GARY S. PRETTYMAN
Senior Director - Regulatory Business

UNITED WATER
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Via FedEx

Ms. Luly Massaro, Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

September 26, 2013

SUBJECT: United Water Rhode Island Inc.
Docket No. 4434

Dear Ms. Massaro:

Enclosed please find an original and nine (9) copies of United Water Rhode Island Inc.'s responses to the Division's First Set of Data Requests.

- Div. 1-1, Div. 1-4, Div. 1-5, Div. 1-6, Div. 1-7, Div. 1-9, Div. 1-10, Div. 1-11, Div. 1-13, Div. 1-15, Div. 1-16, Div. 1-17, Div. 1-18, Div. 1-19, and Div. 1-20

Very truly yours,

Gary S. Prettyman
Senior Director – Regulatory Business

CERTIFICATION

I hereby certify that on September 26, 2013, I sent a copy of the within to all parties set forth on the attached Service List by electronic mail and copies to Luly Massaro, Commission Clerk, by electronic mail and regular mail.

Parties/Address	E-mail Distribution	Phone
United Water RI Joseph A. Keough, Jr., Esq. Keough & Sweeney 41 Mendon Ave. Pawtucket, RI 02861	jkeoughjr@keoughsweeney.com	401-724-3600
Gary S. Prettyman United Water Mgmt. & Services, Inc. 200 Old Hook Road Harrington Park, NJ 07640	gary.prettyman@UnitedWater.com	201-784-7083
Division of Public Utilities Christy Hetherington, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903	chetherington@riag.ri.gov Jmunoz@riag.ri.gov dmacrae@riag.ri.gov	401-222-2424
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Town of South Kingstown Michael A. Ursillo, Esq. South Kingstown Town Solicitor Ursillo, Teitz & Ritch, Ltd. 2 Williams St. Providence, RI 02903	mikeursillo@utrlaw.com	401-331-2222
Town of Narragansett Mark A. McSally, Esq. Kelly, Kelleher, Reilly & Simpson 28 Caswell St. Narragansett, RI 02882	mmcsally@kkrs.com	401-789-7800
Union Fire District of So. Kingstown Margaret L. Hogan, Esq. Hogan & Hogan 344 Main St., Suite 200 Wakefield, RI 02879	Hogan.hogan@verizon.net	401-782-4488
File an original and nine (9) copies w/: Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick, RI 02888	luly.massaro@puc.ri.gov patricia.lucarelli@puc.ri.gov sharon.colbycamara@puc.ri.gov	401-780-2107

Sandra Talone

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Via FedEx

Ms. Luly Massaro, Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

September 30, 2013

SUBJECT: United Water Rhode Island Inc.
Docket No. 4434

Dear Ms. Massaro:

Enclosed please find an original and nine (9) copies of United Water Rhode Island Inc.'s responses to the Division's First Set of Data Requests.

- Div. 1-2; Div. 1-3; Div. 1-8; Div. 1-12; Div. 1-14

Very truly yours,

Gary S. Prettyman
Senior Director – Regulatory Business

Div. 1-1: For each rate case during the past ten years, please provide a history of the rate of return granted to United Water Rhode Island, Inc. ("UWRI" or "the Company"), including:

(a) The overall rate of return;

(b) The return on common equity;

(c) The capital structure ratios;

(d) The docket number; and

(e) The date of the Commission's Order.

RESPONSE:

Docket	Date	Rate of Return		Capitalization		
Number	Effective	Overall	Equity	Debt	Equity	Other
4255	1/10/12	7.76%	9.85%	45.83%	50.13%	4.04%
2873	12/15/99	8.76%	10.41%	57.22%	42.65%	0.13%

Prepared by: Prettyman

Div. 1-2: Please provide the most recent annual report and the most recent financial statements (i.e., balance sheet, income statement, cash flow statement) for:

(a) United Water Resources, Inc., and

(b) UWRI.

RESPONSE: Please refer to the attached Consolidated Financial Statements for United Water Resources, Inc. (Attachment 1).

No annual report is prepared for UWRI. Please refer to the attached Balance Sheet and Income Statement (Attachment 2).

Prepared by: Prettyman

Report ID: BSREG061
Layout ID: BSREG073

Business Unit: 00061
Period Ending: Aug 31, 2013

Run on 09/26/13 at 11:23 AM

United Water Rhode Island
General Ledger System
Regulatory Balance Sheet

		Actual	Prior Year	Variance to Prior Year Amount
	Assets			
	Utility Plant			
10100	Utility Plant in Service	26,813,550.52	21,841,284.08	4,972,266.44
10150	Utility Plant Retirements	(119,246.31)	(8,877.88)	(110,368.43)
10500	Plant held for future use	50,144.23	50,144.23	0.00
10700	Construction work in progress	397,648.84	462,871.43	(65,222.59)
	Total water plant in service	**27,142,097.28**	**22,345,421.86**	**4,796,675.42**
10800	Utility Accumulated Depreciation	(6,516,231.63)	(6,167,312.81)	(348,918.82)
10810	Retirement work in progress	0.00	(4,534.14)	4,534.14
	Total accum prov for depreciation (Cr)	**(6,516,231.63)**	**(6,171,846.95)**	**(344,384.68)**
	Net Utility Plant	**20,625,865.65**	**16,173,574.91**	**4,452,290.74**
	Investments			
	121 Non-utility Property	**0.00**	**0.00**	**0.00**
	122 Accum Prov for Deprn and Amort of Non-utility Prop (Cr)	**0.00**	**0.00**	**0.00**
	123 Investment in Assoc Companies	**0.00**	**0.00**	**0.00**
	124 Other Investments	**0.00**	**0.00**	**0.00**
	125 Other Special Funds	**0.00**	**0.00**	**0.00**
	Total Investments	**0.00**	**0.00**	**0.00**
	Current & Accrued Assets			
13100	Operations Cash Account Current	(4,026,114.65)	(217,114.41)	(3,809,000.24)
13120	Collections	2,000.00	2,000.00	0.00
	131 Cash	**(4,024,114.65)**	**(215,114.41)**	**(3,809,000.24)**
	134 Other Special Deposits	**0.00**	**0.00**	**0.00**
13501	Working Funds	2,350.00	2,350.00	0.00
	135 Working funds	**2,350.00**	**2,350.00**	**0.00**
	141 Notes Receivable	**0.00**	**0.00**	**0.00**
14200	Customer Accounts Receivable Billing System	358,113.86	233,755.51	124,358.35
14201	AR Cash Accrual	(55,939.01)	0.00	(55,939.01)
	142 Customer Accounts Receivable	**302,174.85**	**233,755.51**	**68,419.34**
14309	Accounts Receivable-Other	9,301.94	(236.49)	9,538.43
	143 Other Accounts Receivable	**9,301.94**	**(236.49)**	**9,538.43**
	144 Accum Prov for Uncollected Accts (Cr)	**0.00**	**0.00**	**0.00**
	145 Notes Rec from Assoc Companies	**0.00**	**0.00**	**0.00**
	146 Accts Rec from Assoc Companies	**0.00**	**0.00**	**0.00**
15400	Capital & Maintenance Inventory Nonexempt	93,152.79	20,936.74	72,216.05
15410	Small Repairs Inventory Exempt	40,840.26	47,031.42	(6,191.16)
15430	Chemical Inventory	14,958.94	14,414.91	544.03
	150 Material and Supplies	**148,951.99**	**82,383.07**	**66,568.92**
	165 Prepayments	**0.00**	**0.00**	**0.00**
	171 Interest and Dividends Receivable	**0.00**	**0.00**	**0.00**
17300	Unbilled Revenue	684,294.22	867,611.00	(183,316.78)
	173 Accrued utility revenues	**684,294.22**	**867,611.00**	**(183,316.78)**
	174 Miscellaneous Current and Accrued Assets	**0.00**	**0.00**	**0.00**
	Total current and accrued assets	**(2,877,041.65)**	**970,748.68**	**(3,847,790.33)**
	Deferred Debits			
	181 Unamort Debt Discount and Expense	**0.00**	**0.00**	**0.00**
	182 Extraordinary Property Loss	**0.00**	**0.00**	**0.00**
	183 Preliminary Survey and Investigation	**0.00**	**0.00**	**0.00**
18409	Clearing Expense- General	6,272.00	6,448.00	(176.00)
18410	Clearing Fringe Benefits	(1,012.45)	15,260.73	(16,273.18)
18450	Clearing - Payroll Accrual	10,824.96	15,841.62	(5,016.66)
	184 Clearing Accounts	**16,084.51**	**37,550.35**	**(21,465.84)**
18611	Deferred Pension/OPEB	0.00	1,473.00	(1,473.00)
18620	Deferred Tank Painting Expense	433,828.98	235,735.98	198,093.00
18635	RA-Deferred Pension FAS158	901,039.00	800,116.00	100,923.00
18636	RA-Deferred PBOP FAS158	(16,762.00)	(120,209.00)	103,447.00
18650	Reg Deferred Tank Painting - Amort	(138,932.98)	(102,183.98)	(36,749.00)
18680	Deferred rate charges	231,363.92	231,320.00	43.92
	186 Miscellaneous Deferred Debits	**1,410,536.92**	**1,046,252.00**	**364,284.92**
19010	Def. Federal Inc Taxes- Other	18,365.00	12,429.00	5,936.00
19013	Def. Federal Income Taxes-Medicare Part D	3,948.00	3,948.00	0.00
19014	Def. Federal Income Taxes-GU-Medicare Part D	2,126.00	2,126.00	0.00
19101	Def. FIT-FAS109 ITC	32,541.00	34,173.00	(1,632.00)
19103	Def. FIT-F71/F109 G/U ITC	17,535.00	18,411.00	(876.00)
	190 Accumulated Deferred Income Taxes	**74,515.00**	**71,087.00**	**3,428.00**
	Total Deferred Debits	**1,501,136.43**	**1,154,889.35**	**346,247.08**
	Total assets	**19,249,960.43**	**18,299,212.94**	**950,747.49**

		Actual	Prior Year	Variance to Prior Year Amount
	Capitalization and Liabilities			
	Proprietary Capital			
20100	Common Stock Issued	500,000.00	500,000.00	0.00
	201,3 Common Stock Issued	**500,000.00**	**500,000.00**	**0.00**
	204.6 Preferred Stock Issued	**0.00**	**0.00**	**0.00**
	207 Premium on Capital Stock	**0.00**	**0.00**	**0.00**
	208, 211 Other Paid-In Capital	**5,024,514.21**	**5,024,514.21**	**0.00**
	215, 216 Retained Earnings	**5,854,876.54**	**5,755,904.07**	**98,972.47**
	Reacquired Capital Stock (Dr)	**0.00**	**0.00**	**0.00**
	Total Proprietary Capital	**11,379,390.75**	**11,280,418.28**	**98,972.47**
	Long Term Debt			
	233 Advances from Assoc Companies	**0.00**	**0.00**	**0.00**
	224 Other Long Term Debt	**0.00**	**0.00**	**0.00**
	Total Long Term Debt	**0.00**	**0.00**	**0.00**
	Current & Accrued Liabilities			
	231 Notes Payable	**0.00**	**0.00**	**0.00**
23200	Accounts Payable - System	72,800.74	20,719.66	52,081.08
23210	Accounts Payable Month End Accrual	344,774.74	58,161.79	286,612.95
23299	Accounts Payable- Other	15,978.34	15,614.51	363.83
	232 Accounts Payable	**433,553.82**	**94,495.96**	**339,057.86**
	233 Notes Payable to Assoc Companies	**0.00**	**0.00**	**0.00**
	234 Accts Payable to Assoc Companies	**0.00**	**0.00**	**0.00**
	235 Customer Deposits	**0.00**	**0.00**	**0.00**
23601	Property Taxes Accrued	124,910.00	114,660.25	10,249.75
23631	Gross Receipt Tax Accrued	(20,106.23)	(16,537.53)	(3,568.70)
23641	Federal Income Tax Accrued	208,731.00	35,007.00	173,724.00
23661	FICA Tax Accrued	3,722.86	3,745.10	(22.24)
23662	Federal Unemployment Tax Accrued	19.48	0.00	19.48
23663	State Unemployment Tax Accrued	71.42	0.00	71.42
23670	Sales & Use Taxes Accrued	(8,790.07)	1,992.23	(10,782.30)
	236 Accrued Taxes	**308,559.46**	**138,867.05**	**169,691.41**
	237 Interest Accrued	**0.00**	**0.00**	**0.00**
	238 Dividends Declared	**0.00**	**0.00**	**0.00**
	Matured Long Term Debt	**0.00**	**0.00**	**0.00**
24301	Employee Wthg-401K	0.00	(1,716.02)	1,716.02
	241 Tax Collections Payable	**0.00**	**(1,716.02)**	**1,716.02**
24205	Accrued - Payroll	49,157.56	50,429.22	(1,271.66)
24215	Accrued - Power	33,795.53	8,695.00	25,100.53
24229	Accrued CC&B Charges	0.00	4,143.00	(4,143.00)
24245	Accrued - Vacation	26,510.00	23,132.00	3,378.00
24250	Unearned Revenue	68,469.42	81,773.00	(13,303.58)
24261	Accrued 401K	2,892.94	584.21	2,308.73
24268	Accrued STIP	17,104.00	23,800.00	(6,696.00)
24269	Accrued Bonus, Sick & Vacation bargaining	7,536.00	0.00	7,536.00
24299	Accrued Other	13,580.58	0.00	13,580.58
	242 Misc Current and Accrued Liabilities	**219,046.03**	**192,556.43**	**26,489.60**
	Total Misc Current and Accrued Liabilities	**961,158.31**	**424,203.42**	**536,954.89**
	Deferred Credits			
	252 Customer Advances for Construction	**0.00**	**0.00**	**0.00**
25316	Def. Reg. Liab.-Federal-Medicare Part D	6,074.00	6,074.00	0.00
25340	PBOP Liability - Trustee	866,663.23	720,331.23	146,332.00
25393	Deferred Compensation	12,379.06	12,379.06	0.00
25402	DefRegLiab F71/F109-Fed:ITC	50,076.00	52,584.00	(2,508.00)
	253 Other Deferred Credits	**935,192.29**	**791,368.29**	**143,824.00**
25500	Deferred ITC	92,980.00	97,648.00	(4,668.00)
	255 Accum Deferred Investment Tax Credit	**92,980.00**	**97,648.00**	**(4,668.00)**
28203	Def. FIT-MACRS	1,600,390.00	1,527,221.00	73,169.00
28207	Def FIT Pension Reg Asset FAS158	315,364.00	280,041.00	35,323.00
28208	Def FIT PBOP Reg Asset FAS158	(5,867.00)	(42,073.00)	36,206.00
28300	Def. FIT-Other	(43,718.00)	(40,131.00)	(3,587.00)
28301	Def. FIT-Tank Painting	103,213.00	46,743.00	56,470.00
28302	Def. FIT-Rate Expenses	79,970.00	80,962.00	(992.00)
28306	Def. FIT-Pensions	(423,128.00)	(411,557.00)	(11,571.00)
28307	Def. FIT-PBOP	(303,334.00)	(251,603.00)	(51,731.00)
28308	Def. FIT-Cost of Removal	1,119.00	1,119.00	0.00
28312	Def. FIT - AFUDC Equity	34,008.00	30,651.00	3,357.00
	281, 282, 283 Accumulated Deferred Income Taxes	**1,358,017.00**	**1,221,373.00**	**136,644.00**
	Total Deferred Credits	**2,386,189.29**	**2,110,389.29**	**275,800.00**
	Operating Reserves			
	262 Injuries and Damages Reserve	**0.00**	**0.00**	**0.00**
26340	Pension - Accrued	1,208,934.00	1,175,874.00	33,060.00
	263 Pensions and Benefits Reserve	**1,208,934.00**	**1,175,874.00**	**33,060.00**
	265 Miscellaneous Operating Reserves	**0.00**	**0.00**	**0.00**
	Total Operating Reserves	**1,208,934.00**	**1,175,874.00**	**33,060.00**
	Contributions In Aid of Construction			

Report ID: BSREG061
Layout ID: BSREG073

Business Unit: 00061
Period Ending: Aug 31, 2013

Run on 09/24/13 at 11:23 AM

United Water Rhode Island
General Ledger System
Regulatory Balance Sheet

		Actual	Prior Year	Variance to Prior Year Amount
27100	Contribution in Aid of Construction	3,314,288.08	3,308,327.95	5,960.13
	Contributions in Aid of Construction	**3,314,288.08**	**3,308,327.95**	**5,960.13**
	Total capitalization and liabilities	**19,249,960.43**	**18,299,212.94**	**950,747.49**

Report ID: ISREG061
Layout ID: ISREG096
Business Unit: 00061
Period Ending: Aug 31, 2013
Run on 09/27/13 at 01:24 PM

United Water Rhode Island
General Ledger System
Regulatory Income Statement

			Current Year	Prior Year	Increase (Decrease)
REVENUES					
		WATER SALES REVENUE			
	460.0	**Unmetered Revenue**	0.00	0.00	0.00
40105		Meter sale-residential consump	763,145.29	1,172,147.25	(409,001.96)
40106		Meter sales-residential facili	470,481.30	0.00	470,481.30
	461.1	**Residential**	1,233,626.59	1,172,147.25	61,479.34
40110		Meter sale-commercial consump	299,847.03	348,051.64	(48,204.61)
40111		Meter sale-commercial facility	76,043.48	0.00	76,043.48
	461.2	**Commercial**	375,890.51	348,051.64	27,838.87
40115		Meter sale-industrial consump	3,937.49	5,992.13	(2,054.64)
40116		Meter sale-industrial facility	1,824.30	0.00	1,824.30
	461.3	**Industrial**	5,761.79	5,992.13	(230.34)
40120		Meter sale-public auth consump	41,619.49	55,383.67	(13,764.18)
40121		Meter sale-public auth fac	15,246.78	0.00	15,246.78
	461.4	**Public Sales**	56,866.27	55,383.67	1,482.60
	461.5	**Multiple Family Dwellings**	0.00	0.00	0.00
		Total Metered Revenue	1,672,145.16	1,581,574.69	90,570.47
40145		Public fire protection facilit	296,010.00	275,807.18	20,202.82
	462.1	**Public Fire protection**	296,010.00	275,807.18	20,202.82
40140		Private fire protection facili	102,199.00	87,615.10	14,583.90
	462.2	**Private Fire protection**	102,199.00	87,615.10	14,583.90
40165		Other sales	15,018.26	2,960.44	12,057.82
	464.0	**Other Sales**	15,018.26	2,960.44	12,057.82
40154		Sales for resale facility chg	185.22	0.00	185.22
40155		Sales for resale consumption	222,118.78	307,919.51	(85,800.73)
	466.0	**Sales for Resale**	222,304.00	307,919.51	(85,615.51)
	467.0	**Interdepartmental Sales**	0.00	0.00	0.00
	468.0	**Other**	0.00	0.00	0.00
		TOTAL WATER SALES	2,307,676.42	2,255,876.92	51,799.50
		OTHER WATER REVENUES			
40200		Miscellaneous service revenue	7,142.73	10,071.99	(2,929.26)
40230		Refunds and allowances	(2,389.48)	(598.23)	(1,791.25)
40245		Turn on fees	4,335.00	5,075.00	(740.00)
40250		Other fees	856.85	320.86	535.99
	471.0	**Miscellaneous Service Revenues**	9,945.10	14,869.62	(4,924.52)
40300		Reg Unbill consumption revenue	87,242.95	398,122.00	(310,879.05)
40301		Reg Unbill facility charge rev	98,801.85	0.00	98,801.85
		Other Water Revenues	186,044.80	398,122.00	(212,077.20)
		Other Sewer Revenues	0.00	0.00	0.00
	474.0	**Other Water Revenues**	186,044.80	398,122.00	(212,077.20)
		TOTAL OTHER WATER REVENUES	195,989.90	412,991.62	(217,001.72)
		400 - Operating Revenues	2,503,666.32	2,668,868.54	(165,202.22)
		UTILITY OPERATING EXPENSES			
		Salaries and Wages			
50100		Supervisory labor	179,734.63	176,139.61	3,595.02
50105		Direct labor	273,584.95	277,380.16	(3,795.21)
50110		Supervisory labor transferred	14,948.03	7,573.14	7,374.89
50115		Direct Labor transferred in	67.00	134.73	(67.73)
50120		Supervisory labor trans out	(65,447.76)	(54,493.19)	(10,954.57)
50125		Direct labor transferred out	(34,666.57)	(29,375.70)	(5,290.87)
	601.0	**Employee Salaries**	368,220.28	377,358.75	(9,138.47)
	603.0	**Officers & Directors**	0.00	0.00	0.00
		Total Salaries & Wages	368,220.28	377,358.75	(9,138.47)
91500		Employee pension cost	90,088.00	93,664.00	(3,576.00)
91550		Post Retire Health Care Accrue	38,864.00	41,528.00	(2,664.00)
91700		Employee group health & life	91,396.72	85,075.56	6,321.16
91800		Employee 401K	14,371.53	14,136.27	235.26
91850		Other employee benefits	4,002.92	4,806.09	(803.17)
91860		Other Awards	1,101.46	450.63	650.83
	604.0	**Employee Pension & Benefits**	239,824.63	239,660.55	164.08
	610.0	**Purchased Water**	0.00	0.00	0.00
50810		Purchased power	160,731.90	137,259.73	23,472.17
	615.0	**Purchased Power**	160,731.90	137,259.73	23,472.17
50620		Other utilities	13,245.96	16,821.73	(3,575.77)
	616.0	**Fuel for Power Production**	13,245.96	16,821.73	(3,575.77)
50635		Chemicals	29,951.84	35,239.35	(5,287.51)
	618.0	**Chemicals**	29,951.84	35,239.35	(5,287.51)
50300		Material	5,266.65	4,417.61	849.04
	620.0	**Material & Supplies**	5,266.65	4,417.61	849.04
		Contractual Services			
	631.0	**Engineering**	0.00	0.00	0.00
91100		Outside service - acctg & audg	2,623.92	2,536.00	87.92
	632.0	**Accounting**	2,623.92	2,536.00	87.92

Report ID: ISREG061
Layout ID: ISREG096
Business Unit: 00061
Period Ending: Aug 31, 2013
Ran on 09/27/13 at 01:23 PM

United Water Rhode Island
General Ledger System
Regulatory Income Statement

		Current Year	Prior Year	Increase (Decrease)
91200	Outside service - legal	540.18	0.00	540.18
633.0	**Legal**	**540.18**	**0.00**	**540.18**
90850	Corporate M&S fees	115,591.84	84,232.50	31,359.34
90851	Regulated M&S fees	80,792.72	85,649.10	(4,856.38)
90852	Non-regulated M&S fees	1,169.66	465.32	704.34
634.0	**Management Fees**	**197,554.22**	**170,346.92**	**27,207.30**
50420	Lab Testing Fees	6,834.15	10,336.00	(3,501.85)
635.0	**Water Testing Costs**	**6,834.15**	**10,336.00**	**(3,501.85)**
50400	Outside contractors	15,797.48	8,190.80	7,606.68
50405	CC&B support costs	31,001.64	24,537.87	6,463.77
50410	Outside professional services	17,578.82	27,980.79	(10,401.97)
50625	Waste disposal - sludge	3,808.09	0.00	3,808.09
91250	Outside service - IS	14,614.65	9,405.33	5,209.32
91300	Outside service - temp help	0.00	645.76	(645.76)
91310	Outside Serv - Mgt Fees Other	11,672.71	11,374.32	298.39
91350	Outside service - other	10,051.28	10,526.26	(474.98)
636.0	**Other - Maintenance**	**104,524.67**	**92,661.13**	**11,863.54**
	Total Contractual Services	**312,077.14**	**275,980.05**	**36,197.09**
50600	Rents	16,000.00	21,939.47	(5,939.47)
641.0	**Rental of Building / Real Property**	**16,000.00**	**21,939.47**	**(5,939.47)**
90310	Equipment rental	0.00	616.32	(616.32)
90110	Office equipment rental	2,317.01	1,818.02	498.99
642.0	**Rental of Equipment**	**2,317.01**	**2,434.34**	**(117.33)**
50645	Transp'n cost - other	46,093.16	46,554.59	(461.43)
650.0	**Transportation Expense**	**46,093.16**	**46,554.59**	**(461.43)**
	Insurance			
656.0	**Vehicle**	**0.00**	**0.00**	**0.00**
91400	Property insurance	1,961.71	2,057.40	(95.69)
91450	General corporate insurance	25,536.32	16,082.80	9,453.52
657.0	**General Liability**	**27,498.03**	**18,140.20**	**9,357.83**
91460	Worker compensation	10,032.20	9,614.60	417.60
658.0	**Workmen's Compensation**	**10,032.20**	**9,614.60**	**417.60**
	Total Insurance	**37,530.23**	**27,754.80**	**9,775.43**
90410	Advertising	1,532.37	1,221.55	310.82
660.0	**Advertising**	**1,532.37**	**1,221.55**	**310.82**
92000	Amortization of Rate Case Exp	46,264.00	45,604.82	659.18
666.0	**Reg Commission Exp - Amort**	**46,264.00**	**45,604.82**	**659.18**
91900	Regulatory commission expense	9,002.93	0.00	9,002.93
667.0	**Reg Commission Exp - Other**	**9,002.93**	**0.00**	**9,002.93**
668.0	**Water Resource Conservation Exp**	**0.00**	**0.00**	**0.00**
670.0	**Bad debt Expense**	**0.00**	**0.00**	**0.00**
	Miscellaneous Expenses			
	All Detail Accounts with 'Sewer'	**0.00**	**0.00**	**0.00**
	Miscellaneous Sewer Accts	**0.00**	**0.00**	**0.00**
	Total Sewer Costs	**0.00**	**0.00**	**0.00**
50655	Miscellaneous expenses	21,143.02	17,430.37	3,712.65
90200	Licenses and fees	12,693.92	12,612.51	81.41
90950	Fringe Benefits Transferred	7,859.21	(13,774.48)	21,633.69
90953	Fringe Ben Trf Capital & Other	(63,690.50)	(55,897.54)	(7,792.96)
92600	Other misc G&A expenses	1,653.02	13.35	1,639.67
	Miscellaneous G&A Expense	**(20,341.33)**	**(39,615.79)**	**19,274.46**
675.0	**Miscellaneous Other**	**(20,341.33)**	**(39,615.79)**	**19,274.46**
90500	Club and professional dues	5,405.43	5,159.24	246.19
675.1	**Membership Dues**	**5,405.43**	**5,159.24**	**246.19**
92150	Staff mtgs, conf's & seminars	1,915.73	2,688.34	(772.61)
675.2	**Reg fees for Conventions**	**1,915.73**	**2,688.34**	**(772.61)**
90250	Telephone	16,218.57	18,068.08	(1,849.51)
675.3	**Communication Services**	**16,218.57**	**18,068.08**	**(1,849.51)**
92300	Bank charges	6,078.72	5,392.34	686.38
675.4	**Trustee Fees and Bank Charges**	**6,078.72**	**5,392.34**	**686.38**
675.5	**Stockholder Expenses**	**0.00**	**0.00**	**0.00**
90100	Office supplies	6,519.09	6,390.30	128.79
90300	Other utilities-G&A	10,617.11	3,449.17	7,167.94
92053	Amortization of Tank Painting	28,893.00	102,183.98	(73,290.98)
92056	Amortization of OPEB Costs	0.00	11,784.00	(11,784.00)
675.6	**Office Expenses and Utilities**	**46,029.20**	**123,807.45**	**(77,778.25)**
92200	Clothing & uniforms	1,780.16	820.90	959.26
92550	Safety equipment	676.11	2,206.63	(1,530.52)
675.7	**Uniforms**	**2,456.29**	**3,027.53**	**(571.24)**
675.8	**Directors' Fees and Expenses**	**0.00**	**0.00**	**0.00**
90450	Postage & air freight	14,795.41	13,226.16	1,569.25
675.9	**Postage**	**14,795.41**	**13,226.16**	**1,569.25**
90150	Dues & subscriptions	1,025.26	3,670.09	(2,644.83)
675.10	**Subscriptions**	**1,025.26**	**3,670.09**	**(2,644.83)**
675.11	**Write off Prelim Survey**	**0.00**	**0.00**	**0.00**
675.12	**Travel**	**1,069.16**	**1,843.89**	**(774.73)**
675.13	**Education**	**0.00**	**0.00**	**0.00**
675.14	**Charitable Contributions**	**0.00**	**0.00**	**0.00**
	Total Miscellaneous Expenses	**74,652.44**	**137,267.33**	**(62,614.89)**
401.0	**Operating Expenses**	**1,362,710.54**	**1,369,414.67**	**(6,704.13)**
70100	Depreciation	342,882.78	325,189.27	17,693.51

Report ID: ISREG061
Layout ID: ISREG096
Business Unit: 00061
Period Ending: Aug 31, 2013
Run on 09/27/13 at 01:24 PM

United Water Rhode Island
General Ledger System
Regulatory Income Statement

		Current Year	Prior Year	Increase (Decrease)
403.0	**Depreciation Expense**	342,882.76	325,189.27	17,693.51
404.0	**Amortization of Utility Plant**	0.00	0.00	0.00
406.0	**Amortization Util Plant Acq Adj**	0.00	0.00	0.00
407.1	**Amortization Limited term Plant**	0.00	0.00	0.00
407.2	**Amortization Property Losses**	0.00	0.00	0.00
407.3	**Amortization Other Util Plant**	0.00	0.00	0.00
407.4	**Amort Regulatory Assets**	0.00	0.00	0.00
70200	Real estate	200,377.23	180,195.27	20,181.96
	Real Estate Taxes	200,377.23	180,195.27	20,181.96
	Personal Property Taxes	0.00	0.00	0.00
	Payroll Taxes	0.00	0.00	0.00
70251	FICA Taxes	34,643.99	34,789.47	(145.48)
	FICA	34,643.99	34,789.47	(145.48)
70252	Federal Unemployment Taxes	883.77	650.98	232.79
	Federal Unemployment	883.77	650.98	232.79
70253	State Unemployment Taxes	4,604.52	4,311.97	292.55
	State Unemployment	4,604.52	4,311.97	292.55
70300	Sales and Use Tax	10.00	(932.89)	942.89
	Sales & Use Tax	10.00	(932.89)	942.89
	Franchise Taxes	0.00	0.00	0.00
	Excise taxes	0.00	0.00	0.00
70450	Gross Receipts Tax	28,686.43	31,115.15	(2,428.72)
	Gross Receipts Taxes	28,686.43	31,115.15	(2,428.72)
	Other - Municipal Taxes	0.00	0.00	0.00
	Other Miscellaneous taxes	0.00	0.00	0.00
408.0	**Taxes Other than Income**	269,205.94	250,129.95	19,075.99
80100	Current - federal	112,400.00	180,842.00	(68,442.00)
409.10	**Fed Income Taxes, Util Oper**	112,400.00	180,842.00	(68,442.00)
409.11	**St Income Taxes, Util Oper**	0.00	0.00	0.00
409.12	**Local Income Taxes, Util Oper**	0.00	0.00	0.00
410.0	**Deferred Income Tax**			
80200	Deferred - Federal Income Taxe	55,213.00	14,541.00	40,672.00
410.10	Federal	55,213.00	14,541.00	40,672.00
410.11	State	0.00	0.00	0.00
	Total Deferred Income Tax	55,213.00	14,541.00	40,672.00
411.1	**Prov for Deferred Income Taxes- Credit**	0.00	0.00	0.00
	Tax Credits			
412.1	Investment Tax Credit Def	0.00	0.00	0.00
80400	Investment tax credit amort'n	(3,112.00)	(3,106.00)	(6.00)
412.2	Investment Tax Credit Restored	(3,112.00)	(3,106.00)	(6.00)
	Total Tax Credits	(3,112.00)	(3,106.00)	(6.00)
	TOTAL UTILITY OPERATING EXPENSE	2,139,300.26	2,137,010.89	2,289.37
	NET UTILITY OPERATING INCOME (LOSS)	364,366.06	531,857.65	(167,491.59)
	OTHER OPERATING INCOME (LOSS)			
413.0	**Income from Util Plant Leased to Others**	0.00	0.00	0.00
414.0	**Gains (Losses) from Disposition of Util Prop**	0.00	0.00	0.00
	TOTAL OTHER OPERATING INCOME (LOSS)	0.00	0.00	0.00
	NON-OPERATING INCOME			
415.0	**Revenue from Mdse & Jobbing**	0.00	0.00	0.00
419.0	**Interest & Dividend Income**	0.00	0.00	0.00
71050	AFUDC (Cr) Debt	44,400.68	648.41	43,752.27
	AFUDC - Debt	44,400.68	648.41	43,752.27
71060	AFUDC (Cr) Equity	119,674.02	1,692.59	117,981.43
	AFUDC - Equity	119,674.02	1,692.59	117,981.43
420.0	**Allow for Funds Used During Constr**	164,074.70	2,341.00	161,733.70
71250	Misc non operating income	29,493.32	24,741.03	4,752.29
421.0	**Non-Utility Income**	29,493.32	24,741.03	4,752.29
	TOTAL NON-OPERATING INCOME	193,568.02	27,082.03	166,485.99
	NON-OPERATING DEDUCTIONS			
408.2	**Taxes Other than Income Taxes**	0.00	0.00	0.00
409.2	**Income taxes, Other Income & Deductions**	0.00	0.00	0.00
416.0	**Costs & Exp of Mdse & Jobbing**	0.00	0.00	0.00
71252	Misc non operating deductions	26.67	1.43	25.24
71253	Penalties	0.00	300.78	(300.78)
71261	Federal PAC Withholding	(30.00)	(5.00)	(25.00)
	Total Water	(3.33)	297.21	(300.54)
	Depreciation - Sewer	0.00	0.00	0.00
	Total Sewer	0.00	0.00	0.00
426.0	**Miscellaneous Non-Utility Expenses**	(3.33)	297.21	(300.54)
	TOTAL NON-OPERATING INCOME & DEDUCTIONS	193,571.35	26,784.82	166,786.53
	INTEREST EXPENSE			
70800	Interest on debt to assoc co's	242,927.00	193,522.00	49,405.00
71000	Other Interest	1,130.24	178.97	951.27

Report ID: ISREG061
Layout ID: ISREG096

Business Unit: 06061
Period Ending: Aug 31, 2013
Run on 09/27/13 at 01:24 PM

United Water Rhode Island
General Ledger System
Regulatory Income Statement

		Current Year	Prior Year	Increase (Decrease)
427.0	Interest Expense	244,057.24	193,700.97	50,356.27
428.0	Amort of Debt Discount & Expenses	0.00	0.00	0.00
429.0	Amort of Premium on Debt	0.00	0.00	0.00
	TOTAL INTEREST EXPENSE	244,057.24	193,700.97	50,356.27
	EXTRAORDINARY ITEMS			
433.0	Income	0.00	0.00	0.00
434.0	Deductions	0.00	0.00	0.00
409.3	Income Taxes	0.00	0.00	0.00
409.4	Other	0.00	0.00	0.00
	TOTAL EXTRAORDINARY ITEMS	0.00	0.00	0.00
	NET INCOME (LOSS)	313,880.17	364,941.50	(51,061.33)

Div. 1-3: Please identify the percent of assets devoted to regulated water utility service for UWRI, United Waterworks, Inc. ("UWW"), United Water Resources, Inc. and the publically-traded entity that owns United Water Resources, Inc.

RESPONSE: The publically traded entity that ultimately owns United Water Resources is Suez Environnement S.A.

The percent of assets devoted to regulated water utility service are as follows:

- UWRI – 100%
- United Waterworks – 96.1%
- United Water Resources Inc. – 94.5%
- Suez Environnement S.A. – 7.2%

Prepared by: Prettyman

Div. 1-4: Per Schedule PMA-5, page 1 of 10, SJW Corporation is shown as having a cost of equity of 13.52 percent compared to a water utility median of 8.91 percent. Please explain the abnormally high cost of equity for this company. For example, does it reflect unusually high risk?

RESPONSE: On Schedule PMA-5, page 1 of 10, Ms. Ahern uses publically available information, i.e. stock prices, indicated dividends and analyst projections of growth in EPS to calculate a DCF indicated cost rate for each company. She will not speculate as to the reasons why a company like SJW Corporation has a relatively high DCF indicated cost rate or why a company like Middlesex Water Company has a relatively low DCF indicated cost rate. Ms. Ahern's use of the median DCF indicated cost rate of 9.81% mitigates the effect of high or low side outliers in the indicated DCF cost rate estimates. In addition, it is not Ms. Ahern's testimony that SJW Corporation has a cost rate of common equity of 13.52%, as it is her opinion that multiple common equity cost models must be relied upon in determining a common equity cost rate for a single company or for a proxy group of companies, consistent with the Efficient Market Hypothesis as discussed in her prepared direct testimony on page 20, line 4 through page 21, line 6 and page 40, line 19 through page 41, line 6.

Prepared by: Pauline M. Ahern, CRRA

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4434
Response of United Water Rhode Island, Inc.
To The Division of Public Utilities And Carriers'
Data Requests
Set 1

Div. 1-5: Please provide all supporting data and documents used to develop the proposed 46.55 percent long-term debt/53.45 percent common equity capital structure at March 31, 2013. This request would include the UWW balance sheet. Identify any and all adjustments to the actual balance sheet data used to derive the 46.55 percent and 53.45 percent figures.

RESPONSE: Please see attached.

Prepared by: Prettyman

United Waterworks Inc
Consolidated Capital Structure
31-Mar-13

Item		Amount	Percentage
Long-term Debt	$	324,470,000	46.55%
Common Equity		372,537,970	53.45%
Total	$	697,007,970	100.00%

Common Equity

Common Stock	1,164
Paid in Capital	174,411,374
Retained Earnings	198,125,433
Total	372,537,970

UNITED WATERWORKS
Actual
COMPOSITE COST RATE OF DEBT

Line #	[1] Description of Debt	[2] Issue Date	[3] Maturity Date	[4] [a] Amount Outstanding	[5] Unamortized Net Discount, Premium and Expense	[6] Net Proceeds (C.4+/-C.5)	[7] Stated Interest Rate	[8] Annual Interest Expense (C.4xC.7)	[9] Amortization of Net Discount Premium and Expense	[10] Annual Cost (C.8+C.9)	[11] Effective Cost Rate	[12] Weighted Embedded Cost Rate
1	Medium Term Note Series A 1998	Feb-98	Feb-23	25,000,000	955,918	24,044,082	6.97%	1,742,500	97,212	1,839,712	7.65%	0.59%
2	Medium Term Note Series A 1998	Dec-98	Dec-17	5,000,000	19,152	4,980,848	6.90%	345,000	4,032	349,032	7.01%	0.11%
3	Medium Term Note Series A 1998	Feb-98	Feb-28	15,000,000	118,904	14,881,096	7.10%	1,065,000	8,016	1,073,016	7.21%	0.34%
4	Tax Exempt-Dauphin 92 TEF Series B	Jun-92	Jun-17	4,185,000	17,150	4,167,850	6.70%	280,395	4,116	284,511	6.83%	0.09%
5	Tax Exempt-Boise 2001 TEF	Sep-01	Sep-31	25,960,000	2,433,388	23,526,612	5.00%	1,298,000	132,132	1,430,132	6.08%	0.46%
6	Tax Exempt-DE 2002 TEF	Mar-02	Mar-33	16,130,000	1,493,169	14,636,831	5.15%	830,695	74,964	905,659	6.19%	0.29%
7	Tax Exempt NY (NR) 2002 TEF	Mar-02	Mar-34	11,275,000	1,116,699	10,158,301	5.15%	580,663	53,388	634,051	6.24%	0.20%
8	Tax Exempt-Dauphin 92 TEF Series A	Jun-92	Jun-24	10,000,000	206,249	9,793,751	6.90%	690,000	18,480	708,480	7.23%	0.23%
9	Tax Exempt-Boise 05 TEF	May-05	May-35	18,325,000	1,527,400	16,797,600	4.55%	833,788	65,460	899,248	5.35%	0.29%
10	Tax Exempt-Pennsylvania Series 2007	Feb-07	Feb-37	23,595,000	1,042,756	22,552,244	4.50%	1,061,775	43,752	1,105,527	4.90%	0.35%
11	Senior Note Series 2010	Jan-10	Jan-25	45,000,000	1,045,253	43,954,747	4.92%	2,214,000	88,800	2,302,800	5.24%	0.74%
12	Senior Note Series A	Nov-07	Nov-17	15,000,000	71,232	14,928,768	5.66%	849,000	15,264	864,264	5.79%	0.28%
13	Senior Note Series B	Nov-07	Nov-28	15,000,000	113,928	14,886,072	6.13%	919,500	7,272	926,772	6.23%	0.30%
14	Medium Term Note Mutual of Omaha A	Oct-08	Oct-29	7,500,000	40,788	7,459,212	6.54%	490,500	2,472	492,972	6.61%	0.16%
15	Medium Term Note Mutual of Omaha B	Dec-08	Dec-29	7,500,000	41,200	7,458,800	6.59%	494,250	2,472	496,722	6.66%	0.16%
16	Medium Term Note NY Life A	Oct-08	Oct-18	12,500,000	47,520	12,452,480	6.21%	776,250	8,640	784,890	6.30%	0.25%
17	Medium Term Note NY Life B	Dec-08	Dec-18	12,500,000	49,232	12,450,768	6.31%	788,750	8,688	797,438	6.40%	0.26%
19	Tax-Exempt-NY Series 2010A	Sep-10	Sep-40	35,000,000	990,619	34,009,381	4.88%	1,706,250	36,132	1,742,382	5.12%	0.56%
20	Senior Note Series 2011	Dec-11	Dec-27	20,000,000	781,278	19,218,722	4.10%	820,000	52,968	872,968	4.54%	0.28%
21	Total Long-Term Debt			324,470,000	12,111,835	312,358,165		17,786,315	724,260	18,510,575		5.93%
22	Additional Debt Costs											
23	Unamortized Costs Associated With Retired Medium Term Note ($10M@8.84%)				66,456				5,616	5,616	0.002%	0.002%
24	Premium on Retirement of Medium Term Note				261,422				22,092	22,092	0.01%	0.01%
25	Premium on Retirement of Prudential Capital Corp.Debt ($20M @10.05%, and $15M @ 9.57%)				3,779,328				340,992	340,992	0.11%	0.11%
26	Unamortized Costs Associated With Retired Jacksonville Debt ($12M @ 6.75%)				241,058				24,924	24,924	0.01%	0.01%
27	Unamortized Costs Associated With Retired UW Westchester TEF ($2.25M @ 8.85%)				25,632				8,544	8,544	0.003%	0.003%
28	Totals				16,485,731				1,126,428	18,912,743		6.05%

Report ID: BSCOR176
Layout ID: BSCOR100
Scope Definition: UWW_PRE_PUR

Period Ending: Mar 31, 2013
Run on 04/10/13 at 05:10 PM

UWW Pre Purchase Accounting

General Ledger System
Consol'd B/S- UWWPPA

	- Current Month - This Year	Last Year	Increase or (Decrease)
Assets			
Utility plant	1,204,601,918.29	1,253,273,797.17	(48,671,878.88)
Net Utility plant acquisition adjustment	2,101,340.55	2,646,520.16	(545,179.61)
Less accumulated depreciation & amortization	(287,833,878.05)	(292,892,378.05)	5,058,500.00
Construction work in progress	10,053,079.18	9,332,042.83	721,036.35
Plant held for future use	103,108.23	103,108.23	0.00
Net utility plant	**929,025,568.20**	**972,463,090.34**	**(43,437,522.14)**
Investments - long term consolidating companies	0.00	0.00	0.00
Investments - long term non-consolidated companies	1,516.35	1,516.35	0.00
Equity investments	100,481.00	100,693.00	(212.00)
Non-utility property & equipment	484,552.86	582,573.16	(98,020.30)
Depreciation non-utility properties	0.00	0.00	0.00
Other properties & investments	**586,550.21**	**684,782.51**	**(98,232.30)**
Goodwill, net	2,586,138.00	2,586,138.00	0.00
Other intangibles, net	0.00	0.00	0.00
Goodwill & other intangibles	**2,586,138.00**	**2,586,138.00**	**0.00**
Cash	14,049,786.74	1,797,944.69	12,251,842.05
Restricted cash	0.00	0.00	0.00
Accounts receivable - customer	26,359,797.47	37,585,732.36	(11,225,934.89)
A/R - associated companies	0.00	0.00	0.00
A/R affiliated companies	0.00	0.00	0.00
Interest and dividends receivable	0.00	0.00	0.00
Notes receivable - short term	0.00	0.00	0.00
Materials & supplies inventory	2,306,350.19	2,651,104.14	(344,753.95)
Prepaid expenses	2,078,212.43	845,900.65	1,232,311.78
Other current assets	0.00	0.00	0.00
Total current and accrued assets	**44,794,146.83**	**42,880,681.84**	**1,913,464.99**
Unamortized debt discount/expense	16,485,731.00	17,600,630.00	(1,114,899.00)
Prepaid employee benefits	0.00	0.00	0.00
Regulatory assets	82,125,855.87	80,166,723.37	1,959,132.50
Other deferred charges & assets	4,816,561.45	6,449,447.68	(1,632,886.23)
Notes receivable - long term	0.00	0.00	0.00
Clearing accounts	509,754.77	1,186,375.79	(676,621.02)
Non-current assets	**103,937,903.09**	**105,403,176.84**	**(1,465,273.75)**
Total assets	**1,080,930,306.33**	**1,124,017,869.53**	**(43,087,563.20)**

Capitalization and Liabilities

		- Current Month - This Year	Last Year	Increase or (Decrease)
20100	Common Stock Issued	1,163.83	1,163.83	0.00
20110	Premium on Capital Stock	45,113,982.17	45,113,982.17	0.00
20700	Additional Paid-in Capital	129,297,391.45	129,297,391.45	0.00
	Common stock	174,412,537.45	174,412,537.45	0.00
	Cumulative translation adjustment	0.00	0.00	0.00
	Preferred stock	0.00	0.00	0.00
	Preference stock	0.00	0.00	0.00
	Total capital stock	174,412,537.45	174,412,537.45	0.00
	Total retained earnings	198,125,432.71	210,315,152.12	(12,189,719.41)
	Accumulated other comprehensive income	(7,403,872.00)	(4,439,243.00)	(2,964,629.00)
	Other Equity Noncontrolling Interest	0.00	0.00	0.00
	Long term debt	324,470,000.00	324,615,000.00	(145,000.00)
	Total Capitalization	**689,604,098.16**	**704,903,446.57**	**(15,299,348.41)**
	Minority interest	**0.00**	**0.00**	**0.00**
	Accounts payable	5,029,265.90	4,451,363.20	577,902.70
	Accounts Payable - associated companies	0.00	0.00	0.00
	Notes payable	0.00	35,500,000.00	(35,500,000.00)
	Notes payable - associated companies	0.00	0.00	0.00
	Current portion of long term debt	0.00	0.00	0.00
	Customer deposits	18,038.11	110,154.90	(92,116.79)
	Accrued taxes	23,420,170.59	745,809.23	22,674,361.36
	Accrued interest	3,751,844.62	3,751,629.83	214.79
	Preferred dividends payable	0.00	0.00	0.00
	Other current liabilities	10,602,736.98	12,631,110.64	(2,028,373.66)
	Total current liabilities	**42,822,056.20**	**57,190,067.80**	**(14,368,011.60)**
	Deferred income taxes & credit	93,568,148.52	94,794,361.10	(1,226,212.58)
	Customer advances for construction	36,405,895.27	40,750,359.05	(4,344,463.78)
	Contribution in aid of construction	149,495,250.77	159,701,738.73	(10,206,487.96)
	Pension and benefits	65,091,575.04	62,723,410.34	2,368,164.70
	Regulatory liabilities	3,544,962.91	2,863,669.00	681,293.91
	Other long term liabilities	398,319.46	1,090,816.94	(692,497.48)
	Deferred income taxes & credit	**348,504,151.97**	**361,924,355.16**	**(13,420,203.19)**
	Total capitalization and liabilities	**1,080,930,306.33**	**1,124,017,869.53**	**(43,087,563.20)**

Div. 1-6: Please explain why Ms. Ahern chooses to use the consolidated capital structure of UWW rather than that of UWRI or United Water Resources, Inc. If Ms. Ahern is relying upon a Commission precedent, please identify. Also, please explain why March 31, 2013 was selected.

RESPONSE: UWRI is capitalized at 100% percent equity, which is not appropriate for ratemaking purposes. Use of a common equity ratio of 100% would result in an unreasonably high revenue cost of capital because there would be no income tax shield resulting from interest expense reduction. Ms. Ahern utilizes UWW's consolidated capital structure because UWW is the immediate parent of UWRI and provides all of its capital. The use of United Water Resources' (UWR) capital structure is inappropriate for ratemaking purposes as it does not provide any capital to UWRI.

During the time that the rate case was being prepared, the March 31, 2013 capital structure was the most recent quarterly data available. There were no financings planned that would have an impact on the capital structure. As can be seen on Attachment Div. 1-6, the capital structure percentages do not vary much between December 31, 2012, March 31, 2013 and June 30, 2013.

Prepared by: Pauline M. Ahern, CRRA / Prettyman

United Waterworks Inc
Consolidated Capital Structure
31-Dec-12

Item	Amount	Percentage	Cost
Long-term Debt	$ 324,495,000	46.60%	6.06%
Common Equity	371,907,626	53.40%	
Total	$ 696,402,626	100.00%	

Common Equity		
Common Stock	1,164	
Paid in Capital	174,411,374	
Retained Earnin	197,495,089	
Total		371,907,626

United Waterworks Inc
Consolidated Capital Structure
31-Mar-13

Item	Amount	Percentage	Cost
Long-term Debt	$ 324,470,000	46.55%	6.05%
Common Equity	372,537,970	53.45%	
Total	$ 697,007,970	100.00%	

Common Equity		
Common Stock	1,164	
Paid in Capital	174,411,374	
Retained Earning	198,125,433	
Total		372,537,970

United Waterworks Inc
Consolidated Capital Structure
30-Jun-13

Item	Amount	Percentage	Cost
Long-term Debt	$ 324,420,000	46.36%	6.05%
Common Equity	375,375,001	53.64%	
Total	$ 699,795,001	100.00%	

Common Equity		
Common Stock	1,164	
Paid in Capital	174,411,374	
Retained Earnings	200,962,463	
Total		375,375,001

Div. 1-7: Please explain all reasons for excluding from capital structure short-term debt.

Identify any Commission precedents relied upon for this exclusion.

RESPONSE: Short-term debt is mostly used to fund interim capital projects until long-term debt can be issued or equity infusions can be received. Additionally, short-term debt is used to fund working capital gaps and is secured at the parent level by United Waterworks Inc. ("UWW") for its twelve subsidiaries including UWRI. The use of short-term debt has been used intermittently by UWW over its history. This debt is generally paid off when the Parent received an influx of cash for example: through an asset sale or long-term debt issuance.

Prepared by: Pauline M. Ahern, CRRA

Div. 1-8: For UWW, please provide the balance of short-term debt and the interest rate each month January 2011 – August 2013.

RESPONSE:

Jan 2011	$26,500,000	1.100%	Jul 2012	$40,000,000	1.246%
Feb 2011	$28,000,000	1.100%	Aug 2012	$38,036,000	1.241%
Mar 2011	$28,000,000	1.100%	Sept 2012	$19,000,000	1.224%
Apr 2011	$30,000,000	1.093%	Oct 2012	$10,660,000	1.214%
May 2011	$33,000,000	1.008%	Nov 2012	$20,000,000	1.148%
Jun 2011	$36,000,000	1.066%	Dec 2012	$ 3,000,000	1.000%
Jul 2011	$35,000,000	1.156%	Jan 2013	$20,000,000	1.000%
Aug 2011	$30,000,000	1.155%	Feb 2013	$ 0	0%
Sep 2011	$62,500,000	1.167%	Mar 2013	$ 0	0%
Oct 2011	$66,000,000	1.245%	Apr 2013	$ 0	0%
Nov 2011	$60,000,000	1.252%	May2013	$ 0	0%
Dec 2011	$25,000,000	1.325%	Jun 2013	$ 0	0%
Jan 2012	$40,000,000	1.294%	Jul 2013	$ 0	0%
Feb 2012	$40,000,000	1.267%	Aug 2013	$ 0	0%
Mar 2012	$35,500,000	1.244%			
Apr 2012	$40,000,000	1.241%			
May 2012	$35,000,000	1.239%			
Jun 2012	$ 8,778,000	1.240%			

Prepared by: Prettyman

Div. 1-9: Please provide the documentation and calculations for the claimed embedded cost of long-term debt of 6.05 percent. Note (1) of Schedule PMA-1 states "Company-Provided." Please supply this "Company-Provided" information received by Ms. Ahern.

RESPONSE: Please see response to Div. 1-5.

Prepared by: Prettyman

Div. 1-10: Please include in this response a statement of long-term debt at March 31, 2013 which lists for UWW each long-term debt issue outstanding, the type of debt security, the balance outstanding, date of issue, date of maturity, interest rate, annual amortization of debt expense (including premium/discounts), and effective cost rate. This statement should show how the embedded cost rate of 6.05 percent was calculated.

RESPONSE: Please see response to Div. 1-5.

Prepared by: Prettyman

Div. 1-11: Please provide the same information as requested in item (10) for UWRI. In addition, identify UWRI's sources of long-term debt (e.g., bank borrowings, public debt issues, affiliate borrowing, etc.).

RESPONSE: UWRI has no sources of any kind of debt. All Capital (debt + equity) for all of United Water Works (UWW) subsidiaries is funded by UWW.

Prepared by: Prettyman

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4434
Response of United Water Rhode Island, Inc.
To The Division of Public Utilities And Carriers'
Data Requests
Set 1

Div. 1-12: Please indicate UWRI's current AFUDC rate and provide a workpaper showing how it was calculated.

RESPONSE: The current AFUDC rate for UW Rhode Island is 10.42%. Please see Schedule DIV 1-12 Attachment.

Prepared by: Prettyman

	Date Of Award	Capital Structure				Cost Rates				Weighted Costs			OVERALL ROE	Equity Tax Grossup	A F U D C		AFUDC Rate of Return	Memo	
		Long Term Debt	Short Term Debt	Minority Int/ Pref Stock	Equity	Debt Cost	Short term Debt Cost	Minority Int/ Pref Stock	Equity Cost	Wghtd Debt Cost	Wghtd Min Int	Wghtd Equity Cost			Debt Cost	Equity Cost		State Tax Rate	Fed. Tax Rate
UW Rhode Island	1/10/2012	45.83%	4.04%	0.00%	50.13%	6.07%	1.10%	0.00%	9.85%	2.82%	0.00%	4.94%	7.76%	2.66%	2.82%	7.60%	10.42%	0.00%	35.00%

Div. 1-13: Provide the relevant portions of the Value Line, Blue Chip, and Morningstar source documents cited as "Sources" on Schedule PMA-7, page 8 of 10, and Schedule PMA-9, page 8 of 9.

RESPONSE: Please see Attachment DIV-1-13. The relevant part from Blue Chip Financial Forecasts can be found at page 9 of 10 on Schedule PMA-7.

Prepared by: Pauline M. Ahern, CRRA

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2013 Valuation Yearbook

Market Results for
Stocks, Bonds, Bills, and Inflation
1926–2012

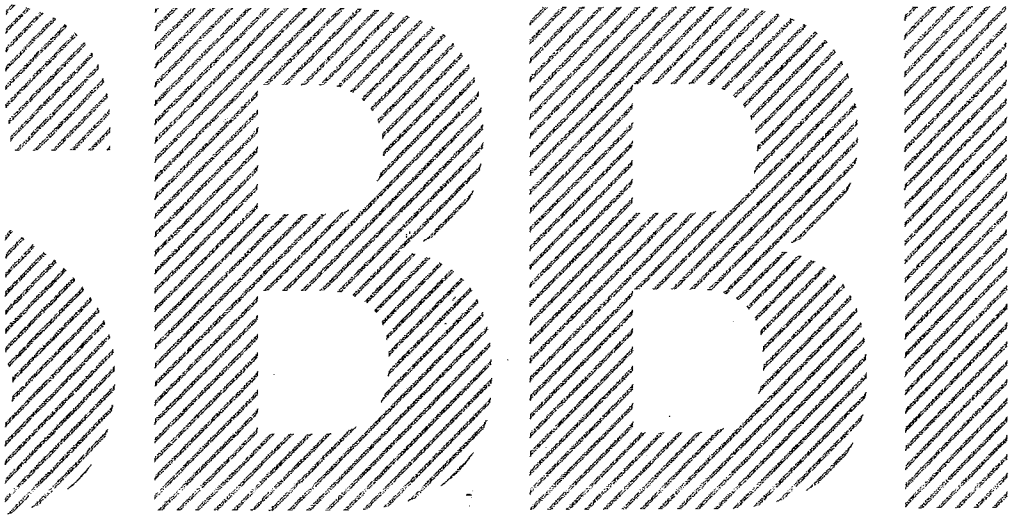

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Table 2-1: Total Returns, Income Returns, and Capital Appreciation of the Basic Asset Classes: Summary Statistics of Annual Returns

Series	Geometric Mean (%)	Arithmetic Mean (%)	Standard Deviation (%)	Serial Correlation
Large Company Stocks				
Total Returns	9.8	11.8	20.2	0.01
Income	4.1	4.1	1.6	0.91
Capital Appreciation	5.6	7.5	19.5	0.01
Ibbotson Small Company Stocks				
Total Returns	11.9	16.5	32.3	0.06
Mid-Cap Stocks*				
Total Returns	10.9	13.7	24.6	-0.04
Income	3.9	3.9	1.8	0.90
Capital Appreciation	6.9	9.6	23.9	-0.04
Low-Cap Stocks*				
Total Returns	11.4	15.2	29.0	0.02
Income	3.5	3.6	2.0	0.90
Capital Appreciation	7.7	11.5	28.3	0.01
Micro-Cap Stocks*				
Total Returns	12.0	18.0	38.7	0.07
Income	2.5	2.5	1.7	0.91
Capital Appreciation	9.5	15.4	38.1	0.06
Long-Term Corporate Bonds				
Total Returns	6.1	6.4	8.3	0.09
Long-Term Government Bonds				
Total Returns	5.7	6.1	9.7	-0.12
Income	5.1	5.1	2.6	0.96
Capital Appreciation	0.4	0.8	8.7	-0.22
Intermediate-Term Government Bonds				
Total Returns	5.4	5.5	5.6	0.12
Income	4.5	4.6	2.9	0.96
Capital Appreciation	0.6	0.7	4.5	-0.16
Treasury Bills				
Total Returns	3.5	3.6	3.1	0.91
Inflation	3.0	3.1	4.1	0.64

Data from 1926–2012. Total return is equal to the sum of three component returns: income return, capital appreciation return, and reinvestment return.

*Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2013 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Annual Total Returns

Annual and monthly total returns for large company stocks, small company stocks, long-term corporate bonds, long-term government bonds, intermediate-term government bonds, Treasury bills, and inflation rates are for the full 87-year time period presented in Appendix B. Those tables can be used to compare the performance of each asset class on both a monthly and an annual basis.

Real Rates versus Nominal Rates

The cost of capital embodies a number of different concepts or elements of risk. Two of the most basic concepts in finance are real and nominal returns. The nominal return includes both the real return and the impact of inflation.

The real rate of interest represents the exchange rate between current and future purchasing power. An increase in the real rate indicates that the cost of current consumption has risen in terms of future goods. It is the real rate of interest that measures the opportunity cost of foregoing consumption.

The relationship between real rates and nominal rates can be expressed in the following equation:

$$\text{Real} = \left[\frac{1+\text{Nominal}}{1+\text{Inflation}}\right] - 1$$

$$\text{Nominal} = \left[(1+\text{Real}) \times (1+\text{Inflation})\right] - 1$$

It is important to note that the conversion of nominal and real rates is not an additive process; rather, it is a geometric calculation. The arithmetic sum or difference is calculated by adding or subtracting one number from the other. As illustrated in the above equation, the real rate of return involves taking the geometric difference of the nominal rate of return and the rate of inflation. Conversely, the nominal rate of return can be determined by taking the geometric sum of the real rate of return and the rate of inflation. For example, if the real rate is 2.5 percent and the inflation rate is 5.0 percent, the nominal rate of interest is not 7.5 percent (2.5+5.0) but 7.625 percent, or $[(1.025)\times(1.05)-1]$. Similarly, if the nominal rate is 7.625 percent and the inflation rate is 2.5 percent, the real rate is not 5.125 percent (7.625−2.5) but 5.0 percent, $[(1.07625/1.025)-1]$.

Discount rates are most often expressed in nominal terms. That is, they usually have an inflation estimate included in them. Unless stated otherwise, the cost of capital data presented in this book are expressed in nominal terms.

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2013 Valuation Yearbook

Market Results for
Stocks, Bonds, Bills, and Inflation
1926–2012

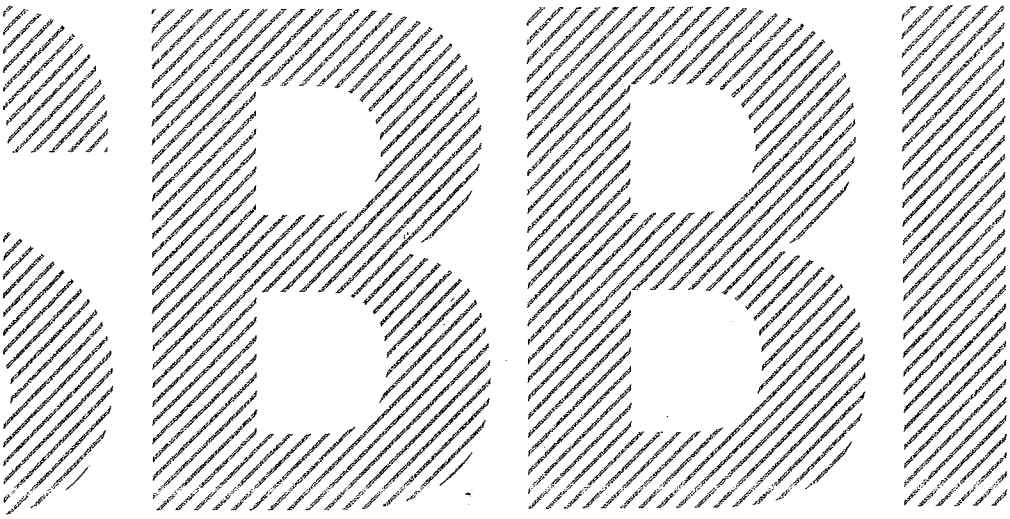

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Table B-1
Large Company Stocks: Total Returns

from January 1926 to December 1970

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1926	0.0000	-0.0385	-0.0575	0.0253	0.0179	0.0457	0.0479	0.0248	0.0252	-0.0284	0.0347	0.0196	1926	0.1162
1927	-0.0193	0.0537	0.0087	0.0201	0.0607	-0.0067	0.0670	0.0515	0.0450	-0.0502	0.0721	0.0279	1927	0.3749
1928	-0.0040	-0.0125	0.1101	0.0345	0.0197	-0.0385	0.0141	0.0803	0.0259	0.0168	0.1292	0.0049	1928	0.4361
1929	0.0583	-0.0019	-0.0012	0.0176	-0.0362	0.1140	0.0471	0.1028	-0.0476	-0.1973	-0.1246	0.0282	1929	-0.0842
1930	0.0639	0.0259	0.0812	-0.0080	-0.0096	-0.1625	0.0386	0.0141	-0.1282	-0.0855	-0.0089	-0.0706	1930	-0.2490
1931	0.0502	0.1193	-0.0675	-0.0935	-0.1279	0.1421	-0.0722	0.0182	-0.2973	0.0896	-0.0798	-0.1400	1931	-0.4334
1932	-0.0271	0.0570	-0.1158	-0.1997	-0.2196	-0.0022	0.3815	0.3869	-0.0346	-0.1349	-0.0417	0.0565	1932	-0.0819
1933	0.0087	-0.1772	0.0353	0.4256	0.1683	0.1338	-0.0862	0.1206	-0.1118	-0.0855	0.1127	0.0253	1933	0.5399
1934	0.1069	-0.0322	0.0000	-0.0251	-0.0736	0.0229	-0.1132	0.0611	-0.0033	-0.0286	0.0942	-0.0010	1934	-0.0144
1935	-0.0411	-0.0341	-0.0286	0.0980	0.0409	0.0699	0.0850	0.0280	0.0256	0.0777	0.0474	0.0394	1935	0.4767
1936	0.0670	0.0224	0.0268	-0.0751	0.0545	0.0333	0.0701	0.0151	0.0031	0.0775	0.0134	-0.0029	1936	0.3392
1937	0.0390	0.0191	-0.0077	-0.0809	-0.0024	-0.0504	0.1045	-0.0483	-0.1403	-0.0981	-0.0866	-0.0459	1937	-0.3503
1938	0.0152	0.0674	-0.2487	0.1447	-0.0330	0.2503	0.0744	-0.0226	0.0166	0.0776	-0.0273	0.0401	1938	0.3112
1939	-0.0674	0.0390	-0.1339	-0.0027	0.0733	-0.0612	0.1105	-0.0648	0.1673	-0.0123	-0.0398	0.0270	1939	-0.0041
1940	-0.0336	0.0133	0.0124	-0.0024	-0.2289	0.0809	0.0341	0.0350	0.0123	0.0422	-0.0316	0.0009	1940	-0.0978
1941	-0.0463	-0.0060	0.0071	-0.0612	0.0183	0.0578	0.0579	0.0010	-0.0068	-0.0657	-0.0284	-0.0407	1941	-0.1159
1942	0.0161	-0.0159	-0.0652	-0.0399	0.0796	0.0221	0.0337	0.0164	0.0290	0.0678	-0.0021	0.0549	1942	0.2034
1943	0.0737	0.0583	0.0545	0.0035	0.0552	0.0223	-0.0526	0.0171	0.0263	-0.0108	-0.0654	0.0617	1943	0.2590
1944	0.0171	0.0042	0.0195	-0.0100	0.0505	0.0543	-0.0193	0.0157	-0.0008	0.0023	0.0133	0.0374	1944	0.1975
1945	0.0158	0.0683	-0.0441	0.0902	0.0195	-0.0007	-0.0180	0.0641	0.0438	0.0322	0.0396	0.0116	1945	0.3644
1946	0.0714	-0.0641	0.0480	0.0393	0.0288	-0.0370	-0.0239	-0.0674	-0.0997	-0.0060	-0.0027	0.0457	1946	-0.0807
1947	0.0255	-0.0077	-0.0149	-0.0363	0.0014	0.0554	0.0381	-0.0203	-0.0111	0.0238	-0.0175	0.0233	1947	0.0571
1948	-0.0379	-0.0388	0.0793	0.0292	0.0879	0.0054	-0.0508	0.0158	-0.0276	0.0710	-0.0961	0.0346	1948	0.0550
1949	0.0039	-0.0296	0.0328	-0.0179	-0.0258	0.0014	0.0650	0.0219	0.0263	0.0340	0.0175	0.0486	1949	0.1879
1950	0.0197	0.0199	0.0070	0.0486	0.0509	-0.0548	0.0119	0.0443	0.0592	0.0093	0.0169	0.0513	1950	0.3171
1951	0.0637	0.0157	-0.0156	0.0509	-0.0299	-0.0228	0.0711	0.0478	0.0013	-0.0103	0.0096	0.0424	1951	0.2402
1952	0.0181	-0.0282	0.0503	-0.0402	0.0343	0.0490	0.0196	-0.0071	-0.0176	0.0020	0.0571	0.0382	1952	0.1837
1953	-0.0049	-0.0106	-0.0212	-0.0237	0.0077	-0.0134	0.0273	-0.0501	0.0034	0.0540	0.0204	0.0053	1953	-0.0099
1954	0.0536	0.0111	0.0325	0.0516	0.0418	0.0031	0.0589	-0.0275	0.0851	-0.0167	0.0909	0.0534	1954	0.5262
1955	0.0197	0.0098	-0.0030	0.0396	0.0055	0.0841	0.0621	-0.0025	0.0130	-0.0284	0.0827	0.0015	1955	0.3156
1956	-0.0347	0.0413	0.0710	-0.0004	-0.0593	0.0409	0.0530	-0.0328	-0.0440	0.0066	-0.0050	0.0370	1956	0.0656
1957	-0.0401	-0.0264	0.0215	0.0388	0.0437	0.0004	0.0131	-0.0505	-0.0602	-0.0302	0.0231	-0.0395	1957	-0.1078
1958	0.0445	-0.0141	0.0328	0.0337	0.0212	0.0279	0.0449	0.0176	0.0501	0.0270	0.0284	0.0535	1958	0.4336
1959	0.0053	0.0049	0.0020	0.0402	0.0240	-0.0022	0.0363	-0.0102	-0.0443	0.0128	0.0186	0.0292	1959	0.1196
1960	-0.0700	0.0147	-0.0123	-0.0161	0.0326	0.0211	-0.0234	0.0317	-0.0590	-0.0007	0.0465	0.0479	1960	0.0047
1961	0.0645	0.0319	0.0270	0.0051	0.0239	-0.0275	0.0342	0.0243	-0.0184	0.0298	0.0447	0.0046	1961	0.2689
1962	-0.0366	0.0209	-0.0046	-0.0607	-0.0811	-0.0803	0.0652	0.0208	-0.0465	0.0064	0.1086	0.0153	1962	-0.0873
1963	0.0506	-0.0239	0.0370	0.0500	0.0193	-0.0188	-0.0022	0.0535	-0.0097	0.0339	-0.0046	0.0262	1963	0.2280
1964	0.0283	0.0147	0.0165	0.0075	0.0162	0.0178	0.0195	-0.0118	0.0301	0.0096	0.0005	0.0056	1964	0.1648
1965	0.0345	0.0031	-0.0133	0.0356	-0.0030	-0.0473	0.0147	0.0272	0.0334	0.0289	-0.0031	0.0106	1965	0.1245
1966	0.0062	-0.0131	-0.0205	0.0220	-0.0492	-0.0146	-0.0120	-0.0725	-0.0053	0.0494	0.0095	0.0002	1966	-0.1006
1967	0.0798	0.0072	0.0409	0.0437	-0.0477	0.0190	0.0468	-0.0070	0.0342	-0.0276	0.0065	0.0278	1967	0.2398
1968	-0.0425	-0.0261	0.0110	0.0834	0.0161	0.0105	-0.0172	0.0164	0.0400	0.0087	0.0531	-0.0402	1968	0.1106
1969	-0.0068	-0.0426	0.0359	0.0229	0.0026	-0.0542	-0.0587	0.0454	-0.0236	0.0459	-0.0297	-0.0177	1969	-0.0850
1970	-0.0743	0.0557	0.0044	-0.0875	-0.0578	-0.0466	0.0769	0.0478	0.0362	-0.0083	0.0506	0.0598	1970	0.0386

*Compound annual return

Table B-1 (Continued)
Large Company Stocks: Total Returns

from January 1971 to December 2012

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1971	0.0432	0.0117	0.0394	0.0389	-0.0391	0.0033	-0.0387	0.0388	-0.0044	-0.0391	0.0002	0.0888	1971	0.1430
1972	0.0206	0.0277	0.0083	0.0068	0.0197	-0.0194	0.0048	0.0369	-0.0025	0.0119	0.0481	0.0142	1972	0.1899
1973	-0.0149	-0.0352	0.0008	-0.0383	-0.0163	-0.0040	0.0407	-0.0341	0.0442	0.0002	-0.1109	0.0198	1973	-0.1469
1974	-0.0072	-0.0007	-0.0205	-0.0359	-0.0302	-0.0114	-0.0742	-0.0864	-0.1152	0.1681	-0.0489	-0.0156	1974	-0.2647
1975	0.1272	0.0638	0.0254	0.0510	0.0476	0.0477	-0.0644	-0.0176	-0.0312	0.0653	0.0282	-0.0081	1975	0.3723
1976	0.1217	-0.0084	0.0337	-0.0078	-0.0111	0.0443	-0.0048	-0.0018	0.0258	-0.0186	-0.0041	0.0561	1976	0.2393
1977	-0.0473	-0.0182	-0.0105	0.0042	-0.0196	0.0494	-0.0124	-0.0172	0.0015	-0.0389	0.0316	0.0075	1977	-0.0716
1978	-0.0574	-0.0203	0.0294	0.0902	0.0092	-0.0138	0.0583	0.0301	-0.0032	-0.0872	0.0215	0.0196	1978	0.0657
1979	0.0443	-0.0321	0.0596	0.0094	-0.0247	0.0435	0.0134	0.0577	0.0043	-0.0640	0.0475	0.0214	1979	0.1861
1980	0.0622	-0.0001	-0.0972	0.0462	0.0515	0.0316	0.0696	0.0101	0.0294	0.0202	0.1065	-0.0302	1980	0.3250
1981	-0.0418	0.0174	0.0400	-0.0193	0.0026	-0.0063	0.0021	-0.0577	-0.0493	0.0540	0.0413	-0.0256	1981	-0.0492
1982	-0.0131	-0.0559	-0.0052	0.0452	-0.0341	-0.0150	-0.0178	0.1214	0.0125	0.1151	0.0404	0.0193	1982	0.2155
1983	0.0372	0.0229	0.0369	0.0788	-0.0087	0.0389	-0.0295	0.0150	0.0138	-0.0116	0.0211	-0.0052	1983	0.2256
1984	-0.0056	-0.0352	0.0173	0.0095	-0.0554	0.0217	-0.0124	0.1104	0.0002	0.0039	-0.0112	0.0263	1984	0.0627
1985	0.0779	0.0122	0.0007	-0.0009	0.0578	0.0157	-0.0015	-0.0085	-0.0313	0.0462	0.0686	0.0484	1985	0.3173
1986	0.0056	0.0747	0.0558	-0.0113	0.0532	0.0169	-0.0559	0.0742	-0.0827	0.0577	0.0243	-0.0255	1986	0.1867
1987	0.1347	0.0395	0.0289	-0.0089	0.0087	0.0505	0.0507	0.0373	-0.0219	-0.2154	-0.0824	0.0761	1987	0.0525
1988	0.0421	0.0466	-0.0309	0.0111	0.0086	0.0459	-0.0038	-0.0339	0.0426	0.0278	-0.0143	0.0174	1988	0.1661
1989	0.0732	-0.0249	0.0233	0.0519	0.0405	-0.0057	0.0903	0.0195	-0.0041	-0.0232	0.0204	0.0240	1989	0.3169
1990	-0.0671	0.0129	0.0265	-0.0249	0.0975	-0.0067	-0.0032	-0.0904	-0.0487	-0.0043	0.0646	0.0279	1990	-0.0310
1991	0.0436	0.0715	0.0242	0.0024	0.0431	-0.0458	0.0466	0.0237	-0.0167	0.0134	-0.0403	0.1144	1991	0.3047
1992	-0.0186	0.0130	-0.0194	0.0294	0.0049	-0.0149	0.0409	-0.0205	0.0118	0.0035	0.0341	0.0123	1992	0.0762
1993	0.0084	0.0136	0.0211	-0.0242	0.0268	0.0029	-0.0040	0.0379	-0.0077	0.0207	-0.0095	0.0121	1993	0.1008
1994	0.0340	-0.0271	-0.0436	0.0128	0.0164	-0.0245	0.0328	0.0410	-0.0245	0.0225	-0.0364	0.0148	1994	0.0132
1995	0.0259	0.0390	0.0295	0.0294	0.0400	0.0232	0.0332	0.0025	0.0422	-0.0036	0.0439	0.0193	1995	0.3758
1996	0.0340	0.0093	0.0096	0.0147	0.0258	0.0038	-0.0442	0.0211	0.0563	0.0276	0.0756	-0.0198	1996	0.2296
1997	0.0625	0.0078	-0.0411	0.0597	0.0609	0.0448	0.0796	-0.0560	0.0548	-0.0334	0.0463	0.0172	1997	0.3336
1998	0.0111	0.0721	0.0512	0.0101	-0.0172	0.0406	-0.0106	-0.1446	0.0641	0.0813	0.0606	0.0576	1998	0.2858
1999	0.0418	-0.0311	0.0400	0.0387	-0.0236	0.0555	-0.0312	-0.0049	-0.0274	0.0633	0.0203	0.0589	1999	0.2104
2000	-0.0502	-0.0189	0.0978	-0.0301	-0.0205	0.0247	-0.0156	0.0621	-0.0528	-0.0042	-0.0788	0.0049	2000	-0.0910
2001	0.0355	-0.0912	-0.0634	0.0777	0.0067	-0.0243	-0.0098	-0.0626	-0.0808	0.0191	0.0767	0.0088	2001	-0.1189
2002	-0.0146	-0.0193	0.0376	-0.0606	-0.0074	-0.0712	-0.0780	0.0066	-0.1087	0.0880	0.0589	-0.0587	2002	-0.2210
2003	-0.0262	-0.0150	0.0097	0.0824	0.0527	0.0128	0.0176	0.0195	-0.0106	0.0566	0.0088	0.0524	2003	0.2868
2004	0.0184	0.0139	-0.0151	-0.0157	0.0137	0.0194	-0.0331	0.0040	0.0108	0.0153	0.0405	0.0340	2004	0.1088
2005	-0.0244	0.0210	-0.0177	-0.0190	0.0318	0.0014	0.0372	-0.0091	0.0081	-0.0167	0.0378	0.0003	2005	0.0491
2006	0.0265	0.0027	0.0124	0.0134	-0.0288	0.0014	0.0062	0.0238	0.0258	0.0326	0.0190	0.0140	2006	0.1579
2007	0.0151	-0.0196	0.0112	0.0443	0.0349	-0.0166	-0.0310	0.0150	0.0374	0.0159	-0.0418	-0.0069	2007	0.0549
2008	-0.0600	-0.0325	-0.0043	0.0487	0.0130	-0.0843	-0.0084	0.0145	-0.0891	-0.1679	-0.0718	0.0106	2008	-0.3700
2009	-0.0843	-0.1065	0.0876	0.0957	0.0559	0.0020	0.0756	0.0361	0.0373	-0.0186	0.0600	0.0193	2009	0.2646
2010	-0.0360	0.0310	0.0603	0.0158	-0.0799	-0.0523	0.0701	-0.0451	0.0892	0.0380	0.0001	0.0668	2010	0.1506
2011	0.0237	0.0343	0.0004	0.0296	-0.0113	-0.0167	-0.0203	-0.0543	-0.0703	0.1093	-0.0022	0.0102	2011	0.0211
2012	0.0448	0.0432	0.0329	-0.0063	-0.0601	0.0412	0.0139	0.0225	0.0258	-0.0185	0.0058	0.0091	2012	0.1600

*Compound annual return

Table B-7
Long-Term Government Bonds: Income Returns

from January 1926 to December 1970

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1926	0.0031	0.0028	0.0032	0.0030	0.0028	0.0033	0.0031	0.0031	0.0030	0.0030	0.0031	0.0030	1926	0.0373
1927	0.0030	0.0027	0.0029	0.0027	0.0028	0.0027	0.0027	0.0029	0.0027	0.0028	0.0027	0.0027	1927	0.0341
1928	0.0027	0.0025	0.0027	0.0026	0.0027	0.0027	0.0027	0.0029	0.0027	0.0030	0.0027	0.0029	1928	0.0322
1929	0.0029	0.0027	0.0028	0.0034	0.0030	0.0029	0.0032	0.0030	0.0032	0.0031	0.0026	0.0031	1929	0.0347
1930	0.0029	0.0026	0.0029	0.0027	0.0027	0.0029	0.0028	0.0026	0.0029	0.0027	0.0026	0.0028	1930	0.0332
1931	0.0028	0.0026	0.0029	0.0027	0.0026	0.0028	0.0027	0.0027	0.0027	0.0029	0.0031	0.0032	1931	0.0333
1932	0.0032	0.0032	0.0031	0.0030	0.0028	0.0028	0.0028	0.0028	0.0026	0.0027	0.0026	0.0027	1932	0.0369
1933	0.0027	0.0023	0.0027	0.0025	0.0028	0.0025	0.0026	0.0026	0.0025	0.0026	0.0025	0.0028	1933	0.0312
1934	0.0029	0.0024	0.0027	0.0025	0.0025	0.0024	0.0024	0.0024	0.0023	0.0027	0.0025	0.0025	1934	0.0318
1935	0.0025	0.0021	0.0022	0.0023	0.0023	0.0022	0.0024	0.0023	0.0023	0.0023	0.0024	0.0024	1935	0.0281
1936	0.0024	0.0023	0.0024	0.0022	0.0022	0.0024	0.0023	0.0023	0.0021	0.0023	0.0022	0.0022	1936	0.0277
1937	0.0021	0.0020	0.0022	0.0023	0.0022	0.0025	0.0024	0.0023	0.0023	0.0023	0.0024	0.0023	1937	0.0266
1938	0.0023	0.0021	0.0023	0.0022	0.0022	0.0021	0.0021	0.0022	0.0021	0.0022	0.0021	0.0022	1938	0.0264
1939	0.0021	0.0019	0.0021	0.0019	0.0020	0.0018	0.0019	0.0018	0.0019	0.0023	0.0020	0.0019	1939	0.0240
1940	0.0020	0.0018	0.0019	0.0018	0.0019	0.0019	0.0020	0.0019	0.0018	0.0018	0.0018	0.0017	1940	0.0223
1941	0.0016	0.0016	0.0018	0.0017	0.0017	0.0016	0.0016	0.0016	0.0016	0.0016	0.0014	0.0016	1941	0.0194
1942	0.0021	0.0019	0.0021	0.0020	0.0019	0.0021	0.0021	0.0021	0.0020	0.0021	0.0020	0.0021	1942	0.0246
1943	0.0020	0.0019	0.0021	0.0020	0.0019	0.0021	0.0021	0.0021	0.0020	0.0020	0.0021	0.0021	1943	0.0244
1944	0.0021	0.0020	0.0021	0.0020	0.0022	0.0020	0.0021	0.0021	0.0020	0.0021	0.0020	0.0020	1944	0.0246
1945	0.0021	0.0018	0.0020	0.0019	0.0019	0.0019	0.0018	0.0019	0.0018	0.0019	0.0018	0.0018	1945	0.0234
1946	0.0017	0.0015	0.0016	0.0017	0.0018	0.0016	0.0019	0.0017	0.0018	0.0019	0.0018	0.0019	1946	0.0204
1947	0.0018	0.0016	0.0018	0.0017	0.0017	0.0019	0.0018	0.0017	0.0018	0.0018	0.0017	0.0021	1947	0.0213
1948	0.0020	0.0019	0.0022	0.0020	0.0018	0.0021	0.0019	0.0021	0.0020	0.0019	0.0021	0.0020	1948	0.0240
1949	0.0020	0.0018	0.0019	0.0018	0.0020	0.0019	0.0017	0.0019	0.0017	0.0018	0.0017	0.0017	1949	0.0225
1950	0.0018	0.0016	0.0018	0.0016	0.0019	0.0017	0.0018	0.0018	0.0017	0.0019	0.0018	0.0018	1950	0.0212
1951	0.0020	0.0017	0.0019	0.0020	0.0021	0.0020	0.0023	0.0021	0.0019	0.0023	0.0021	0.0022	1951	0.0238
1952	0.0023	0.0021	0.0023	0.0022	0.0020	0.0022	0.0022	0.0021	0.0023	0.0023	0.0021	0.0024	1952	0.0266
1953	0.0023	0.0021	0.0025	0.0024	0.0024	0.0027	0.0025	0.0025	0.0025	0.0023	0.0024	0.0024	1953	0.0284
1954	0.0023	0.0022	0.0025	0.0022	0.0020	0.0025	0.0022	0.0023	0.0022	0.0021	0.0023	0.0023	1954	0.0279
1955	0.0022	0.0022	0.0024	0.0022	0.0025	0.0023	0.0023	0.0027	0.0024	0.0025	0.0024	0.0024	1955	0.0275
1956	0.0025	0.0023	0.0023	0.0026	0.0026	0.0023	0.0026	0.0026	0.0025	0.0029	0.0027	0.0028	1956	0.0299
1957	0.0029	0.0025	0.0026	0.0029	0.0029	0.0025	0.0033	0.0030	0.0031	0.0031	0.0029	0.0029	1957	0.0344
1958	0.0027	0.0025	0.0027	0.0026	0.0024	0.0027	0.0027	0.0027	0.0032	0.0032	0.0028	0.0033	1958	0.0327
1959	0.0031	0.0031	0.0035	0.0033	0.0033	0.0036	0.0035	0.0035	0.0034	0.0035	0.0035	0.0036	1959	0.0401
1960	0.0035	0.0037	0.0036	0.0032	0.0037	0.0034	0.0032	0.0034	0.0032	0.0033	0.0032	0.0033	1960	0.0426
1961	0.0033	0.0030	0.0031	0.0031	0.0034	0.0032	0.0033	0.0033	0.0032	0.0034	0.0032	0.0031	1961	0.0383
1962	0.0037	0.0032	0.0033	0.0033	0.0032	0.0030	0.0034	0.0034	0.0030	0.0035	0.0031	0.0032	1962	0.0400
1963	0.0032	0.0029	0.0031	0.0034	0.0033	0.0030	0.0036	0.0033	0.0034	0.0034	0.0032	0.0036	1963	0.0389
1964	0.0035	0.0032	0.0037	0.0035	0.0032	0.0038	0.0035	0.0035	0.0034	0.0034	0.0035	0.0035	1964	0.0415
1965	0.0033	0.0032	0.0038	0.0033	0.0033	0.0038	0.0034	0.0037	0.0035	0.0034	0.0037	0.0037	1965	0.0419
1966	0.0038	0.0034	0.0040	0.0036	0.0041	0.0039	0.0038	0.0043	0.0041	0.0040	0.0038	0.0039	1966	0.0449
1967	0.0040	0.0034	0.0039	0.0035	0.0043	0.0039	0.0043	0.0042	0.0040	0.0045	0.0045	0.0044	1967	0.0459
1968	0.0050	0.0042	0.0043	0.0049	0.0046	0.0042	0.0048	0.0042	0.0044	0.0045	0.0043	0.0049	1968	0.0550
1969	0.0050	0.0046	0.0047	0.0055	0.0047	0.0055	0.0052	0.0048	0.0055	0.0057	0.0049	0.0060	1969	0.0595
1970	0.0056	0.0052	0.0056	0.0054	0.0055	0.0064	0.0059	0.0057	0.0056	0.0055	0.0058	0.0053	1970	0.0674

*Compound annual return

Table B-7 (Continued)
Long-Term Government Bonds: Income Returns

from January 1971 to December 2012

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1971	0.0051	0.0046	0.0056	0.0048	0.0047	0.0056	0.0052	0.0055	0.0049	0.0047	0.0051	0.0050	1971	0.0632
1972	0.0050	0.0047	0.0049	0.0048	0.0055	0.0049	0.0051	0.0049	0.0047	0.0052	0.0048	0.0045	1972	0.0587
1973	0.0054	0.0051	0.0056	0.0057	0.0058	0.0055	0.0061	0.0062	0.0055	0.0063	0.0056	0.0060	1973	0.0651
1974	0.0061	0.0055	0.0058	0.0068	0.0068	0.0061	0.0072	0.0065	0.0071	0.0070	0.0062	0.0067	1974	0.0727
1975	0.0068	0.0060	0.0066	0.0067	0.0067	0.0070	0.0068	0.0065	0.0073	0.0072	0.0061	0.0074	1975	0.0799
1976	0.0065	0.0060	0.0071	0.0064	0.0059	0.0073	0.0065	0.0069	0.0064	0.0061	0.0066	0.0063	1976	0.0789
1977	0.0059	0.0057	0.0065	0.0061	0.0067	0.0062	0.0059	0.0067	0.0061	0.0063	0.0063	0.0062	1977	0.0714
1978	0.0069	0.0060	0.0069	0.0063	0.0075	0.0069	0.0073	0.0070	0.0065	0.0073	0.0071	0.0068	1978	0.0790
1979	0.0079	0.0065	0.0074	0.0076	0.0077	0.0071	0.0076	0.0073	0.0068	0.0082	0.0083	0.0083	1979	0.0886
1980	0.0083	0.0084	0.0099	0.0100	0.0087	0.0086	0.0084	0.0081	0.0097	0.0097	0.0091	0.0108	1980	0.0997
1981	0.0094	0.0088	0.0111	0.0101	0.0104	0.0109	0.0109	0.0110	0.0114	0.0117	0.0113	0.0100	1981	0.1155
1982	0.0108	0.0103	0.0124	0.0112	0.0101	0.0120	0.0114	0.0112	0.0100	0.0091	0.0094	0.0093	1982	0.1350
1983	0.0087	0.0081	0.0089	0.0085	0.0091	0.0090	0.0088	0.0103	0.0096	0.0095	0.0094	0.0094	1983	0.1038
1984	0.0103	0.0092	0.0098	0.0104	0.0103	0.0106	0.0116	0.0106	0.0094	0.0108	0.0091	0.0098	1984	0.1174
1985	0.0096	0.0082	0.0094	0.0102	0.0097	0.0080	0.0094	0.0085	0.0088	0.0089	0.0081	0.0086	1985	0.1125
1986	0.0079	0.0073	0.0071	0.0063	0.0062	0.0070	0.0066	0.0063	0.0065	0.0069	0.0059	0.0070	1986	0.0898
1987	0.0064	0.0059	0.0066	0.0065	0.0066	0.0075	0.0073	0.0075	0.0075	0.0079	0.0075	0.0078	1987	0.0792
1988	0.0072	0.0071	0.0072	0.0070	0.0078	0.0076	0.0071	0.0083	0.0076	0.0076	0.0070	0.0075	1988	0.0897
1989	0.0080	0.0069	0.0079	0.0070	0.0080	0.0070	0.0068	0.0066	0.0065	0.0072	0.0064	0.0064	1989	0.0881
1990	0.0073	0.0066	0.0071	0.0075	0.0075	0.0068	0.0074	0.0071	0.0069	0.0081	0.0071	0.0072	1990	0.0819
1991	0.0071	0.0064	0.0064	0.0076	0.0068	0.0063	0.0076	0.0068	0.0068	0.0065	0.0060	0.0068	1991	0.0822
1992	0.0061	0.0059	0.0067	0.0065	0.0061	0.0067	0.0063	0.0060	0.0058	0.0057	0.0061	0.0063	1992	0.0726
1993	0.0059	0.0055	0.0063	0.0057	0.0052	0.0062	0.0054	0.0056	0.0050	0.0049	0.0053	0.0055	1993	0.0717
1994	0.0055	0.0049	0.0058	0.0057	0.0063	0.0061	0.0060	0.0066	0.0061	0.0066	0.0064	0.0066	1994	0.0659
1995	0.0070	0.0059	0.0064	0.0058	0.0065	0.0054	0.0056	0.0057	0.0052	0.0057	0.0051	0.0049	1995	0.0760
1996	0.0054	0.0048	0.0052	0.0059	0.0058	0.0054	0.0062	0.0057	0.0060	0.0058	0.0052	0.0056	1996	0.0618
1997	0.0056	0.0051	0.0059	0.0059	0.0058	0.0059	0.0058	0.0049	0.0058	0.0054	0.0047	0.0054	1997	0.0664
1998	0.0048	0.0044	0.0052	0.0049	0.0048	0.0052	0.0049	0.0048	0.0044	0.0042	0.0045	0.0045	1998	0.0583
1999	0.0042	0.0040	0.0053	0.0048	0.0045	0.0055	0.0051	0.0054	0.0052	0.0050	0.0056	0.0055	1999	0.0557
2000	0.0057	0.0051	0.0054	0.0047	0.0056	0.0052	0.0052	0.0050	0.0046	0.0053	0.0048	0.0045	2000	0.0650
2001	0.0049	0.0042	0.0045	0.0047	0.0050	0.0047	0.0052	0.0046	0.0041	0.0048	0.0041	0.0046	2001	0.0553
2002	0.0048	0.0043	0.0043	0.0054	0.0049	0.0044	0.0051	0.0044	0.0042	0.0040	0.0040	0.0045	2002	0.0559
2003	0.0041	0.0038	0.0040	0.0040	0.0039	0.0036	0.0038	0.0042	0.0046	0.0041	0.0039	0.0047	2003	0.0480
2004	0.0042	0.0038	0.0043	0.0039	0.0040	0.0048	0.0043	0.0045	0.0040	0.0038	0.0041	0.0043	2004	0.0502
2005	0.0041	0.0035	0.0041	0.0039	0.0040	0.0036	0.0034	0.0040	0.0035	0.0039	0.0039	0.0039	2005	0.0469
2006	0.0040	0.0036	0.0039	0.0039	0.0048	0.0044	0.0045	0.0043	0.0039	0.0042	0.0039	0.0036	2006	0.0468
2007	0.0043	0.0038	0.0039	0.0042	0.0041	0.0040	0.0046	0.0042	0.0037	0.0043	0.0039	0.0037	2007	0.0486
2008	0.0040	0.0034	0.0037	0.0035	0.0037	0.0040	0.0039	0.0036	0.0039	0.0037	0.0036	0.0033	2008	0.0445
2009	0.0024	0.0030	0.0035	0.0029	0.0033	0.0038	0.0036	0.0036	0.0034	0.0033	0.0035	0.0034	2009	0.0347
2010	0.0036	0.0033	0.0040	0.0038	0.0034	0.0037	0.0031	0.0032	0.0026	0.0027	0.0032	0.0032	2010	0.0425
2011	0.0035	0.0032	0.0036	0.0034	0.0036	0.0032	0.0032	0.0033	0.0025	0.0022	0.0023	0.0022	2011	0.0381
2012	0.0021	0.0019	0.0022	0.0025	0.0022	0.0017	0.0020	0.0017	0.0016	0.0020	0.0019	0.0018	2012	0.0240

*Compound annual return

Corporate Bond Yield Averages

	AV. CORP.	CORPORATE BY RATINGS Aaa	Aa	A	Baa	CORPORATE BY GROUPS P.U.	IND.	R.R.		PUBLIC UTILITY BONDS Aaa	Aa	A	Baa		INDUSTRIAL BONDS Aaa	Aa	A	Baa		RAILROAD BONDS Aaa	Aa	A	Baa
2008																							
Jan.	6.02	5.33	5.78	6.06	6.54	6.08	5.96	----	Jan.	----	5.87	6.02	6.35	Jan.	5.33	5.68	6.10	6.73	Jan.	----	----	----	----
Feb.	6.24	5.53	5.97	6.26	6.82	6.28	6.19	----	Feb.	----	6.04	6.21	6.60	Feb.	5.53	5.90	6.30	7.04	Feb.	----	----	----	----
Mar.	6.24	5.51	5.90	6.24	6.89	6.29	6.17	----	Mar.	----	5.99	6.21	6.68	Mar.	5.51	5.80	6.27	7.10	Mar.	----	----	----	----
Apr.	6.29	5.55	5.93	6.30	6.97	6.36	6.21	----	Apr.	----	5.99	6.29	6.81	Apr.	5.55	5.86	6.31	7.12	Apr.	----	----	----	----
May	6.30	5.57	6.00	6.30	6.92	6.38	6.22	----	May	----	6.07	6.27	6.79	May	5.57	5.93	6.33	7.05	May	----	----	----	----
June	6.42	5.68	6.11	6.43	7.07	6.50	6.35	----	June	----	6.19	6.38	6.93	June	5.68	6.02	6.48	7.22	June	----	----	----	----
July	6.44	5.67	6.05	6.47	7.16	6.50	6.38	----	July	----	6.13	6.40	6.97	July	5.67	5.97	6.54	7.35	July	----	----	----	----
Aug.	6.42	5.64	6.01	6.46	7.15	6.48	6.35	----	Aug.	----	6.09	6.37	6.98	Aug.	5.64	5.92	6.55	7.31	Aug.	----	----	----	----
Sept.	6.50	5.65	6.03	6.55	7.31	6.59	6.41	----	Sept.	----	6.13	6.49	7.15	Sept.	5.65	5.93	6.60	7.47	Sept.	----	----	----	----
Oct.	7.56	6.28	6.79	7.58	8.88	7.70	7.42	----	Oct.	----	6.95	7.56	8.58	Oct.	6.28	6.63	7.60	9.17	Oct.	----	----	----	----
Nov.	7.65	6.12	6.73	7.68	9.21	7.80	7.49	----	Nov.	----	6.83	7.60	8.98	Nov.	6.12	6.63	7.76	9.44	Nov.	----	----	----	----
Dec.	6.73	5.06	5.81	6.70	8.45	6.87	6.59	----	Dec.	----	5.93	6.54	8.13	Dec.	5.06	5.68	6.85	8.76	Dec.	----	----	----	----
2009																							
Jan.	6.59	5.05	5.84	6.46	8.14	6.77	6.41	----	Jan.	----	6.01	6.39	7.90	Jan.	5.05	5.67	6.52	8.39	Jan.	----	----	----	----
Feb.	6.64	5.27	6.02	6.47	8.08	6.72	6.56	----	Feb.	----	6.11	6.30	7.74	Feb.	5.27	5.93	6.62	8.42	Feb.	----	----	----	----
Mar.	6.84	5.50	6.11	6.66	8.42	6.85	6.83	----	Mar.	----	6.14	6.42	8.00	Mar.	5.50	6.07	6.90	8.84	Mar.	----	----	----	----
Apr.	6.85	5.39	6.17	6.70	8.39	6.90	6.79	----	Apr.	----	6.20	6.48	8.03	Apr.	5.39	6.14	6.90	8.74	Apr.	----	----	----	----
May	6.79	5.54	6.24	6.67	8.06	6.83	6.75	----	May	----	6.23	6.49	7.76	May	5.54	6.24	6.84	8.36	May	----	----	----	----
June	6.52	5.61	6.12	6.39	7.50	6.54	6.49	----	June	----	6.13	6.20	7.30	June	5.61	6.11	6.58	7.69	June	----	----	----	----
July	6.17	5.41	5.71	6.09	7.09	6.15	6.18	----	July	----	5.63	5.97	6.87	July	5.41	5.78	6.20	7.30	July	----	----	----	----
Aug.	5.83	5.26	5.45	5.78	6.58	5.80	5.86	----	Aug.	----	5.33	5.71	6.36	Aug.	5.26	5.56	5.84	6.79	Aug.	----	----	----	----
Sept.	5.61	5.13	5.21	5.56	6.31	5.60	5.62	----	Sept.	----	5.15	5.53	6.12	Sept.	5.13	5.27	5.58	6.50	Sept.	----	----	----	----
Oct.	5.63	5.15	5.24	5.57	6.29	5.64	5.61	----	Oct.	----	5.23	5.55	6.14	Oct.	5.15	5.25	5.59	6.44	Oct.	----	----	----	----
Nov.	5.68	5.19	5.29	5.64	6.32	5.71	5.64	----	Nov.	----	5.33	5.64	6.18	Nov.	5.19	5.26	5.64	6.46	Nov.	----	----	----	----
Dec.	5.78	5.26	5.44	5.77	6.37	5.86	5.71	----	Dec.	----	5.52	5.79	6.26	Dec.	5.26	5.36	5.74	6.47	Dec.	----	----	----	----
2010																							
Jan.	5.76	5.26	5.50	5.76	6.25	5.83	5.69	----	Jan.	----	5.55	5.77	6.16	Jan.	5.26	5.44	5.73	6.33	Jan.	----	----	----	----
Feb.	5.86	5.35	5.62	5.84	6.34	5.94	5.79	----	Feb.	----	5.69	5.87	6.25	Feb.	5.35	5.55	5.80	6.43	Feb.	----	----	----	----
Mar.	5.81	5.27	5.57	5.80	6.27	5.90	5.71	----	Mar.	----	5.64	5.84	6.22	Mar.	5.27	5.49	5.75	6.32	Mar.	----	----	----	----
Apr.	5.80	5.29	5.57	5.78	6.25	5.87	5.71	----	Apr.	----	5.62	5.81	6.19	Apr.	5.29	5.50	5.74	6.32	Apr.	----	----	----	----
May	5.52	4.96	5.25	5.49	6.05	5.59	5.44	----	May	----	5.29	5.50	5.97	May	4.96	5.19	5.47	6.13	May	----	----	----	----
June	5.52	4.88	5.16	5.44	6.23	5.62	5.42	----	June	----	5.22	5.46	6.18	June	4.88	5.11	5.42	6.28	June	----	----	----	----
July	5.32	4.72	4.96	5.25	6.01	5.41	5.23	----	July	----	4.99	5.26	5.98	July	4.72	4.92	5.23	6.04	July	----	----	----	----
Aug.	5.05	4.49	4.72	5.00	5.66	5.10	4.98	----	Aug.	----	4.75	5.01	5.55	Aug.	4.49	4.68	4.98	5.77	Aug.	----	----	----	----
Sept.	5.05	4.53	4.72	5.01	5.66	5.10	5.00	----	Sept.	----	4.74	5.01	5.53	Sept.	4.53	4.70	5.00	5.78	Sept.	----	----	----	----
Oct.	5.15	4.68	4.83	5.09	5.72	5.20	5.08	----	Oct.	----	4.89	5.10	5.62	Oct.	4.68	4.77	5.07	5.81	Oct.	----	----	----	----
Nov.	5.37	4.87	5.07	5.33	5.92	5.45	5.29	----	Nov.	----	5.12	5.37	5.85	Nov.	4.87	5.02	5.29	5.99	Nov.	----	----	----	----
Dec.	5.55	5.02	5.26	5.52	6.10	5.64	5.46	----	Dec.	----	5.32	5.56	6.04	Dec.	5.02	5.19	5.47	6.15	Dec.	----	----	----	----
2011																							
Jan.	5.56	5.04	5.26	5.53	6.09	5.64	5.46	----	Jan.	----	5.29	5.57	6.06	Jan.	5.04	5.22	5.48	6.11	Jan.	----	----	----	----
Feb.	5.66	5.22	5.37	5.64	6.15	5.73	5.58	----	Feb.	----	5.42	5.68	6.10	Feb.	5.22	5.31	5.59	6.19	Feb.	----	----	----	----
Mar.	5.55	5.13	5.28	5.52	6.03	5.62	5.48	----	Mar.	----	5.33	5.56	5.97	Mar.	5.13	5.22	5.48	6.09	Mar.	----	----	----	----
Apr.	5.56	5.16	5.29	5.52	6.02	5.62	5.49	----	Apr.	----	5.32	5.55	5.98	Apr.	5.16	5.25	5.48	6.06	Apr.	----	----	----	----
May	5.33	4.96	5.06	5.29	5.78	5.38	5.27	----	May	----	5.08	5.32	5.74	May	4.96	5.04	5.26	5.81	May	----	----	----	----
June	5.30	4.99	5.04	5.26	5.75	5.33	5.27	----	June	----	5.04	5.26	5.67	June	4.99	5.02	5.25	5.82	June	----	----	----	----
July	5.30	4.93	5.03	5.26	5.76	5.34	5.25	----	July	----	5.05	5.27	5.70	July	4.93	4.99	5.25	5.81	July	----	----	----	----
Aug.	4.79	4.37	4.47	4.74	5.36	4.78	4.79	----	Aug.	----	4.44	4.69	5.22	Aug.	4.37	4.50	4.79	5.49	Aug.	----	----	----	----
Sept.	4.60	4.09	4.23	4.54	5.27	4.61	4.58	----	Sept.	----	4.24	4.48	5.11	Sept.	4.09	4.21	4.59	5.42	Sept.	----	----	----	----
Oct.	4.60	3.98	4.16	4.54	5.37	4.66	4.54	----	Oct.	----	4.21	4.52	5.24	Oct.	3.98	4.11	4.56	5.50	Oct.	----	----	----	----
Nov.	4.39	3.87	3.97	4.34	5.14	4.37	4.41	----	Nov.	----	3.92	4.25	4.93	Nov.	3.87	4.01	4.43	5.34	Nov.	----	----	----	----
Dec.	4.47	3.93	4.03	4.40	5.25	4.47	4.47	----	Dec.	----	4.00	4.33	5.07	Dec.	3.93	4.06	4.46	5.43	Dec.	----	----	----	----
2012																							
Jan.	4.45	3.85	4.01	4.39	5.23	4.48	4.41	----	Jan.	----	4.03	4.34	5.06	Jan.	3.85	3.98	4.43	5.39	Jan.	----	----	----	----
Feb.	4.42	3.85	3.99	4.39	5.14	4.47	4.37	----	Feb.	----	4.02	4.36	5.02	Feb.	3.85	3.96	4.41	5.26	Feb.	----	----	----	----
Mar.	4.54	3.99	4.14	4.51	5.23	4.59	4.50	----	Mar.	----	4.16	4.48	5.13	Mar.	3.99	4.12	4.53	5.33	Mar.	----	----	----	----
Apr.	4.49	3.96	4.08	4.44	5.19	4.53	4.44	----	Apr.	----	4.10	4.40	5.11	Apr.	3.96	4.06	4.48	5.27	Apr.	----	----	----	----
May	4.33	3.80	3.91	4.26	5.07	4.36	4.30	----	May	----	3.92	4.20	4.97	May	3.80	3.90	4.32	5.17	May	----	----	----	----
June	4.22	3.64	3.78	4.14	5.02	4.26	4.18	----	June	----	3.79	4.08	4.91	June	3.64	3.77	4.18	5.13	June	----	----	----	----
July	4.03	3.40	3.54	3.93	4.87	4.12	3.93	----	July	----	3.58	3.93	4.85	July	3.40	3.49	3.93	4.89	July	----	----	----	----
Aug.	4.09	3.48	3.61	3.99	4.91	4.18	3.99	----	Aug.	----	3.65	4.00	4.88	Aug.	3.48	3.57	3.98	4.93	Aug.	----	----	----	----
Sept.	4.09	3.49	3.68	4.01	4.84	4.17	4.00	----	Sept.	----	3.69	4.02	4.81	Sept.	3.49	3.66	4.00	4.87	Sept.	----	----	----	----
Oct.	3.97	3.47	3.63	3.90	4.58	4.05	3.89	----	Oct.	----	3.68	3.91	4.54	Oct.	3.47	3.58	3.89	4.62	Oct.	----	----	----	----
Nov.	3.92	3.50	3.57	3.87	4.51	3.95	3.88	----	Nov.	----	3.60	3.84	4.42	Nov.	3.50	3.54	3.89	4.60	Nov.	----	----	----	----
Dec.	4.05	3.65	3.70	3.98	4.63	4.10	3.99	----	Dec.	----	3.75	4.00	4.56	Dec.	3.65	3.65	3.96	4.70	Dec.	----	----	----	----
2013																							
Jan.	4.19	3.80	3.87	4.14	4.73	4.24	4.14	----	Jan.	----	3.90	4.15	4.66	Jan.	3.80	3.84	4.13	4.81	Jan.	----	----	----	----
Feb.	4.27	3.90	3.95	4.19	4.85	4.29	4.25	----	Feb.	----	3.95	4.18	4.74	Feb.	3.90	3.95	4.20	4.95	Feb.	----	----	----	----
Mar.	4.19	3.80	3.87	4.14	4.73	4.24	4.14	----	Mar.	----	3.90	4.15	4.66	Mar.	3.80	3.84	4.13	4.81	Mar.	----	----	----	----

Notes: Moody's®Long-Term Corporate Bond Yield Averages have been published daily since 1929. They are derived from pricing data on a regularly-replenished population of nearly 75 seasoned corporate bonds in the US market, each with current outstandings over $100 million. The bonds have maturities as close as possible to 30 years; they are dropped from the list if their remaining life falls below 20 years, if their ratings change. Bonds with deep discounts or steep premiums to par are generally excluded. All yields are yield-to-maturity calculated on a semi-annual basis. Each observation is an unweighted average, with Average Corporate Yields representing the unweighted average of the corresponding Average Industrial and Average Public Utility observations. Because of the dearth of **Aaa** -rated railroad term bond issues, Moody's® **Aaa** railroad bond yield average was discontinued as of December 18, 1967. Moody's® **Aaa** public utility average suspended from Jan. 1984 thru Sept. 1984. Oct. 1984 figure for last 14 business days only. The Railroad Bond Averages were discontinued as of July 17, 1989 because of insufficient frequently tradable bonds. The July figures were based on 8 business days.
Because of the dearth of Aaa rated public utility bond issues, Moody's Aaa public utility bond yield average was discontinued as of December 10, 2001.

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May 3, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.9

26 Weeks Ago	Market Low	Market High
15.2	3-9-09 10.3	7-13-07 19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	3-9-09 4.0%	7-13-07 1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
65%	3-9-09 185%	7-13-07 35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXVIII, No. 37.
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April 26, 2013

TABLE OF SUMMARY & INDEX CONTENTS

Summary & Index Page Number

SCREENS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.8

26 Weeks Ago	Market Low	Market High
15.5	10.3 (3-9-09)	19.7 (7-13-07)

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	4.0% (3-9-09)	1.6% (7-13-07)

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
60%	185% (3-9-09)	35% (7-13-07)

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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April 19, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.7

26 Weeks Ago	Market Low	Market High
15.2	3-9-09 10.3	7-13-07 19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	3-9-09 4.0%	7-13-07 1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
60%	3-9-09 185%	7-13-07 35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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April 12, 2013

TABLE OF SUMMARY & INDEX CONTENTS

SCREENS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.8

26 Weeks Ago	Market Low	Market High
15.3	3-9-09 10.3	7-13-07 19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	3-9-09 4.0%	7-13-07 1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
60%	3-9-09 185%	7-13-07 35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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April 5, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.8

26 Weeks Ago	Market Low	Market High
15.3	10.3	19.7
	3-9-09	7-13-07

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	4.0%	1.6%
	3-9-09	7-13-07

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

45%

26 Weeks Ago	Market Low	Market High
60%	185%	35%
	3-9-09	7-13-07

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

*Reviewed in this week's issue.

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Part 1 Summary & Index

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March 29, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.7

26 Weeks Ago	Market Low	Market High
15.3	3-9-09 10.3	7-13-07 19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	3-9-09 4.0%	7-13-07 1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
60%	3-9-09 185%	7-13-07 35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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Part 1
Summary & Index

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March 22, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.8

26 Weeks Ago	Market Low	Market High
15.2	10.3 (3-9-09)	19.7 (7-13-07)

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	4.0% (3-9-09)	1.6% (7-13-07)

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
60%	185% (3-9-09)	35% (7-13-07)

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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Part 1 Summary & Index

File at the front of the *Ratings & Reports* binder. Last week's *Summary & Index* should be removed.

March 15, 2013

TABLE OF SUMMARY & INDEX CONTENTS

Summary & Index Page Number

SCREENS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.6

26 Weeks Ago	Market Low 3-9-09	Market High 7-13-07
14.9	10.3	19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low 3-9-09	Market High 7-13-07
2.3%	4.0%	1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low 3-9-09	Market High 7-13-07
65%	185%	35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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Part 1 Summary & Index

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March 8, 2013

TABLE OF SUMMARY & INDEX CONTENTS

Summary & Index Page Number

SCREENS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.1

26 Weeks Ago	Market Low 3-9-09	Market High 7-13-07
14.8	10.3	19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.3%

26 Weeks Ago	Market Low 3-9-09	Market High 7-13-07
2.3%	4.0%	1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

55%

26 Weeks Ago	Market Low 3-9-09	Market High 7-13-07
65%	185%	35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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March 1, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.5

26 Weeks Ago	Market Low	Market High
15.0	10.3 (3-9-09)	19.7 (7-13-07)

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	4.0% (3-9-09)	1.6% (7-13-07)

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
65%	185% (3-9-09)	35% (7-13-07)

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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February 22, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

16.2

26 Weeks Ago	Market Low	Market High
14.6	10.3 (3-9-09)	19.7 (7-13-07)

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	4.0% (3-9-09)	1.6% (7-13-07)

The Estimated Median Price **APPRECIATION POTENTIAL** of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

50%

26 Weeks Ago	Market Low	Market High
70%	185% (3-9-09)	35% (7-13-07)

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

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February 15, 2013

TABLE OF SUMMARY & INDEX CONTENTS

SCREENS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

16.7

26 Weeks Ago	Market Low	Market High
15.1	10.3	19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.3%	4.0%	1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

45%

26 Weeks Ago	Market Low	Market High
70%	185%	35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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February 8, 2013

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

16.6

26 Weeks Ago	Market Low	Market High
14.8	10.3 (3-9-09)	19.7 (7-13-07)

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks under review

2.2%

26 Weeks Ago	Market Low	Market High
2.4%	4.0% (3-9-09)	1.6% (7-13-07)

The Estimated Median Price **APPRECIATION POTENTIAL** of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

45%

26 Weeks Ago	Market Low	Market High
75%	185% (3-9-09)	35% (7-13-07)

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4434
Response of United Water Rhode Island, Inc.
To The Division of Public Utilities And Carriers'
Data Requests
Set 1

Div. 1-14: Please provide all credit rating reports issued since January 1, 2012 for UWRI, United Water Resources, Inc., and UWW.

RESPONSE: Please refer to the attached Rating Agency Reports for UWW. There are no Rating Agency reports for either United Water Resources or UWRI.

Prepared by: Prettyman

STANDARD &POOR'S

Standard & Poor's Research

January 30, 2012

Summary:

United Waterworks Inc.

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Table Of Contents

Summary:
United Waterworks Inc.

Credit Rating: A-/Stable/--

Rationale

The ratings on Wilmington, Del.-based water supplier United Waterworks Inc. (UWW) and Harrington Park, N.J.-based water supplier United Water New Jersey Inc. (UWNJ) reflect the consolidated credit profile of Harrington Park, N.J.-based parent United Water Resources (UWR; not rated). UWNJ and UWW account for around 90% of UWR's consolidated revenues and 85% of consolidated funds from operations (FFO). Suez Environnement (not rated) indirectly owns UWR through United Water Inc. (not rated).

UWNJ's and UWW's stand-alone business risk profiles are excellent, reflecting a favorable regulatory environment, no retail competition in their service territories, geographic diversity, largely residential markets, and low operating risk. Reliance on Suez Environnement for periodic capital infusions to fund capital-spending requirements for infrastructure replacement and increasing compliance costs with water-quality standards somewhat temper the company's strengths. Even though UWR gets only about 6% of its cash flows from nonregulated operations, we view these nonregulated operations, which consist of managing and maintaining municipal water and wastewater facilities, as having modest incremental risk, due to their low profit-margin volatility and modest expected capital requirements.

State commissions oversee UWR's regulated operations, and supporting revenue and cash flow stability. UWR serves more than two million people across eight states, which mitigates some of the effects of adverse weather patterns and the regulatory climate of any particular state. Many of the company's operations benefit from cost-recovery mechanisms to recover capital spending outside of traditional rate proceedings, rate cases based on a future test year, and a consolidated rate structure. Adding to revenue and cash flow stability, the company's residential and commercial customers provide a vast majority of total revenues.

UWNJ's and UWW's financial risk profile is significant. Financial measures are weak for the significant categorization, but the low cash flow volatility inherent to the water utility operations allow for more aggressive measures. We expect modest customer growth, and regulatory rate case proceedings to benefit cash flow over time. In 2011, various regulated subsidiaries of UWR received rate case increases of more than $90 million. We expect this figure to be higher in 2012. As of Sept. 30, 2011, the company showed continued improvement in its financial metrics, with FFO to debt of 13.5% and debt to capital of about 59%. We expect financial metrics to remain appropriate for the rating, with consolidated debt to capital of about 60% and FFO to debt of about 11% to 13% over the next three years.

Liquidity

Standard & Poor's bases its view of UWNJ's and UWW's liquidity on the consolidated liquidity of UWR. We view liquidity as adequate, under our corporate liquidity methodology. We expect liquidity sources will exceed projected uses by more than 1.2x during the next 12 months.

The primary sources of liquidity include internally generated cash flow, which we expect to be between $120 million

and $140 million and a $250 million revolving credit facility from Suez Environnement. Suez is an indirect parent of UWR and, given its prior history of capital infusion to UWR, its revenue of about €14 billion, more than €2 billion of EBITDA, and available credit facility of more than €1.8 billion as of Dec. 31, 2010, we believe it will have sufficient funding for the UWR revolver.

In 2012 we expect UWR's annual capital expenditures to increase to between $150 million and $200 million although mandatory and compliance-related expenses will be lower. Distribution of about $25 million and insignificant debt maturities also constitute uses of liquidity. UWR has historically funded its discretionary spending with capital infusions from its parent company, Suez Environnement. Under most scenarios, we would expect this dynamic to continue.

Outlook

The stable outlook reflects our expectation of adequate and timely rate relief and maintenance of the current financial profile. We could lower the ratings if the regulatory environment deteriorates or rate case decisions are significantly lower than those the company has requested, such that the company sustains FFO to debt below 10%. Large debt-financed acquisitions or any discontinuation of Suez Environnement's capital contributions could also lead to lower ratings. Although a positive outlook is unlikely in the near term, it could occur if financial leverage measures materially improve, with FFO to debt increasing to between 18% and 20% and the companies' debt to capital declining to the low-50% area for a sustained period of time.

Related Criteria And Research

Criteria: Key Credit Factors: Business And Financial Risks In the Investor-Owned Utilities Industry, Nov. 26, 2008

STANDARD &POOR'S

Standard & Poor's Research

Summary:

United Waterworks Inc.

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Table Of Contents

Summary:
United Waterworks Inc.

Credit Rating: A-/Stable/--

Rationale

Standard & Poor's Ratings Services' ratings on United Waterworks Inc. (UWW) reflects the consolidated credit profile of parent United Water Resources Inc. (UWR; not rated). The ratings also reflect UWW's "excellent" business risk profile and "significant" financial risk profile under our criteria.

UWW is 100% owned by Suez Environnement Co. (not rated). GDF Suez S.A. (A/Stable/A-1) owns about 35% of Suez Environnement and consolidates it on its balance sheet because it has a controlling interest. On this basis, our rating on UWW is the lower of its stand-alone credit quality or our rating on GDF Suez.

UWR's other major regulated subsidiary is United Water New Jersey Inc. (UWNJ; A-Stable/--) and its nonregulated operations primarily consist of managing and maintaining municipal water and wastewater facilities. For 2011, UWNJ and UWW accounted for around 97% of UWR's consolidated EBITDA and 95% of consolidated funds from operations (FFO). We expect this trend to continue.

UWW's excellent business risk profile reflects the monopolistic and essential service it provides, favorable regulatory environments, geographic diversity, largely residential markets, and low operating risk. In addition, we view UWR's nonregulated operations, which contribute approximately 5%-10% of consolidated FFO, as having only modest incremental risk, due to their low cash flow volatility and modest expected capital requirements.

UWR serves more than 2.5 million people across eight states (New Jersey being the biggest service territory), which mitigates some of the effects of adverse weather patterns and the regulatory climate of any particular state. The state commissions, which oversee UWR's regulated operations, generally support revenue and cash flow stability. Many of the company's operations benefit from several cost-recovery mechanisms to recover expenses outside of traditional rate proceedings, rate cases based on a future test year, and a consolidated rate structure. New Jersey recently approved a Distribution System Improvement Charge (DSIC), which will begin to benefit the company in 2013. We view the regulators' policies in certain states as supportive, particularly in New Jersey, New York, Delaware, and Pennsylvania, due to their infrastructure surcharge mechanisms.

In 2011, UWR put into effect a total of 13 rate awards (new rate decisions, surcharges, and prior approved phased-in increases) providing for a total revenue increase of $31.6 million. This includes a $19 million rate increase that UWNJ received in December 2011, based on a return on equity (ROE) of 10.3%, which is consistent with the average ROEs received by regulated utilities across the U.S. We expect that these regulated subsidiaries will continue to implement rate awards on a consistent basis for the recovery of their investments and expenses.

UWW's significant financial risk profile reflects UWR's consolidated financial risk profile. Consolidated financial

measures are at the lower end of the significant categorization. As of Dec. 31, 2011, FFO to debt rose to 14.7% compared with 13.0% at year-end 2010, debt to total capital improved to 54.9% compared with 55.7% at year-end 2010, and debt to EBITDA slightly weakened to 4.9x compared with 4.8x at year-end 2010. Under our baseline forecasts, we expect that FFO to debt and debt to EBITDA will approximate 14.0% and 4.5x, respectively, over the medium term, based on modest customer growth and continued rate increases.

We expect UWR's discretionary cash flow to be negative over the intermediate term, reflecting increased annual capital spending of about $625 million over the next three years (2012-2014) compared with spending of about $425 million over the past three years (2009-2011). Fundamentally, we expect that UWR will continue to fund its investments in a manner that preserves credit quality.

Liquidity

We view UWW's liquidity on a consolidated basis with that of UWR. UWR has adequate liquidity and can more than cover its needs for the near term, even if FFO declines.

Our liquidity assessment is based on the following factors and assumptions:

- We expect the company's liquidity sources to exceed its uses by more than 1.4x over the next 12 months.
- Long-term debt maturities are manageable with less than $1.0 million each maturing in 2012, 2013, and 2014.
- Even if EBITDA declines by 15%, we believe net sources will be well in excess of liquidity requirements.
- The company can absorb high-impact, low-probability events with limited need for refinancing, has the flexibility to lower capital spending, has sound bank relationships and solid standing in the credit markets, and has generally prudent risk management.

In our analysis, based on information available as of Dec. 31, 2011, we assumed sources of about $270 million over the next 12 months, consisting of cash, cash from operations, and availability under its committed credit facility. We estimate the company could use up to $190 million during the same period for capital spending and debt maturities.

Outlook

The stable outlook reflects Standard & Poor's baseline forecast that consolidated FFO to debt will generally be greater than 14% and consolidated debt to EBITDA will approximate 4.5x. Our base-case forecast assumes continued adequate and timely rate relief to support the company's financial measures. We could lower the ratings if the regulatory environment deteriorates or the company's financial measures weaken such that FFO to debt is below 14%, debt to EBITDA is above 5.0x, and debt to total capital is above 55% on a consistent basis. Large debt-financed acquisitions, or a material shift in the company's business mix toward nonregulated businesses could also lead to a downgrade. Although we consider a ratings upgrade to be less likely in the near term, we could raise the ratings if financial measures improve, with FFO to debt consistently increasing to above 17% and debt to capital decreasing to below 47%.

Related Criteria And Research

- Liquidity Descriptors For Global Corporate Issuers, Sept. 28, 2011
- Business Risk/Financial Risk Matrix Expanded, May 27, 2009
- Analytical Methodology, April 15, 2008
- Ratios And Adjustments, April 15, 2008
- Assessing U.S. Utility Regulatory Environments, Nov. 7, 2007

MOODY'S
INVESTORS SERVICE

Credit Opinion: United Waterworks, Inc.

Global Credit Research - 06 Sep 2012

Harrington Park, New Jersey, United States

Ratings

Category	Moody's Rating
Outlook	Stable
Senior Unsecured	Baa1
Ult Parent: Suez Environnement Company	
Outlook	Stable
Issuer Rating -Dom Curr	A3
Senior Unsecured	A3
Pref. Stock -Dom Curr	Baa2
Other Short Term -Dom Curr	(P)P-2

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Opinion

Rating Drivers

- Solid credit metrics for the rating

- Geographically diversified in the United States

- Adequate liquidity

- Ownership by large, global environmental services company

Corporate Profile

United Waterworks, Inc. (UW) is an intermediate holding company of twelve regulated water supply operating companies providing water services to approximately 809,000 people located within eight states, primarily in the northeastern U.S. UW, which reported revenue of $214 million through the twelve months ended June 30, 2012, is among the smallest of the U.S. based investor-owned regulated water utilities rated by Moody's.

UW is the second largest wholly owned subsidiary of United Water Resources Inc. (UWR; unrated). Including operations at UW, UWR provides water and wastewater services to approximately 2.5 million people in the United States. UWR is ultimately owned by the larger, Paris based, environmental services company, Suez Environnement Company (SE: A3 senior unsecured; stable outlook). UW is ultimately held as part of SE's international division, a segment that accounted for 29% of SE's total revenues in 2011.

SUMMARY RATING RATIONALE

UW's Baa1 senior unsecured rating reflects our expectation for relatively stable and predictable earnings and cash flow generation from the company's diversified group of water utilities, the constructive regulatory relationships that exist with several of those utilities and the implied support of its larger, diversified parent, SE. UW's credit metrics

are appropriate for the current rating and while we expect this to continue there can be some variability year-to-year based on weather conditions. Because UW has a substantial capital program the rating also incorporates an expectation that the company will continue to actively file rate cases to include those investments in rate base as quickly as possible. Since capital expenditures are expected to be in excess of operating cash flow, periodic external capital infusions will be necessary as evidenced by the $15 million capital contribution received UWR in 2011. In addition, we currently view UW's short-term liquidity profile as adequate.

DETAILED RATING CONSIDERATIONS

SOLID CREDIT METRICS FOR RATING

UW has exhibited solid credit metrics historically that are appropriate for the rating. At June 30, 2012 the trailing twelve month three year average of FFO Interest coverage was a 4.0x which was at the lower end of the A rating category. We generally view water utilities' lower business risk profile relative to other utility companies as supportive of their slightly weaker credit metrics than their equally rated electric and gas counterparts. Reasons for this range from the regulated nature of the water utility business to the importance of their operations in the communities they serve and the lack of fuel or raw material cost volatility. As such, we believe UW's future credit metrics will be reasonably well placed in the high Baa / low A category going forward assuming the current level of regulatory support remains unchanged. It is also important to note that as a holding company UW's rating would typically reflect some structural subordination from its operating subsidiaries; however, a strong mitigant in this case is that the operating companies are debt free as all financing is centralized at UW.

GEOGRAPHICALLY DIVERSIFIED IN THE UNITED STATES

Like most water utilities, changes in weather patterns can have short-term effects on UW's operating results due to changes in water demand. However, with operations in eight different states, UW has some geographic diversification, albeit limited as the utility operations are centered primarily in the eastern U.S. (the top three service areas include operations in Pennsylvania, Idaho, and New Rochelle, NY). In addition, we recognize there is regulatory diversity as well and that UW's customer base, which is primarily residential, provides some added revenue stability.

ADEQUATE LIQUIDITY FOR CAPITAL INTENSIVE INDUSTRY

The regulated water utility business in the U.S. is capital intensive. It is common for capex to be a multiple of depreciation given the typical long useful lives of water assets. Over the past three years, UW's capex averaged 2.3 times depreciation; however, capital spending has decreased slightly over the past few years coming down from a high of $81 million in 2006 to $52 million for the trailing twelve months at June 30, 2012. UW is completely reliant on the debt capital markets or its parent companies to support cash flow short-falls arising from its capital spending. UWR maintains a committed loan facility from SE which is earmarked for UW and United Water New Jersey (UWNJ, unrated) and is described further in the Liquidity Section. While UW was cash flow positive for the trailing twelve months, UW required a $15 million capital contribution in 2011 from UWR to fund its capital spending program. We expect UW to continue to issue incremental debt or seek capital contributions as UW adds to its rate base.

OWNERSHIP BY LARGE, GLOBAL ENVIRONMENTAL SERVICES COMPANY

With approximately $214 million of revenues reported for the LTM period ended June 30, 2012, UW is relatively small, which increases the risk of a material impact from any unexpected financial shock. However, this is somewhat mitigated by UW's position within the larger UWR family. Firstly, we view the strong banking relationships and capital market access that runs through the family organization as beneficial to UW's credit profile. Secondly, despite the lack of any downstream guarantees or other form of explicit credit support, we observe the equity portion of UW's capital program has been supported by UWR. Over the 2009 to 2011 timeframe, UWR has contributed in aggregate $60 million of additional capital into UW, which exceeds the roughly $44 million in dividends paid by UW to UWR over this time frame.

Liquidity

Moody's views UW's liquidity as adequate. UW's liquidity is provided by a combination of cash on hand, operating cash flows, contributions from its parent, short-term uncommitted credit lines and a committed line at UWR. The company maintains several uncommitted credit lines (none of these lines extend beyond 2013) totaling $79 million. At June 30, 2012, approximately $9 million was drawn under these facilities. UWR maintains a $250 million 365 day revolving loan facility with its ultimate parent, SE. This facility can be allocated for the benefit of UW and UWNJ

with sublimits of $75 million and $175 million, respectively. The facility contains an evergreen clause that annually renews the facility unless either UWR or SE choose to terminate the agreement. There were no draws under this facility at June 30, 2012.

The company has no significant debt maturities until 2017, and the continued ownership by SE provides a potential additional source of capital, if needed.

Rating Outlook

The stable rating outlook reflects our expectation that UW will continue to maintain credit metrics associated with the high Baa/low A rating category and that SE will continue to support its US operations.

What Could Change the Rating - Up

An upgrade in the near-term is unlikely; however, UW could be considered for an upgrade if among other factors it could demonstrate its ability to generate FFO to net debt on a sustainable basis in the high teens.

What Could Change the Rating - Down

A downgrade to UW's rating or a change in outlook to negative could develop if FFO to adjusted debt were to fall to or below 12%, or if further pressure on the rating of SE develops over time.

Other Considerations

We view UW's rating within the context of our Rating Methodology for "Global Regulated Water Utilities" published in December 2009. The table below details parameters around certain qualitative considerations and key credit metrics outlined in the methodology.

Rating Factors

United Waterworks, Inc.

Global Regulated Water Utilities [1][2]	Current LTM 6/30/2012		Moody's 12-18 month Forward View As of September 2012	
Factor 1: Regulatory Framework & Asset Ownership (40%)	**Measure**	**Score**	**Measure**	**Score**
a) Stability & Predictability of Regulatory Environment		Baa		Baa
b) Asset Ownership		A		A
c) Cost and Investment Recovery (Ability & Timeliness)		A		A
d) Revenue Risk		A		A
Factor 2: Operational Characteristics & Asset Risk (10%)				
a) Operational Efficiency		Baa		Baa
b) Scale of Capital Program and Asset Condition		A		A
Factor 3: Stability of Business Model and Financial Structure (10%)				
a) Ability & Willingness to Pursue Opportunistic Corp. Activity		Baa		Baa
b) Ability & Willingness to Increase Leverage		Baa		Baa
c) Proportion of Revenues Outside Core Water and Wastewater		A		A
Factor 4: Key Financial Metrics (40%)				
a) FFO Interest Coverage (3 Year Average)	4.0x	Baa	2.5x - 4.5x	Baa
b) Debt / Capitalization (3 Year Average)	45%	A	40% - 55%	A
c) FFO / Net Debt (3 Year Average)	17%	A	15% - 25%	A
d) RCF / Capex (3 Year Average)	0.90x	Ba	0.5x - 1.0x	Ba

Rating:				
Indicated Rating from Grid		Baa1		Baa1
Actual Rating Assigned		Baa1		Baa1

* THIS REPRESENTS MOODY'S FORWARD VIEW; NOT THE VIEW OF THE ISSUER; AND UNLESS NOTED IN THE TEXT DOES NOT INCORPORATE SIGNIFICANT ACQUISITIONS OR DIVESTITURES

[1] All ratios are calculated using Moody's Standard Adjustments. [2] As of 6/30/2012; Source: Moody's Financial Metrics

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Table Of Contents

Summary:

United Waterworks Inc.

Credit Rating: A-/Stable/--

Rationale

Standard & Poor's Ratings Services' ratings on United Waterworks Inc. (UWW) reflect the consolidated credit profile of unrated parent United Water Resources Inc. (UWR). The ratings also reflect UWW's "excellent" business risk profile and "significant" financial risk profile under our criteria.

UWW is 100% owned by UWR, which in turn is owned by Suez Environnement Co. (not rated). GDF Suez S.A. (A/Stable/A-1) owns about 35% of Suez Environnement and consolidates it on its balance sheet because it has a controlling interest. On this basis, our rating on UWW is the lower of its stand-alone credit quality or our rating on GDF Suez.

UWR's other major regulated subsidiary is United Water New Jersey Inc. (UWNJ; A-Stable/--) and its nonregulated operations primarily consist of managing and maintaining municipal water and wastewater facilities. For 2011, UWNJ and UWW accounted for about 97% of UWR's consolidated EBITDA and 95% of consolidated funds from operations (FFO). We expect this trend to continue.

UWW's excellent business risk profile is based on UWR's consolidated business risk profile, which is excellent, reflecting the monopolistic and essential service it provides, favorable regulatory environments, geographic diversity, largely residential markets, and low operating risk. UWR's nonregulated operations consist of contracted operations and maintenance services for water and wastewater operations, forming about 5%-10% of consolidated FFO. We view these operations as having only modest incremental risk, due to their low cash flow volatility and modest expected capital requirements.

UWNJ serves customers in portions of New Jersey and New York. UWW serves customers in portions of Arkansas, Pennsylvania, Delaware, Idaho, and Rhode Island. In all, UWR serves more than 2.5 million people across seven states, which mitigates some of the effects of adverse weather patterns and the regulatory climate of any particular state. The state commissions, which oversee UWR's regulated operations, generally support revenue and cash flow stability. Many of the company's operations benefit from several cost-recovery mechanisms to recover expenses outside of traditional rate proceedings, including rate case filings on a future test year, and a consolidated rate structure. New Jersey recently approved a distribution system improvement charge, which will begin to benefit the company in 2013. We view the regulators' policies in certain states as supportive, particularly in New Jersey, New York, Delaware, and Pennsylvania, partially due to their infrastructure surcharge mechanisms.

In 2011, UWR put into effect a total of 13 rate awards (new rate decisions, surcharges, and previously approved phased-in increases) providing for a total revenue increase of about $32 million. This includes a $19 million rate

increase that UWNJ received in December 2011, based on a return on equity (ROE) of 10.3%, which is consistent with the average ROEs received by regulated utilities across the U.S. We expect that these regulated subsidiaries will continue to implement rate awards on a consistent basis for the recovery of their investments and expenses.

In September 2012, UWR completed the sale of its regulated operations in Connecticut and is currently awaiting regulatory approval to complete the divestiture of its regulated operations in Arkansas. These divestitures will not materially affect the company's consolidated operations because they consist of only 3% of the total revenues. Strategically, the divestitures highlight the company's proactive decision to exit from service territories that have a relatively challenging regulatory environment.

UWW's significant financial risk profile reflects UWR's consolidated financial risk profile. Consolidated financial measures are at the lower end of the significant categorization. For the trailing 12 months ended Sept. 30, 2012, FFO to debt remained largely unchanged at 14.5% compared with 14.7% at year-end 2011, debt to total capital improved to 53.4% compared with 54.9% at year-end 2011, and debt to EBITDA improved slightly to 4.6x compared with 4.9x at year-end 2011. Under our baseline forecasts, we expect that FFO to debt and debt to EBITDA will be about 14% and 4.5x, respectively, over the medium term, based on modest customer growth and continued rate increases.

We expect UWR's discretionary cash flow to be negative over the intermediate term, reflecting increased annual capital spending of about $675 million over the next three years (2013-2015) compared with spending of about $425 million over the past three years (2009-2011). Fundamentally, we expect that UWR will continue to fund its investments in a manner that preserves credit quality.

Liquidity

We view UWW's liquidity on a consolidated basis with that of UWR. UWR has adequate liquidity and can more than cover its needs for the near term, even if FFO decreases.

Our liquidity assessment is based on the following factors and assumptions:

- We expect the company's liquidity sources to exceed its uses by more than 1.4x over the next 12 months.
- Long-term debt maturities are manageable, with less than $1 million each maturing in 2013, 2014, and 2015.
- Even if EBITDA decreases by 15%, we believe net sources will be well in excess of liquidity requirements.
- The company can absorb high-impact, low-probability events with limited need for refinancing, has the flexibility to lower capital spending, has sound bank relationships and solid standing in the credit markets, and has generally prudent risk management.

In our analysis we assumed sources of about $296 million over the next 12 months, consisting of cash from operations and availability under its committed credit facility. We estimate the company could use up to $206 million during the same period for capital spending and debt maturities.

Outlook

The stable outlook reflects Standard & Poor's baseline forecast that consolidated FFO to debt will generally be greater than 14% and consolidated debt to EBITDA will be about 4.5x. Our base-case forecast assumes continued adequate and timely rate relief to support the company's financial measures. We could lower the ratings if the regulatory

environment deteriorates or the company's financial measures weaken such that FFO to debt is less than 14%, debt to EBITDA is more than 5x, and debt to total capital is more than 55% on a consistent basis. Large debt-financed acquisitions or a material shift in the company's business mix toward nonregulated businesses could also lead to a downgrade. Although we consider an upgrade to be less likely in the near term, we could raise the ratings if financial measures improve, with FFO to debt consistently increasing to more than 17% and debt to capital decreasing to less than 47%.

Related Criteria And Research

- Liquidity Descriptors For Global Corporate Issuers, Sept. 28, 2011
- Business Risk/Financial Risk Matrix Expanded, May 27, 2009
- Analytical Methodology, April 15, 2008
- 2008 Corporate Ratings Criteria: Ratios And Adjustments, April 15, 2008
- Assessing U.S. Utility Regulatory Environments, Nov. 7, 2007

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Div. 1-15: Per page 5 of Ms. Ahern's testimony, please show precisely how the indicated cost of equity before adjustments of 10.55 percent was calculated. Specifically, how much weight is given to each of the four methods?

RESPONSE: The evaluation of the investors' required rate of return on their common stock investment, i.e., cost rate of common equity capital, is not a mechanistic, mathematical exercise, but rather an exercise based upon informed, expert judgment. Therefore, in an attempt to emulate investor behavior, Ms. Ahern did not simply rely upon a mechanical calculation of the average or median of the results of her application of multiple cost of common equity cost rate models. Instead, in addition to considering the mean and median costs of common equity model results, she also considered the range of these results when formulating an indicated common equity cost rate before adjustment for the increased investment risk of United Water Rhode Island, Inc.

Prepared by: Pauline M. Ahern, CRRA

Div. 1-16: Please provide the year-by-year 2013 – 2018 capital spending projections for UWRI. Also, please describe the plan for financing these capital additions (i.e., internally retained cash, debt issues, parent contributions, customer contributions, etc.).

RESPONSE:

year	2013	2014	2015	2016	2017	2018
Net Capital spending Plan	$3,276.2	$2,350.8	$2,024.3	$974.5	$971.9	$1,031.2

The Company plans on financing these capital expenditures through a mixture of debt, equity and internally generated funds as provided by United Waterworks.

Prepared by: McEvoy/Prettyman

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4434
Response of United Water Rhode Island, Inc.
To The Division of Public Utilities And Carriers'
Data Requests
Set 1

Div. 1-17: Please provide a copy of the study referenced at footnote 14, page 26 of Ms. Ahern's testimony.

RESPONSE: Please see Attachment DIV-1-17.

Prepared by: Pauline M. Ahern, CRRA

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ORIGINAL ARTICLE

New approach to estimating the cost of common equity capital for public utilities

Pauline M. Ahern · Frank J. Hanley · Richard A. Michelfelder

Published online: 26 August 2011

Abstract The regulatory process for setting public utilities' allowed rate of return on common equity has generally used the Gordon DCF, CAPM and Risk Premium specifications to estimate the cost of common equity. Despite the widely known problems with these models, there has been little movement to adopt more recently developed asset pricing models to provide additional evidence for estimating the cost of capital. This paper presents, validates empirically and applies a general yet simple consumption-based asset pricing specification to model the risk-return relationship for stocks and estimate the cost of common equity for public utilities. The model is not necessarily superior to other models in its practical results, yet these results do indicate that it should be used to provide additional estimates of the cost of common equity. Additionally, the model raises doubts as to whether assets such as utility stocks are a consumption (business cycle) hedge.

Keywords Public utilities · Cost of capital · GARCH · Consumption asset pricing model

JEL Classification G12 · L94 · L95

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1 Introduction

Following electricity deregulation with the National Energy Policy Act of 1992, the estimation of the cost of common equity capital remains a critical component of the utility rate-of-return regulatory process. Since the cost of common equity is not observable in capital markets, it must be inferred from asset pricing models. The models that are commonly applied in regulatory proceedings are the Gordon (1974) Discounted Cash Flow (DCF), the Capital Asset Pricing (CAPM) and Risk Premium Models. There are other tools used to estimate the cost of common equity such as comparable earnings or earnings-to-price ratios, but they are not asset pricing models. The empirical literature on the CAPM is vast {Fama and French (2004)} and the CAPM is used by a number of US regulatory jurisdictions. The DCF model has not been empirically tested to the same extent as the CAPM, yet it is considered by many US regulatory jurisdictions.

The purpose of this paper is to present, test empirically and apply a recently developed general consumption-based asset pricing model that estimates the risk-return relationship directly from asset pricing data and, when estimated with recently developed time series methods, produces a prediction of the equity risk premium that is driven by its predicted volatility. The predicted risk premium is then added to a risk-free rate of return to provide an estimate of the cost of common equity. We predict two forms of the equity risk premium with the model, the risk premium net of the risk-free rate and the equity-to-debt risk premium (equity risk premium net of the relevant bond yield for the company's stock). Either can be applied to predict the common equity cost of capital for a public utility. Although the model is tested and applied to public utilities for rate of return regulation, it can be used to estimate the cost of capital for any stock. Section 2 reviews the asset pricing models typically used in public utility rate cases and the generalized consumption asset pricing model we propose to estimate the cost of common equity. Section 3 discusses the data and the empirical testing of the consumption asset pricing model. Section 4 reviews the application of the model and compares it with the DCF and CAPM results. Section 5 is the conclusion.

2 DCF, CAPM and consumption asset pricing model

2.1 DCF and CAPM approaches

The standard DCF model frequently used in estimative the cost rate of common equity in regulatory proceedings is defined by the following equation:

$$k = D_0 (1 + g) / P_0 + g,$$

where k is the expected return on common equity; D_0 is the current dividend per share; g is the expected dividend per share growth rate; and P_0 is the current market price.

The DCF was developed by Gordon (1974) specifically for regulatory purposes. Underlying the DCF model is the theory that the present value of an expected future stream of net cash flows during the investment holding period can be determined

by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate) over the investment holding period. Mathematically, the expected dividend yield $(D_0(1+g)/P_0)$ on market price plus an expected growth rate equals the capitalization rate, i.e., the expected return on common equity.

The standard DCF contains several restrictive assumptions, the most contentious of which during utility cost of capital proceedings is typically that dividends per share (DPS), book value per share (BVPS), earnings per share (EPS) as well as market price grow at the same rate in perpetuity. There is also considerable contention over the proper proxy for g, prospective or historical growth in DPS, BVPS, EPS and market price and over what time period. In addition, although the standard DCF described above is a single stage annual growth model, there is considerable discussion over the use of multiple stage growth models during regulatory proceedings. Some analysts use the discrete version and others use the continuous version of the DCF model. Solving these models for k, the cost of common equity, results in differing equations to solve for k. The equation above is from the discrete version. The continuous version uses the current dividend yield and is not adjusted by g, which results in a lower estimate for k. Because of these and other restrictive assumptions that require numerous subjective judgments in application, it is often difficult for regulatory commissions to reconcile the frequently large disparities in rates of return on common equity recommended by various parties in a public utility rate case.

The CAPM model is defined by the following equation:

$$k = R_f + \beta \left(R_m - R_f\right),$$

where k is the expected return on common equity; R_f is the expected risk-free rate of return; β is the expected beta; and R_m is the expected market return.

CAPM theory defines risk as the co-variability of a security's returns with the market's returns or β, also known as systematic or market risk, with the market beta being defined as 1.0. Because CAPM theory assumes that all investors hold perfectly diversified portfolios, they are presumed to be exposed only to systematic risk and the market (according to the model) will not reward them a risk premium for unsystematic or non-market risk. In other words, the CAPM presumes that investors require compensation only for systematic or market risks which are due to macroeconomic and other events that affect the returns on all assets. Mathematically, the CAPM is applied by adding a forward-looking risk-free rate of return to an expected market equity risk premium adjusted proportionately by the expected beta to reflect the systematic risk.

As with the DCF, there is considerable contention during regulatory cost of capital proceedings as to the proper proxies for all components of the CAPM: the R_f, the R_m, as well as β. In addition, the CAPM assumption that the market will only reward investors for systematic or market risk is extremely restrictive when estimating the expected return on common equity for a single asset such as a single jurisdictional regulated operating utility. Additionally, this assumption requires that the investor have a perfectly diversified portfolio, that is, one with no unsystematic risk. Since

this assumption is not applicable, estimating the cost of common equity capital for a single utility's common equity undoubtedly will not reflect the risk actually faced by the imperfectly diversified investor.

As will be discussed in the next section, our application of the risk premium approach, the consumption asset pricing model and GARCH[1] rest on minimal assumptions and restrictions and therefore requires considerably less judgment in its application.

2.2 Risk premium approach, consumption asset pricing models, and GARCH

A widely used model to estimate the cost of common equity capital for public utilities is the risk premium approach. This approach often estimates the expected rate of return as the long-term historic mean of the realized risk premium above an historic yield plus the current yield of the relevant bond applicable to a specific utility or peer group of utilities. Litigants in public utility rate proceedings debate the choice of inputs to estimate the risk premium as well as how far back to reach into history to collect data for calculating an average that is representative of a forward-looking premium.

It is surprising that, as popular as the risk premium method is in public utility rate cases, the intuitively appealing general consumption-based asset pricing model, with its minimal assumptions and strong theoretical foundation, has not been applied to estimate the cost of common equity capital for public utilities. The model provides projections of the conditional expected risk premium on an asset based on its relation to its predicted conditional volatility. This model generalizes the well known special case asset pricing models such as the Merton (1973) intertemporal capital asset pricing model, Campbell (1993) intertemporal asset pricing model, and the habit-persistence model of Campbell and Cochrane (1999), which are special cases of the general model. The relation of the model to their specialized cases can be found in Cochrane (2006) and Cochrane (2007). The approach of consumption asset pricing models is to make investment decisions that maximize investors' utility from the consumption that they ultimately desire, not returns.

Even if the model is not used to project directly the expected risk premium, it can, at a minimum, be used to verify that the risk premia data chosen for estimating the cost of capital is empirically validated by fitting the model well. The model can be used to predict the equity risk premia net of the risk-free rate (equity risk premium) or to predict the equity-to-debt risk premium for a firm. We perform both of these empirical tests in this paper. The general consumption-based asset pricing model developed in Michelfelder and Pilotte (2011) and based on Cochrane (2004) provides the relationship of the ex ante risk premium to an asset's own volatility in return:

$$E_t[R_{i,t+1}] - R_{f,t} = -\frac{vol_t[M_{t+1}]}{E_t\left[M_{t+1}\right]} vol_t[R_{i,t+1}] corr_t[M_{t+1}, R_{i,t+1}]. \quad (1)$$

[1] GARCH refers to the generalized autoregressive conditional heteroskedasticity regression model which is discussed below.

where vol_t is the conditional volatility, $corr_t$ is the conditional correlation, and M_{t+1} is the stochastic discount factor (SDF).

The SDF is the intertemporal marginal rate of substitution in consumption, or, $M_{t+1} = \beta \frac{U_{c,t+1}}{U_{c,t}}$, where the U_c's are the marginal utilities of consumption in the next period, $t+1$, and the current period, t, and β is the discount factor for period t to $t+1$. Equation 1 shows that the algebraic sign of the relation between the expected risk premium and the conditional volatility of an asset's risk premium is determined by the correlation between the asset's return and the SDF. That is, the direction of the relation between the asset return and the ratio of intertemporal marginal utilities in consumption inversely determines the relation between the expected risk premium and conditional volatility. When the correlation is equal to negative one, the asset's conditional expected risk premium is perfectly positively correlated with its conditional volatility. A positive relation between the conditionally expected risk premium and volatility obtains when $-1 < corr_t < 0$. A negative relation obtains when $0 < corr_t < 1$. For an asset that represents a perfect hedge against shocks to the marginal utility of consumption, with $corr_t = 1$, there will be a perfect negative correlation between the conditionally expected risk premium and its volatility.[2] Therefore, estimates of the relation between the first two conditional moments of a public utility stock's returns provide a direct test of the effectiveness of a public utility stock, or any asset, as a consumption hedging asset. In Eq. 1, $vol_t[M_{t+1}]/E_t[M_{t+1}]$ is the slope of the mean-variance frontier. If this slope changes over time, the estimated relation between the stock's risk and return will vary over time. This model can also be viewed simplistically as the projected expected risk premium as a function of its own projected risk, given information available at time t.

Note that the model allows for the expected risk premium to be negative if the asset hedges shocks to the marginal utility of consumption. Investors are willing to accept an expected rate of return lower than the risk-free rate of return if the pattern of volatility is such that returns are expected to rise with expected reductions in consumption. Simply, investors are willing to *pay* a premium for a higher level of returns volatility that has the desired pattern of returns. These desired returns patterns have a tendency to offset drops in consumption. Therefore, this model shows that investors may not be averse to volatility, but rather to the timing of expected changes in returns.

Summarizing, several conclusions can be drawn from the general model of asset pricing. First, the sign of the relation between a stock's risk premium and conditional volatility depends on the extent to which the stock serves as an intertemporal hedge against shocks to the marginal utility of consumption. Second, the relation between stock risk and return may be time-varying depending on changes in the slope of the mean-variance frontier. Third, hedging assets have desired patterns of volatility that result in expected rates of return that are less than the risk-free rate. We do not expect

[2] A hedging asset is one that has a positive increase in returns that is coincident with a positive shock in the ratio of intertemporal marginal utilities of consumption. Note that if we assume a concave utility function in consumption, as consumption declines, the marginal utility of consumption rises relative to last period marginal utility. If we think of a decline in consumption as a contraction in the business cycle, the hedging asset delivers positive changes in returns when the business cycle is moving into a contraction, and therefore the asset is a business cycle hedge.

that public utility stocks serve as a hedging asset as they are not viewed as defensive stocks (they do not rise in value during downturns in the stock market) due to asymmetric regulation and returns as discussed in detail in Kolbe and Tye (1990). Under asymmetric regulation, utility regulators have a tendency to allow the return on equity to fall below the allowed return during downturns in the business cycle and to reduce the return should it rise above the allowed return during expansions. Therefore we expect that the parameter estimates of the return-risk relationship to be positive as utility stocks are hypothesized to not be hedges.

We use the GARCH model to estimate the general asset pricing model since the GARCH model accommodates ARCH effects that improve the efficiency of the parameter estimates. It also provides a volatility forecasting model for the conditional volatility of the asset's risk premium. The conditional volatility projection is used, in turn to predict the expected risk premium. We also use the GARCH-in-Mean model (GARCH-M) since it specifies that the conditional expected risk premium is a linear function of its conditional volatility. There is a vast body of literature that estimates asset pricing models with the GARCH and GARCH-M methods and therefore we will not attempt to summarize them here.

The GARCH-M model was initially developed and tested by Engle et al. (1987) to estimate the relationship between US Treasury and corporate bond risk premia and their expected volatilities. The GARCH-M model is specified as:

$$R_{t+1} - R_{f,t+1} = \alpha\sigma_{t+1}^2 + \varepsilon_{t+1} \tag{2}$$

$$\sigma_{t+1}^2 = \beta_0 + \beta_1\sigma_t^2 + \beta_2\varepsilon_t^2 + \eta_{t+1} \tag{3}$$

$$\varepsilon_t \,|\psi_{t-1} \sim T(0, \sigma_t^2) \tag{4}$$

where R_{t+1} is the expected total return on the public utility stock index or individual utility stock; $R_{f,t+1}$ is the risk-free rate of return or the yield on an index of public utility bonds of a specified bond rating for the equity-to-debt premium; σ_{t+1}^2 is the conditional or predicted variance of the risk premium that is conditioned on past information (ψ_{t-1}); and ε_t is the error term that is conditional on ψ_{t-1}.

The conditional distribution of the error term is specified as the non-unitary variance T-distribution due to the thick-tailed distribution of the risk premia data. If the error distribution is thick-tailed, using an approximating distribution that accommodates thick tails improves the efficiency of the estimates. The parameter, α, is the return-to-risk coefficient as specified in Eq. 1 as:

$$\alpha = -\frac{vol_t[M_{t+1}]}{E_t\left[M_{t+1}\right]} corr_t[M_{t+1}, R_{i,t+1}] \tag{5}$$

Note that the coefficient will be positive if the conditional correlation between the SDF and the asset return is negative, indicating that the stock is not a hedging asset. Recall that the SDF is the ratio of intertemporal marginal utilities. Assuming a concave utility function, an upward shock in the ratio implies falling consumption, therefore an associated rise (positive correlation) in the return (R_i) would offset the reduction

in consumption, thereby causing the sign of α to be negative. The parameter, α, is also the ratio of risk premium to variance, or, the Sharpe ratio.

The intercept in Eq. 2 is restricted to zero as specified by the general asset pricing model specification. The restriction on the intercept equal to zero has been found to be robust in producing consistently positive and significant relationships between equity risk premia and risk in GARCH-M models. This is discussed in Lanne and Saikkonen (2006) and Lanne and Luoto (2007). We have found the same results in our modeling in this paper, although we have excluded these results for brevity (available upon request). Therefore we specify the prior assumption that the intercept or the "excess" return, i.e., the return not associated with risk to be equal to zero and drop the intercept from the model.

The consumption asset pricing model is estimated in the empirical section of the paper and applied in the applications section of the paper. The model is tested to (1) determine if equity-to-debt risk premium indices for utilities of differing risk specified by differing bond ratings are validated by the asset pricing model and therefore have some empirical support for risk premium prediction and application to utility cost of capital estimation, (2) determine whether equity risk premia can be predicted and fit the model and therefore be used to estimate the cost of common equity, (3) empirically test the consumption asset pricing model, and (4) ascertain whether utility stocks are assets that hedge shocks to the marginal utility of consumption.

If utility stocks are hedging assets then the cost of common equity should reflect a downward adjustment to a specified risk-free rate to reflect investors' preferences for a hedge and the compensation that they are willing to pay for it.

3 Data and empirical results

We use portfolios as represented by public utility stock and bond indices to estimate the conditional return-risk relationship for the equity-to-debt premium. The equity-to-debt risk premium data employed for estimating Eq. 1 with the GARCH-M conditional return-risk regressions are monthly total returns on the Standard and Poor's Public Utilities Stock Index (utility portfolio), and the monthly Moody's Public Utility Aa, A, and Baa yields for the debt cost. We also obtained equity risk premia for the utility portfolio using the Fama-French specified risk-free rate of return, which is the holding period return on a 1-month US Treasury Bill. The data range from January 1928 to December 2007 with 960 observations. The return-risk relationships for the equity-to-debt premia are risk-differentiated by their own bond rating.

As a check, we also estimate Eq. 1 with the GARCH-M for large common stock returns using the monthly Ibbotson Large Company Common Stocks Portfolio total returns and the Ibbotson US Long-Term Government income returns as the risk-free rate. Additionally, as another check, we do the same for the University of Chicago's Center for Research in Security Prices value-weighted stock index (CRSP) using the Fama-French risk-free rate. This is the Fama-French specification of the market equity risk premium. The data range from January 1926 to December 2007 with 984 observations for the Large Company Common Stock estimation and the data ranges

Table 1 Descriptive statistics: public utility and large company common stocks equity-to-debt and equity risk premia

Utility bond rating	Mean	Std. Dev.	Skewness	Kurtosis	JB
Aa	0.0037	0.0568	0.0744	10.07	2,001.2***
A	0.0035	0.0568	0.0632	10.06	1,991.8***
Baa	0.0031	0.0568	0.0375	10.02	1,973.6***
Ibbotson					
Large common stocks	0.0054	0.0554	0.4300	12.84	3,954.7***
CRSP value-weighted stock index	0.0062	0.0544	0.2309	10.92	2,519.1***

The public utility equity-to-debt risk premia monthly time series is from January 1928 to December 2007 with 960 observations. The equity risk premium monthly time series for the Large Common Stocks and the CRSP index are January 1926 to December 2007 with 984 observations, and January 1926 to December 2007 with 984 observations, respectively. The public utility stocks equity-to-debt risk premia are calculated as the total return on the S&P Public Utilities Index of stocks minus the Moody's Public Utility Aa, A, and Baa Indices yields to maturity. The Large Company Common Stock equity risk premia are the monthly total returns on the Ibbotson Large Company Common Stocks Portfolio minus the Ibbotson Long-Term US Government Bonds Portfolio income yield. The CRSP equity risk premia, or the Fama-French market risk premia are the CRSP total returns on the value-weighted equity index minus the 1-month holding period return on a 1 month Treasury Bill. The Jarque-Bera (JB) statistic is a goodness-of-fit measure of the departure of the distribution of a data series from normality, based on the levels of skewness and excess kurtosis. The JB statistic is χ^2 distributed with 2° of freedom. *** Significant at 0.01 level, one-tailed test

from January 1928 to January 2007 with 960 observations (same as the utilities) for the CRSP estimation.

Table 1 displays the descriptive statistics for these data. We have estimated the mean, standard deviation, skewness and kurtosis parameters, as well as the Jarque-Bera (JB) statistic to test the distribution of the data. The means of the utility equity-to-debt risk premia fall as the risk (bond rating) declines. This is consistent with the notion that larger yields are subtracted from stock returns the lower the bond rating. Intertemporally, there is an inverse relationship between risk premia and interest rates (See Brigham et al. (1985) and Harris et al. (2003)). The mean for risk premia will have a tendency to be larger during low interest rate periods.

Not surprisingly, large company common stocks have the highest mean risk premia as the majority of these firms are not rate-of-return regulated firms with a ceiling on their ROE's close to their cost of capital. Interestingly, the standard deviations of the utility stock returns are similar and slightly higher than large company common stocks. Skewness coefficients are small and positive except for Ibbotson large company common stock returns and CRSP returns that have large positive skewness. This suggests that large unregulated stocks have a tendency to have more and larger positive shocks in returns than do utilities that are rate of return regulated. The kurtosis values show that all of the risk premia are thick-tail distributed. This is also found in the significant JB statistics that test the null hypothesis that the data are normally distributed. The null hypothesis is rejected for all assets. The high kurtosis, low skewness, and significant JB statistics show that the risk premia data are substantially thick-tailed, except for non-utility stocks that are both skewed and thick-tailed. Therefore, robust estimation methods are required to produce efficient regression estimates with non-normal data. Additionally, although not shown but available upon request, the serial correlation and

ARCH Lagrange Multiplier tests show that residuals from OLS regressions of risk premia on volatilities follow an ARCH process. Therefore, the GARCH-M method will improve the efficiency of the estimates. We specify the regression error distribution as a non-unitary variance T-distribution so that thick-tails could be accommodated in the estimation and therefore produce increasingly efficient parameter estimates.

We used maximum likelihood estimation with the likelihood function specified with the non-unitary-variance T-distribution as the approximating distribution of the residuals to accommodate the thick-tailed nature of the error distribution. The equations are estimated as a system using the Marquardt iterative optimization algorithm. The chosen software for estimating the model was EViews© version 6.0 (2007).

Table 2 shows the GARCH-M estimations for the consumption asset pricing Eq. 1. We have estimated Eq. 1 for the utility equity risk premia using the Fama-French risk-free rate in addition to the equity-to-debt risk premia risk-differentiated by bond ratings and the two measures of the market equity risk premium. The chosen measure of volatility is the variance of risk premium (in contrast to other such measures such as the standard deviation or the log of variance. Although these results are not shown for brevity, they are robust to these other measures of volatility). The slope, which is the predicted return-to-predicted risk coefficient and Sharpe ratio, is positive and significant at the 99% level for all assets except the utility stock returns with Baa bonds, which is significant at the 95% level. Given that all slopes are positive, public utility stocks are not found to hedge shocks to the marginal utility of consumption. Note that the reward-to-risk slope rises as bond rating rises. This suggests that lower risk utility stocks provide a higher incremental risk-premium for an increase in conditional volatility. This is consistent with other studies that find that lower risk assets, such as shorter maturity bonds, have higher Sharpe Ratios than long-term bonds and stocks. See Pilotte and Sterbenz (2006) and Michelfelder and Pilotte (2011).

The variance equation shows that all GARCH coefficients (β's) are significant at the 1% level and the sums of β_1 and β_2 are close to, but less than 1.0, indicating that the residuals of the risk premium equation follow a GARCH process and that the persistence of a volatility shock on returns and stock prices for utility stocks is temporary. The estimates of the non-unitary variance T-distribution degrees of freedom parameter are low and statistically significant, indicating that the residuals are well approximated by the T. Similar values for the log-likelihood functions (Log-L) show that each of the regressions has a similar goodness-of-fit. Chi-squared distributed likelihood ratio tests (not shown but available upon request) that compare the goodness of fit among the T and normal specifications of the likelihood function of the GARCH-M regressions show that the T has a significantly better fit than the normal distribution.

The GARCH-M results for the large company common stocks portfolio are similar to those of the utility stocks. Not surprisingly, large company common stocks do not hedge shocks to the marginal utility of consumption and volatility shocks temporarily affect their valuations. The exception is that the return-risk slope is substantially higher than utility stock slopes. This is partially due to the risk-free nature of the risk-free rates used with the non-utility equity risk premia compared to the

Table 2 Estimation of return-risk relation: public utility and large company common stocks

Utility bond rating	α	β_0	β_1	β_2	Log-L	T dist. D.F.
Aa	1.5183*** (0.5308)	0.0000** (0.0000)	0.8791*** (0.0230)	0.1031*** (0.0219)	1,604.4	9.9254*** (3.0272)
A	1.4536*** (0.5308)	0.0000** (0.0000)	0.8790*** (0.0230)	0.1033*** (0.0220)	1,605.0	9.9381*** (3.0408)
Baa	1.3318** (0.5303)	0.0000** (0.0000)	0.8789*** (0.0229)	0.1040*** (0.0220)	1,605.2	10.0*** (3.0540)
Fama-French R_f	2.1428*** (0.5318)	0.0000** (0.0000)	0.8811*** (0.0232)	0.0979*** (0.0212)	1,601.0	9.8773*** (2.9700)
Ibbotson						
Large company common stocks	2.7753*** (0.5513)	0.0001*** (0.0000)	0.8381*** (0.0269)	0.1186*** (0.0332)	1,620.8	8.8457*** (2.1613)
CRSP value-weighted stock index	3.3873*** (0.5673)	0.0001*** (0.0000)	0.8330*** (0.0270)	0.1149*** (0.0358)	1,598.9	8.8571*** (1.9505)

The results below are the GARCH-in-Mean regressions for the risk premium ($R_{t+1} - R_{f,t+1}$) on the conditional variance of the risk premium (σ^2_{t+1}) in the mean equation. The intercept in the mean equation is restricted to be equal to zero. The public utility equity-to-debt risk premia monthly time series is from January 1928 to December 2007 with 960 observations. The equity risk premium monthly time series for the Large Company Common Stocks and the CRSP index are January 1926 to December 2007 with 984 observations, and January 1926 to December 2007 with 984 observations, respectively. The public utility stocks equity-to-debt risk premia are calculated as the total return on the S&P Public Utilities Index of stocks minus the Moody's Public Utility Aa, A, and Baa Indices yields to maturity. The Large Company Common Stock equity risk premia are the monthly total returns on the Ibbotson Large Company Common Stocks Portfolio minus the Ibbotson Long-Term US Government Bonds Portfolio income yield. The CRSP equity risk premia, or the Fama-French market risk premia are the CRSP total returns on the value-weighted equity index minus the 1-month holding period return on a 1 month Treasury Bill. The estimated model is:

$$R_{t+1} - R_{f,t+1} = \alpha\sigma^2_{t+1} + \varepsilon_{t+1} \text{ where } \alpha = -\frac{vol_t[M_{t+1}]}{E_t[M_{t+1}]} corr_t[M_{t+1}, R_{i,t+1}]$$

$$\sigma^2_{t+1} = \beta_0 + \beta_1\sigma^2_t + \beta_2\varepsilon^2_t + \eta_{t+1}$$

The conditional distribution of the error term is the non-unitary variance T-distribution to accommodate the kurtosis of the risk premia and error term. Standard errors are in parentheses. ***, **, * denote significance at the 0.01, 0.05, and 0.10 levels, respectively for two-tail tests

utility bond yields that reflect risk. The utility stocks slope value of 2.1428 using the Fama-French risk-free rate is closer to the higher CRSP value of 3.3873 that is also based on the Fama-French risk-free rate. This is inconsistent with previous results herein and in other papers that find that Sharpe Ratios are lower for higher risk assets unless this finding can be interpreted as utility stocks having more risk than non-regulated stocks. The standard deviations on Table 1 suggest that utility stock return volatilities are as high as the stock returns of non-regulated firms. However, similar model estimates of portfolios of common stocks yield unstable results, such as negative as well as positive return-risk slopes when the intercept is not restricted to zero. See Campbell (1987), Glosten et al. (1993), Harvey (2001), and Whitelaw (1994).

Stock market results are highly sensitive to empirical model specification. Many studies do not consider the impact of a zero-intercept prior restriction on the stability of their results. This simple innovation has led to more consistent results in modeling stock market risk-return relationships, and therefore we have included it in this paper.

The estimation of the consumption asset pricing model for utility stock equity-debt risk premia shows that the use of bond-rating risk-differentiated risk premia are validated as their risk-return relationships are well-fitted by theoretical and empirical models of risk and return. Therefore, these data impound good representations of the risk and reward relationship.

One concern is the intertemporal stability of the alphas. Figure 1 plots the utility stock portfolio alpha (using the Fama-French R_f to calculate the premium) and its standard error for 240 month rolling regressions of the model estimated with GARCH-M in the same manner as described above to review the intertemporal stability of the alpha. A 20-year period was used for each estimation to trade off timeliness with sufficient observation of up and down stock market regimes and business cycles. This resulted in 720 estimated alphas from 1947 to 2007. The results show that the utility alpha is stable to the extent that the algebraic sign is always positive and generally significant, therefore the nature of utility stocks are assets that are not and have never been hedges during the second half of the twentieth century up to the present. The value of the alpha does change substantially. The mean of the alpha is 4.40 with a range from -0.11 (insignificantly different from 0) to 11.66. As a comparison, the alpha for the CRSP value-weighted stock index was also estimated with rolling regressions in the same manner and for the same time period. Figure 2 is a plot of the CRSP alpha and standard error. Note that the general stock market alpha is similar to that of utility stocks. They are all positive and almost all statistically significant and follow a strikingly similar cycle. Figure 3 plots both the utility and stock market alphas and demonstrates the similarity. The correlation coefficient between the utility and stock market alphas is 0.88. Recalling that the alpha is a Sharpe Ratio, we see that return to risk ratio does change substantially. This is consistent with the results in Pilotte and Sterbenz (2006).

One other interesting observation is that the standard errors of the alphas are highly stable over the study period and are very similar in magnitude regardless of the size of the corresponding alpha. Whereas the alpha follows a cyclical pattern, the volatility in alpha is highly stationary around a constant, long-run mean.

The GARCH-M model estimations of the consumption asset pricing model were specified with variance as the measure of volatility. We also performed the same model estimations with alternative specifications of volatility such as the standard deviation and the log of variance and the results were not sensitive to this specification.

4 Application

We apply the model in this section to compare the cost of common equity capital estimates with the DCF and CAPM models. Using EViews© Version 6.0, we estimated the model coefficients (α, $\beta's$) over rolling 24 month periods ending December 2008.

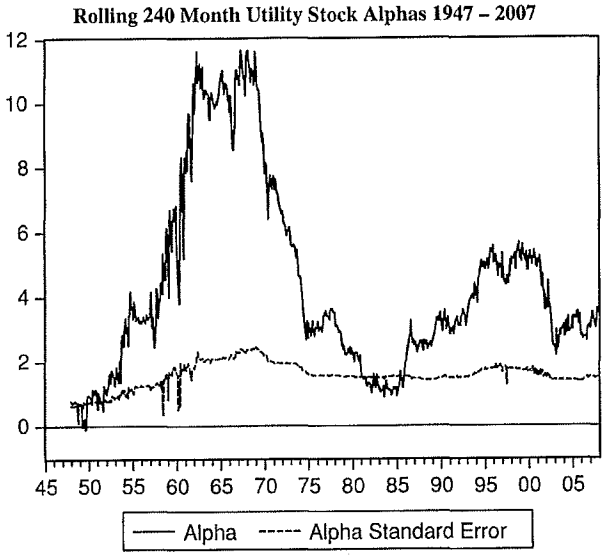


Fig. 1 Rolling 240 month utility stock alphas 1947–2007

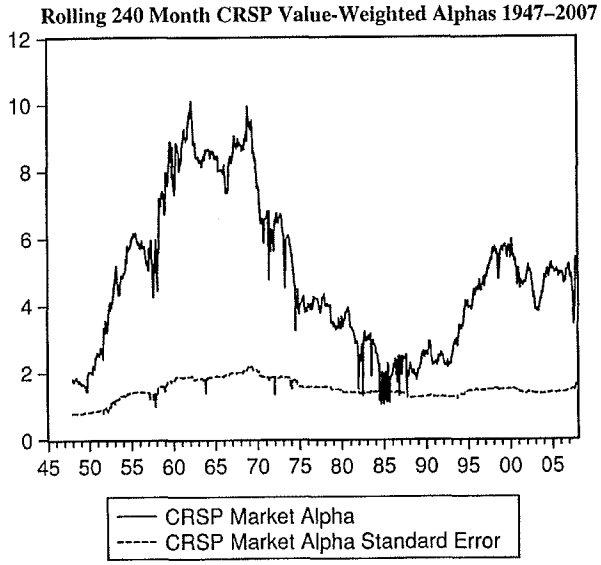


Fig. 2 Rolling 240 month CRSP value-weighted alphas 1947–2007

We repeated the estimation over 5, 10, 15, 20 and 79 year periods.[3] Predicted monthly variances (σ^2_{t+1}) were generated from these estimations to produce predicted risk premiums that were calculated by multiplying the predicted variance by the "α" slope

[3] We did not include the results of the 10 and 15 year estimations to abbreviate the amount of empirical results presented since they added no material insights beyond those already presented.

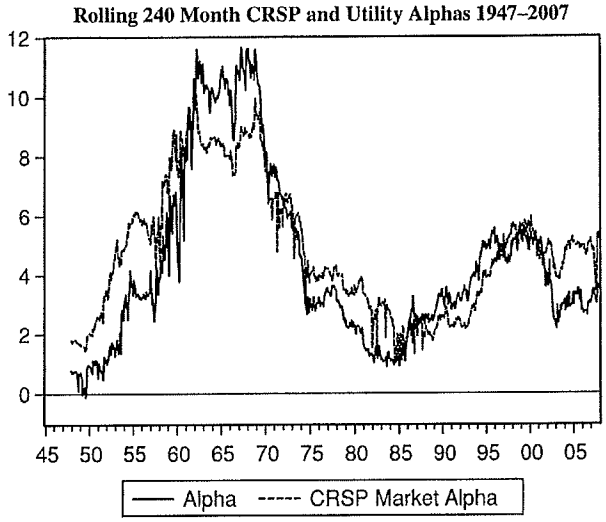


Fig. 3 Rolling 240 month CRSP and utility alphas 1947–2007

Table 3 Estimates of expected risk premia

	Mean (%)		Range (%)		Standard deviation (%)	
	Average	Spot	Average	Spot	Average	Spot
Ibbotson Associates data						
79-years	9.59	5.76	8.74–9.96	2.62–22.60	0.32	5.24
20-years	6.77	6.94	4.99–8.50	2.24–28.95	0.95	6.88
5-years	4.20	10.25	−98.49–11.62	−100.00–39.65	22.00	26.61
S&P Utility Index						
79-years	5.28	2.90	4.30–5.28	1.65–8.15	0.32	1.60
20-years	3.93	3.51	2.78–5.03	2.18–6.88	0.57	1.11
5-years	31.82	326.63	7.77–156.97	6.12–6465.74	31.47	1283.51

coefficient. To test the stability of the predicted risk premia over time, the predicted risk premia were calculated using either the predicted variance over each entire time period or the last monthly (spot) predicted variance. Table 3 presents the mean predicted risk premia, the range of predicted premia and the standard deviations for each time period. It is clear from the results that the risk premia are more stable over the rolling 24 month period when calculated using the average predicted variance compared with using the spot variance. Secondly, the 20 and 79 year means are substantially more stable and reasonable in magnitude than the 5 year means.

Next, given the lessons from the analyses above, we apply the model to mechanically[4] estimate the cost of common equity for 8 utility companies using the model and

[4] The term "mechanically" in this context means that the resulting values have been developed in a consistent manner with the same inputs across all utility stocks but no subjective judgment was used to develop final values for each specific utility stock application.

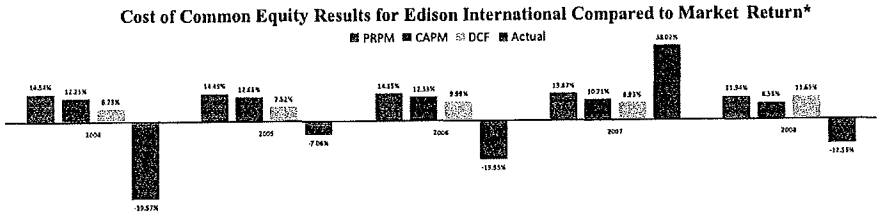
the DCF and CAPM as comparisons. We also calculated the realized market return for comparison. Two publicly-traded electric, electric and gas combination, gas, and water utilities respectively were chosen for the application. The Gordon (1974) DCF and CAPM models are used in many utility regulatory jurisdictions in the US.

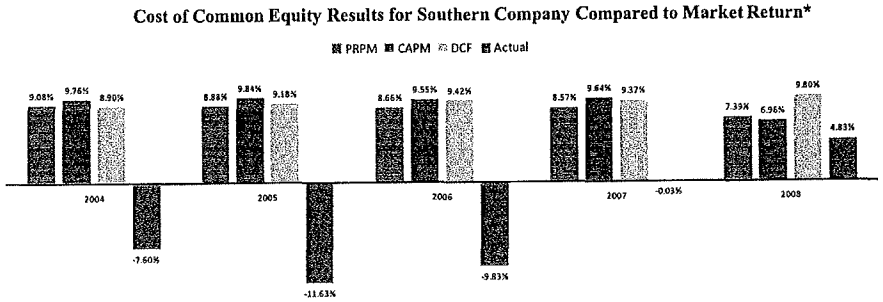
The DCF was applied using a dividend yield, D_0/P_0, derived by dividing the year-end indicated dividend per share (D_0) by the year-end spot market price (P_0). The dividend yield is grown by the year-end I/B/E/S five year projected earnings per share growth rate (g) to derive $D_0(1+g)/P_0$. The one-year predicted dividend yield is then added to the I/B/E/S five-year projected EPS growth rate to obtain the DCF estimate of the cost of common equity capital, k. This study was conducted for the 5 years ending 2008.

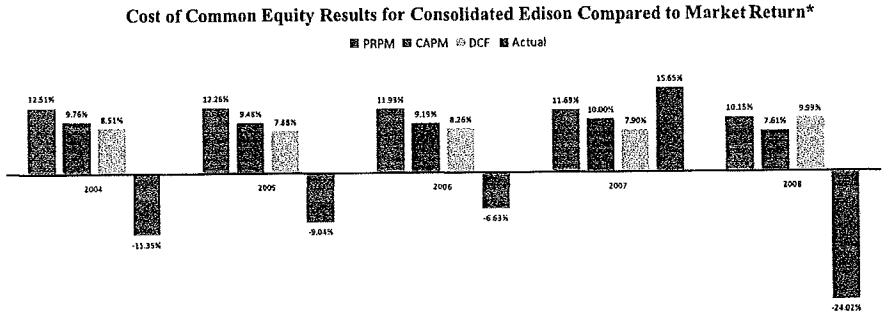
The CAPM was applied by multiplying the Value Line beta (β) available at year-end for each company by the long-term historic arithmetic mean market risk premium ($R_m - R_f$). $R_m - R_f$ is derived as the spread of the total return of large company common stocks over the income return on long-term government bonds from the Ibbotson SBBI 2009 Valuation Yearbook. The resulting company-specific market equity risk premium is then added to a projected consensus estimate of the yield on 30-year U.S. Treasury rate provided by Blue Chip Financial Forecasts as the risk-free rate (R_f) to obtain the CAPM result. This study was also conducted over the 5 years ending 2008.

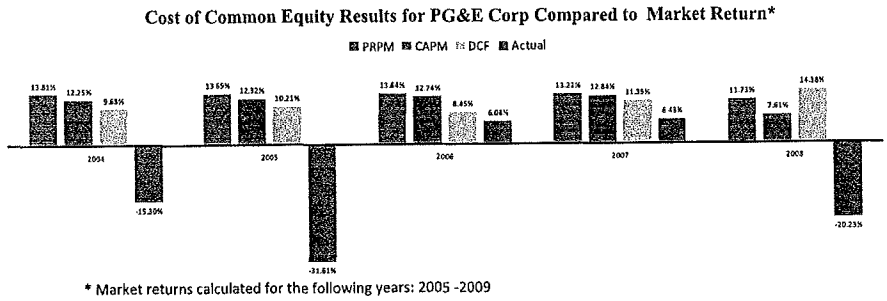
Figures 4–11 show the histograms of the cost of common equity capital estimations for each of the eight public utility stocks and the realized market returns in the forthcoming year. The consumption asset pricing model appears to track more consistently with the CAPM than with the DCF which seems to produce generally lower values than the other methods. The consumption asset pricing model results are similar to the CAPM. The model and the CAPM compete as the best predictor of the rate of return on the book value of common equity (not shown but available upon request), but none of the expected returns were good predictors of market returns. That does not infer that they were not good predictors of *expected* market returns. These results are an initial indicator that the consumption asset pricing model provides reasonable and stable results. This paper does not suggest at this early juncture that the consumption asset pricing model is superior to the CAPM or DCF, although it is based on far less restrictive assumptions than these other models. For example, both the DCF and CAPM assume that markets are efficient. Many assume that the DCF requires that the market-to-book ratio to always equal one, whereas the long-term value for the Standard and Poor's 500 is equal to 2.34. The CAPM assumes that investors demand higher returns for higher volatility and that the minimum required return is the risk-free rate, whereas the consumption asset pricing model allows for investors to require returns less than the risk-free rate for stocks that may have relatively higher volatility but are hedging assets that have desirable return fluctuation patterns that offset downturns in the business cycle. Unlike the CAPM, the model prices the risk to which investors are actually exposed, whether it's systematic risk or not. Some investors are diversified and some are not; the model prices whatever risk to which the aggregate of investors of the specific stock is exposed.

We find that the consumption asset pricing model should be used in combination with other cost of common equity pricing models as additional information in the devel-



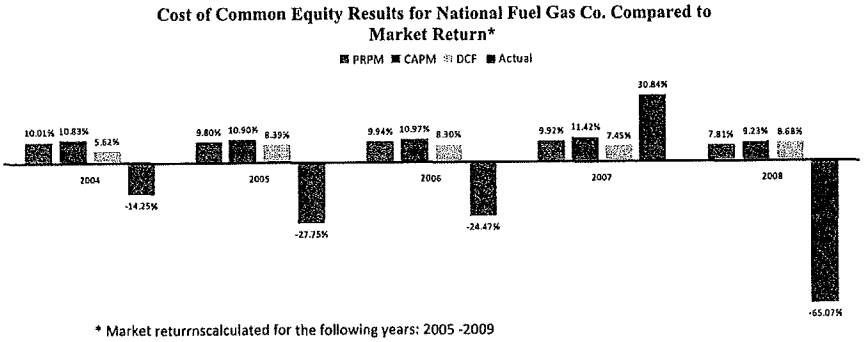


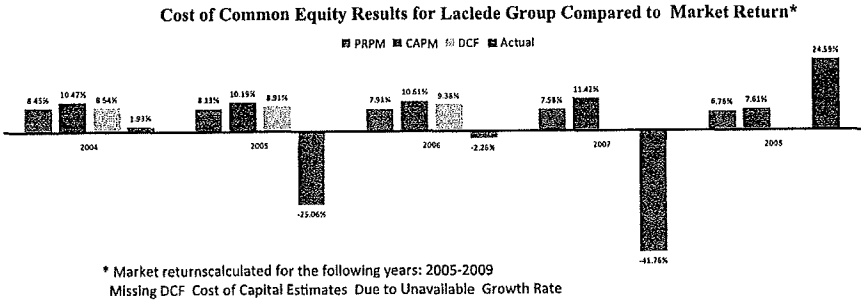


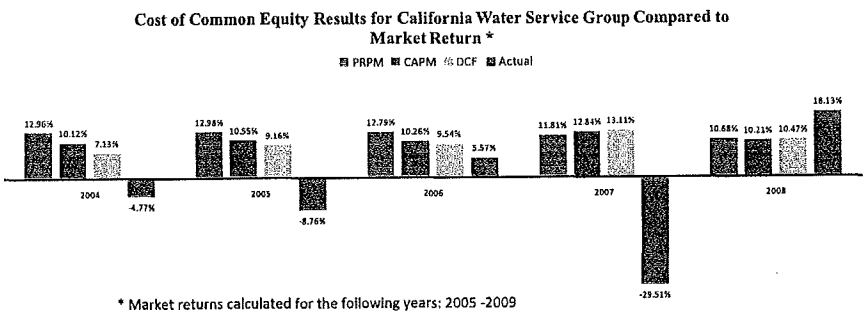


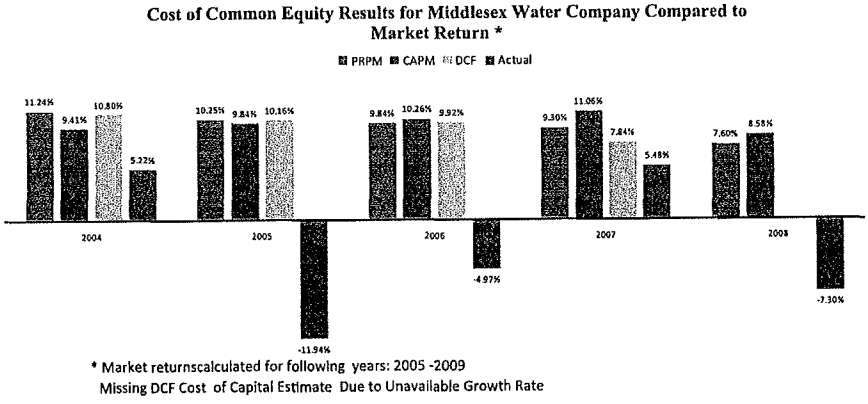
Figs. 4–11 Comparison of the cost of common equity estimates and market

opment of a cost of common equity capital recommendation. Practitioners may find the modeling methods and the use of relatively advanced econometric methods rather cumbersome. The software for performing these estimations is readily available from EViews© and SAS©; two commonly available software packages at utilities, consult-









Figs. 4–11 continued

ing firms and financial firms. Recent Ph.D. and M.S. holding members of research departments of investment and consulting firms have ready access to the model and methods discussed in this paper, although it will require years for these tools, like any "new" technology, to diffuse into standard use. Another problem is that the model requires a substantial time series history on stock returns data to develop stable estimates of risk premia This is problematic especially for the electric and gas utility industries that have consolidated with many mergers in the recent past. This problem can be addressed by developing and predicting the value-weighted risk premium of a portfolio of similar stocks such as electric utilities that have nuclear generating assets. The specific stock in question would be included in the returns index with a weight based on market capitalization that would go to 0 when the stock price history is no longer existent reaching back into the past.

5 Conclusion

The purpose of this paper is to introduce, test empirically and apply a general consumption based asset pricing model that is based on a minimum of assumptions and restrictions that can be used to predict the risk premium to be applied in estimating the cost of common equity for public utilities in regulatory proceedings. The results support the simple consumption-based asset pricing model that predicts the ex ante risk premium with a conditionally predicted volatility in risk premium. The estimates of the cost of common equity from the consumption asset pricing model compare well with rates of return on the book value of common equity and with the CAPM, although both the model and the CAPM results are substantially higher than the DCF. This is quite common in the practice of the cost of common equity in the utility industry. The results of the model are stable and consistent over time. Therefore the model should be considered as it provides additional evidence on the cost of common equity in general and specifically in public utility regulatory proceedings. Secondly, the use of bond-rated yields to predict risk differentiated equity-to-debt risk premia is supported by the empirical evidence and therefore should be applied in estimating the cost of common equity. Finally, the robust empirical evidence on the positive risk-return relationship also shows that utility stocks are not a consumption hedge and are not good hedging securities against contractions in the economy. The model and estimation methodology presented in this paper provide a relatively simple tool to determine whether any asset is a hedge to adverse changes in the business cycle through the level of consumption in the economy.

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References

Brigham, E. F., Shome, D. K., & Vinson, S. R. (1985). The risk premium approach to measuring a utility's cost of capital. *Financial Management, 14*, 33–45.

Campbell, J. Y. (1987). Stock returns and the term structure. *Journal of Financial Economics, 18*, 373–399.
Campbell, J. Y. (1993). Intertemporal asset pricing without consumption data. *American Economic Review, 83*, 487–512.
Campbell, J. Y., & Cochrane, J. H. (1999). By force of habit: A consumption-based explanation of aggregate stock market behavior. *Journal of Political Economy, 107*, 205–251.
Cochrane, J. H. (2004). *Asset pricing*. Revised Edition. Princeton, NJ: Princeton University Press.
Cochrane, J. H. (2006). Financial markets and the real economy. NBER Working Paper.
Cochrane, J. H. (2007). *Portfolio theory. Manuscript*. University of Chicago.
Engle, R. F., Lilein, D., & Robins, R. (1987). Estimation of time varying risk premia in the term structure: The ARCH-M model. *Econometrica, 55*, 391–407.
EViews©. (2007). Version 6.0. Quantitative Micro Software, LLC.
Fama, E., & French, K. (2004). The capital asset pricing model: Theory and evidence. *Journal of Economic Perspectives, 18*, 25–46.
Glosten, L. R., Jaganathan, R., & Runkle, D. E. (1993). Relationship between the expected value and the volatility of the nominal excess returns on stocks. *Journal of Finance, 48*, 1779–1801.
Gordon, M. (1974). *The cost of capital to a public utility*. East Lansing, MI: MSU Public Utility Studies.
Harris, R. S., Marston, F. C., Mishra, D. R., & O'Brien, T. J. (2003). Ex ante cost of equity estimate of S&P 500 firms: The choice between global and domestic CAPM. *Financial Management, 32*, 51–66.
Harvey, C. R. (2001). The specification of conditional expectations. *Journal of Empirical Finance, 8*, 573–637.
Kolbe, A. L., & Tye, W. B. (1990). The *Duquense* opinion: How much "Hope" is there for investors in regulated firms. *Yale Journal on Regulation, 8*, 113–157.
Lanne, M., & Luoto, J. (2007). Robustness of risk-return relationship in the U.S. stock market. Helsinki Center of Economic Research, Discussion Paper No. 168.
Lanne, M., & Saikkonen, P. (2006).Why is it so difficult to uncover the risk-return tradeoff in stock returns? *Economic Letters, 92*, 118–125.
Merton, R. C. (1973).An intertemporal capital asset pricing model. *Econometrica, 41*, 867–887.
Michelfelder, R. A., & Pilotte, E. A. (2011). Treasury bond risk and return, the implications for the hedging of consumption and lessons for asset pricing. *Journal of Economics and Business* (forthcoming).
Pilotte, E., & Sterbenz, F. (2006).Sharpe and treynor ratios on treasury bonds. *Journal of Business, 79*, 149–180.
Whitelaw, R. W. (1994).Time-variation and covariations in the expectation and volatility of stock market returns. *Journal of Finance, 49*, 515–541.

Div. 1-18: One of Ms. Ahern's risk premium methods is the "PRPM" method.

(a) When did Ms. Ahern first begin employing this model in utility rate of return testimony?

(b) Please identify any other witnesses that she is aware of that have employed and relied upon the PRPM model in developing utility cost of equity recommendations.

(c) Please identify any state or federal public utility rate of return decisions that have approved or adopted this model for setting utility return on equity.

RESPONSE: a) Ms. Ahern first began employing the PRPM model in May 2012.

b) Frank J. Hanley and Dylan W. D'Ascendis are also witnesses that have employed the PRPM model.

c) To the best of Ms. Ahern's knowledge, no regulatory commission has expressly accepted or rejected the Predictive Risk Premium Model (PRPM^{TM}) in any regulatory proceedings in which Ms. Ahern or other AUS Consultants' witnesses have testified to date. It has, however, also been presented to a number of utility industry groups including the following: The Edison Electric Institute Cost of Capital Working Group; The NARUC Staff Subcommittee on Accounting and Finance; The National Association of Water Companies Finance/Accounting/Taxation and Rates and Regulations Committees; the NARUC Water Committee; The Wall Street Utility Group; the Indiana Utility Regulatory Commission Cost of Capital Task Force; the Financial Research Institute of the University of Missouri Hot Topic Hotline Webinar; and the Center for Research and Regulated Industries Annual Eastern Conference on two occasions. The PRPM^{TM} also formed the basis of "Comparative Evaluation of the Predictive Risk Premium Model^{TM}" (co-authored with Richard A. Michelfelder, Ph.D., Rutgers Univ., Dylan W. D'Ascendis and Frank J. Hanley (both of AUS Consultants, The Electricity Journal, May 2013), a follow-up article to the original "A New Approach for Estimating the Equity Risk Premium for Public Utilities" provided in Attachment DIV 1-17.

Prepared by: Pauline M. Ahern, CRRA

Div. 1-19: Please provide Ms. Ahern's opinion concerning UWRI's business risk at this time as compared to its business risk profile at the time of the Company's last rate case in 2011. If she believes the business risk has increased, please provide the basis for that conclusion, including the supporting evidence.

RESPONSE: It is Ms. Ahern's opinion that United Water Rhode Island's business risk relative to the proxy group has not changed since United Water Rhode Island filed its last case in 2011. In both cases, Ms. Ahern [TM] made a 55 basis point upward adjustment for business risk.

Prepared by: Pauline M. Ahern, CRRA

Div. 1-20: Is Ms. Ahern the only UWRI witness in this case sponsoring the capital structure and cost of debt recommendations? If there is another sponsoring witness, please identify.

RESPONSE: Yes, Ms. Ahern is the United Water Rhode Island Witness sponsoring capital structure and cost of debt recommendations.

Prepared by: