

Régie de l'énergie
DOSSIER: R-3752-2011 Phase 2
DÉPOSÉE EN AUDIENCE
Date: 15/Sept/2011
Pièces n°: C-AC16.0073

Gaz Métro's Rate Application – File R-3752-2011 Phase 2

Gaz Métro Fair Return and Capital Structure

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September 2011

BOOTH Gaz Métro 2011



Key Issues before the Régie

- ◆ Has Gaz Métro's business risk increased since 2009 when the Régie decided it had not changed.
- ◆ What is a fair and reasonable ROE for Gaz Métro and a reasonable capital structure?
- ◆ Should Gaz Métro be put on a formula ROE similar to that used by the Régie last year for Gazifère?

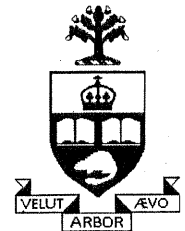
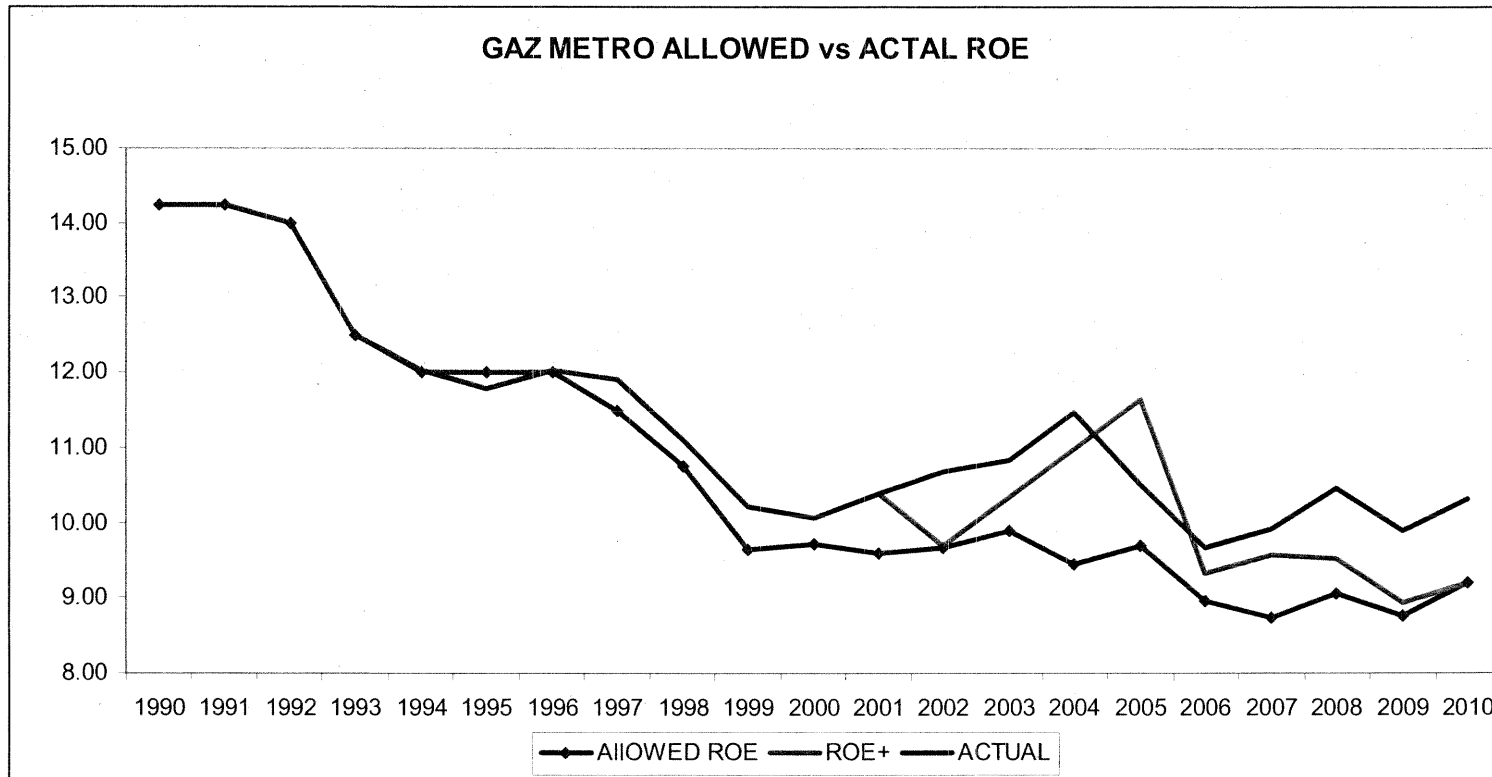


Gaz Metro's Business Risk

- ◆ Business risk has a short and long run dimension
- ◆ Short run: return *on* capital
 - **Quantitative assessment: Allowed vs actual ROE (Moody's has 25% of their credit analysis weight on this)**
 - **Qualitative factors**
- ◆ Long run: return *of* capital
 - **The ability to recover the investment in rate base**
 - **Viability of the natural gas market in Quebec**
 - **Qualitative assessment**
 - **When do small iterative changes add up to a substantial change?**



Gaz Métro



Short Run Risk

- ◆ **Gaz Métro has consistently over earned its allowed ROE, except for one year 1995**
- ◆ **No trend in over-earning**
- ◆ **Normally earns its incentive ROE (+), but this is not risk as it is a bonus to the fair ROE (on average 0.60%)**
- ◆ **One would expect that sooner or later “risk” would materialise to harm the shareholder, but this has not happened,**
- ◆ **Indicates the supportive nature of the Régie’s regulation and that the extensive use of deferral accounts has shielded the shareholder from risk (Moody’s assessment of Canada)**



Natural Gas Competitiveness

- ◆ Development of natural gas from shale has created a disconnect with the price of oil
 - Record high natural gas inventories
 - TransCanada forecasts Marcellus shale gas will become a “super field” of 4 bcf a day;
 - Gaz Métros’ supply price of natural gas has dropped from \$5.78 in 2009 per gj to \$4.93 per gj in 2010
- ◆ Canada: Quebec and Alberta shale gas potential

Figure 6: Ultimate Potential of the WCSB

	Cumulative Production TCF	Remaining Potential TCF	Ultimate Potential TCF
WCSB Conventional ¹	168	109	277
WCSB CBM ¹	1.0	55	56
Montney Shale Hybrid ²	0.1	30 – 50	30 – 50
Horn River Shale ²	negligible	40 – 100	40 – 100
WCSB Total	169	234 – 314	403 – 483

¹ Source: ERCB & Gas Potential Committee

² Source: TransCanada



Gaz Metro (IR #1.3)

- ◆ Residential users:
 - electricity cheaper than natural gas until 2009. For new users with high efficiency furnaces natural gas is 15-20% cheaper
 - 30% of new users in Greater Montreal now chose gas;

- ◆ Commercial users
 - Natural gas cost advantages 16% (Small) 37% (large)

- ◆ Industrial
 - 50-60% cost advantage over fuel oil for firm and interruptible
 - Even an advantage over off-peak (tariff L) electricity



Business Risk Summary

- ◆ Demonstrated ability to earn allowed ROE
- ◆ Protective regulatory environment where PBR has increased over-earning
- ◆ Significant increase in competitiveness of natural gas in Quebec over the last few years
- ◆ Shale gas is a “game changer” in terms of the WCSB
- ◆ Dawn is emerging as a viable hub for Marcellus gas from the US East coast. Long term the potential of Quebec’s shale gas.
- ◆ *Overall every sign of a reduction in long term risk of capital recovery*



Régie Gaz Métro 2009 Decision

Parameters	Bottom of range	Top of range
Risk-free rate	4.23%	4.50%
Market risk premium before financial crisis	5.50%	5.75%
Benchmark gross beta (not adjusted)	0.50	0.55
Adjustment for Gaz Métro's risks	0.25%	0.35%
Issuance costs	0.30%	0.40%
Sub-total n° 1: Result produced by CAPM	7.53%	8.41%
Adjustment to take account of results of other models	0.25%	0.50%
Sub-total n° 2: Rate of return before adjustment to take account of effect of financial crisis	7.78%	8.91%
Adjustment to account for the effect of the financial crisis	0.25%	0.55%
Total: Rate of return after adjustment to account for the effect of the financial crisis	8.03%	9.46%



Financial

- ◆ US has emerged from a brutal recession with a weak recovery;
- ◆ Canada has fully recovered from a mild recession, but is buffeted by international concerns
- ◆ Private debt is no longer a problem, concern is *public* debt

Government Deficits as a % of GDP

	2007	2009	2010	2011
Japan	2.4	10.3	9.6	8.9
US	2.7	12.5	11.1	9.7
Italy	1.5	5.3	5.1	4.3
Ireland	-0.1	11.4	31.9	11.8
Greece	3.7	13.6	7.9	7.3
France	2.7	7.9	8	6
Portugal	2.7	9.4	7.3	5.2
Germany	-0.2	3.3	4.5	3.7
Spain	-1.9	11.4	9.3	6.9
UK	2.7	10.9	10.2	8.1
Canada	-1.6	5.1	4.9	2.9
Advanced	1.3	9.2	10.0	6.8



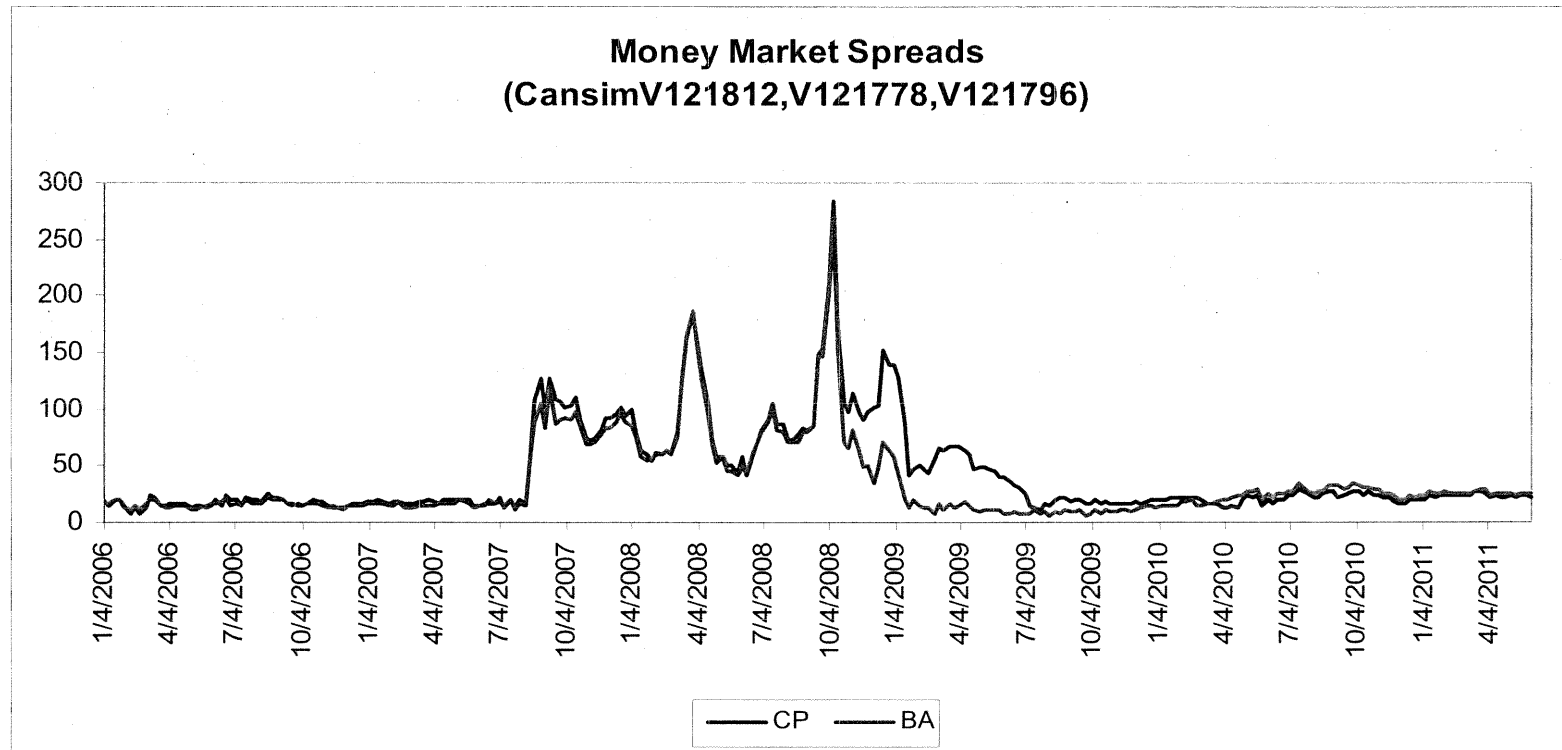
Public Debt Concerns

- ◆ Portugal, Ireland, Italy Greece and Spain (PIIGS)
 - Cyclical debt layered on top of structural problems
 - Slow growth delaying the natural improvement in deficits

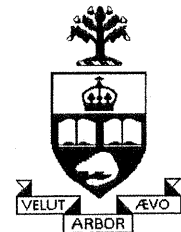
- ◆ US
 - US numbers downplay the size of its problems: Debt is close to 100% of GDP and the deficit over 10% if they are counted the same way as Europe
 - Downgraded by S&P from AAA due to political wrangling in Congress and the Tea party
 - Limited options monetary policy played out and fiscal policy a hostage to Tea party.
 - S&P downgrade from AAA rocked the markets causing turbulence for the last five weeks

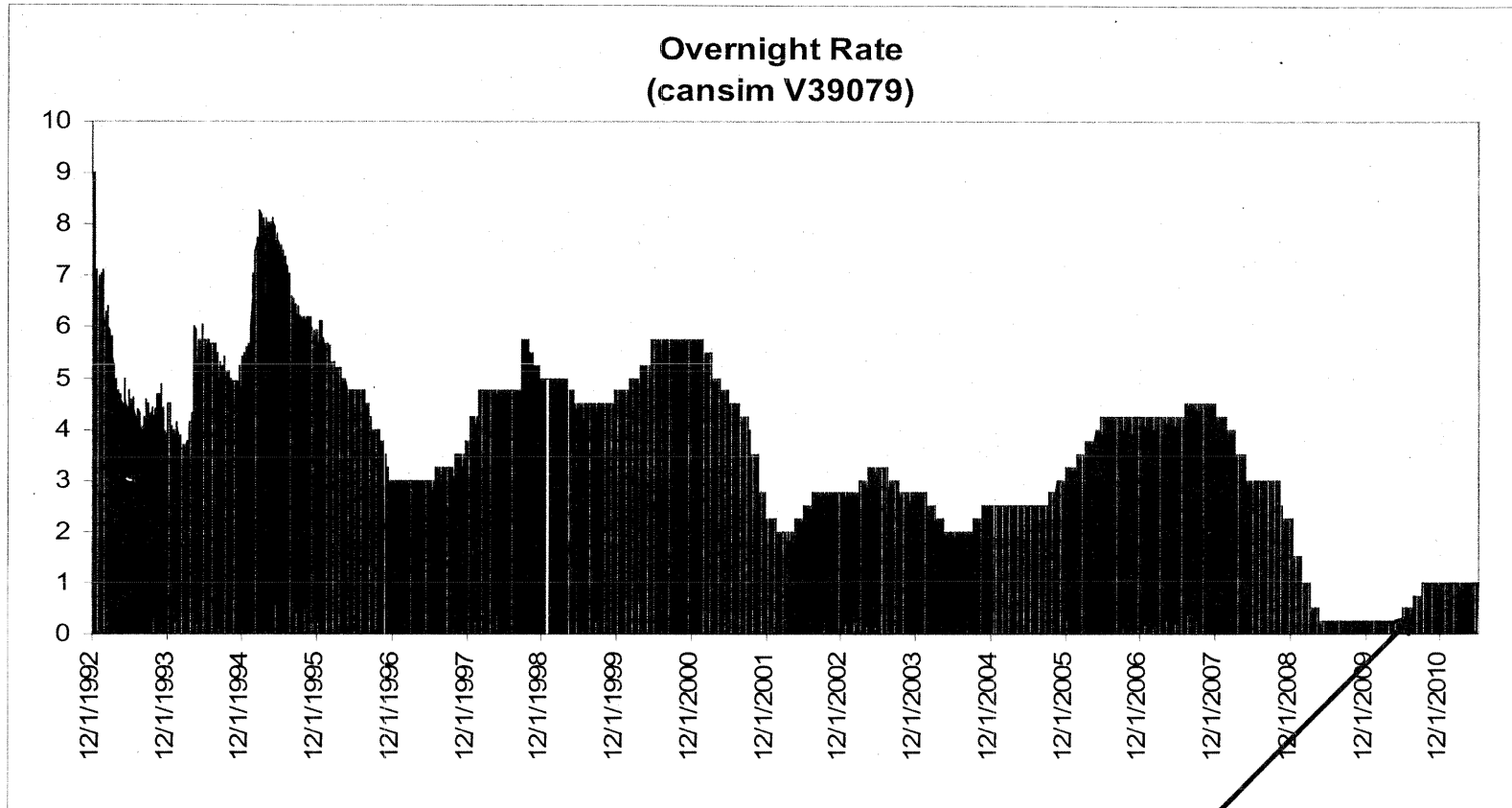


Short Term Credit Spreads



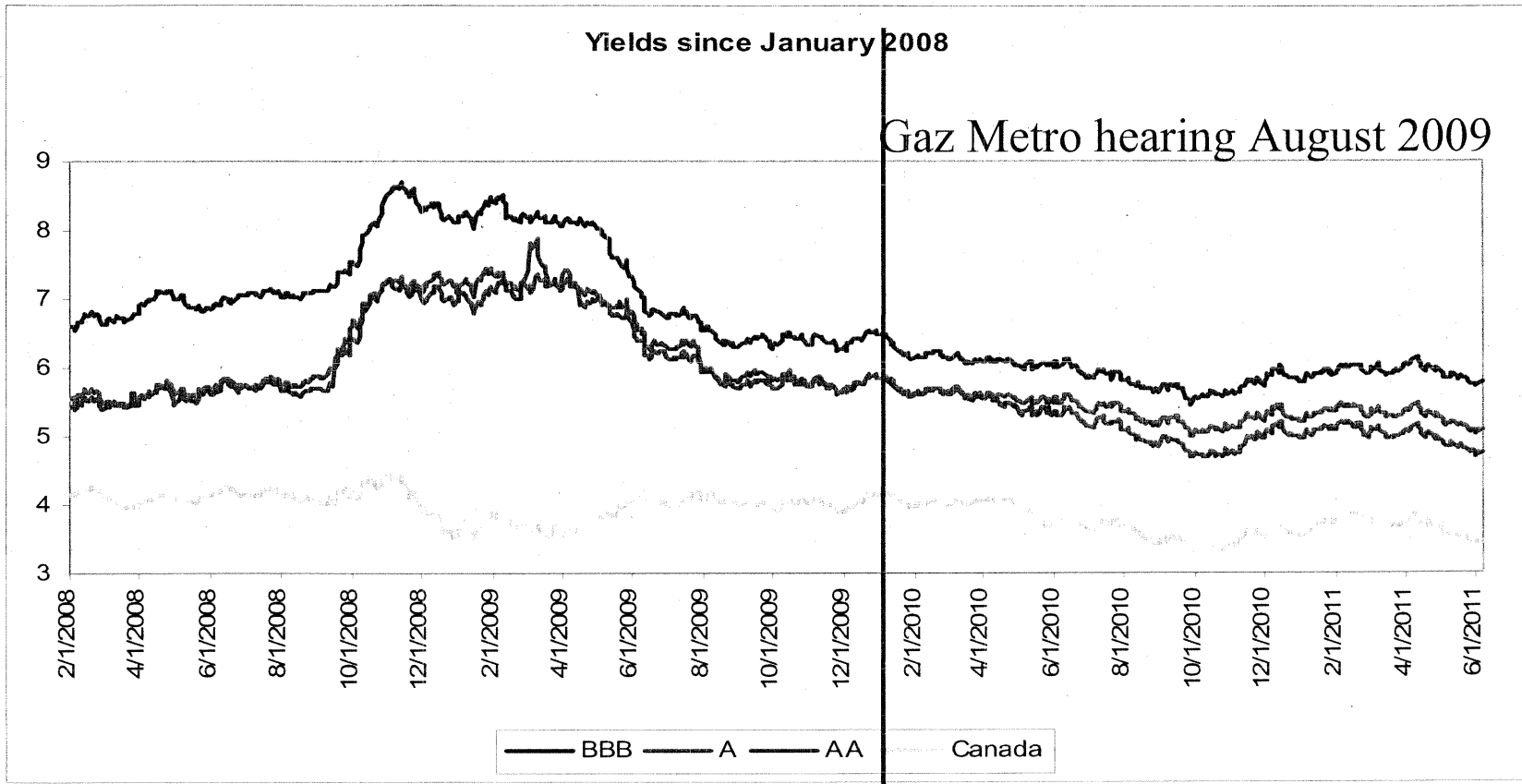
Money market now largely back to normal in Canada.





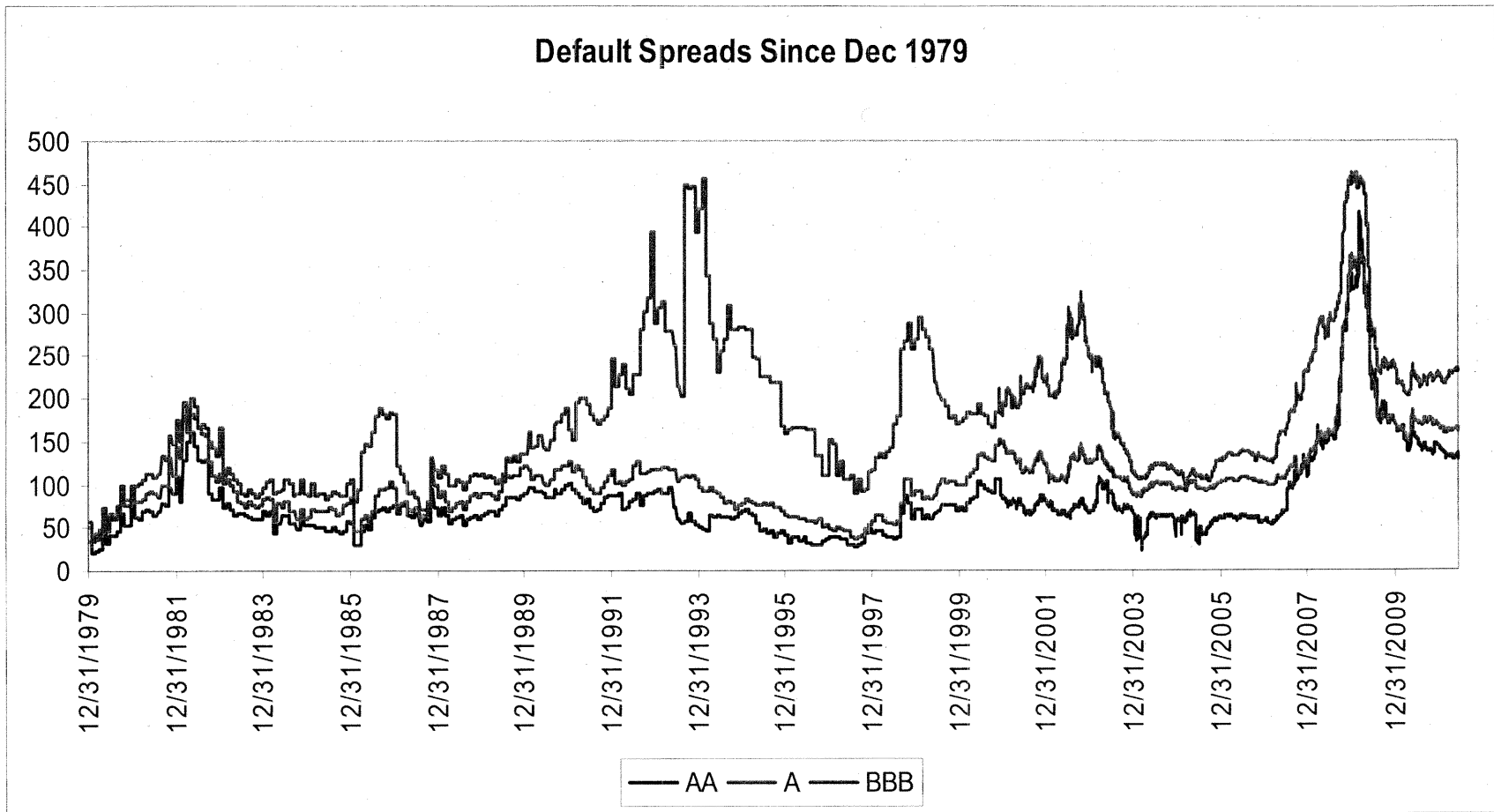
Bank of Canada increased the overnight rate twice since May 2010 to remove stimulus as economy regained the jobs lost during the recession





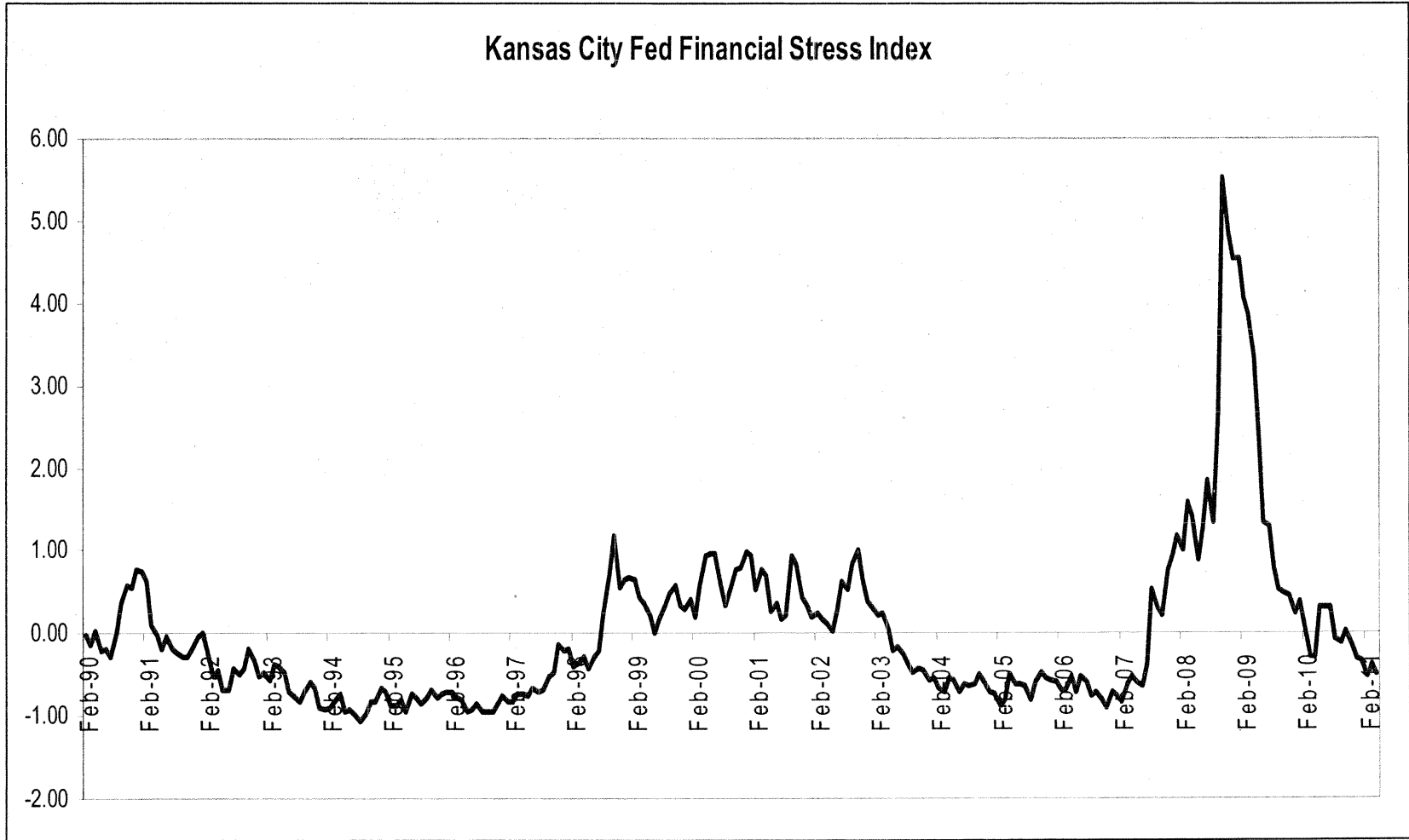
**From 9/08 LTC Yields fell while Corporate debt yields increased.
 This ended with US bank stress tests Summer 2009
 Recently both Corporates and LTC yields have fallen unlike during
 the financial crisis**





Spreads still high relative to where we are in the recovery, perhaps 0.65% too high or long Canada's 0.65% too low





Canada not the US:3

	<u>10Q2</u>	<u>10Q3</u>	<u>10Q4</u>	<u>11Q1</u>	<u>11Q2</u>	<u>11Q3</u>	<u>11Q4</u>	<u>12Q1</u>	<u>12Q2</u>	<u>12Q3</u>	<u>12Q4</u>
<u>Canada</u>											
Overnight	0.50	1.00	1.00	1.00	1.00	1.25	1.75	2.25	2.50	2.75	3.00
Three-month	0.50	0.88	0.97	1.10	1.20	1.70	2.15	2.40	2.65	2.90	3.15
Two-year	1.39	1.40	1.71	1.85	1.75	2.15	2.40	2.80	3.00	3.35	3.75
Five-year	2.32	2.04	2.46	2.65	2.50	3.00	3.30	3.50	3.65	3.85	4.05
10-year	3.08	2.75	3.16	3.25	3.25	3.50	3.80	3.95	4.05	4.15	4.15
30-year	3.65	3.34	3.55	3.80	3.75	4.00	4.30	4.45	4.50	4.50	4.55
<u>United States</u>											
Fed funds	0 to 0.25	0 to 0.25	0 to 0.25	0 to 0.25	0 to 0.25	0 to 0.25	0 to 0.25	0 to 0.25	0.50	1.00	1.50
Three-month	0.18	0.16	0.12	0.15	0.20	0.20	0.25	0.35	0.65	1.25	1.70
Two-year	0.61	0.44	0.61	0.70	0.80	0.90	1.10	1.25	1.60	2.00	2.50
Five-year	1.79	1.27	2.01	2.10	2.00	2.30	2.60	2.80	3.05	3.40	3.75
10-year	2.97	2.48	3.30	3.45	3.25	3.65	4.00	4.15	4.25	4.45	4.50
30-year	3.91	3.67	4.34	4.50	4.55	4.60	4.85	4.90	4.95	5.00	5.05
<u>United Kingdom</u>											

RBC Financial Markets Monthly June, 2011



Conclusion

- ◆ LTC Yields remain the only long term opportunity cost or fair rate of return in the capital market
- ◆ LTC yields expected to increase to 4.5% for 2012:
 - 3.47% at time of testimony
 - (Gazifere last year I stated “more risk of lower LTC yields than higher for 2011”)
 - Currently LTC yields and forecasts have dropped
- ◆ Corporate yields have followed long Canada yields down.
- ◆ Still very easy borrowing conditions for corporates as banks flush with cash
- ◆ However, market is still “jittery”



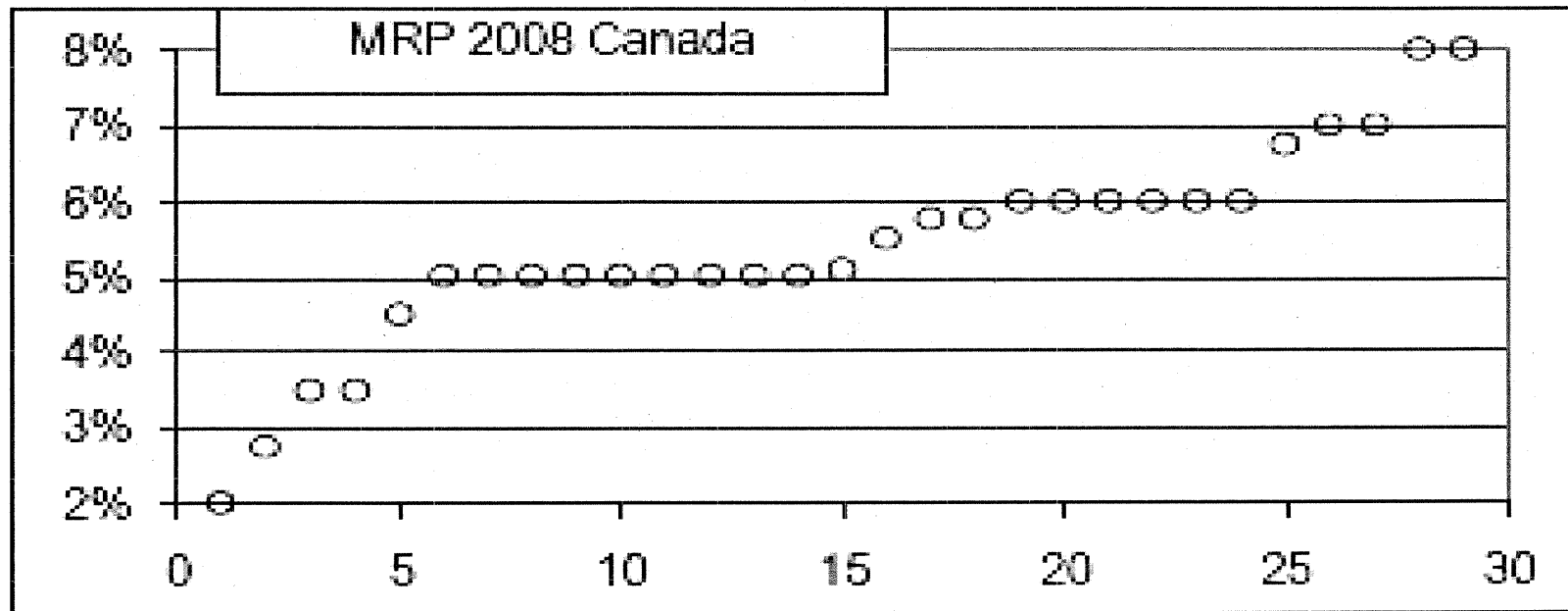
Fernandez Survey May 2009

Table 2. Market Risk Premium used in 2008 by 884 finance professors

		USA	Euro	UK	Canada	Australia	Other	Sum
MRP used in 2008	Average	6.3%	5.3%	5.5%	5.4%	5.9%	7.9%	
	St. dev.	2.2%	1.5%	1.9%	1.3%	1.4%	3.9%	
	MAX	19.0%	10.0%	10.0%	8.0%	7.5%	27.0%	
	Q3	7.2%	6.0%	7.0%	6.0%	7.0%	10.0%	
	Median	6.0%	5.0%	5.0%	5.1%	6.0%	7.0%	
	Q1	5.0%	4.1%	4.0%	5.0%	6.0%	5.5%	
	min	0.8%	1.0%	3.0%	2.0%	2.0%	2.0%	
	Number	487	224	54	29	23	67	884

- 1) MRP higher in Canada than US
- 2) Median Canadian MRP is 5.1%





If the Régie randomly asked a Canadian finance professor what the MRP is, the answer would almost certainly be 5.0% or 6.0%

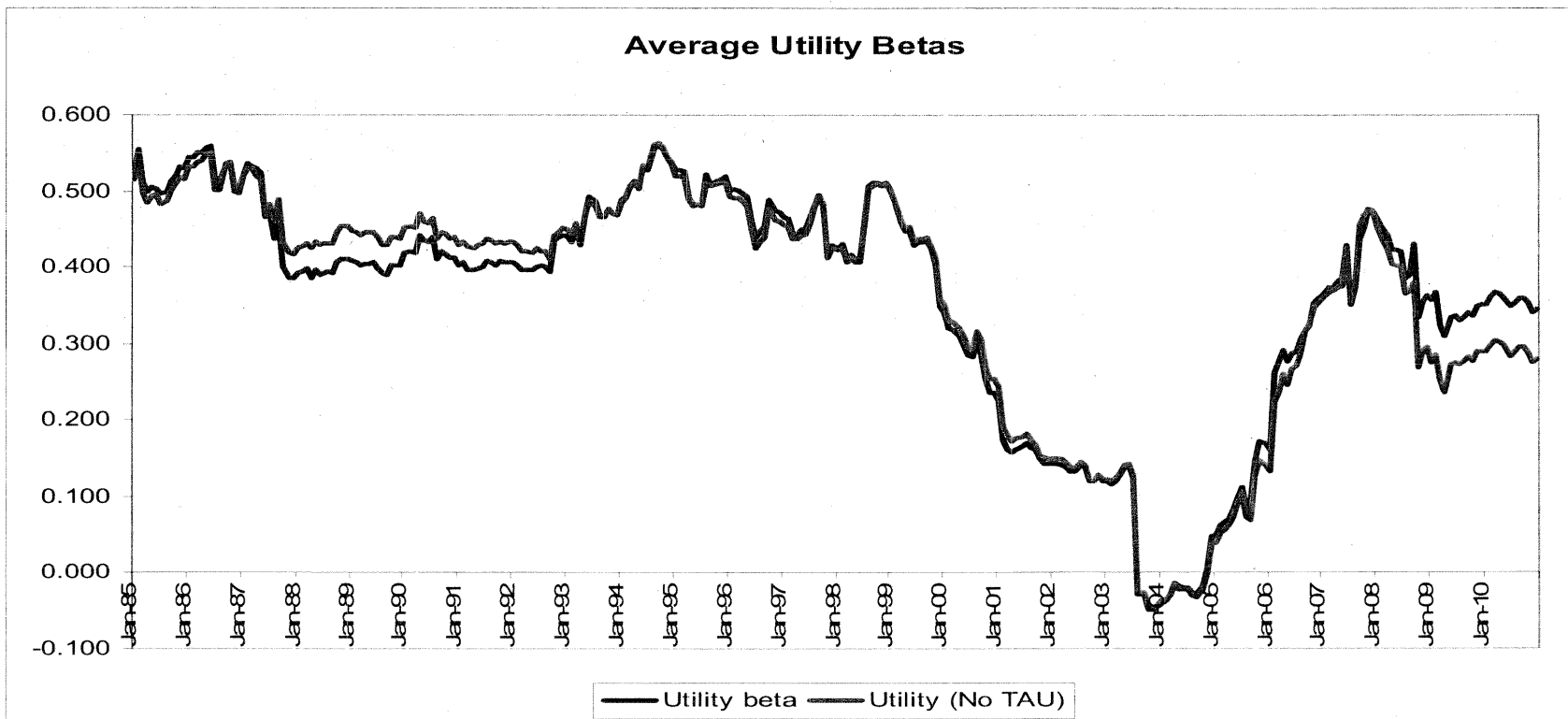


Table 12. Market Risk Premium used in 2010 and in 2009 by Professors, Analysts and Companies

		2010				2009			
		USA	Euro	UK	Other	USA	Euro	UK	Other
Professors	Average	6.0	5.3	5.0	7.8	6.4	5.4	4.9	8.9
Analysts	Average	5.1	5.0	5.2	6.3	5.5	5.1	5.3	6.3
Companies	Average	5.3	5.7	5.6	7.5	5.5	5.8	5.9	7.3
Professors	St. dev.	1.7	1.7	1.6	4.2	2.4	1.9	1.5	3.8
Analysts	St. dev.	1.1	1.3	1.4	2.2	1.3	1.2	1.2	2.0
Companies	St. dev.	1.8	1.5	1.8	3.2	1.8	1.6	0.8	2.3
Professors	Median	6.0	5.0	5.0	7.0	6.0	5.0	5.0	7.1
Analysts	Median	5.0	5.0	4.5	5.9	5.0	5.0	5.0	6.0
Companies	Median	5.0	5.5	5.5	7.0	5.5	5.5	5.8	7.0
Professors	Respondents	462	194	49	145	448	194	49	140
Analysts	Respondents	104	197	31	269	99	189	29	197
Companies	Respondents	205	543	30	123	189	521	28	109

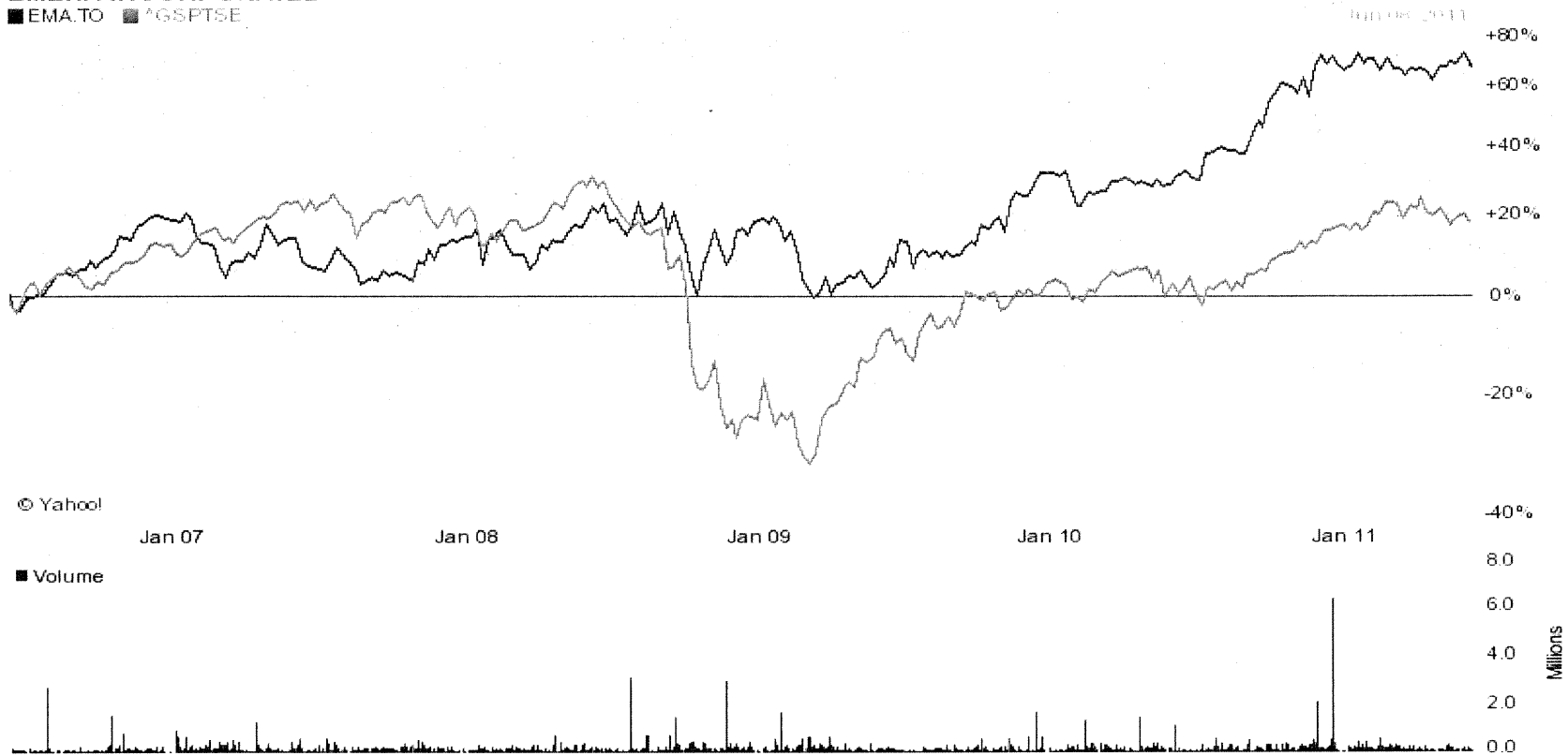


Relative Risk (BETA)



Stock Performance over Last Five Years: Emera

EMERA INCORPORATED
 ■ EMA.TO ■ ^GSPTSE

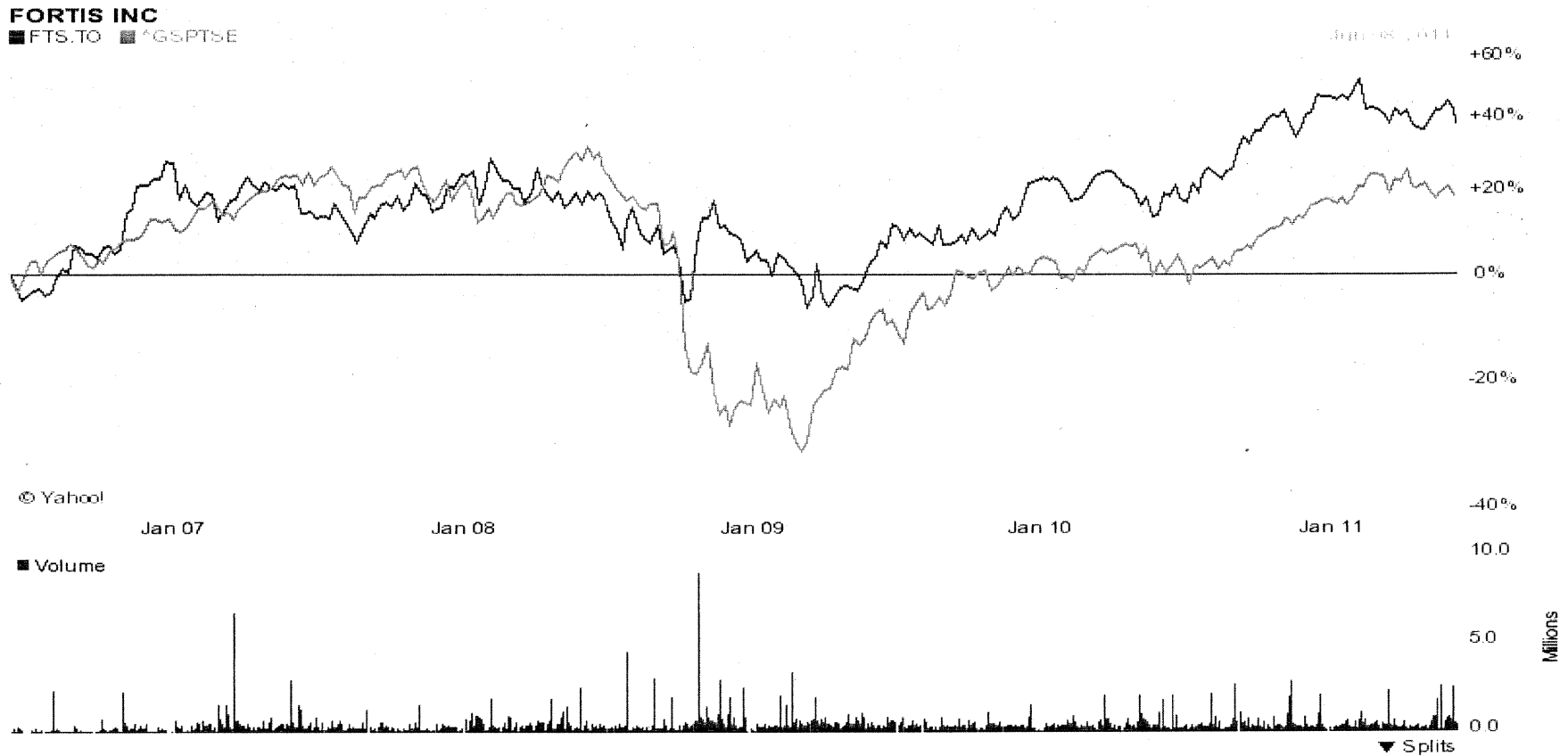


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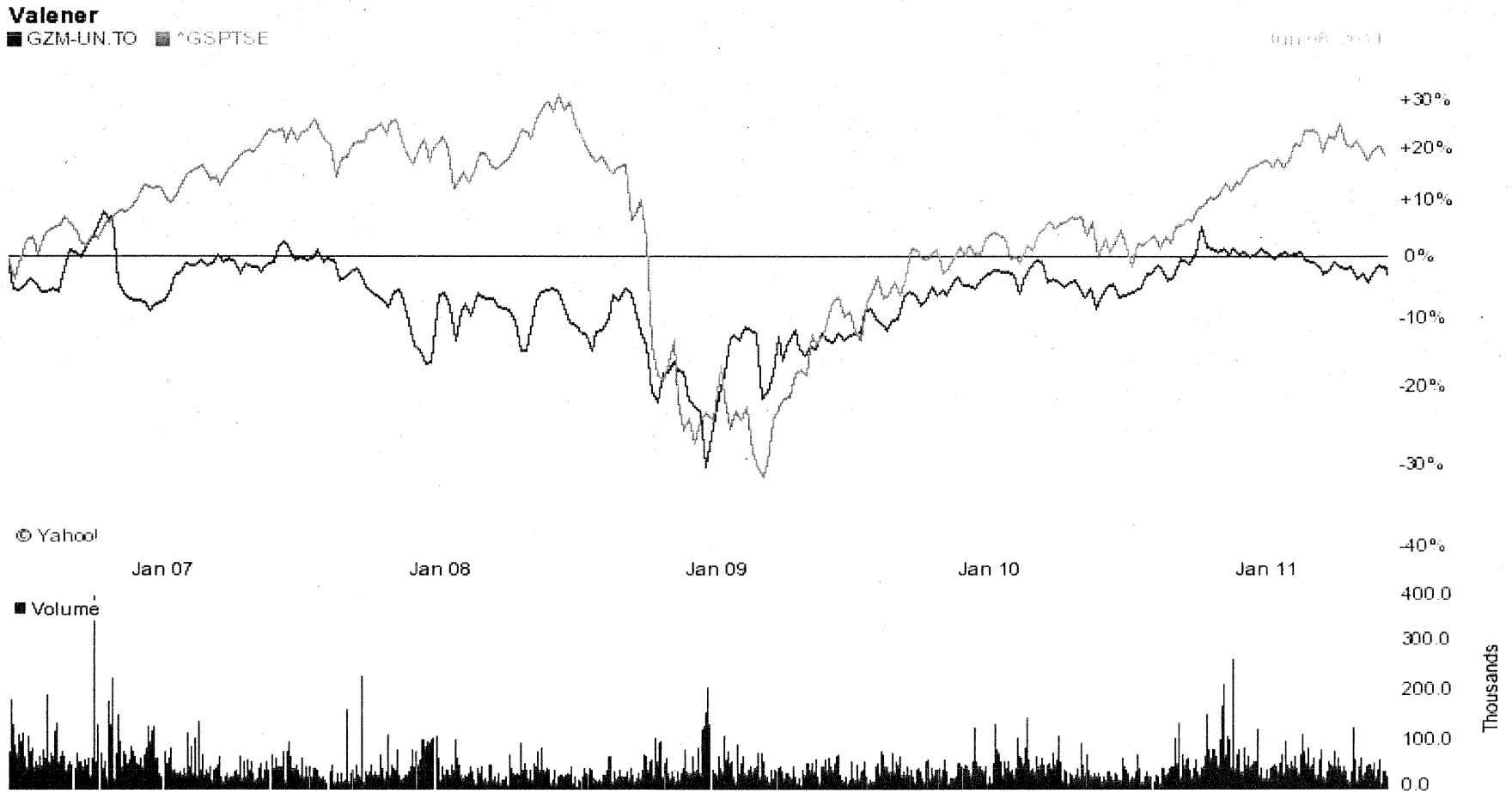
■ Volume



Stock Performance over Last Five Years: Fortis



Stock Performance over Last Year: GMLP



Note: GMLP/Valener pays out almost all its income so the above understates performance



Fair ROE

- ◆ LTC Yield: 4.50%
- ◆ Market Risk Premium: 5.0-6.0%
- ◆ Beta: 0.45-0.55
- ◆ Issue costs: 0.50%
- ◆ Credit spreads: 0.25-0.40

- ◆ *Recommended Benchmark ROE:* 8.10%

- ◆ Gaz Métro has 38.5% common shares and 7.5% *deemed* preferred shares. I regard this as offsetting its slightly higher business risk compared to Union Gas and EGDI (36%), TGI (40%) and ATCO Gas (38% under review)



2009 ROE Reviews

AUC November 2009


51. Notwithstanding the issues and economic developments discussed above, the Commission observes that since the issuance of Decision 2004-052 in July 2004 and before the onset of the economic crisis, there had been few indications that the adjustment formula was not producing an appropriate annual ROE. Decision 2004-052 and the annual formula had resulted in a range of ROEs with a high of 9.60 percent and a low of 8.51 percent well within the off-ramp triggers set out in the Decision of 7.6 percent and 11.6 percent. Further, until the present Proceeding, no party, other than ATCO Gas with respect to its equity ratio for 2008 and ATCO Pipelines with respect to ROE and capital structure for 2008, had requested a review of the generic formula or a change to the allowed capital structure determined in Decision 2004-052.

OEB (August 2009)

The Board's consultation is prompted by the state of the financial markets. As indicated in the Board's June 18, 2009 letter, the Board is satisfied that further examination of its policy regarding the cost of capital is warranted to ensure that, on a going forward basis, changing economic and financial conditions are accommodated if required. [1]



Analyst Views



MACQUARIE

Macquarie Research Equities

Conclusion

- The ROE formula appears to be working
- *But evidence may be masked by:*
 - Fund flows away from other yield product
 - Modest increase in allowed equity
 - Loosening of regulatory framework
- So a reduction in allowed returns could be detrimental
- The whole framework and its effectiveness is contingent on its stability and reliability

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Matt Aikman McQuarrie May 2008 to CAMPUT



ROE Formula Reviews

- ◆ OEB *2003* (2004 Decision)
- ◆ AUC (AEUB) *2003* for 2004
- ◆ BCUC *2007* changes (100% adjustment to Canada yields changed to 75%)
- ◆ NEB *2001* confirmation in TCPL Mainline declined to hear ROE evidence in 2004
- ◆ Régie 2007 Gaz Métro decision



New ROE formula proposals

◆ Ms. McShane's Gazifere 2010 testimony

- assume NEB correct in 1994
- adjusts for 50% of long term Canada (LTC) and “spread” in A bond yield changes
- collapses to change by 50% of the change in A bond yields

$$ROE = 12.25\% + 0.50 * (LTC - 9.25\%) + 0.50 * (Spread - 0.71\%)$$

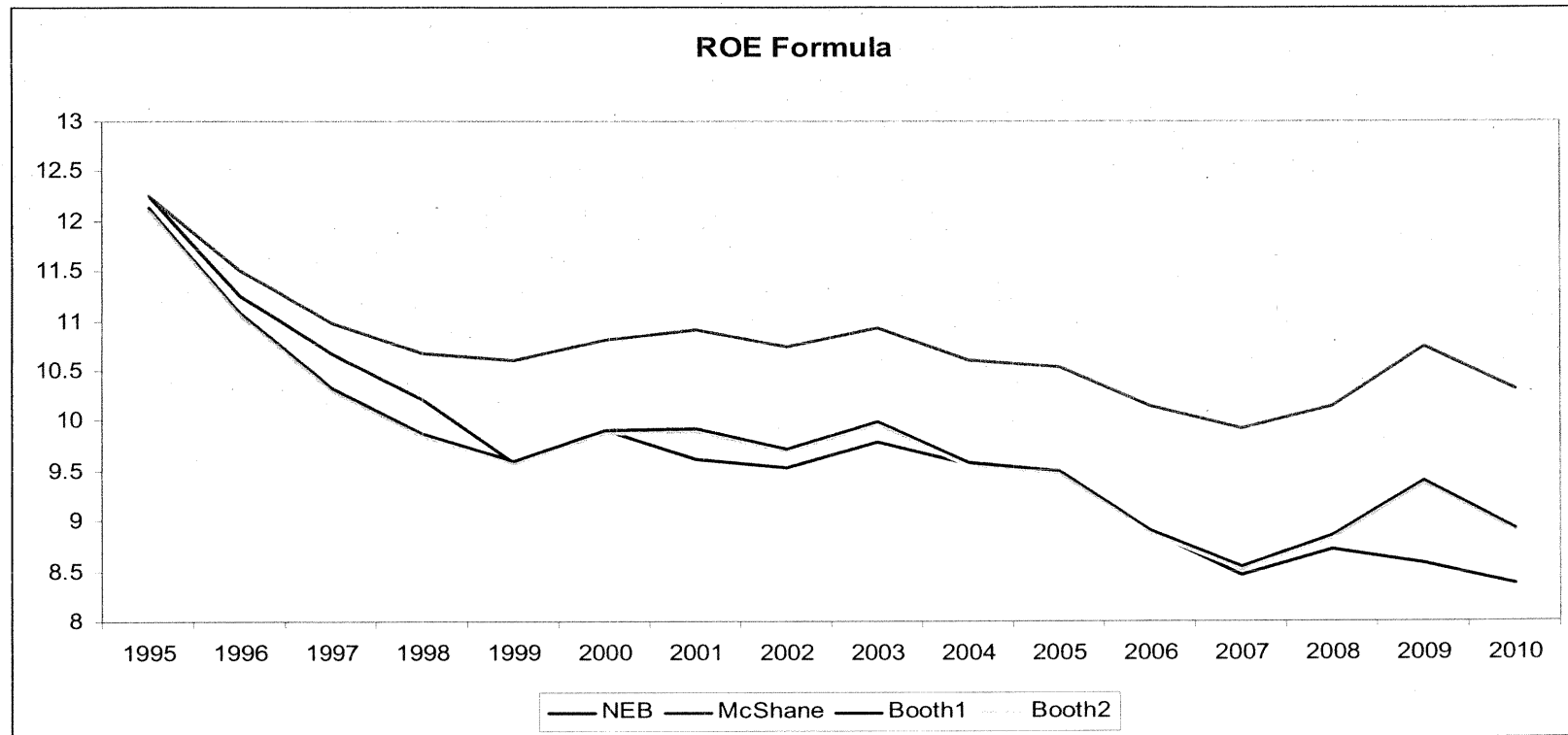
◆ Booth

- assume NEB correct in 2000
- adjusts for 75% of change in LTC yields
- adjusts for 50% of the change in A spreads

$$ROE = 9.90 + .75 * (LTC - 6.12\%) + 0.50 * (Spread - 0.94\%)$$



ROE Adjustment Formula



McShane assumes NEB got it right for 1994 and wrong thereafter
Booth 1 & 2 assumes NEB got it right in 2001 or 2004 and uses spread change to capture the “crisis” premium



Booth Recommendation

- ◆ Markets are still “jittery” and spreads wider than they should be
- ◆ ROE adjustment formula of:
 - 75% of change in forecast LTC Yields
 - 50% of change in credit spreads
- ◆ This confirms that the Regie got it right:
 - during the time that Gaz Metro had an ROE adjustment mechanism
 - By allowing a spread adjustment in 2009
 - Over the business cycle the spread adjustment should average out to zero as long as markets stabilise
- ◆ Avoids repetitive ROE hearings (Gaz Metro 2007, 2009 and now 2011)



US Data

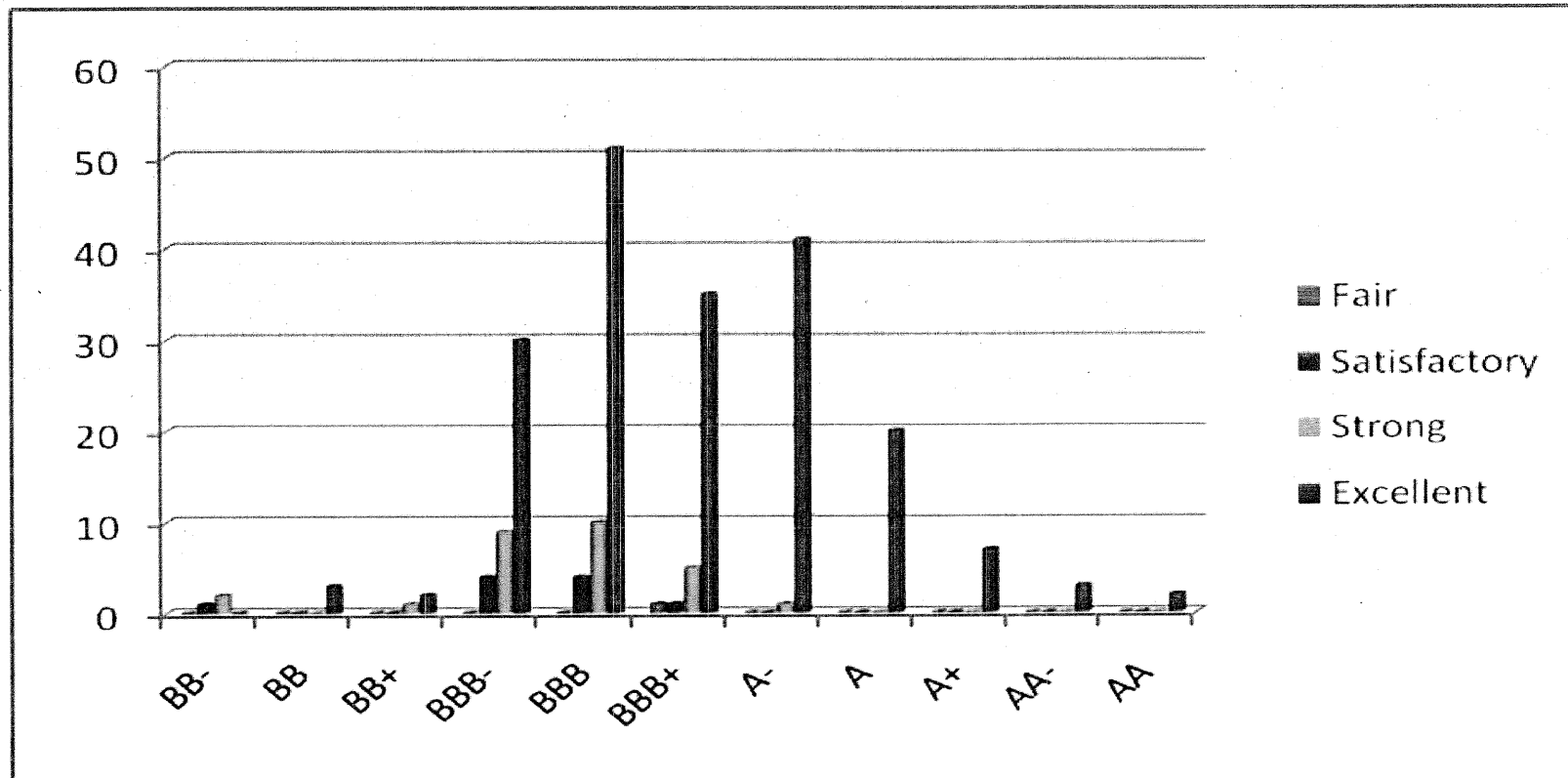
- ◆ Moody's:
 - 25% regulation
 - 25% ability to earn the allowed ROE
 - 10% diversification
 - 40% financials: the numbers

“Moody’s views the regulatory risk of US utilities as being higher in most cases than that of utilities located in some other developed countries, including Japan, Australia and Canada. The difference in risk reflects our view that individual state regulation is less predictable than national regulation; a highly fragmented market in the US results in stronger competition in wholesale power markets; US fuel and power markets are more volatile; there is a low likelihood of extraordinary political action to support a failing company in the US; holding company structures limit regulatory oversight; and overlapping and unclear regulatory jurisdictions characterize the US market. As a result no US utilities, except for transmission companies subject to federal regulation, score higher than a single A in this factor.”

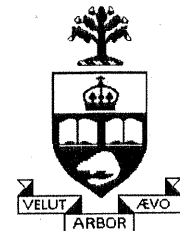
“as is characteristic of the US, the ability to recover costs and earn returns is less certain and subject to public and sometimes political scrutiny.”



US Utility Bond Ratings



Description is of business risk rating for each rating class



Newfoundland Power Decision

3 The Board believes that, in this type of analysis, it is not enough that the chosen
4 comparables are the best available. If this data is to be relied on it must be shown to be a
5 reasonable proxy or that reasonable adjustments can be made to account for differences. The
6 evidence showed significant differences in virtually all of the comparables including significant
7 levels of non-regulated and non-utility business as well as riskier generation projects, earnings
8 volatility, more competition and less regulatory support. While it was argued that, on balance,
9 the U.S. comparables are reasonable proxies the Board notes the overwhelming evidence of a
10 lack of balance as it was clear that on almost every measure Newfoundland Power would have to
11 be considered less risky than the U.S. comparables. The Board heard evidence that the rating
12 agencies consider U.S. companies to be peers for Newfoundland Power but the Board does not
13 conclude from this that they are the same. Moody's comments acknowledge the differences in
14 operations in the U.S. and Canada:

15
16 *"NPI's Baa1 issuer rating reflects the fact that the company's operations are exclusively based*
17 *in Canada, a jurisdiction where regulatory and business environments in general are relatively*
18 *more supportive than those of other international jurisdictions such as the United States, in*
19 *Moody's view."* (Application, 1st Revision, Exhibit 4 - Moody's Credit Opinion, August 3,
20 2009)
21



BCUC Decision

The Commission Panel agrees with Dr Booth that “significant risk adjustments” to US utility data are required in this instance to recognize the fact that TGI possesses a full array of deferral mechanisms which give it more certainty that it will, in the short-term, earn its allowed return than the *Value Line* US natural gas LDCs enjoy. The Commission Panel notes Dr. Booth’s suggestion that the risk premium required by US utilities is between 90 and 100 basis points more than utilities in Canada require may set an upper limit on the necessary adjustment. Accordingly, the Commission Panel will reduce its DCF estimate by between 50 and 100 basis points to a range of 9.0 percent to 10.0 percent, before any allowance for financing flexibility.

