 | 504,254 | 12,486,516 |
| May 1-31, 2017 | 629,093 | 116.76 | 628,220 | 11,858,296 |
| June 1-30, 2017 | 591,424 | 120.00 | 591,424 | 11,266,872 |
| Total | 1,724,771 | | 1,723,898 | |

⁽¹⁾ Of this amount, 873 represent shares tendered by employees in connection with the exercise of options under the stockholder-approved Long-Term Incentive Plan.

⁽²⁾ Our Board of Directors authorized a share repurchase program, pursuant to which up to 50 million shares of Common Stock could be purchased through December 31, 2017.

Item 6. Exhibits.

See Exhibit Index beginning on page 27 for a description of the exhibits filed as part of this report.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

NORFOLK SOUTHERN CORPORATION
Registrant

/s/ Thomas E. Hurlbut
Date: July 26, 2017 Thomas E. Hurlbut
Vice President and Controller
(Principal Accounting Officer) (Signature)

/s/ Denise W. Hutson
Date: July 26, 2017 Denise W. Hutson
Corporate Secretary (Signature)

EXHIBIT INDEX

4.1 Fourth Supplemental Indenture, dated as of May 31, 2017, between the Registrant and U.S. Bank National Association, as trustee, is incorporated by reference to exhibit 4.1 to the Corporation's Form 8-K filed May 31, 2017.

31-A* Rule 13a-14(a)/15d-014(a) CEO Certifications.

31-B* Rule 13a-14(a)/15d-014(a) CFO Certifications.

32* Section 1350 Certifications.

101* The following financial information from Norfolk Southern Corporation's Quarterly Report on Form 10-Q for the second quarter of 2017, formatted in Extensible Business Reporting Language (XBRL) includes (i) the Consolidated Statements of Income for the second quarter and first six months of 2017 and 2016; (ii) the Consolidated Statements of Comprehensive Income for the second quarter and first six months of 2017 and 2016; (iii) the Consolidated Balance Sheets at June 30, 2017, and December 31, 2016; (iv) the Consolidated Statements of Cash Flows for the first six months of 2017 and 2016; and (v) the Notes to Consolidated Financial Statements.

* Filed herewith.