2018 State Assessed Property Spring Forum

March 1, 2018



Agenda

Topic

Department of Revenue

- Welcome & Introduction
- Valuation Reminders and Updates
- Administrative Appeals
- Updates on Reports & Instructions
- Cap Rate Data Inputs
- Cost of Debt vs. Indexing

Open Discussion

Agenda

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Open Discussion



Valuation Reminders and Updates

Jon Van Nurden, Supervisor, State Assessed Property Section



Administrative Appeals

Jon Van Nurden, Supervisor, State Assessed Property Section

Administrative Appeals

State Assessed Property Administrative Appeal Process

Agreement Determining Valuation

Administrative Appeal and Appeal to Tax Court

Appeal Options to the Department of Revenue

Previously:

- 1. Administrative Appeal
- 2. Informal Appeal

Going forward:

1. Expanded Administrative Appeal

State Assessed Property Administrative Appeal Steps

Administrative Appeal Process Steps

- 1. Department issues the valuation
- 2. Property owner reviews the valuation
- 3. Property owner has 30 days to submit a written appeal
- 4. Department will schedule a conference within 20 days of the appeal
- 5. Department will issue a determination within 30 days of the conference
- 6. Property owner may appeal the determination to Minnesota Tax Court

State Assessed Property Administrative Appeal Updates

Administrative Appeal Conference

- Property owner
- Assessor
- Appeal panel
- Resolution

Agreement Determining Valuation

Agreement Determining Valuation

- When in the best interest of the state
- In writing
- Signed by the property owner
- Signed by the commissioner
- Final and conclusive

Administrative Appeal and Appeal to Tax Court

An administrative appeal is dismissed if a company files an appeal of the same order with the Tax Court



Questions?

Jon Van Nurden



2018 Updates to Reports & Instructions

Jesse Larson

2018 Reports and Instructions

Utility Market Value Report Updates

- PDF format, instead of Excel format
- Fixed amount of rows/lines in the return
- Added Section 11 "Additional Notes"



Certification by Utility, Cooperative, or Pipeline Company

You must include this certification when filing a MARKET VALUE report, or we cannot process the report.

	rt, as submitted, represents the system-wide utility, coc rincluding that portion located within Minnesota. The ir		
company		n January 2 of the ass	sessment year.
	Company Name		
Initiai Here	In the event that the commissioner of revenue requagrees to provide the information promptly and in t		
S	Signature of Authorized Company Representative	Date	Title of Company Representative *
Company	y Representative's Email Address:		
I have e	y that I am the above named officer of said company, and examined the electronic file, accompanying schedules and Id complete for the year stated.		

* The company representative must be a company President, Vice President, General Superintendent, Auditor, Tax Agent, or some other general officer of the reporting utility or pipeline company, who is authorized by the company to file this report.

Making false statements on this report is against the law. Minnesota Statutes, section 609.41 states that anyone giving false information in order to avoid or reduce their tax obligation is subject to a fine of up to \$3,000 and/or up to one year in prison.

200	DEPARTMENT OF REVENUE	
	OF DEVENUE	

Market Value Report

	_	NEVEROL				
Market \	Value	e Report for Assessmer	nt Year:		Date Submitted:	Due Annually on March 31
						Revision
	С	ompany Name				
Section 1 Company Information	N	linnesota Tax ID				
form	St	reet Address				
any Infor	С	ity, State, ZIP Code				
ğ w	С	ontact Person and Title				
٥	P	hone Number		Email Address		
			System	Minnesota	Source, including form and page number	Comments
& mation	1	Operating Revenues				
Allocation & Customer Information	2	Units Sold or Throughput				
All	3	Metered Customers				
			System	Minnesota	Source, including form and page number	Comments
	4	Plant in Service	- System		ana page namer	
	5	Construction Work in Progress (CWIP)				
	6	Construction Completed Not Classified (CCNC)				
rints	7	Leased Property				
Plant Accounts	8	Contributions in Aid of Construction (CIAC)				
Plant	9	Land				
	10	Intangible Plant				
	11	Other Plant Item(s):				
	12	Total Plant in Service	\$0	\$ 0	Total	al lines 4-11

Other Item(s)

Market Value Report, Revised November 2017

Page 2 of 7

Revision Checkbox



For Sections 7 and 8 (below), you must provide an additional statement for each item listed. You must provide the statute under which the property is exempt if one is not already listed.

Source, including form

			Minnesota	and page number	Comments
e e	52	Land		F-8	M.R. 8100.0100, Subp.10
dable	53	MN Qualifying CWIP (Not in Place)			M.R. 8100.0100, Subp.13
ON 7 Exclu	54	Locally Assessed or Non-taxable CWIP			
SECTION 7 Minnesota Excludable Property - Non-Depreciable	55	Other Non-Depreciable Excludable(s):			
2 20	56	Total Non-Depreciable Excludable Property	\$0	Total	of lines 52 - 55
	57	Land Rights			
	58				M.R. 8100.0100, Subp.11
	59				
	Н				
	60				
	61	, , , , , , , , , , , , , , , , , , , ,			
	62	Power Operated Equipment			
a a	63	Communication Equipment	×		
cíabl	64	Transportation - General Plant			
Depre	65	Inventory of Meters			Only include meters NOT Installed
erty .	66	Pollution Control			Must provide order
SECTION 8 dable Prope	67	Electric Distribution Lines in Rural Areas			
SEC	68	Shop/Lab Equipment			
SECTION 8 Minnesota Excludable Property - Depreciable	69	Office Equipment - General Plant			
nesot	70	General Plant Items			
Σ	71	Heavy Equipment			
	72	Miscellaneous Equipment			
	73	Solar Energy Generating Systems			M.S. 272.02, subd. 24
	74	Wind Energy Conversion Systems			M.S. 272.02, subd. 22
	75	Intangible Plant			
	76	Other Depreciable Excludable(s):			
	77	Total Depreciable Excludable Property	\$0	Total o	f lines 57 - 76





SECTION 9
Long-Term Debt

Attach Schedule of Long Term Debt

SECTION 10

Forecasts

Attach Financial Forecasts, including, but not limited to income, expense, and capital expenditures.

Detailed income and expense figures and anticipated income and expenses collected by the department is private or nonpublic data.

SECTION 11
Additional Notes



Page 6 of 7

Market Value Report, Revised November 2017

Additional Notes



Questions?

Jesse Larson



2018 Cap Rate Data Inputs

Jesse Larson

Capital Structure

Capital Structure	2018 AY (Avg.)		2017 AY	
Capital Structure	Debt	Equity	Debt	Equity
Electric	32.70%	67.30%	36.00%	64.00%
Gas Distribution	27.63%	72.37%	26.00%	74.00%
Gas Transmission Pipeline	39.70%	60.30%	39.00%	61.00%
Fluid Transportation Pipeline	42.88%	57.12%	36.00%	64.00%
Railroad, Class I	17.06%	82.93%	21.00%	79.00%
Railroad, Others	34.78%	65.22%	31.00%	69.00%

Risk Free Rate

Risk-free rate	2018 AY	2017 AY
Year-End U.S. Treasury 20-year Coupon Bond Yield	2.58%	2.79%
4th Quarter Average U.S. Treasury 20-year Coupon Bond Yield	2.62%	2.52%

Equity Risk Premium

Equity Risk Premium	2018 AY	2017 AY
Ex Post		6.94%
Supply Side		5.97%
Dr. Damodaran's	5.08%	5.69%
Ex Ante		5.53%
Duff & Phelps		5.50%
Graham and Harvey	4.02%	
Fernandez, Pershin & Acin	5.70%	

Cost of Debt

Corporate Bond Yield Averages - Year Ending 2017 (2018 AY)

Industrial Bonds						
	Aaa	Aa	Α	Baa		
Jan	3.92	4.00	4.17	4.70		
Feb	3.95	4.02	4.19	4.70		
Mar	4.01	4.07	4.23	4.74		
Apr	3.87	3.92	4.11	4.62		
May	3.85	3.92	4.09	4.60		
Jun	3.68	3.78	3.92	4.41		
Jul	3.70	3.78	3.95	4.41		
Aug	3.63	3.76	3.90	4.38		
Sep	3.63	3.75	3.89	4.37		
Oct	3.60	3.74	3.90	4.37		
Nov	3.57	3.68	3.85	4.37		
Dec	3.51	3.60	3.79	4.31		
Avg.	3.74	3.84	4.00	4.50		

	Public Utility Bonds							
	Aaa Aa A Baa							
Jan		3.96	4.14	4.62				
Feb		3.99	4.18	4.58				
Mar		4.04	4.23	4.62				
Apr		3.93	4.12	4.51				
May		3.94	4.12	4.50				
Jun		3.77	3.94	4.32				
Jul		3.82	3.99	4.36				
Aug		3.67	3.86	4.23				
Sep		3.70	3.87	4.24				
Oct		3.74	3.91	4.26				
Nov		3.65	3.83	4.16				
Dec		3.62	3.79	4.14				
Avg.		3.82	4.00	4.38				

Betas

_	2018 AY	2017 AY	
Betas	Average Beta	Selected Beta	
Electric	0.73	0.72	
Gas Distribution	0.70	0.70	
Gas Transmission Pipeline	1.29	1.10	
Fluid Transportation Pipeline	1.25	1.05	
Railroad, Class I	1.13	1.13	
Railroad, Others	1.50	1.40	

Dividend Growth Models

	2018 AY		2017 AY	
Dividend Growth Models	DGM, Earnings (Avg.)	DGM, Dividends (Avg.)	DGM, Earnings	DGM, Dividends
Electric	8.95%	8.35%	9.30%	9.00%
Gas Distribution	8.84%	7.53%	7.90%	6.50%
Gas Transmission Pipeline*^	12.50%		13.45%	
Fluid Transportation Pipeline*^	19.69%		15.55%	
Railroad	10.77%	9.60%	10.30%	11.85%

Source of growth estimates is Value Line.

^{*} Source of growth estimate for the 2017 and 2018 assessment is Yahoo! Finance.

[^] Displaying median, due to outliers in data.

New CAPM Models

- Graham & Harvey (August 2016): Equity Risk Premium based on CFO Survey
- Fernandez, Pershin, & Acin (April 2017): Equity Risk Premium based on academic, and company surveys

Short-term Growth Rates

Short-term growth	2018 AY	2017 AY
Electric	5.87%	5.38%
Gas Distribution	5.78%	5.25%
Gas Transmission Pipeline*	6.52%	7.74%
Fluid Transportation Pipeline*	11.47%	8.97%
Class I Railroads	9.08%	8.78%
Other Railroads	5.50%	6.50%

Source of growth estimates is Value Line.

^{*} Source of growth estimate for the 2017 and 2018 assessment is Yahoo! Finance.

Long-term Growth Rates and Inflation

Long-term growth	2018 AY	2017 AY
Risk-free rate	2.58%	2.79%
World Bank forecasted change in GDP, 2020 and 2018, respectively	2.90%, 3.00%	2.90%
Trading Economics forecasted GDP growth for 2020	2.60%	2.60%
OECD forecasted growth rate 2031 -2060 (2014 Publication)	1.70%	1.70%

Estimated Inflation, using inflation-indexed and non-inflation-indexed U.S. securities

10-Year	20-Year	30-Year
1.87%	1.91%	1.74%

Direct Capitalization Rate – Equity Component

Direct Equity Component	2018 AY (not finalized)	2017 AY
Electric	4.72%	5.43%
Gas Distribution	4.02%	4.76%
Gas Transmission Pipeline	8.69%	9.11%
Fluid Transportation Pipeline	8.52%	8.54%
Class I Railroads	5.24%	5.52%
Other Railroads	5.21%	5.46%

Guideline Company Selection for 2018 Study

Electric

Allete Inc.

Alliant Energy Corp.

American Electric Power Co Inc.

Ameren Corp.

Black Hills Corp.

CenterPoint Energy Inc.

CMS Energy Corp.

DTE Energy Company

Entergy Corp.

MGE Energy Inc.

Northwestern Corp.

OGE Energy Corp.

Otter Tail Corp.

Vectren Corp.

WEC Energy Group

Xcel Energy Inc.

Included in 2017, & 2018

New for 2018

Removed for 2018

Guideline Company Selection for 2018 Study

Gas Distribution

Atmos Energy Corp.

Chesapeake Utilities Corp.

Delta Natural Gas Co. Inc.

New Jersey Resources Corp

NiSource Inc.

Northwest Natural Gas Co.

RGC Resources Inc.

South Jersey Industries

Southwest Gas

Spire Inc.

WGL Holdings Inc.

- Included in 2017, & 2018
- Added for 2018
- Removed for 2018

Guideline Company Selection for 2017 Study

Gas Transmission

Boardwalk Pipeline Partners L.P.

Enterprise Products Partners L.P.

Kinder Morgan, Inc.

ONEOK Partners

TC PipeLines, L.P.

Williams Partners, L.P.

- Included in 2017, & 2018
- New for 2018
- Removed for 2018

Guideline Company Selection for 2018 Study

Fluid Transportation Pipeline

Buckeye Partners, L.P.

Holly Energy Partners, L.P.

Magellan Midstream Partners, L.P.

NuStar Energy, L.P.

Plains All American Pipeline, L.P.

- Included in 2017, & 2018
- New for 2018
- Removed for 2018

Guideline Company Selection for 2018 Study

Railroad

Canadian National Railway

Canadian Pacific Railway

CSX Corp.

Genesee & Wyoming

Kansas City Southern

Norfolk Southern Corp.

Union Pacific Corp.

- Included in 2017, & 2018
- New for 2018
- Removed for 2018



Questions?

Jesse Larson



Cost of Debt

YTM vs Indexing

Paul Winghart

Background

- Employed at DOR in January 2018
- Instructor of undergrad Business & Economics at Bethel University from 2014 – 2017
- Interest Rate Strategist & Market Economist At RBC Wealth Management 2013 – 1998
- Graduated University of Minnesota with B.A. Economics March 1998

Why

"....finding a better resource of actual debt issued by the guideline companies is ideal." – SAPS DoR

Yield to Maturity (YTM) accurately & consistently captures the reinvestment income needed to make up the dollar return shortfall otherwise incurred; hence YTM is a truer cost of debt¹.

¹ Fabozzi, Frank J. 2000 pp 190

Where

You may not send a completed printout of this form to the SEC to satisfy a filing obligation. You can only satisfy an SEC filing obligation by submitting the information required by this form to the SEC in electronic format online at https://www.edgarfiling.sec.gov. 3235-0578 March 31, 2019 Estimated average burden UNITED STATES hours per response 10.5 SECURITIES AND EXCHANGE COMMISSION Washington, DC 20549 FORM N-Q QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY Investment Company Act file number (Exact name of registrant as specified in charter) (Address of principal executive offices) (Zip code) (Name and address of agent for service) Registrant's telephone number, including area code: Date of fiscal year end: Date of reporting period: Form N-Q is to be used by management investment companies, other than small business investment companies registered on Form N-5 (§§ 239.24 and 274.5 of this chapter), to file reports with the Commission, not later than 60 days after the close of the first and third fiscal quarters, pursuant to rule 30b1-5 under the Investment Company Act of 1940 (17 CFR 270.30b1-5). The Commission may use the information provided on Form N-Q in its regulatory, disclosure review, inspection, and policymaking roles. A registrant is required to disclose the information specified by Form N-Q, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-O

Form N-Q is...

E. Definitions.

"....used by management investment companies ...to file semi-annuallyand the Commission will make this public."

Unless the countest clearly indicates the courtesty, terms used in this Form N-Q have meanings as defined in the Act and the rules and regulations thereunder. Unless otherwise indicated, all references in the form to statutory.

F. Signature and Filing of Report.

Using (see Items 201 gt_pag. of Regulation 5-T (17 CFR 232-201 gt_pag.)), eight complete copies of the report shall be filed with each exchange on which say

(a) The report must be signed by the registrant, and on behalf of the registrant by its principal executive and principal financial officers.

and signatures pursuant to powers of attorney.

which he or she signs the report. Attention is directed to Ende 12b-11 under the Exchange Act (3.7

CFR 240.12b-11) and Role 8b-11 under the Act (17 CFR 270.8b-11) concerning manual signatures

When

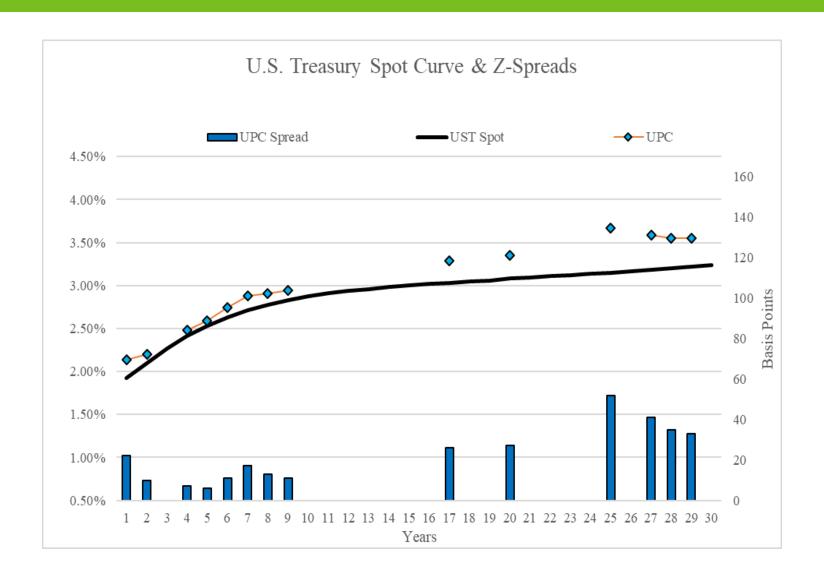
Required to file N-Q Semi-Annually

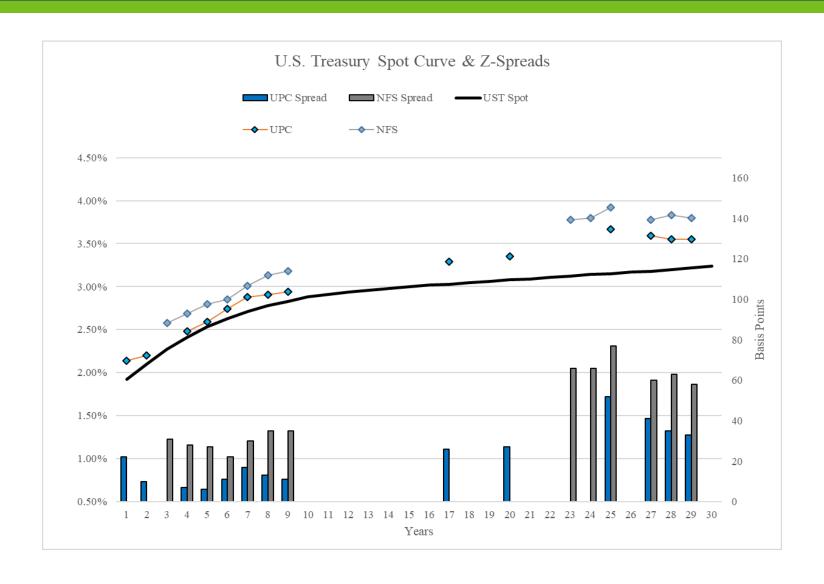
Most post holdings quarterly

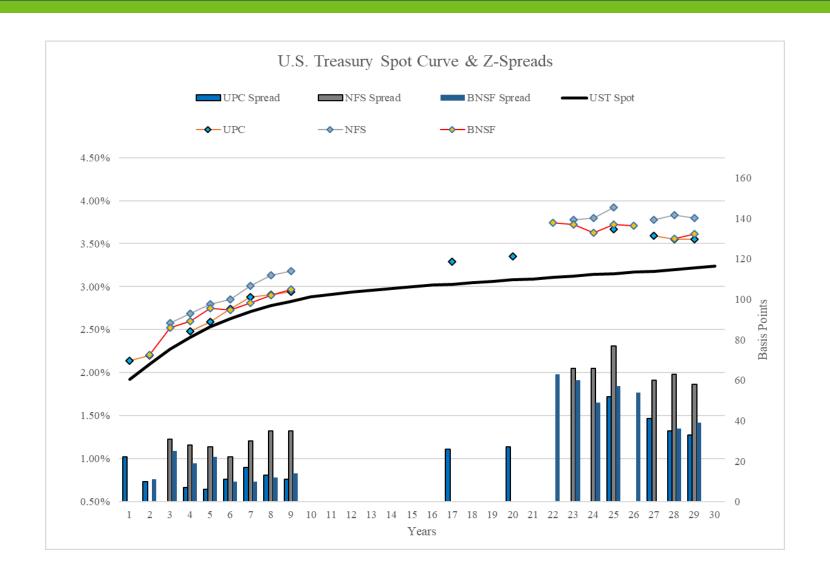
Some post monthly

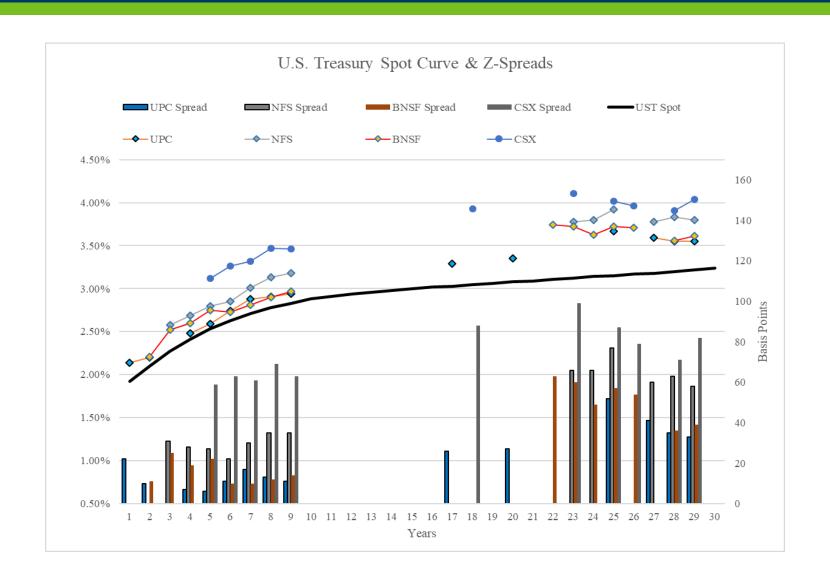
This study of a new source of cost of debt is an ongoing concern.

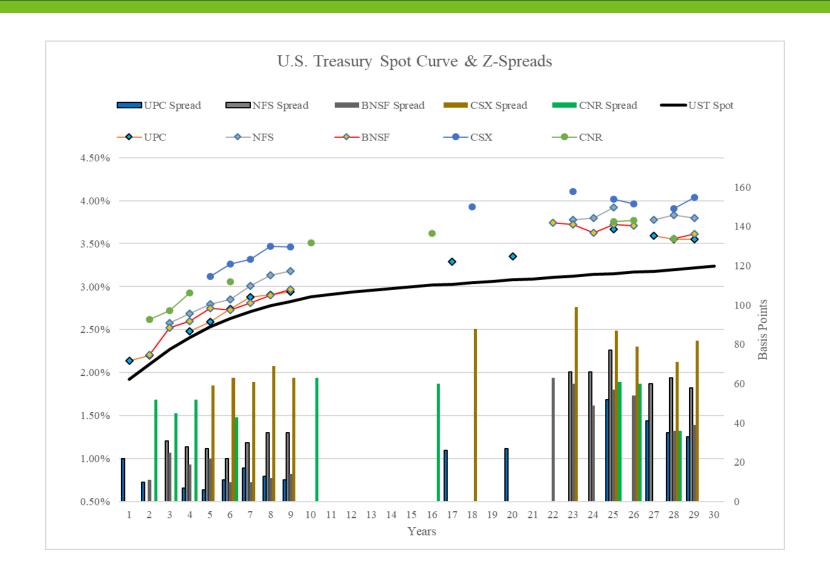
	Se	ttlement Date I	Redemption Price			
		1/4/2018	\$100			
Issue	Coupon	Maturity	Face Amount	Market Value	Market Price	YTM
Canadian National Railway Co.	6.38%	11/15/2037	\$1,110,000	\$1,551,503	\$139.78	3.56%
CSX Corp.	6.22%	4/30/2040	\$1,285,000	\$1,695,930	\$131.98	4.03%
Burlington Northern Santa Fe LLC	5.75%	5/1/2040	\$1,332,000	\$1,734,038	\$130.18	3.74%
Burlington Northern Santa Fe LLC	5.05%	3/1/2041	\$979,000	\$1,174,242	\$119.94	3.75%
CSX Corp.	5.50%	4/15/2041	\$956,000	\$1,171,339	\$122.53	4.00%
Burlington Northern Santa Fe LLC	5.40%	6/1/2041	\$1,023,000	\$1,278,341	\$124.96	3.78%
Burlington Northern Santa Fe LLC	4.95%	9/15/2041	\$313,000	\$371,991	\$118.85	3.74%
Union Pacific Corp.	4.75%	9/15/2041	\$100,000	\$115,551	\$115.55	3.75%
Norfolk Southern Corp.	4.84%	10/1/2041	\$1,241,000	\$1,438,232	\$115.89	3.81%
Canadian Pacific Railway Co.	5.75%	1/15/2042	\$315,000	\$401,105	\$127.33	3.97%
Burlington Northern Santa Fe LLC	4.40%	3/15/2042	\$1,578,000	\$1,768,891	\$112.10	3.64%
CSX Corp.	4.75%	5/30/2042	\$1,015,000	\$1,137,450	\$112.06	3.97%
Union Pacific Corp.	4.30%	6/15/2042	\$556,000	\$611,900	\$110.05	3.67%
Burlington Northern Santa Fe LLC	4.38%	9/1/2042	\$1,309,000	\$1,463,946	\$111.84	3.64%
Norfolk Southern Corp.	3.95%	10/1/2042	\$980,000	\$1,004,480	\$102.50	3.79%
CSX Corp.	4.40%	3/1/2043	\$500,000	\$537,880	\$107.58	3.92%
Burlington Northern Santa Fe LLC	4.45%	3/15/2043	\$2,976,000	\$3,358,981	\$112.87	3.66%
Union Pacific Corp.	4.25%	4/15/2043	\$1,072,000	\$1,173,218	\$109.44	3.67%
Kansas City Southern	4.30%	5/15/2043	\$920,000	\$954,252	\$103.72	4.06%
Burlington Northern Santa Fe LLC	5.15%	9/1/2043	\$1,149,000	\$1,409,697	\$122.69	3.76%
Canadian National Railway Co.	4.50%	11/7/2043	\$200,000	\$227,054	\$113.53	3.68%
Union Pacific Corp.	4.82%	2/1/2044	\$625,000	\$742,344	\$118.78	3.69%
CSX Corp.	4.10%	3/15/2044	\$2,112,000	\$2,197,409	\$104.04	3.85%
GATX Corp.	5.20%	3/15/2044	\$340,000	\$390,538	\$114.86	4.25%













	Investment Company Name Assets Under Management (In USD Billions)			Investment Company Name	Assets Under Management (In USD Billions)	
1	Black Rock Funds	\$5,977.00	26	Franklin Templeton	\$750.40	
2	Vanguard	\$4,500.00	27	Legg Mason	\$750.00	
3	State Street Global Advisors	\$2,670.00	28	Insight Investors	\$727.50	
4	Fidelity Investments	\$2,400.00	29	Principal Financial Group	\$655.50	
5	JP Morgan	\$1,900.00	30	UBS	\$653.00	
6	BNY Mellon (Dreyfus)	\$1,800.00	31	BNP Paribas	\$648.60	
7	PIMCO	\$1,690.00	32	Dimensional Fund Advisers	\$548.00	
8	Amundi Asset Mgmt	\$1,650.00	33	Alliance Bernstein	\$542.00	
9	Prudential Investments	\$1,370.00	34	Wells Fargo Advantage Funds	\$496.00	
10	American Funds Investments	\$1,300.00	35	Ameriprise Financial	\$484.00	
11	Nomura Asset Management	\$1,100.00	36	MFS Investment Management	\$480.30	
12	Northern Trust	\$1,100.00	37	Columbia Management	\$473.00	
13	TD Ameritrade	\$1,100.00	38	AVIVA	\$420.00	
14	Morgan Stanley	\$1,000.00	39	Eaton Vance Distributors	\$419.30	
15	Wellington Management	\$1,000.00	40	BofA Merrill Lynch	\$418.00	
16	TIAA	\$954.00	41	Aegon	\$417.50	
17	T Rowe Price	\$948.00	42	Lafayette Investments	\$408.00	
18	Sun Life Global Investments	\$934.00	43	The BlackStone Group	\$385.00	
19	Invesco	\$917.50	44	Manulife	\$383.00	
20	AXA	\$870.60	45	Aberdeen Asset Management	\$372.00	
21	Deutsche Asset Management	\$840.00	46	Federated Investors	\$360.50	
22	TransAmerica Funds	\$809.00	47	Julius Baer Securities	\$358.70	
23	Goldman Sachs Asset Management	\$794.00	48	Janus Capital Group	\$331.00	
24	Affilated Managers Group (AMG)	\$772.10	49	SEI Investments	\$325.10	
25	Credit Sussie	\$759.00	50	Charles Schwab	\$320.00	

Fabozzi, Frank J; Fixed Income Analysis; 2000; New Hope, Pennsylvania; ISBN: 1-883249-83-X

Fabozzi, Frank L; The Handbook of Fixed Income Securities 8th Edition via Capital Markets BUS 440 2015 McGraw Hill ISBN-13:9781308250533



Questions?

Paul Winghart

Open Forum

Discussion

Open Forum

- What trends have you been seeing in your industry and in the market?
- What are your expectations about your industry's cost of equity, cost of debt, capital structure, etc.? And why?
- What are your thoughts and suggestions on the selection of guideline companies?
- Are there any significant changes in your industry due to recent mergers and acquisitions? What does that mean for the market?
- Cost of Guideline Company Debt vs. Index
- What do you think the risk free rate was as of January 2, 2018?

Open Forum

Discussion



Thank you!

State Assessed Property Section

sa.property@state.mn.us

651-556-6091