APRIL 2, 2014

2014 UNDERGRADUATE ANALYST REPORT

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UNIVERSITY OF CONNECTICUT STUDENT MANAGED FUND

Analyst Report	Ticker: NSC	4/2/2014	UG Student Managed Fund

	Key Financial Metrics	
Market Cap: $30.1 billion	ROE: 18.12%	Net Profit Margin: 17.81%
52 Week Range: $70.27 – 98.09	ROA: 6.08%	Debt/Equity Ratio: 83%
Dividend: $2.16	ROIC: 7.82%	FCF/Share: 3.65%
Price/Earnings: 16.63x	Dividend Yield: 2.10%	YoY Revenue Growth: 4.7%
Intrinsic Value: $105.51	Price/Book: 2.66x	# of Shares: 308 million

Recommendation	Closing Price as of 3/31/2013
Buy	$97.17

Stock Price Movement (1 year)

Rationale

Norfolk is an attractive investment due to the industry's high barriers to entry as well as the company's ability to generate high returns on equity. **We purchased the stock in October of 2013 at $88 per share, well below its intrinsic value of $105.51.** The graph to the left compares the 1 year returns compared to the S&P shown by the orange line.

Company Highlights

- High barriers to entry, persistent pricing power (the industry as a whole)
- Expansion of the Panama canal should increase NSC's intermodal transportation, driving long-term growth
- Crude-by-Rail (CBR) in Marcellus Shale region in growing need, which should help counter low coal demand
- Double stack, double track method to increase volume and in turn increase

Investment Risks

- The possibility of government regulation decreasing pricing power, consequently affecting profits
- Capital intensive business
- Tougher regulations for utilities and natural gas decreases coal volumes by 2014
- Slower economic growth in China lowers demand for exporting coal, one of the main contributors to NSC's success

revenues year to year. • Record all-time high earnings in 2013 • Free cash flow generated rose 34% during 2013 • Dividend hikes of 4% expected during 2014 • Plans to increase capital spending budget by 12% in 2014 • Anticipated strong gains in crude oil, domestic intermodal, grain and automotive carload	• Constant competition from CSX Corp diminishes full market capital by NSC • Lower consumer spending due to slow recovery has clamped down sales tax receipts and ultimately reduced the amount of funds consumers count for capital projects • Poor infrastructure within the sector • Coal Mining is expected to fall in 2014, posing a potential revenue threat to the industry

Industry Analysis

The railroad industry is extremely dynamic and constantly altered as new regulations and mergers occur within this industry. The removal of the Staggers act in 1980, which deregulated mergers and acquisitions throughout the industry, allowed the railroad industry further enhancement. This served as a catalyst for new competitive strategies between all of the railroad companies. This regulation legalized privatized railroad-shipper contracts which allowed railroads to become more efficient due to improved asset utilization. Norfolk Southern's double-stack freight train capacity has increased transportation efficiency by more than 200% in the past 30 years. Industry margins are expected to increase due to a modest rise within manufacturing and consumer spending. In 2014, IBISWorld estimates that industry margins will increase to 15.1%, representing an overall increase over the past five years.

Prior to 2008, the industry experienced its strongest performance in a generation; however falling fuel prices and declining freight volume caused revenue to contract 22.4% in 2009. This rapid decline has been offset by strong growth in 2010 and 2011 which continued over the next five years to 2014. IBISWorld estimates that revenue will grow at an annualized rate of 7.3% to $74.5 billion over the same five-year period. Coal mining, the second-largest market segment for freight transportation, is expected to decrease 1.6% over the year, indicating a potential threat for the industry. Despite this decline in coal mining, the industrial production index is expected to increase 2.9% in 2014. The growing demand for imports and exports has given to an increase in total trade value. Industry revenue is also expected to continue growing by 1.3% throughout 2014.

Revenue Growth

Year	Revenue $ million	Growth %
2004	49,748.4	7.7
2005	54,840.3	10.2
2006	60,534.4	10.4
2007	61,389.5	1.4
2008	67,539.7	10.0
2009	52,401.2	-22.4
2010	62,878.1	20.0
2011	71,133.4	13.1
2012	72,807.3	2.4
2013	73,601.5	1.1
2014	74,544.0	1.3

Corporate Social Responsibility (CSR)

Carbon emissions and fuel efficiency are an increasingly valuable asset within the corporate social responsibility. The Railroad industry is increasingly enhancing its fuel efficiency and transport. The transportation sector accounts for 27.0% of greenhouse gas emissions, second only to electricity, according to a study from the US Energy Information Administration. The total transportation sector consumes about 25.0% of US energy every year, including energy from power trucks, trains, pipelines, aircraft and other transportation modes. However, rail's share of the sector's total energy demand is extremely low, at only 2.0%, far below passenger vehicles (58.0%), freight trucks (17.0%) and air travel (10.0%).

Norfolk Southern's CSR ratings stand out as industry leaders, with an ESG Disclosure Rating or 53.31 compared to the industry average of 25.78. Also, their Environmental Disclosure Score is 49.61 compared to the average of 19.84. Carbon Disclosure Score comes in above the average as well at 88 vs. 76.5. Norfolk Southern has made it their goal to be as transparent as possible in their efforts to better the environment in which they operate. Their Social Disclosure Score as well as Governance Disclosure score rank higher than the average as well. They implement an Equal Opportunity Policy, and are about average in Community Spending per year at $4.39 million. FInally, NSC is below the industry average in Total Energy Consumption.

NSC is a leader within Corporate social responsibility in 2013. NSC helped with the location of 67 new industries and the expansion of 25 existing industries within NSC during 2013. NSC invested $2.3 billion towards CSR, which will lead in the expected creation of 3,100 new jobs, and 136,000 new carloads of rail traffic annually.

Industry Outlook

Revenue Outlook

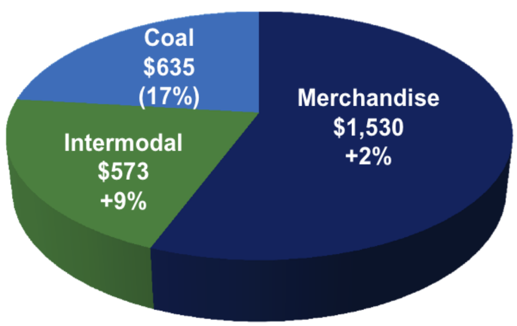
Year	Revenue $ million	Growth %
2015	77,268.9	3.7
2016	80,899.1	4.7
2017	84,601.8	4.6
2018	87,706.8	3.7
2019	90,242.4	2.9
2020	91,596.0	1.5

The industry value added (IVA), which measures the industry's contribution to the economy, is forecast to grow at an annualized rate of 4.9% in the 10 years to 2019 comparable to US GDP's forecast of 2.7%. Currently, highway infrastructure is not receiving adequate funding needed to service future demand for trucking services. The lack of infrastructure funding gives an advantage to the railroad industry, making it a much more cost-effective, fuel-efficient and convenient than the alternative. US rail freights have reinvested private funds of about $525 billion since 1980 to build, improve and maintain the rail network. $0.40 has been reinvested for every dollar generated by freight operations and it is likely to increase with growing demand for freight transportation and efficiency within the market. Consequently, the seemingly archaic rail infrastructure is expected to undergo considerable changes in the next 20 years, which is indicative of a growing, progressive industry. Freight transportation will increase approximately 88% according to the Department of Transportation. In demand for the future, the Association of American Railroads announced last year that the major freight railroads plan to invest an approximate $24.5 billion to build, maintain, and upgrade America's rail network.

Business Analysis

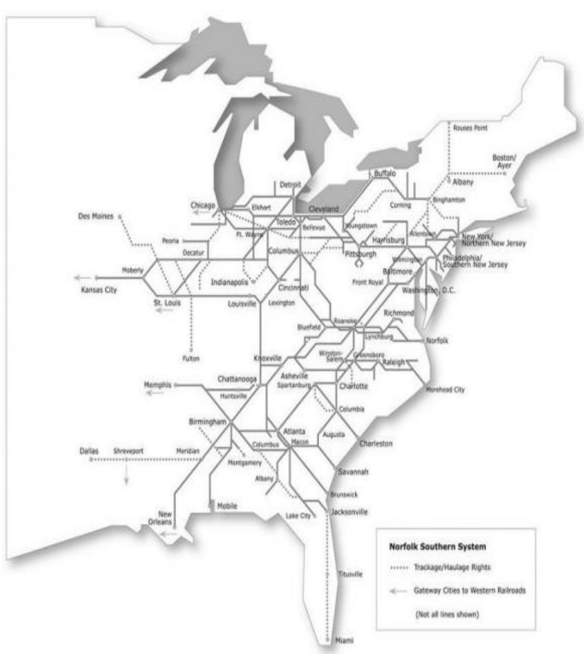
Norfolk Southern Corporation (NSC), headquartered in Norfolk, VA. Norfolk, is a railroad based company that owns more than 21,000 miles of track within 22 states and the District of Columbia. NSC employs 28,559 workers. NSC's consistent ROE of 17% and the highest dividend yield of all industry competitors makes this company a top pick within the Student Managed Fund Portfolio.

1Q 2013 Revenue $ in Millions & y-o-y Percent Change



The pie chart to the left shows that merchandising which includes the automotive, chemical, metal, construction, agriculture, consumer, paper, clay and forest markets. Merchandise makes up slightly more than half of the company's revenue.

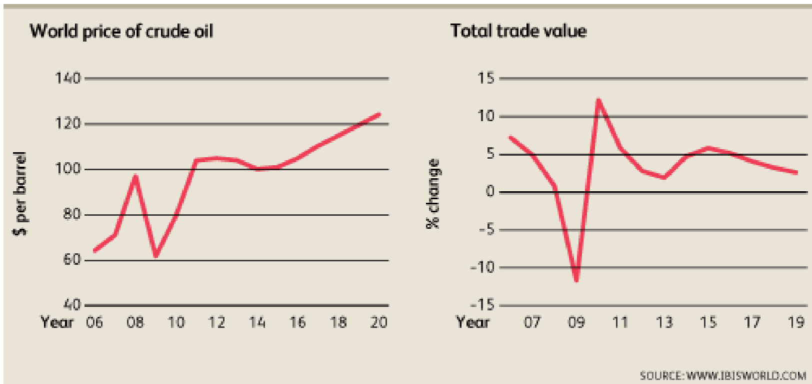
Specializing in shorter-haul transport compared to Union Pacific and Burlington Northern, NSC relies heavily on coal, chemical, automotive, and intermodal transport. Intermodal transport is increasing due to a widening of the Panama Canal which will allow for Asian ships easier access to East Coast. The Marcellus shale region in the heart of Pennsylvania is a great advantage over its closest competitor, CSX. With the decline in demand for coal, natural gas coming from Marcellus shale along with the necessary products needed to extract the natural gas has allowed countered any losses in revenue. This was one of the main reasons, besides the stronger valuation, that we decided to invest in NSC as opposed to CSX as they share an equal market share in the region.



Both companies have similar management styles and business models. Norfolk Southern and CSX dominate the eastern US have become highly successful due to the merger of Consolidated Rail (Conrail), which was previously a government-run railroad compiled of 6 bankrupt railroads in the North East. Due to the equal merge of Conrail with the two companies, the effect has been a duopoly in the East. Norfolk Southern in our opinion is strong in their operational capabilities of double stacking cargo and adding another track alongside the existing one, we look for Norfolk Southern's to return 12.3% annually long-term to shareholders. See **Exhibit B** in the Appendix to see how 12% was achieved.

Growth Factors (Highlights) 2014

Industry Demand: The industrial manufacturing sector is the largest user of railroad shipping services. Consequently, as manufacturing output increases, the demand for long-distance freight rail increases. The industrial production index is expected to increase in 2014. Chemical Manufacturing is the second-largest generator of rail freight revenue, and is also expected to increase demand in 2014. Automotive, grain, fracking sand and other drilling materials are projected to be strong contributors for the railroad demand during 2014.



Expense decrease: Fuel is the industry's second-largest expense after wages and is the largest component of diesel fuel costs in the United States. Industry operators often implement surcharges to mitigate fluctuations in the price of fuel. Consequently, industry revenue is sensitive to fluctuations in the price of fuel. When fuel costs increase, trains become a more cost-effective shipment option, which boosts industry revenue, including revenue generated by fuel surcharges. The world price of crude oil is expected to decrease in 2014.The total trade value is expected to increase in 2014, marking a potential opportunity for the industry.

Regulation and hopes for high-speed rail: Technological regulations include the creation of a visibility platform, providing single interface for customers to obtain transit information over the entire rail network. As more processes become automated, wages as a percentage of revenue have decreased from 33.3% in 2009 to 26.9% in 2014. Increases in revenue growth have resulted in total wages growing at an estimated annualized rate of 2.8% to $20.0 billion in the five years to 2014.

The Obama administration has set its sights on a high-speed rail system to connect nearby cities within the United States. In 2010, clusters of cities were chosen to receive about $8.0 billion in grants to make rail corridors similar to those in Europe and parts of Asia. Most of the plans that have been laid out require high-speed trains to use the same tracks as freight trains. This improvement in infrastructure is expected to have a positive effect on the industry.

Efficiency Enhancement: Rail transportation offers superior fuel efficiency and a smaller environmental footprint than truck transport as rail transportation costs approximately a third as much as truck per ton mile. These factors will likely continue to drive the growth in intermodal transport at a higher rate than total rail transport volumes. The recession gave way to Norfolk Southern reducing its capacity and improves operating cost efficiency, which has allowed NSC to benefit from the recovery.

Company Specific: NSC is looking for possible growth within the automobile traffic as vehicle sales rise in Canada and the United States, and market shares shift. Grain traffic will increase in both nations, with the Canadian crop expected to near an all-time record. NS also is counting on natural gas liquids, plastics, frac sand and domestic steel to help drive traffic next year.

Norfolk Southern’s CEO Wick Moorman will continue to identify and employ best practices with a problem solving mindset to improve the way rail cars are handles in yards. This will increase departure time and crew scheduling efficiency.

Intermodal Opportunities: On the Q1 2014, NSC introduced a service in South Carolina between an inland port in Greencastle, Pa., and the Port of Charleston that will convert highway shipments for BMW and other customers. NSC is currently planning to open a new intermodal terminal Dec. 9 in Charlotte, N.C., making it the last of four new facilities along the Class I's New Jersey-to-Louisiana Crescent Corrido. NSC also opened new bulk transfer facilities at Knoxville, Tenn., and Columbia, S.C. "Highway conversion and international growth both represent continued opportunity ahead for our intermodal network," said Moorman. Intermodal traffic led a 6 percent growth driven by increases in domestic and international business fed by previous investments in corridor infrastructure.

Financial Growth: NSC hit a record $11.2 billion in revenues during the 2013 fiscal year. NSC has had its third consecutive year at $11 billion-plus revenues. Net income in 2013 was also up 9 percent, and earnings per share up 12 percent, and operating ratio of 71 percent, setting records for the company. NSC also invested $2 billion in capital improvements in 2013.

Risk Factors 2014

Industry demand risk: Coal is the most widely transported commodity in the United States according to the latest available data from the Association of American Railroads. Coal accounts for about 43.3% of all rail tonnage in 2011; In 2010 and 2011, the Coal Mining industry grew 20.8% and 10.7%, respectively, but declined in all subsequent years. This coincides with the fall in industry revenue growth from 1.3% in 2014 compared with 20.0% in 2010. Both domestic and export coal volumes are forecasted to remain weak because of low natural gas prices and sluggish global demand. Demand is likely to decrease in 2014.

In 2014 large freight railroads will rely on crude oil, domestic intermodal and grain shipments to offset weak coal and international container traffic in 2014. Both domestic and export coal volumes are forecasted to remain weak due to low natural gas prices and sluggish global demand. Other sectors that likely will continue to lag include international intermodal, due to cautious consumer spending; lumber, due to a still-lackluster U.S. housing market; and paper products, due to dwindling newsprint demand.

Economic risk: "Our biggest concern is the sustainability of the economic recovery. We have seen encouraging growth in some products we transport, but we're still not back to pre-recession levels elsewhere," said Norfolk Southern Corp. Chairman and CEO Wick Moorman. "We need an economic and policy environment more conducive to growth."

Government regulatory risk: competitive switching rule revisions under consideration by the Surface Transportation Board and potentially onerous federal safety rules stemming from two major crude-by rail accidents in 2013's latter half. An onset of regulatory restrictions within the regulatory industry would have a dampening effect on the economy and growth.

Valuation Highlights

Through the Discounted Cash Flow Valuation found on Exhibit A in the Appendix. First by finding the free cash flows of the company and calculating a growth rate by multiplying the plowback rate by the return on equity, we grew the cash flows at 12.2% annually for 10 years and assumed a terminal growth rate of 3% (expected inflation). Discounting the cash flows by 10%, we were able to sum the present value of free cash flows to find the enterprise value of the company. After adding in cash and cash equivalents and subtracting debt, the equity value was found to be $31,620,000,000. By dividing the equity value by their current shares outstanding of 303,000,000 to get an intrinsic value per share of $105.51. We purchased the stock at $88 per share, with the company trading at $98 currently we have an unrealized gain of 10.2%. See **Exhibit A** for the Discounted Cash Flow valuation.

Conclusion

We feel that Norfolk Southern is an attractive investment due to its potential to return 12% back to shareholders annually. This can be achieved with help from the expansion of the Panama Canal along with the method of double-stacking and double-tracking the rails in order to cut costs and increase revenues per mile. With extremely high barriers to entry, high returns on equity, and a strong management team, Norfolk is a value investment we see doing very well over the long-term.

Appendix

Exhibit A (Free Cash Flow)

Norfolk Southern	Year 2013
EBIT	$ 2,965.00
minus taxes (34.48%)	$ (1,022.33)
^change in deferred tax	$ 710.00
NOPLAT	$ 2,652.67
Plus DEP/AMORT	$ 922.00
Stock option expense	$ -
GROSS CASH FLOW	$ 3,574.67
^ in working capital	$ 609.00
plus ^ NPPE	$ 909.00
plus DEP/AMORT	$ 922.00
plus stock option expense	$ -
plus ^ investments & other assets	$ 18.00
GROSS INVESTMENT	$ 2,458.00
TOTAL FREE CASH FLOW	**$ 1,116.67**

Year	0	1	2	3	4	5	6	7	8	9	10	11
TOTAL FREE CASH FLOW	$ 1,116.67	$ 1,254.24	$ 1,408.76	$ 1,582.32	$ 1,777.27	$ 1,996.23	$ 2,242.16	$ 2,518.39	$ 2,828.66	$ 3,177.15	$ 3,568.58	$ 73,512.68
PV of FCF	$ 1,116.67	$ 1,140.22	$ 1,164.27	$ 1,188.82	$ 1,213.90	$ 1,239.50	$ 1,265.64	$ 1,292.33	$ 1,319.59	$ 1,347.42	$ 1,375.84	$ 25,765.74
Sum of PV FCF	$39,429.95											

Growth Rate	12.3%
Terminal Growth (exp. inflation)	3%
Discount Rate	10%

Enterprise Value	$39,429.95
Cash	$ 1,443.00
Debt	$ 8,903.00
Equity Value	$31,969.95
Shares Outstanding	303
Total Value per Share	**$ 105.51**

Exhibit B (Growth Calculation)

Calculating Growth Rate	
Price Paid:	$ 88.00
Shares Outstanding:	315
Market Cap:	$ 27.70
Earnings (billions):	$ 1.9
Plowback (billions)	$ 1.2
Reinvested Capital:	$ 700.00
Net debt:	$ 300.00
	$ 1,000.00
ROIC:	15%
Return:	$ 150.00
Growth From Invested Capital:	**8%**
Return to shareholders:	1.2 billion / 27.7B
Growth of shareholder retutn:	**4.32%**
Total Growth:	**12.32%**

Exhibit C (Balance Sheet) - All financials from EDGAR

Consolidated Statements Of Income (USD $) In Millions, except Per Share data, unless otherwise specified	12 Months Ended		
	Dec. 31, 2013	Dec. 31, 2012	Dec. 31, 2011
Consolidated Statements Of Income [Abstract]			
Railway operating revenues	$ 11,245	$ 11,040	$ 11,172
Railway operating expenses:			
Compensation and benefits	3,002	2,960	2,974
Purchased services and rents	1,629	1,604	1,610
Fuel	1,613	1,577	1,589
Depreciation	916	916	862
Materials and other	828	859	924
Total railway operating expenses	7,988	7,916	7,959
Income from railway operations	3,257	3,124	3,213
Other income, net	233	129	160
Interest expense on debt	525	495	455
Income before income taxes	2,965	2,758	2,918
Provision for income taxes	1,055	1,009	1,002
Net income	$ 1,910	$ 1,749	$ 1,916
Per share amounts:			
Basic	$ 6.10	$ 5.42	$ 5.52
Diluted	$ 6.04	$ 5.37	$ 5.45

Exhibit D (Income Statement)

Consolidated Balance Sheets (USD $) In Millions, unless otherwise specified	Dec. 31, 2013	Dec. 31, 2012
Assets		
Cash and cash equivalents	$ 1,443	$ 653
Short-term investments	118	15
Accounts receivable, net	1,024	1,109
Materials and supplies	223	216
Deferred income taxes	180	167
Other current assets	87	82
Total current assets	3,075	2,242
Investments	2,439	2,300
Properties less accumulated depreciation of $10,387 and $9,922, respectively	26,645	25,736
Other assets	324	64
Total assets	32,483	30,342
Liabilities and stockholders' equity		
Accounts payable	1,265	1,362
Short-term debt	100	200
Income and other taxes	225	206
Other current liabilities	270	263
Current maturities of long-term debt	445	50
Total current liabilities	2,305	2,081
Long-term debt	8,903	8,432
Other liabilities	1,444	2,237
Deferred income taxes	8,542	7,832
Total liabilities	21,194	20,582
Stockholders' equity:		
Common stock $1.00 per share par value, 1,350,000,000 shares authorized; outstanding 308,878,402 and 314,034,174 shares, respectively, net of treasury shares	310	315
Additional paid-in capital	2,021	1,911
Accumulated other comprehensive loss	(381)	(1,109)
Retained income	9,339	8,643
Total stockholders' equity	11,289	9,760
Total liabilities and stockholders' equity	$ 32,483	$ 30,342

Exhibit E (Cash Flow Statement)

Consolidated Statements Of Cash Flows (USD $) In Millions, unless otherwise specified	12 Months Ended		
	Dec. 31, 2013	Dec. 31, 2012	Dec. 31, 2011
Cash flows from operating activities			
Net income	$ 1,910	$ 1,749	$ 1,916
Reconciliation of net income to net cash provided by operating activities:			
Depreciation	922	922	869
Deferred income taxes	262	366	527
Gains and losses on properties and investments	(104)	(6)	(32)
Changes in assets and liabilities affecting operations:			
Accounts receivable	85	(64)	(215)
Materials and supplies	(7)	(7)	(40)
Other current assets	(5)	(6)	14
Current liabilities other than debt	5	82	68
Other, net	10	29	120
Net cash provided by operating activities	3,078	3,065	3,227
Cash flows from investing activities			
Property additions	(1,971)	(2,241)	(2,160)
Property sales and other transactions	144	192	84
Investments, including short-term	(130)	(23)	(135)
Investment sales and other transactions	63	78	439
Net cash used in investing activities	(1,894)	(1,994)	(1,772)
Cash flows from financing activities			
Dividends	(637)	(624)	(576)
Common stock issued, net	131	89	120
Purchase and retirement of common stock	(627)	(1,288)	(2,051)
Proceeds from borrowings, net	989	1,491	1,101
Debt repayments	(250)	(362)	(600)
Net cash used in financing activities	(394)	(694)	(2,006)
Net increase (decrease) in cash and cash equivalents	790	377	(551)
Cash and cash equivalents			
At beginning of year	653	276	827
At end of year	1,443	653	276
Supplemental disclosure of cash flow information			
Interest (net of amounts capitalized)	492	473	435
Income taxes (net of refunds)	$ 735	$ 618	$ 289