Current

			Gas					
			AmerenCIPS		**AmerenCILCO**		**Ameren IP**	
			Equity ratio		**Equity ratio**		**Equity ratio**	
		Gas Sample	Book Value		Book Value		Book Value	
		Mkt. Value CEQ	48.69%		43.62%		44.06%	
			ROE					
	Periodicity	**Market Value**	**Bare**	**Adjusted**	**Bare**	**Adjusted**	**Bare**	**Adjusted**
DCF-IBES	2008	55.00%	10.80%	11.4%	10.80%	12.0%	10.80%	12.0%
DCF-Sustainable	2008	55.00%	10.90%	11.5%	10.90%	12.2%	10.90%	12.1%
DCF-Three Stage	2008	55.00%	10.40%	11.0%	10.40%	11.5%	10.40%	11.5%
CAPM- Forward	2004-2008	62.00%	10.70%	12.0%	10.70%	12.6%	10.70%	12.6%
CAPM- Historic	2004-2009	62.00%	9.80%	10.8%	9.80%	11.4%	9.80%	11.4%
Historic - rf	na	na	11.10%	11.1%	11.10%	11.1%	11.10%	11.1%
Historic - A	na	na	11.40%	11.4%	11.40%	11.4%	11.40%	11.4%
DCF Based RP -A	8/2007-3/2010	59.00%	9.80%	10.6%	9.80%	11.2%	9.80%	11.1%
Average			10.61%	**11.2%**	10.61%	**11.7%**	10.61%	**11.6%**

Debt Cost

Gas 6.90%

Tax Rate 38.50%

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%**

Mean Capital Structures
Electric

	Mkt Val
Aug2007-2009March	0.59
2004-2008	0.62
2008	0.55

Gas	
DCF	
IBES	10.8%
3 Stage	10.4%
Sustainable with SV	10.9%
CAPM forward	10.7%
CAPM historic	9.8%
Historic utility risk free rate	11.1%
Historic utility risk A rated bonds	11.4%
DCF A rated	9.8%
	10.613%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
38.00	**62.00**	**56.4%**	**43.6%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	10.70%		62.00%	6.63%
Weighted Average Cost of Capital				8.25%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.42%		43.62%	5.85%
Weighted Average Cost of Capital				8.25%

Change in ROE 2.72%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
38.00	62.00	56.4%	43.6%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	10.70%		62.00%	6.63%
Weighted Average Cost of Capital				8.25%

t*new debt	at new tax rate	21.7055%
T*old debt		14.6300%
1-t*new debt		78.2945%
1-t*old debt		85.3700%
ratio		0.92
WACC*ratio		7.563%
New WACC	7.563%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.85%		43.62%	5.17%
Weighted Average Cost of Capital				7.56%

Change in ROE **1.15%**

AVG ROE 12.64%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
38.00	**62.00**	**55.9%**	**44.1%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	10.70%		62.00%	6.63%
Weighted Average Cost of Capital				8.25%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	13.33%		44.06%	5.87%
Weighted Average Cost of Capital				8.25%

Change in ROE 2.63%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
38.00	62.00	55.9%	44.1%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	10.70%		62.00%	6.63%
Weighted Average Cost of Capital				8.25%

t*new debt	at new tax rate	21.5366%
T*old debt		14.6300%
1-t*new debt		78.4634%
1-t*old debt		85.3700%
ratio		0.92
WACC*ratio		7.579%
New WACC	7.579%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.81%		44.06%	5.21%
Weighted Average Cost of Capital				7.58%

Change in ROE **1.11%**

AVG ROE 12.57%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
38.00	**62.00**	**51.3%**	**48.7%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	10.70%		62.00%	6.63%
Weighted Average Cost of Capital				8.25%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.46%		48.69%	6.07%
Weighted Average Cost of Capital				8.25%

Change in ROE 1.76%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
38.00	62.00	51.3%	48.7%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	10.70%		62.00%	6.63%
Weighted Average Cost of Capital				8.25%

t*new debt	at new tax rate	19.7532%
T*old debt		14.6300%
1-t*new debt		80.2468%
1-t*old debt		85.3700%
ratio		0.94
WACC*ratio		7.752%
New WACC	7.752%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.45%		48.69%	5.57%
Weighted Average Cost of Capital				7.75%

Change in ROE **0.75%**

AVG ROE 11.96%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
38.00	**62.00**	**56.4%**	**43.6%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	9.80%		62.00%	6.08%
Weighted Average Cost of Capital				7.69%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.14%		43.62%	5.30%
Weighted Average Cost of Capital				7.69%

Change in ROE 2.34%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
38.00	62.00	56.4%	43.6%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	9.80%		62.00%	6.08%
Weighted Average Cost of Capital				7.69%

t*new debt	at new tax rate	21.7055%
T*old debt		14.6300%
1-t*new debt		78.2945%
1-t*old debt		85.3700%
ratio		0.92
WACC*ratio		7.051%
New WACC	7.051%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.68%		43.62%	4.66%
Weighted Average Cost of Capital				7.05%

Change in ROE **0.88%**

AVG ROE 11.41%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
38.00	**62.00**	**55.9%**	**44.1%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	9.80%		62.00%	6.08%
Weighted Average Cost of Capital				7.69%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.06%		44.06%	5.31%
Weighted Average Cost of Capital				7.69%

Change in ROE 2.26%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
38.00	62.00	55.9%	44.1%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	9.80%		62.00%	6.08%
Weighted Average Cost of Capital				7.69%

t*new debt	at new tax rate	21.5366%
T*old debt		14.6300%
1-t*new debt		78.4634%
1-t*old debt		85.3700%
ratio		0.92
WACC*ratio		7.067%
New WACC	7.067%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.65%		44.06%	4.69%
Weighted Average Cost of Capital				7.07%

Change in ROE **0.85%**

AVG ROE 11.36%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
38.00	**62.00**	**51.3%**	**48.7%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	9.80%		62.00%	6.08%
Weighted Average Cost of Capital				7.69%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.32%		48.69%	5.51%
Weighted Average Cost of Capital				7.69%

Change in ROE 1.52%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
38.00	62.00	51.3%	48.7%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	38.00%	1.61%
	0.00%		0.00%	0.00%
Common Equity	9.80%		62.00%	6.08%
Weighted Average Cost of Capital				7.69%

t*new debt	at new tax rate	19.7532%
T*old debt		14.6300%
1-t*new debt		80.2468%
1-t*old debt		85.3700%
ratio		0.94
WACC*ratio		7.227%
New WACC	7.227%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.37%		48.69%	5.05%
Weighted Average Cost of Capital				7.23%

Change in ROE **0.57%**

AVG ROE 10.84%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**56.4%**	**43.6%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.80%		55.00%	5.94%
Weighted Average Cost of Capital				7.85%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.51%		43.62%	5.46%
Weighted Average Cost of Capital				7.85%

Change in ROE 1.71%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	56.4%	43.6%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.80%		55.00%	5.94%
Weighted Average Cost of Capital				7.85%

t*new debt	at new tax rate	21.7055%
T*old debt		17.3250%
1-t*new debt		78.2945%
1-t*old debt		82.6750%
ratio		0.95
WACC*ratio		7.434%
New WACC	7.434%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.56%		43.62%	5.04%
Weighted Average Cost of Capital				7.43%

Change in ROE **0.76%**

AVG ROE 12.03%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**55.9%**	**44.1%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.80%		55.00%	5.94%
Weighted Average Cost of Capital				7.85%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.43%		44.06%	5.48%
Weighted Average Cost of Capital				7.85%

Change in ROE 1.63%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	55.9%	44.1%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.80%		55.00%	5.94%
Weighted Average Cost of Capital				7.85%

t*new debt	at new tax rate	21.5366%
T*old debt		17.3250%
1-t*new debt		78.4634%
1-t*old debt		82.6750%
ratio		0.95
WACC*ratio		7.450%
New WACC	7.450%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.52%		44.06%	5.08%
Weighted Average Cost of Capital				7.45%

Change in ROE **0.72%**

AVG ROE 11.97%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**51.3%**	**48.7%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.80%		55.00%	5.94%
Weighted Average Cost of Capital				7.85%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.65%		48.69%	5.67%
Weighted Average Cost of Capital				7.85%

Change in ROE 0.85%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	51.3%	48.7%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.80%		55.00%	5.94%
Weighted Average Cost of Capital				7.85%

t*new debt	at new tax rate	19.7532%
T*old debt		17.3250%
1-t*new debt		80.2468%
1-t*old debt		82.6750%
ratio		0.97
WACC*ratio		7.619%
New WACC	7.619%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.18%		48.69%	5.44%
Weighted Average Cost of Capital				7.62%

Change in ROE **0.38%**

AVG ROE 11.41%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**56.4%**	**43.6%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.90%		55.00%	6.00%
Weighted Average Cost of Capital				7.90%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.64%		43.62%	5.51%
Weighted Average Cost of Capital				7.90%

Change in ROE 1.74%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	56.4%	43.6%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.90%		55.00%	6.00%
Weighted Average Cost of Capital				7.90%

t*new debt	at new tax rate	21.7055%
T*old debt		17.3250%
1-t*new debt		78.2945%
1-t*old debt		82.6750%
ratio		0.95
WACC*ratio		7.486%
New WACC	7.486%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.68%		43.62%	5.09%
Weighted Average Cost of Capital				7.49%

Change in ROE **0.78%**

AVG ROE 12.16%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**55.9%**	**44.1%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.90%		55.00%	6.00%
Weighted Average Cost of Capital				7.90%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.55%		44.06%	5.53%
Weighted Average Cost of Capital				7.90%

Change in ROE 1.65%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	55.9%	44.1%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.90%		55.00%	6.00%
Weighted Average Cost of Capital				7.90%

t*new debt	at new tax rate	21.5366%
T*old debt		17.3250%
1-t*new debt		78.4634%
1-t*old debt		82.6750%
ratio		0.95
WACC*ratio		7.502%
New WACC	7.502%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.64%		44.06%	5.13%
Weighted Average Cost of Capital				7.50%

Change in ROE **0.74%**

AVG ROE 12.10%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**51.3%**	**48.7%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.90%		55.00%	6.00%
Weighted Average Cost of Capital				7.90%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.76%		48.69%	5.73%
Weighted Average Cost of Capital				7.90%

Change in ROE 0.86%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	51.3%	48.7%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.90%		55.00%	6.00%
Weighted Average Cost of Capital				7.90%

t*new debt	at new tax rate	19.7532%
T*old debt		17.3250%
1-t*new debt		80.2468%
1-t*old debt		82.6750%
ratio		0.97
WACC*ratio		7.672%
New WACC	7.672%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.29%		48.69%	5.50%
Weighted Average Cost of Capital				7.67%

Change in ROE **0.39%**

AVG ROE 11.52%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**56.4%**	**43.6%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.40%		55.00%	5.72%
Weighted Average Cost of Capital				7.63%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	12.01%		43.62%	5.24%
Weighted Average Cost of Capital				7.63%

Change in ROE 1.61%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	56.4%	43.6%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.40%		55.00%	5.72%
Weighted Average Cost of Capital				7.63%

t*new debt	at new tax rate	21.7055%
T*old debt		17.3250%
1-t*new debt		78.2945%
1-t*old debt		82.6750%
ratio		0.95
WACC*ratio		7.225%
New WACC	7.225%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.08%		43.62%	4.83%
Weighted Average Cost of Capital				7.23%

Change in ROE **0.68%**

AVG ROE 11.54%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**55.9%**	**44.1%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.40%		55.00%	5.72%
Weighted Average Cost of Capital				7.63%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.93%		44.06%	5.26%
Weighted Average Cost of Capital				7.63%

Change in ROE 1.53%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	55.9%	44.1%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.40%		55.00%	5.72%
Weighted Average Cost of Capital				7.63%

t*new debt	at new tax rate	21.5366%
T*old debt		17.3250%
1-t*new debt		78.4634%
1-t*old debt		82.6750%
ratio		0.95
WACC*ratio		7.241%
New WACC	7.241%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.05%		44.06%	4.87%
Weighted Average Cost of Capital				7.24%

Change in ROE **0.65%**

AVG ROE 11.49%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
45.00	**55.00**	**51.3%**	**48.7%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.40%		55.00%	5.72%
Weighted Average Cost of Capital				7.63%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.20%		48.69%	5.45%
Weighted Average Cost of Capital				7.63%

Change in ROE 0.80%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
45.00	55.00	51.3%	48.7%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	45.00%	1.91%
	0.00%		0.00%	0.00%
Common Equity	10.40%		55.00%	5.72%
Weighted Average Cost of Capital				7.63%

t*new debt	at new tax rate	19.7532%
T*old debt		17.3250%
1-t*new debt		80.2468%
1-t*old debt		82.6750%
ratio		0.97
WACC*ratio		7.405%
New WACC	7.405%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.74%		48.69%	5.23%
Weighted Average Cost of Capital				7.41%

Change in ROE **0.34%**

AVG ROE 10.97%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
41.00	**59.00**	**56.4%**	**43.6%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	41.00%	1.74%
	0.00%		0.00%	0.00%
Common Equity	9.80%		59.00%	5.78%
Weighted Average Cost of Capital				7.52%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.76%		43.62%	5.13%
Weighted Average Cost of Capital				7.52%

Change in ROE 1.96%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
41.00	59.00	56.4%	43.6%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	41.00%	1.74%
	0.00%		0.00%	0.00%
Common Equity	9.80%		59.00%	5.78%
Weighted Average Cost of Capital				7.52%

t*new debt	at new tax rate	21.7055%
T*old debt		15.7850%
1-t*new debt		78.2945%
1-t*old debt		84.2150%
ratio		0.93
WACC*ratio		6.993%
New WACC	6.993%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	56.38%	2.39%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.55%		43.62%	4.60%
Weighted Average Cost of Capital				6.99%

Change in ROE **0.75%**

AVG ROE 11.15%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
41.00	**59.00**	**55.9%**	**44.1%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	41.00%	1.74%
	0.00%		0.00%	0.00%
Common Equity	9.80%		59.00%	5.78%
Weighted Average Cost of Capital				7.52%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	11.68%		44.06%	5.15%
Weighted Average Cost of Capital				7.52%

Change in ROE 1.88%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
41.00	59.00	55.9%	44.1%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	41.00%	1.74%
	0.00%		0.00%	0.00%
Common Equity	9.80%		59.00%	5.78%
Weighted Average Cost of Capital				7.52%

t*new debt	at new tax rate	21.5366%
T*old debt		15.7850%
1-t*new debt		78.4634%
1-t*old debt		84.2150%
ratio		0.93
WACC*ratio		7.008%
New WACC	7.008%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	55.94%	2.37%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.52%		44.06%	4.63%
Weighted Average Cost of Capital				7.01%

Change in ROE **0.72%**

AVG ROE 11.10%

COST OF DEBT	0.0690
Tax Rate	38.50%
new Tax rate	38.50%

Current Debt Ratio	Current Equity Ratio	Moving to Debt	Moving to Equity
41.00	**59.00**	**51.3%**	**48.7%**

Theory1

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	41.00%	1.74%
	0.00%		0.00%	0.00%
Common Equity	9.80%		59.00%	5.78%
Weighted Average Cost of Capital				7.52%

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.98%		48.69%	5.34%
Weighted Average Cost of Capital				7.52%

Change in ROE 1.18%

Theory 2

Current Debt Ratio	Current Equity Ratio	Debt	Equity
41.00	59.00	51.3%	48.7%

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	41.00%	1.74%
	0.00%		0.00%	0.00%
Common Equity	9.80%		59.00%	5.78%
Weighted Average Cost of Capital				7.52%

t*new debt	at new tax rate	19.7532%
T*old debt		15.7850%
1-t*new debt		80.2468%
1-t*old debt		84.2150%
ratio		0.95
WACC*ratio		7.167%
New WACC	7.167%	=WACC * (1-T*(NEW DEBT)) / (1-T*(OLD DEBT))

Solve for Cost of Equity

	Cost	Tax Rate	Proportion	After Tax Weighted Component
Debt	6.90%	38.50%	51.31%	2.18%
Preferred	0.00%		0.00%	0.00%
Common Equity	10.25%		48.69%	4.99%
Weighted Average Cost of Capital				7.17%

Change in ROE **0.45%**

AVG ROE 10.61%