

Facility Association Cat 2 Taxi & Limousines Rate Filing

Exhibit - SD 43

Filed: Nov. 5, 2014 Board Secretary: LB

Facility Association - Trend Analysis - Industry - OW Approach

NL - CV

BI

as at: Dec 31, 2012

actual observations:	40
excluded observations:	24
# observations used:	16

Level Options:	Freq	Sev	LC
At Selected Ultimate Levels	1	R	T
At Favourable Levels	2	V	W
At Unfavourable Levels	3	Z	AA

MODEL DESCRIPTION Regulator LC avg 3: latest 10 yrs only to second most recent period, excluding 2 highest and 2 lowest by % change

Loss Costs in Loss Costs in: \$1s

Level Selected: 1

At Selected Ultimate Levels

Chart Periods	Exclude Data Point (y)?	Trend Periods based on average accident date where scalar present										Loss Cost Values					% chg								
		Season	All Years	Scalar 1		Trend 1		Scalar 2		Trend 2		Scalar 3		Trend 3		Scalar 4		Trend 4		From Valuation	Fitted Model	Fitted Model Residual	Selected Model	Selected Model Residual	
				0	1	0	0	0	0	0	0	0	0	0	0	0		0	0						
'93H1	y	1	1993.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	509.61	(509.61)	393.90	(393.90)	
'93H2	y	2	1993.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500.46	(500.46)	390.94	(390.94)	
'94H1	y	1	1994.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	491.48	(491.48)	387.99	(387.99)	
'94H2	y	2	1994.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	482.66	(482.66)	385.07	(385.07)	
'95H1	y	1	1995.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	474.00	(474.00)	382.18	(382.18)	
'95H2	y	2	1995.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	465.50	(465.50)	379.30	(379.30)	
'96H1	y	1	1996.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	457.14	(457.14)	376.45	(376.45)	
'96H2	y	2	1996.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	448.94	(448.94)	373.61	(373.61)	
'97H1	y	1	1997.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440.88	(440.88)	370.80	(370.80)	
'97H2	y	2	1997.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	432.97	(432.97)	368.01	(368.01)	
'98H1	y	1	1998.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180.58	425.20	(244.62)	365.24	(184.66)
'98H2	y	2	1998.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	303.54	417.57	(114.03)	362.49	(58.95)
'99H1	y	1	1999.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	329.87	410.08	(80.21)	359.76	(28.89)
'99H2	y	2	1999.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	363.05	402.72	(39.67)	357.05	6.00
'00H1	y	1	2000.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	302.89	395.49	(92.60)	354.37	(51.48)
'00H2	y	2	2000.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	453.77	388.40	65.37	351.70	102.07
'01H1	y	1	2001.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	428.08	381.43	46.65	349.05	79.03
'01H2	y	2	2001.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	629.01	374.58	254.43	346.43	282.58
'02H1	y	1	2002.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	713.39	367.86	345.53	343.82	369.57
'02H2	y	2	2002.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	315.24	361.26	(46.02)	341.23	(25.99)
'03H1		1	2003.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	430.12	354.78	75.34	338.66	91.46
'03H2		2	2003.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	390.31	348.41	41.90	336.11	54.20
'04H1		1	2004.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	387.68	342.16	45.52	333.58	54.10
'04H2		2	2004.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	262.67	336.02	(73.35)	331.07	(68.40)
'05H1	y	1	2005.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	211.21	329.99	(118.78)	328.58	(117.37)
'05H2		2	2005.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	305.53	324.07	(18.54)	326.11	(20.58)
'06H1		1	2006.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	285.03	318.25	(33.22)	323.65	(38.62)
'06H2		2	2006.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272.56	312.54	(39.98)	321.22	(48.66)
'07H1		1	2007.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	267.68	306.93	(39.25)	318.80	(51.12)
'07H2	y	2	2007.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	448.75	301.42	147.33	316.40	132.35
'08H1		1	2008.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340.14	296.01	44.13	314.02	26.12
'08H2		2	2008.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	302.26	290.70	11.56	311.66	(9.40)
'09H1		1	2009.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	251.11	285.49	(34.38)	309.31	(58.20)
'09H2		2	2009.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	329.62	280.36	49.26	306.98	22.64
'10H1		1	2010.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	245.94	275.33	(29.39)	304.67	(58.73)
'10H2		2	2010.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	303.59	270.39	33.20	302.38	1.21
'11H1		1	2011.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	257.85	265.54	(7.69)	300.10	(42.25)
'11H2	y	2	2011.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	475.19	260.77	214.42	297.84	177.35
'12H1		1	2012.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275.50	256.09	19.41	295.60	(20.10)
'12H2	y	2	2012.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	335.74	251.50	84.24	293.38	42.36
'13H1		1	2013.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	246.99			291.17	
'13H2		2	2013.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	242.55			288.98	
'14H1		1	2014.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	238.20			286.80	
'14H2		2	2014.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	233.93			284.64	
'15H1		1	2015.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	229.73			282.50	
'15H2		2	2015.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	225.61			280.37	
'16H1		1	2016.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	221.56			278.26	
'16H2		2	2016.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	217.58			276.17	
'17H1		1	2017.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	213.68			274.09	
'17H2		2	2017.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209.84			272.03	
'18H1		1	2018.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	206.08			269.98	

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as at: Dec 31, 2012

actual observations:	40
excluded observations:	24
# observations used:	16

Level Options:	Freq	Sev	LC
At Selected Ultimate Levels	1	R	S T
At Favourable Levels	2	V	W X
At Unfavourable Levels	3	Z	AA AB

MODEL DESCRIPTION Regulator LC avg 3: latest 10 yrs only to second most recent period, excluding 2 highest and 2 lowest by % change

FITTED TREND STRUCTURE ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.1575	0.1575	8.0155	0.0133
Residual	14	0.2752	0.0197		
Total	15	0.4327			

FITTED TREND STRUCTURE REGRESSION STATISTICS						
Multiple R	R2	Adjusted R2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	k
0.6034	0.3541	0.3187	0.1402	16	24	2

Runs-Test Result: 3.6078 RESIDUALS RUNS NOT RANDOM
parameters with p-value >5%: 0

	Coefficients	S.E.	t-Stat	p-value	C.I. Lower	0.99 Upper	Selected Coeff.
Intercept	78.421	18.819	4.167	0.1%	22.399	134.442	36.094 11
Season	-	-	-	n/a	-	-	-
All Years	(0.036)	0.009	(3.854)	0.2%	(0.064)	(0.008)	(0.015) 9
Scalar 1	-	-	-	n/a	-	-	-
Trend 1	-	-	-	n/a	-	-	-
Scalar 2	-	-	-	n/a	-	-	-
Trend 2	-	-	-	n/a	-	-	-
Scalar 3	-	-	-	n/a	-	-	-
Trend 3	-	-	-	n/a	-	-	-
Scalar 4	-	-	-	n/a	-	-	-
Trend 4	-	-	-	n/a	-	-	-

Trends are Annual use "All Years" to match trend; use "Intercept" to match average values

SELECTED TREND STRUCTURE ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.0594	0.0594	2.6752	0.1242
Residual	14	0.3633	0.0259		
Total	15	0.4327			

SELECTED TREND STRUCTURE REGRESSION STATISTICS						
Multiple R	R2	Adjusted R2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	k
0.4005	0.1804	0.3005	0.1611	16	24	2

Runs-Test Result: 3.5234 RESIDUALS RUNS NOT RANDOM

	Fitted Annual	Previous Selected	Selected Annual	selected does NOT equal fitted!
past	(3.6%)	(2.5%)	(1.5%)	'12H2 => last period in "past"
future	(3.6%)	(2.5%)	(2.5%)	

WHERE SELECTED MODEL COEFFICIENTS ARE TO BE FITTED MANUALLY:

Option 1: set so that averages for selected model = actuals over the period
avg NOT USED
From Valuation - '02H2 to '12H1 317.90 actual values
Selected Model - '02H2 to '12H1 317.90 selected model values
diff: 0.00 If used, adjust scalar to make diff zero

Option 2: set to minimize mean square error (MSE)
MSE: 0.0259 NOT USED

