

Rounded:

Current

	Periodicity	Market Value
DCF-IBES	2008	44.00%
DCF-Sustainable	2008	44.00%
DCF-Three Stage	2008	44.00%
CAPM- Forward	2004-2008	56.00%
CAPM- Historic	2004-2009	56.00%
Historic - rf	na	na
Historic - Baa	na	na
DCF Based RP -Baa	8/2007-3/2010	53.00%
Average		

Electric Sample
Mkt. Value CEQ

		Electric					
		AmerenCIPS		AmerenCILCO		Ameren IP	
		Equity ratio		Equity ratio		Equity ratio	
		Book Value		Book Value		Book Value	
		48.69%		43.62%		44.06%	
		ROE					
		Bare	Adjusted	Bare	Adjusted	Bare	Adjusted
		13.60%	12.9%	13.60%	13.7%	13.60%	13.6%
		11.80%	11.3%	11.80%	11.8%	11.80%	11.8%
		12.40%	11.8%	12.40%	12.4%	12.40%	12.4%
		11.20%	11.9%	11.20%	12.5%	11.20%	12.4%
		10.10%	10.6%	10.10%	11.1%	10.10%	11.1%
		11.10%	11.1%	11.10%	11.1%	11.10%	11.1%
		11.50%	11.5%	11.50%	11.5%	11.50%	11.5%
		11.80%	12.3%	11.80%	12.9%	11.80%	12.8%
		11.69%	11.7%	11.69%	12.1%	11.69%	12.1%

CILCO WACC
as of 3/31/2009

CAPITAL COMPONENT	PERCENT OF TOTAL
Long-Term Debt	47.5%
Short-Term Debt	5.6%
Preferred Stock	3.3%
Common Equity	43.6%
TOTAL	100.0%

IP WACC
as of 3/31/2009

CAPITAL COMPONENT	PERCENT OF TOTAL
Long-Term Debt	53.7%
Short-Term Debt	0.4%
Preferred Stock	1.8%
Common Equity	44.1%
TOTAL	100.0%

CIPS
as of 12/31/2008

CAPITAL COMPONENT	PERCENT OF TOTAL
Long-Term Debt	40.4%
Short-Term Debt	5.9%
Preferred Stock	5.0%
Common Equity	48.7%
TOTAL	100.0%

Debt Cost

Gas	6.90%
Electric	7.60%

Tax Rate 38.50%

Mean Capital Structures
Electric

	BV	Mkt Val
Aug2007-2009March	43.4%	53.0%
2004-2008	42.9%	56.0%
2008	42.7%	44.0%

Electric	
DCF	
IBES	13.6%
Sustainable with SV	11.8%
Three-stage	12.4%
CAPM forward	11.2%
CAPM historic	10.1%
Historic utility risk free rate	11.1%
Historic utility risk Baa rated bonds	11.5%
DCF baa rated	11.8%
	11.7%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
44.00	56.00	56.4%	43.6%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	11.20%		56.00%	6.27%
Weighted Average Cost of Capital				8.33%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.05%		43.62%	5.69%
Weighted Average Cost of Capital				8.33%

Change in ROE 1.85%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
44.00	56.00	56.4%	43.6%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	11.20%		56.00%	6.27%
Weighted Average Cost of Capital				8.33%

t*new debt	at new tax rate	21.7055%
T*old debt		16.9400%
1-t*new debt		78.2945%
1-t*old debt		83.0600%
ratio		0.94
WACC*ratio		7.851%
New WACC	7.851%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.96%		43.62%	5.22%
Weighted Average Cost of Capital				7.85%

Change in ROE 0.76%

AVG ROE 12.50%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
44.00	56.00	55.9%	44.1%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	11.20%		56.00%	6.27%
Weighted Average Cost of Capital				8.33%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.97%		44.06%	5.71%
Weighted Average Cost of Capital				8.33%

Change in ROE 1.77%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
44.00	56.00	55.9%	44.1%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	11.20%		56.00%	6.27%
Weighted Average Cost of Capital				8.33%

t*new debt	at new tax rate	21.5366%
T*old debt		16.9400%
1-t*new debt		78.4634%
1-t*old debt		83.0600%
ratio		0.94
WACC*ratio		7.868%
New WACC	7.868%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.92%		44.06%	5.25%
Weighted Average Cost of Capital				7.87%

Change in ROE 0.72%

AVG ROE 12.45%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
44.00	56.00	51.3%	48.7%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	11.20%		56.00%	6.27%
Weighted Average Cost of Capital				8.33%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.18%		48.69%	5.93%
Weighted Average Cost of Capital				8.33%

Change in ROE 0.98%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
44.00	56.00	51.3%	48.7%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	11.20%		56.00%	6.27%
Weighted Average Cost of Capital				8.33%

t*new debt	at new tax rate	19.7532%
T*old debt		16.9400%
1-t*new debt		80.2468%
1-t*old debt		83.0600%
ratio		0.97
WACC*ratio		8.046%
New WACC	8.046%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.60%		48.69%	5.65%
Weighted Average Cost of Capital				8.05%

Change in ROE 0.40%

AVG ROE 11.89%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
44.00	56.00	56.4%	43.6%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	10.10%		56.00%	5.66%
Weighted Average Cost of Capital				7.71%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.64%		43.62%	5.08%
Weighted Average Cost of Capital				7.71%

Change in ROE 1.54%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
44.00	56.00	56.4%	43.6%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	10.10%		56.00%	5.66%
Weighted Average Cost of Capital				7.71%

t*new debt	at new tax rate	21.7055%
T*old debt		16.9400%
1-t*new debt		78.2945%
1-t*old debt		83.0600%
ratio		0.94
WACC*ratio		7.270%
New WACC	7.270%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.63%		43.62%	4.63%
Weighted Average Cost of Capital				7.27%

Change in ROE 0.53%

AVG ROE 11.13%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
44.00	56.00	55.9%	44.1%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	10.10%		56.00%	5.66%
Weighted Average Cost of Capital				7.71%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.57%		44.06%	5.10%
Weighted Average Cost of Capital				7.71%

Change in ROE 1.47%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
44.00	56.00	55.9%	44.1%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	10.10%		56.00%	5.66%
Weighted Average Cost of Capital				7.71%

t*new debt	at new tax rate	21.5366%
T*old debt		16.9400%
1-t*new debt		78.4634%
1-t*old debt		83.0600%
ratio		0.94
WACC*ratio		7.286%
New WACC	7.286%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.60%		44.06%	4.67%
Weighted Average Cost of Capital				7.29%

Change in ROE 0.50%

AVG ROE 11.09%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
44.00	56.00	51.3%	48.7%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	10.10%		56.00%	5.66%
Weighted Average Cost of Capital				7.71%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.91%		48.69%	5.31%
Weighted Average Cost of Capital				7.71%

Change in ROE 0.81%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
44.00	56.00	51.3%	48.7%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	44.00%	2.06%
	0.00%		0.00%	0.00%
Common Equity	10.10%		56.00%	5.66%
Weighted Average Cost of Capital				7.71%

t*new debt	at new tax rate	19.7532%
T*old debt		16.9400%
1-t*new debt		80.2468%
1-t*old debt		83.0600%
ratio		0.97
WACC*ratio		7.451%
New WACC	7.451%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.38%		48.69%	5.05%
Weighted Average Cost of Capital				7.45%

Change in ROE 0.28%

AVG ROE 10.65%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	56.4%	43.6%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	13.60%		44.00%	5.98%
Weighted Average Cost of Capital				8.60%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.68%		43.62%	5.97%
Weighted Average Cost of Capital				8.60%

Change in ROE 0.08%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	56.4%	43.6%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	13.60%		44.00%	5.98%
Weighted Average Cost of Capital				8.60%

t*new debt	at new tax rate	21.7055%
T*old debt		21.5600%
1-t*new debt		78.2945%
1-t*old debt		78.4400%
ratio		1.00
WACC*ratio		8.585%
New WACC	8.585%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.64%		43.62%	5.95%
Weighted Average Cost of Capital				8.59%

Change in ROE 0.04%

AVG ROE 13.66%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	55.9%	44.1%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	13.60%		44.00%	5.98%
Weighted Average Cost of Capital				8.60%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.59%		44.06%	5.99%
Weighted Average Cost of Capital				8.60%

Change in ROE -0.01%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	55.9%	44.1%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	13.60%		44.00%	5.98%
Weighted Average Cost of Capital				8.60%

t*new debt	at new tax rate	21.5366%
T*old debt		21.5600%
1-t*new debt		78.4634%
1-t*old debt		78.4400%
ratio		1.00
WACC*ratio		8.604%
New WACC	8.604%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.59%		44.06%	5.99%
Weighted Average Cost of Capital				8.60%

Change in ROE -0.01%

AVG ROE 13.59%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	51.3%	48.7%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	13.60%		44.00%	5.98%
Weighted Average Cost of Capital				8.60%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.74%		48.69%	6.20%
Weighted Average Cost of Capital				8.60%

Change in ROE -0.86%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	51.3%	48.7%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	13.60%		44.00%	5.98%
Weighted Average Cost of Capital				8.60%

t*new debt	at new tax rate	19.7532%
T*old debt		21.5600%
1-t*new debt		80.2468%
1-t*old debt		78.4400%
ratio		1.02
WACC*ratio		8.800%
New WACC	8.800%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.15%		48.69%	6.40%
Weighted Average Cost of Capital				8.80%

Change in ROE -0.45%

AVG ROE 12.94%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	56.4%	43.6%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	11.80%		44.00%	5.19%
Weighted Average Cost of Capital				7.81%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.86%		43.62%	5.17%
Weighted Average Cost of Capital				7.81%

Change in ROE 0.06%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	56.4%	43.6%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	11.80%		44.00%	5.19%
Weighted Average Cost of Capital				7.81%

t*new debt	at new tax rate	21.7055%
T*old debt		21.5600%
1-t*new debt		78.2945%
1-t*old debt		78.4400%
ratio		1.00
WACC*ratio		7.795%
New WACC	7.795%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.83%		43.62%	5.16%
Weighted Average Cost of Capital				7.79%

Change in ROE 0.03%

AVG ROE 11.85%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	55.9%	44.1%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	11.80%		44.00%	5.19%
Weighted Average Cost of Capital				7.81%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.79%		44.06%	5.19%
Weighted Average Cost of Capital				7.81%

Change in ROE -0.01%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	55.9%	44.1%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	11.80%		44.00%	5.19%
Weighted Average Cost of Capital				7.81%

t*new debt	at new tax rate	21.5366%
T*old debt		21.5600%
1-t*new debt		78.4634%
1-t*old debt		78.4400%
ratio		1.00
WACC*ratio		7.812%
New WACC	7.812%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.80%		44.06%	5.20%
Weighted Average Cost of Capital				7.81%

Change in ROE 0.00%

AVG ROE 11.79%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	51.3%	48.7%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	11.80%		44.00%	5.19%
Weighted Average Cost of Capital				7.81%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.11%		48.69%	5.41%
Weighted Average Cost of Capital				7.81%

Change in ROE -0.69%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	51.3%	48.7%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	11.80%		44.00%	5.19%
Weighted Average Cost of Capital				7.81%

t*new debt	at new tax rate	19.7532%
T*old debt		21.5600%
1-t*new debt		80.2468%
1-t*old debt		78.4400%
ratio		1.02
WACC*ratio		7.989%
New WACC	7.989%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.48%		48.69%	5.59%
Weighted Average Cost of Capital				7.99%

Change in ROE -0.32%

AVG ROE 11.30%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	56.4%	43.6%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	12.40%		44.00%	5.46%
Weighted Average Cost of Capital				8.07%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.47%		43.62%	5.44%
Weighted Average Cost of Capital				8.07%

Change in ROE 0.07%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	56.4%	43.6%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	12.40%		44.00%	5.46%
Weighted Average Cost of Capital				8.07%

t*new debt	at new tax rate	21.7055%
T*old debt		21.5600%
1-t*new debt		78.2945%
1-t*old debt		78.4400%
ratio		1.00
WACC*ratio		8.058%
New WACC	8.058%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.43%		43.62%	5.42%
Weighted Average Cost of Capital				8.06%

Change in ROE 0.03%

AVG ROE 12.45%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	55.9%	44.1%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	12.40%		44.00%	5.46%
Weighted Average Cost of Capital				8.07%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.39%		44.06%	5.46%
Weighted Average Cost of Capital				8.07%

Change in ROE -0.01%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	55.9%	44.1%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	12.40%		44.00%	5.46%
Weighted Average Cost of Capital				8.07%

t*new debt	at new tax rate	21.5366%
T*old debt		21.5600%
1-t*new debt		78.4634%
1-t*old debt		78.4400%
ratio		1.00
WACC*ratio		8.076%
New WACC	8.076%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.39%		44.06%	5.46%
Weighted Average Cost of Capital				8.08%

Change in ROE -0.01%

AVG ROE 12.39%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
56.00	44.00	51.3%	48.7%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	12.40%		44.00%	5.46%
Weighted Average Cost of Capital				8.07%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.66%		48.69%	5.68%
Weighted Average Cost of Capital				8.07%

Change in ROE -0.74%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
56.00	44.00	51.3%	48.7%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.00%	2.62%
	0.00%		0.00%	0.00%
Common Equity	12.40%		44.00%	5.46%
Weighted Average Cost of Capital				8.07%

t*new debt	at new tax rate	19.7532%
T*old debt		21.5600%
1-t*new debt		80.2468%
1-t*old debt		78.4400%
ratio		1.02
WACC*ratio		8.259%
New WACC	8.259%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.04%		48.69%	5.86%
Weighted Average Cost of Capital				8.26%

Change in ROE -0.36%

AVG ROE 11.85%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
47.00	53.00	56.4%	43.6%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	47.00%	2.20%
	0.00%		0.00%	0.00%
Common Equity	11.80%		53.00%	6.25%
Weighted Average Cost of Capital				8.45%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.33%		43.62%	5.82%
Weighted Average Cost of Capital				8.45%

Change in ROE 1.53%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
47.00	53.00	56.4%	43.6%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	47.00%	2.20%
	0.00%		0.00%	0.00%
Common Equity	11.80%		53.00%	6.25%
Weighted Average Cost of Capital				8.45%

t*new debt	at new tax rate	21.7055%
T*old debt		18.0950%
1-t*new debt		78.2945%
1-t*old debt		81.9050%
ratio		0.96
WACC*ratio		8.078%
New WACC	8.078%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	56.38%	2.64%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.48%		43.62%	5.44%
Weighted Average Cost of Capital				8.08%

Change in ROE 0.68%

AVG ROE 12.90%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
47.00	53.00	55.9%	44.1%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	47.00%	2.20%
	0.00%		0.00%	0.00%
Common Equity	11.80%		53.00%	6.25%
Weighted Average Cost of Capital				8.45%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.25%		44.06%	5.84%
Weighted Average Cost of Capital				8.45%

Change in ROE 1.45%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
47.00	53.00	55.9%	44.1%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	47.00%	2.20%
	0.00%		0.00%	0.00%
Common Equity	11.80%		53.00%	6.25%
Weighted Average Cost of Capital				8.45%

t*new debt	at new tax rate	21.5366%
T*old debt		18.0950%
1-t*new debt		78.4634%
1-t*old debt		81.9050%
ratio		0.96
WACC*ratio		8.096%
New WACC	8.096%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	55.94%	2.61%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.44%		44.06%	5.48%
Weighted Average Cost of Capital				8.10%

Change in ROE 0.64%

AVG ROE 12.84%

COST OF DEBT	0.0760
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
47.00	53.00	51.3%	48.7%

Theory1

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	47.00%	2.20%
	0.00%		0.00%	0.00%
Common Equity	11.80%		53.00%	6.25%
Weighted Average Cost of Capital				8.45%

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.43%		48.69%	6.05%
Weighted Average Cost of Capital				8.45%

Change in ROE 0.63%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
47.00	53.00	51.3%	48.7%

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	47.00%	2.20%
	0.00%		0.00%	0.00%
Common Equity	11.80%		53.00%	6.25%
Weighted Average Cost of Capital				8.45%

t*new debt	at new tax rate	19.7532%
T*old debt		18.0950%
1-t*new debt		80.2468%
1-t*old debt		81.9050%
ratio		0.98
WACC*ratio		8.280%
New WACC	8.280%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	<u>Cost</u>	<u>Tax Rate</u>	<u>Proportion</u>	<u>After Tax Weighted Component</u>
Debt	7.60%	38.50%	51.31%	2.40%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.08%		48.69%	5.88%
Weighted Average Cost of Capital				8.28%

Change in ROE 0.28%

AVG ROE 12.25%