

Weighted Average Awarded Return Recommendation

Exhibit DJG-2

Source	Capital Structure	Cost Rates	Weighted Cost
Long-term Debt	51.50%	5.62%	2.89%
Common Equity	48.50%		
Recommended Range for Awarded Rate of Return			

Proxy Group Summary

Exhibit DJG-4

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Market Cap. (\$ millions)	Market Category	Moody's Ratings	Value Line Safety Rank	Financial Strength	Value Line Region
ALLETE	ALE	4,000	Mid Cap	A3	2	A	Central
Ameren Corp.	AEE	15,000	Large Cap	Baa1	2	A	Central
Avangrid, Inc.	AGR	15,000	Large Cap	Baa1	2	B++	East
Avista Corp.	AVA	3,300	Mid Cap	Baa1	2	A	West
Black Hills	BKH	3,700	Mid Cap	Baa2	2	A	West
CMS Energy Corp.	CMS	14,000	Large Cap	Baa1	2	B++	Central
Dominion Energy	D	50,000	Large Cap	Baa2	2	B++	East
DTE Energy Co.	DTE	20,000	Large Cap	Baa1	2	B++	Central
Edison International	EIX	25,000	Large Cap	A3	2	A	West
El Paso Electric	EE	2,100	Mid Cap	Baa1	2	B++	West
Exelon Corp.	EXC	37,000	Large Cap	Baa2	3	B++	East
Hawaiian Elec.	HE	3,500	Mid Cap	Baa2	2	A	West
IDACORP, Inc.	IDA	4,200	Mid Cap	Baa1	2	A	West
NorthWestern Corp.	NWE	2,900	Mid Cap	Baa1	3	B+	West
Otter Tail Corp.	OTTR	1,700	Small Cap	A3	2	A	Central
PG&E Corp.	PCG	34,000	Large Cap	A3	2	B++	West
Portland General	POR	4,000	Mid Cap	A3	2	B++	West
Sempra Energy	SRE	28,000	Large Cap	Baa1	2	A	West

[1], [4], [5], [6] Value Line Investment Survey

[2] Large Cap > \$10 billion; Mid Cap > \$2 billion; Small Cap > \$200 million

[3] Bond ratings

Stock and Index Prices

Exhibit DJG-4

Ticker	^GSPC	ALE	AEE	AGR	AVA	BKH	CMS	D	DTE	EIX	EE	EXC	HE	IDA	NWE	OTTR	PCG	POR	SRE
30-day Average	2517	78.05	59.24	47.53	51.79	68.89	47.24	77.90	109.38	78.64	55.91	37.98	33.84	89.36	58.27	43.75	67.52	46.30	115.60
Standard Deviation	29.4	0.63	0.82	0.59	0.34	0.91	0.80	1.00	1.56	1.20	1.14	0.71	0.39	1.04	0.79	1.10	4.03	0.61	1.93
09/06/17	2466	77.63	59.04	47.50	51.68	69.80	48.18	77.99	110.85	79.00	54.71	37.55	33.48	89.72	59.17	42.05	69.14	46.82	116.37
09/07/17	2465	78.65	59.45	48.04	52.02	69.93	48.46	78.25	111.03	79.61	55.16	38.03	33.60	90.83	59.46	42.65	69.76	47.25	118.13
09/08/17	2461	79.14	59.66	48.37	51.74	70.22	48.66	79.24	112.01	80.18	55.61	38.17	34.13	91.40	59.71	42.80	70.09	47.52	118.32
09/11/17	2488	79.14	60.47	48.62	51.56	70.83	49.10	79.92	112.67	80.92	56.01	38.47	34.42	91.88	60.11	43.20	71.00	47.84	119.21
09/12/17	2496	77.75	59.45	47.69	51.39	69.50	48.08	78.18	110.47	80.18	54.96	37.88	33.86	89.87	58.82	42.10	69.61	46.89	117.50
09/13/17	2498	77.56	58.89	47.22	51.33	69.48	47.50	78.07	109.41	80.42	54.67	37.80	33.74	89.50	58.70	42.15	69.01	46.54	117.29
09/14/17	2496	78.20	59.56	47.42	51.39	69.82	47.89	79.17	110.76	80.47	55.15	38.10	33.82	89.96	59.23	42.60	69.54	46.74	118.25
09/15/17	2500	78.41	59.81	47.51	51.64	69.63	47.87	79.50	111.45	80.64	55.15	37.61	33.72	90.06	58.96	43.00	69.73	46.62	118.45
09/18/17	2504	77.65	59.25	47.02	51.39	68.95	47.63	78.55	110.53	79.99	54.80	37.40	33.49	89.18	58.41	42.90	69.11	46.02	116.83
09/19/17	2507	77.68	59.25	46.77	51.53	69.00	47.39	78.33	110.18	79.16	54.85	37.28	33.37	89.11	58.47	43.05	68.74	46.23	116.75
09/20/17	2508	77.29	58.74	46.49	51.43	68.51	47.07	77.62	108.88	78.54	54.40	36.91	33.37	88.60	58.34	42.95	68.51	45.93	115.76
09/21/17	2501	77.15	58.81	46.56	51.30	68.73	47.06	77.30	109.02	78.11	54.90	37.15	33.56	88.52	58.64	43.00	68.64	45.96	115.91
09/22/17	2502	76.91	58.51	46.50	51.40	68.60	46.47	77.04	108.38	77.74	54.65	37.12	33.48	87.75	57.75	42.80	68.36	45.58	115.94
09/25/17	2497	77.56	59.38	47.10	51.53	69.23	47.10	78.02	109.74	78.72	55.30	37.60	33.80	88.67	57.87	43.15	68.75	45.95	116.88
09/26/17	2497	77.42	59.14	47.14	51.49	68.96	46.94	78.21	109.53	78.60	55.20	37.17	33.70	88.41	57.78	43.35	68.50	46.06	116.26
09/27/17	2507	77.70	57.92	46.75	51.54	69.07	46.23	76.78	107.24	77.54	55.30	37.15	33.55	88.35	57.42	44.05	67.44	45.90	114.50
09/28/17	2510	77.84	58.36	47.19	51.62	69.33	46.35	77.03	107.66	77.57	55.60	37.40	33.67	88.58	57.50	44.30	68.05	46.11	114.58
09/29/17	2519	77.29	57.84	47.42	51.77	68.87	46.32	76.93	107.36	77.17	55.25	37.67	33.37	87.93	56.94	43.35	68.09	45.64	114.13
10/02/17	2529	77.82	58.39	47.54	52.20	68.62	46.42	76.74	107.37	77.00	56.05	38.14	33.64	88.78	57.27	44.45	68.13	46.10	113.98
10/03/17	2535	77.55	57.93	47.48	52.18	69.08	45.97	75.95	106.60	77.01	56.15	37.84	33.64	88.42	57.30	44.35	68.31	46.12	113.87
10/04/17	2538	78.49	58.55	47.94	52.16	69.73	46.49	76.87	107.55	77.85	56.70	38.19	33.82	89.15	57.66	44.75	69.20	46.48	114.56
10/05/17	2552	78.49	58.84	48.31	52.05	69.15	46.53	76.81	107.75	77.68	56.75	38.35	33.78	88.69	57.73	44.85	69.07	46.31	112.02
10/06/17	2549	78.31	58.78	47.64	52.02	67.08	46.30	76.81	107.68	77.62	56.85	38.15	33.90	88.44	57.37	44.80	68.84	46.07	111.95
10/09/17	2545	78.08	59.15	47.38	52.20	67.09	46.48	76.64	107.93	77.55	57.05	38.04	33.80	88.38	57.44	44.40	68.65	46.05	112.63
10/10/17	2551	78.81	59.86	47.88	52.35	68.04	47.00	77.74	109.29	78.54	57.65	38.30	34.07	89.25	57.91	45.20	69.19	46.58	113.81
10/11/17	2555	79.06	59.78	48.25	52.24	68.00	47.35	78.01	109.70	78.42	57.85	38.46	34.28	89.54	58.00	45.25	69.15	46.70	114.94
10/12/17	2551	78.81	60.34	48.39	52.23	68.42	47.72	78.63	110.67	79.66	58.20	38.94	34.35	90.67	58.66	45.45	64.50	46.59	115.96
10/13/17	2553	78.38	60.41	47.99	52.23	67.67	47.54	78.62	109.89	77.99	58.10	39.24	34.33	90.34	58.44	45.30	57.72	46.25	114.87
10/16/17	2558	78.01	60.64	47.78	52.01	67.69	47.41	79.03	109.63	77.64	57.00	39.67	34.67	90.18	58.50	45.10	53.43	44.77	114.46
10/17/17	2559	78.78	60.95	48.11	51.99	67.60	47.81	78.96	110.16	77.60	57.15	39.60	34.89	90.59	58.63	45.25	57.44	45.50	114.04

All prices are adjusted closing prices reported by Yahoo! Finance, <http://finance.yahoo.com>

Dividend Yields

Exhibit DJG-5

		[1]	[2]	[3]
Company	Ticker	Dividend	Stock Price	Dividend Yield
ALLETE	ALE	0.535	78.05	0.69%
Ameren Corp.	AEE	0.440	59.24	0.74%
Avangrid, Inc.	AGR	0.432	47.53	0.91%
Avista Corp.	AVA	0.357	51.79	0.69%
Black Hills	BKH	0.445	68.89	0.65%
CMS Energy Corp.	CMS	0.333	47.24	0.70%
Dominion Energy	D	0.755	77.90	0.97%
DTE Energy Co.	DTE	0.825	109.38	0.75%
Edison International	EIX	0.543	78.64	0.69%
El Paso Electric	EE	0.335	55.91	0.60%
Exelon Corp.	EXC	0.327	37.98	0.86%
Hawaiian Elec.	HE	0.310	33.84	0.92%
IDACORP, Inc.	IDA	0.550	89.36	0.62%
NorthWestern Corp.	NWE	0.525	58.27	0.90%
Otter Tail Corp.	OTTR	0.320	43.75	0.73%
PG&E Corp.	PCG	0.530	67.52	0.78%
Portland General	POR	0.340	46.30	0.73%
Sempra Energy	SRE	0.822	115.60	0.71%
Average		\$0.48	\$64.84	0.76%

[1] Third quarter 2017 dividends per share. Nasdaq.com

[2] Average stock price from DJG stock price exhibit.

[3] = [1] / [2]

Terminal Growth Rate

Exhibit DJG-6

Growth Determinant	Rate	
Nominal GDP	4.10%	[1]
Inflation	2.00%	[2]
Risk Free Rate	2.80%	[3]
Average	2.97%	

[1], [2] CBO Long-Term Budget Outlook 2016 - 2046

[3] From DJG risk-free rate exhibit

Final DCF Result

Exhibit DJG-7

[1]	[2]	[3]	[4]
Dividend (d_0)	Stock Price (P_0)	Growth Rate (g)	DCF Result
\$0.48	\$64.84	4.10%	7.2%

[1] Average proxy dividend from DJG dividend exhibit

[2] Average proxy stock price from DJG dividend exhibit

[3] Highest growth rate from DJG growth determinant exhibit

[4] Quarterly DCF Approximation = $[d_0(1+g)^{0.25}/P_0 + (1+g)^{0.25}]^4 - 1$

Risk-Free Rate

Exhibit DJG-8

Date	Rate
09/05/17	2.69%
09/06/17	2.72%
09/07/17	2.66%
09/08/17	2.67%
09/11/17	2.75%
09/12/17	2.78%
09/13/17	2.79%
09/14/17	2.77%
09/15/17	2.77%
09/18/17	2.80%
09/19/17	2.81%
09/20/17	2.82%
09/21/17	2.80%
09/22/17	2.80%
09/25/17	2.76%
09/26/17	2.78%
09/27/17	2.86%
09/28/17	2.87%
09/29/17	2.86%
10/02/17	2.87%
10/03/17	2.87%
10/04/17	2.87%
10/05/17	2.89%
10/06/17	2.91%
10/10/17	2.88%
10/11/17	2.88%
10/12/17	2.86%
10/13/17	2.81%
10/16/17	2.82%
10/17/17	2.80%
Average	2.81%

*Daily Treasury Yield Curve Rates on 30-year T-bonds, <http://www.treasury.gov/resources-center/data-chart-center/interest-rates/>.

Beta Results

Exhibit DJG-9

<u>Company</u>	<u>Ticker</u>	<u>Beta</u>
ALLETE	ALE	0.75
Ameren Corp.	AEE	0.65
Avangrid, Inc.	AGR	NMF
Avista Corp.	AVA	0.70
Black Hills	BKH	0.85
CMS Energy Corp.	CMS	0.65
Dominion Energy	D	0.65
DTE Energy Co.	DTE	0.65
Edison International	EIX	0.60
El Paso Electric	EE	0.75
Exelon Corp.	EXC	0.70
Hawaiian Elec.	HE	0.70
IDACORP, Inc.	IDA	0.70
NorthWestern Corp.	NWE	0.65
Otter Tail Corp.	OTTR	0.90
PG&E Corp.	PCG	0.65
Portland General	POR	0.70
Sempra Energy	SRE	0.80
Average		0.71

*Betas from Value Line Investment Survey

Implied Equity Risk Premium

Exhibit DJG-10

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Year	Index Value	Operating Earnings	Dividends	Buybacks	Earnings Yield	Dividend Yield	Buyback Yield	Gross Cash Yield
2011	11,385	877	240	405	7.70%	2.11%	3.56%	5.67%
2012	12,742	870	281	399	6.83%	2.20%	3.13%	5.33%
2013	16,495	956	312	476	5.80%	1.89%	2.88%	4.77%
2014	18,245	1,004	350	553	5.50%	1.92%	3.03%	4.95%
2015	17,900	885	382	572	4.95%	2.14%	3.20%	5.33%
2015	19,268	920	397	536	4.77%	2.06%	2.78%	4.85%
Cash Yield	5.15%	[9]						
Growth Rate	0.96%	[10]						
Risk-free Rate	2.81%	[11]						
Current Index Value	2,517	[12]						
	[13]	[14]	[15]	[16]	[17]			
Year	1	2	3	4	5			
Expected Dividends	131	132	133	135	136			
Expected Terminal Value					2868			
Present Value	122	114	107	100	2074			
Intrinsic Index Value	2517	[18]						
Required Return on Market	7.68%	[19]						
Implied Equity Risk Premium	4.88%	[20]						

[1-4] S&P Quarterly Press Releases, data found at <https://us.spindices.com/indices/equity/sp-500> (additional info tab) (all dollar figures are in \$ billions)

[1] Market value of S&P 500

[5] = [2] / [1]

[6] = [3] / [1]

[7] = [4] / [1]

[8] = [6] + [7]

[9] = Average of [8]

[10] = Compound annual growth rate of [2] = (end value / beginning value)^{1/4}-1

[11] Risk-free rate from DJG risk-free rate exhibit

[12] 30-day average of closing index prices from DJG stock price exhibit

[13-16] Expected dividends = [9]*[12]*(1+[10])ⁿ; Present value = expected dividend / (1+[11]+[19])ⁿ

[17] Expected terminal value = expected dividend * (1+[11]) / [19]; Present value = (expected dividend + expected terminal value) / (1+[11]+[19])ⁿ

[18] = Sum([13-17]) present values.

[19] = [20] + [11]

[20] Internal rate of return calculation setting [18] equal to [12] and solving for the discount rate

Equity Risk Premium Results

Exhibit DJG-11

IESE Business School Survey	5.7%	[1]
Graham & Harvey Survey	4.0%	[2]
Duff & Phelps Report	5.0%	[3]
Damodaran	5.2%	[4]
Garrett	4.9%	[5]
Highest	5.7%	

[1] IESE Business School Survey

[2] Graham and Harvey Survey

[3] Duff & Phelps Client Alert 2016

[4] Average ERP est., <http://pages.stern.nyu.edu/~adamodar/>
(avg. 4.63%, 4.92%, 6.16%)

[5] From DJG implied ERP exhibit

CAPM Final Results

Exhibit DJG-12

		[1]	[2]	[3]	[4]
Company	Ticker	Risk-Free Rate	Value Line Beta	Risk Premium	CAPM Results
ALLETE	ALE	2.81%	0.750	5.70%	7.1%
Ameren Corp.	AEE	2.81%	0.650	5.70%	6.5%
Avangrid, Inc.	AGR	2.81%	NMF	5.70%	NA
Avista Corp.	AVA	2.81%	0.700	5.70%	6.8%
Black Hills	BKH	2.81%	0.850	5.70%	7.7%
CMS Energy Corp.	CMS	2.81%	0.650	5.70%	6.5%
Dominion Energy	D	2.81%	0.650	5.70%	6.5%
DTE Energy Co.	DTE	2.81%	0.650	5.70%	6.5%
Edison International	EIX	2.81%	0.600	5.70%	6.2%
El Paso Electric	EE	2.81%	0.750	5.70%	7.1%
Exelon Corp.	EXC	2.81%	0.700	5.70%	6.8%
Hawaiian Elec.	HE	2.81%	0.700	5.70%	6.8%
IDACORP, Inc.	IDA	2.81%	0.700	5.70%	6.8%
NorthWestern Corp.	NWE	2.81%	0.650	5.70%	6.5%
Otter Tail Corp.	OTTR	2.81%	0.900	5.70%	7.9%
PG&E Corp.	PCG	2.81%	0.650	5.70%	6.5%
Portland General	POR	2.81%	0.700	5.70%	6.8%
Sempra Energy	SRE	2.81%	0.800	5.70%	7.4%
Average			0.709		6.8%

[1] From DJG risk-free rate exhibit

[2] From DJG beta exhibit

[3] From DJG equity risk premium exhibit

[6] = [1] + [2] * [3]

Cost of Equity Summary

Model	Cost of Equity
Discounted Cash Flow Model	7.2%
Capital Asset Pricing Model	6.8%
Average	7.0%

Market Cost of Equity

Exhibit DJG-14

<u>Source</u>	<u>Estimate</u>	
IESE Survey	8.5%	[1]
Graham Harvey Survey	6.8%	[2]
Damodaran	8.0%	[3]
Garrett	7.7%	[4]
Average	7.8%	

[1] Average reported ERP + riskfree rate

[2] Average reported ERP + risk-free rate

[3] Recent highest reported ERP + risk-free rate

[4] From implied ERP exhibit herein

Awarded Returns vs. Market Cost of Equity (2005 - 2016)

Exhibit DJG-15

[1]			[2]		[3]				
Quarter	Cases Filed	Average Awarded ROE	Year	Annual Market Return					
2005.1	4	10.55%	2005	4.83%					
2005.2	12	10.13%	2006	15.61%					
2005.3	8	10.84%	2007	5.48%					
2005.4	10	10.57%	2008	-36.55%					
2006.1	11	10.38%	2009	25.94%					
2006.2	18	10.39%	2010	14.82%					
2006.3	7	10.06%	2011	2.10%					
2006.4	12	10.38%	2012	15.89%					
2007.1	11	10.30%	2013	32.15%					
2007.2	16	10.27%	2014	13.25%					
2007.3	8	10.02%	2015	1.38%					
2007.4	11	10.44%	2016	11.74%					
2008.1	7	10.15%	Average						
2008.2	8	10.41%	Arithmetic			8.89%	[4]		
2008.3	21	10.42%	Geometric			7.39%	[5]		
2008.4	6	10.38%	Average Return on All Stocks					8.1%	[6]
2009.1	13	10.31%	Average Utility Awarded ROE					10.2%	[7]
2009.2	22	10.55%	[8]						
2009.3	17	10.46%	Year			Market Cost of Equity			
2009.4	14	10.54%	2005	8.47%					
2010.1	16	10.45%	2006	8.86%					
2010.2	19	10.12%	2007	8.39%					
2010.3	12	10.27%	2008	8.64%					
2010.4	8	10.30%	2009	8.20%					
2011.1	8	10.35%	2010	8.49%					
2011.2	15	10.24%	2011	7.89%					
2011.3	17	10.13%	2012	7.54%					
2011.4	10	10.29%	2013	8.00%					
2012.1	17	10.84%	2014	7.95%					
2012.2	16	9.92%	2015	8.39%					
2012.3	8	9.78%	2016	8.14%					
2012.4	12	10.05%	Average				8.25%		
2013.1	19	10.23%							
2013.2	16	9.77%							
2013.3	4	10.06%							
2013.4	7	9.90%							
2014.1	9	10.23%							
2014.2	25	9.83%							
2014.3	8	9.89%							
2014.4	16	9.78%							
2015.1	10	10.37%							
2015.2	21	9.73%							
2015.3	6	9.40%							
2015.4	11	9.62%							
2016.1	14	10.26%							
2016.2	27	9.57%							
2016.3	12	9.76%							
2016.4	17	9.57%							

[1] Edison Electric Institute Financial Update. Number of cases filed in each quarter.

[2] Edison Electric Institute Financial Update. Average awarded utility ROE each quarter.

[3] Historical stock returns. NYU Stern School of Business. <http://pages.stern.nyu.edu/~adamodar/>.

[4] = Average of [3]

[5] = Geometric mean of [3]

[6] = Average ([4],[5])

[7] = Average of [2]

[8] Annual required market returns. NYU Stern School of Business. <http://pages.stern.nyu.edu/~adamodar/> (adding risk-free rate to implied ERP)

Optimal Capital Structure

Exhibit DJG-16

Inputs			[14]	[15]	[16]	[17]																																																								
EBIT	289,803	[1]	<table border="1"> <thead> <tr> <th colspan="4">Ratings Table</th> </tr> <tr> <th>Coverage Ratio</th> <th>Bond Rating</th> <th>Spread</th> <th>Interest Rate</th> </tr> </thead> <tbody> <tr> <td>8.5 - 10.00</td> <td>Aaa/AAA</td> <td>0.60%</td> <td>3.41%</td> </tr> <tr> <td>6.5 - 8.49</td> <td>Aa2/AA</td> <td>0.80%</td> <td>3.61%</td> </tr> <tr> <td>5.5 - 6.49</td> <td>A1/A+</td> <td>1.00%</td> <td>3.81%</td> </tr> <tr> <td>4.25 - 5.49</td> <td>A2/A</td> <td>1.10%</td> <td>3.91%</td> </tr> <tr> <td>3.0 - 4.24</td> <td>A3/A-</td> <td>1.25%</td> <td>4.06%</td> </tr> <tr> <td>2.5 - 2.99</td> <td>Baa2/BBB</td> <td>1.60%</td> <td>4.41%</td> </tr> <tr> <td>2.25 - 2.49</td> <td>Ba1/BB+</td> <td>2.50%</td> <td>5.31%</td> </tr> <tr> <td>2.0 - 2.24</td> <td>Ba2/BB</td> <td>3.00%</td> <td>5.81%</td> </tr> <tr> <td>1.75 - 1.99</td> <td>B1/B+</td> <td>3.75%</td> <td>6.56%</td> </tr> <tr> <td>1.5 - 1.74</td> <td>B2/B</td> <td>4.50%</td> <td>7.31%</td> </tr> <tr> <td>1.25 - 1.49</td> <td>B3/B-</td> <td>5.50%</td> <td>8.31%</td> </tr> <tr> <td>0.8 - 1.24</td> <td>Caa/CCC</td> <td>6.50%</td> <td>9.31%</td> </tr> </tbody> </table>				Ratings Table				Coverage Ratio	Bond Rating	Spread	Interest Rate	8.5 - 10.00	Aaa/AAA	0.60%	3.41%	6.5 - 8.49	Aa2/AA	0.80%	3.61%	5.5 - 6.49	A1/A+	1.00%	3.81%	4.25 - 5.49	A2/A	1.10%	3.91%	3.0 - 4.24	A3/A-	1.25%	4.06%	2.5 - 2.99	Baa2/BBB	1.60%	4.41%	2.25 - 2.49	Ba1/BB+	2.50%	5.31%	2.0 - 2.24	Ba2/BB	3.00%	5.81%	1.75 - 1.99	B1/B+	3.75%	6.56%	1.5 - 1.74	B2/B	4.50%	7.31%	1.25 - 1.49	B3/B-	5.50%	8.31%	0.8 - 1.24	Caa/CCC	6.50%	9.31%
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Interest Expense	87,130	[2]																																																												
Book Debt	1,682,004	[3]																																																												
Book Equity	1,648,727	[4]																																																												
Debt / Capital	50.50%	[5]																																																												
Debt / Equity	102%	[6]																																																												
Debt Cost	5.62%	[7]																																																												
Tax Rate	35%	[8]																																																												
Unlevered Beta	0.43	[9]																																																												
Risk-free Rate	2.81%	[10]																																																												
Equity Risk Premium	5.70%	[11]																																																												
Coverage Ratio	3.33	[12]																																																												
Bond Rating	Baa1	[13]																																																												

[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Optimal Capital Structure Calculation											
Debt Ratio	D/E Ratio	Levered Beta	True Cost of Equity	Awarded ROE	Debt Level	Interest Expense	Coverage Ratio	Pre-tax Debt Cost	After-tax Debt Cost	Optimal WACC	WACC at 9.9% ROE
0%	0%	0.426	5.24%	9.90%	0	0	∞	3.41%	2.22%	5.24%	9.90%
20%	25%	0.495	5.63%	9.90%	666,146	37,437	7.74	3.61%	2.35%	4.97%	8.39%
30%	43%	0.545	5.91%	9.90%	999,219	56,156	5.16	3.91%	2.54%	4.90%	7.69%
40%	67%	0.611	6.29%	9.90%	1,332,292	74,875	3.87	4.06%	2.64%	4.83%	7.00%
50%	100%	0.703	6.82%	9.90%	1,665,366	93,594	3.10	4.06%	2.64%	4.73%	6.27%
60%	150%	0.842	7.61%	9.90%	1,998,439	112,312	2.58	4.41%	2.87%	4.76%	5.68%
70%	233%	1.073	8.92%	9.90%	2,331,512	131,031	2.21	5.31%	3.45%	5.09%	5.39%

[1], [2] Q-AG-01-002 AG-1-2 Attachment (11) (000's)

[3], [4] Company Schedule DPH-31 (000's)

[5] = [3] / ([3] + [4])

[6] = [3] / [4]

[7] Company Schedule DPH-31

[8] Estimated corporate tax rate

[9] Average beta / (1+(1-[8])*[6])

[10] From DJG risk-free rate exhibit

[11] From DJG equity risk premium exhibit

[12] = [1] / [2]

[13] Company bond rating

[14] Ranges of coverage ratios

[15] Moody's / S&P bond ratings

[16] NYU spread over risk-free rate

[17] = [16] + [10] = est. debt cost

[18] = debt / total capital

[19] = [18] / (1 - [18])

[20] = [9] * (1 + (1 - [8]) * [6])

[21] = [10] + [20] * [11]

[22] Recommended awarded ROE

[23] = [18] * ([3] + [4]); (000's)

[24] = [22] * [7]; (000's)

[25] = [1] / [23]

[26] Debt cost given coverage ratio per Ratings Table

[27] = [25] * (1 - [8])

[28] = ([18] * [26]) + ((1 - [18]) * [21])

[29] = ([18] * [26]) + ((1 - [18]) * [22])

Competitive Industry Debt Ratios

Exhibit DJG-17

Industry	Number of Firms	Debt Ratio
Advertising	41	87%
Hospitals/Healthcare Facilities	38	84%
Broadcasting	30	83%
Restaurant/Dining	86	82%
Tobacco	22	80%
Coal & Related Energy	38	79%
Brokerage & Investment Banking	45	76%
Retail (Building Supply)	6	75%
Retail (Automotive)	25	73%
Auto & Truck	15	73%
Trucking	30	73%
Packaging & Container	26	66%
Bank (Money Center)	10	66%
Beverage (Soft)	36	66%
Office Equipment & Services	24	65%
Telecom. Services	67	64%
Retail (Distributors)	88	62%
Power	68	62%
Hotel/Gaming	69	61%
Telecom (Wireless)	17	61%
R.E.I.T.	238	60%
Food Wholesalers	16	60%
Retail (Grocery and Food)	14	59%
Real Estate (Operations & Services)	54	59%
Transportation	17	59%
Chemical (Basic)	45	58%
Construction Supplies	51	58%
Environmental & Waste Services	89	57%
Farming/Agriculture	37	56%
Business & Consumer Services	165	56%
Air Transport	18	56%
Green & Renewable Energy	25	55%
Computer Services	117	54%
Oil/Gas Distribution	78	54%
Utility (Water)	22	54%
Cable TV	14	53%
Steel	38	53%
Rubber& Tires	4	52%
Drugs (Biotechnology)	426	52%
Chemical (Specialty)	100	52%
Recreation	66	51%
Software (System & Application)	236	51%
Metals & Mining	97	51%
Beverage (Alcoholic)	25	51%
Information Services	64	51%
Household Products	129	51%
Chemical (Diversified)	8	50%
Aerospace/Defense	96	50%
Building Materials	41	50%
Oil/Gas (Production and Exploration)	330	50%
Investments & Asset Management	156	49%
Auto Parts	63	48%
Total / Average	3660	61%

Proxy Company Debt Ratios

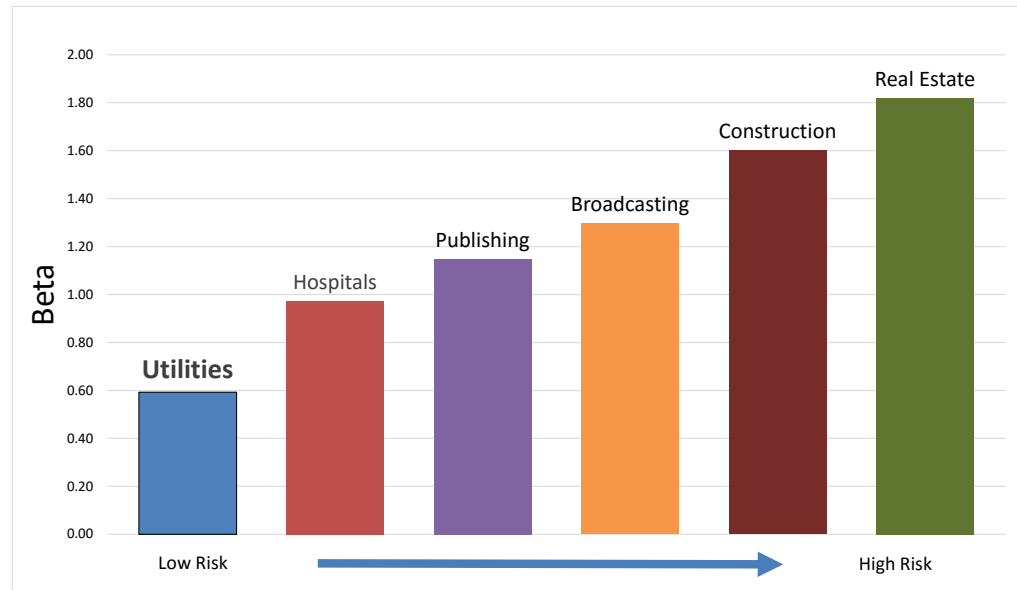
Exhibit DJG-18

<u>Company</u>	<u>Ticker</u>	<u>Debt Ratio</u>
ALLETE	ALE	42%
Ameren Corp.	AEE	48%
Avangrid, Inc.	AGR	23%
Avista Corp.	AVA	51%
Black Hills	BKH	67%
CMS Energy Corp.	CMS	67%
Dominion Energy	D	67%
DTE Energy Co.	DTE	56%
Edison International	EIX	42%
El Paso Electric	EE	53%
Exelon Corp.	EXC	56%
Hawaiian Elec.	HE	42%
IDACORP, Inc.	IDA	45%
NorthWestern Corp.	NWE	52%
Otter Tail Corp.	OTTR	43%
PG&E Corp.	PCG	47%
Portland General	POR	48%
<u>Sempra Energy</u>	SRE	<u>53%</u>
Average		50%

Debt ratios from Value Line Investment Survey

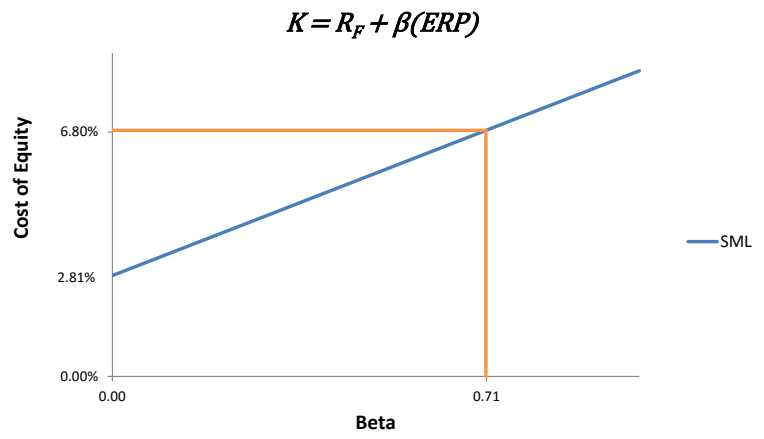
<i>Industry</i>	<i>Beta</i>
Utility (General)	0.59
Hospitals	0.97
Publishing	1.15
Broadcasting	1.30
Construction Supplies	1.60
Real Estate	1.82

See Betas by Sector (US) at <http://pages.stern.nyu.edu/~adamodar/>.



Risk-free Rate 2.81%
 Equity risk premium 5.70%
 Beta 0.709
 CAPM Result 0.068

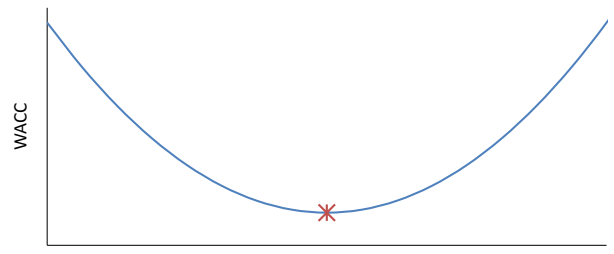
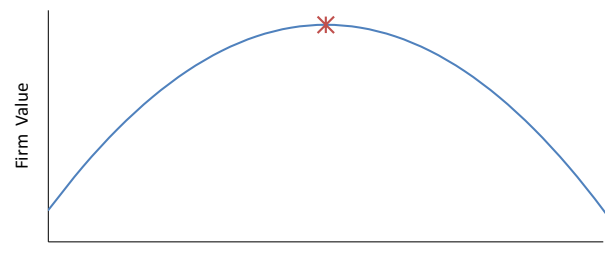
X	Y	ER		
0.00	0.0281	0.0685	0.7088	0.0000
0.50	0.0566	0.0685	0.7088	0.0685
0.71	0.0685	0.0685		
1.00	0.0851			



a		X	Y	X	Y	X	Y	X	Y
	-0.04	0	0	20	0	60	0	100	0
b		1	5	20	1880	60	11160	100	15000
	5.5	2	22						

$$y = ax^2 + bx + c$$

WACC Min		X	WACC Min Y	Value Max Y
a	0.2	0	15	2.2
b	-3.2	1	12	5.2
c	15	2	9.4	7.8
		3	7.2	10
		4	5.4	11.8
		5	4	13.2
		6	3	14.2
		7	2.4	14.8
		8	2.2	15
		9	2.4	14.8
		10	3	14.2
		11	4	13.2
		12	5.4	11.8
		13	7.2	10
		14	9.4	7.8
		15	12	5.2
		16	15	2.2
		17	18.4	-1.2
		18	22.2	-5
		19	26.4	-9.2
		20	31	-13.8



Debt Ratio

X	Y	Top Line	Mid Line	Bot. Line	Top Arrow	Bottom Arrow
1	100	0	100	0	-40	22 10 22 -5
2	75	1	100	0	-40	22 90 22 -35
3	55	2	100	0	-40	
4	37	3	100	0	-40	
5	25	4	100	0	-40	
6	17	5	100	0	-40	
7	12	6	100	0	-40	
8	8.3	7	100	0	-40	
9	5.5	8	100	0	-40	
10	4	9	100	0	-40	
11	3.2	10	100	0	-40	
12	2.7	11	100	0	-40	
13	2.3	12	100	0	-40	
14	1.9	13	100	0	-40	
15	1.7	14	100	0	-40	
16	1.5	15	100	0	-40	
17	1.3	16	100	0	-40	
18	1.2	17	100	0	-40	
19	1.1	18	100	0	-40	
20	1	19	100	0	-40	
		20	100	0	-40	

