

Facility Association - Trend Analysis - Industry - OW Approach

NL - CV  
BI

as at: Dec 31, 2012

actual observations:	40
excluded observations:	32
# observations used:	8

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 2: latest 5 yrs only, excluding highest and lowest by % change

Loss Costs Ir Loss Costs in: \$1s

Level Selected: 1

At Selected Ultimate Levels

Chart Periods	Exclude Data Point (y)?	XI											Loss Cost Values					% chg	
		Season	All Years	Trend Periods based on average accident date where scalar present								From Valuation	Fitted Model	Fitted Model Residual	Selected Model	Selected Model Residual			
				Scalar 1	Trend 1	Scalar 2	Trend 2	Scalar 3	Trend 3	Scalar 4	Trend 4								
		0	1	0	0	0	0	0	0	0	0	0							
'93H1	y	1	1995.25	-	-	-	-	-	-	-	-	-	-	313.20	(313.20)	404.41	(404.41)		
'93H2	y	2	1993.75	-	-	-	-	-	-	-	-	-	-	312.51	(312.51)	401.37	(401.37)		
'94H1	y	1	1994.25	-	-	-	-	-	-	-	-	-	-	311.82	(311.82)	398.35	(398.35)		
'94H2	y	2	1994.75	-	-	-	-	-	-	-	-	-	-	311.13	(311.13)	395.35	(395.35)		
'95H1	y	1	1995.25	-	-	-	-	-	-	-	-	-	-	310.44	(310.44)	392.37	(392.37)		
'95H2	y	2	1995.75	-	-	-	-	-	-	-	-	-	-	309.75	(309.75)	389.42	(389.42)		
'96H1	y	1	1996.25	-	-	-	-	-	-	-	-	-	-	309.07	(309.07)	386.49	(386.49)		
'96H2	y	2	1996.75	-	-	-	-	-	-	-	-	-	-	308.38	(308.38)	383.58	(383.58)		
'97H1	y	1	1997.25	-	-	-	-	-	-	-	-	-	-	307.70	(307.70)	380.69	(380.69)		
'97H2	y	2	1997.75	-	-	-	-	-	-	-	-	-	-	307.02	(307.02)	377.83	(377.83)		
'98H1	y	1	1998.25	-	-	-	-	-	-	-	-	-	180.58	306.34	(125.76)	374.98	(194.40)		
'98H2	y	2	1998.75	-	-	-	-	-	-	-	-	-	303.54	305.66	(2.12)	372.16	(68.62)		
'99H1	y	1	1999.25	-	-	-	-	-	-	-	-	-	329.87	304.99	24.88	369.36	(39.49)	83%	
'99H2	y	2	1999.75	-	-	-	-	-	-	-	-	-	363.05	304.31	58.74	366.58	(3.53)	20%	
'00H1	y	1	2000.25	-	-	-	-	-	-	-	-	-	302.89	303.64	(0.75)	363.82	(60.93)	-8%	
'00H2	y	2	2000.75	-	-	-	-	-	-	-	-	-	453.77	302.97	150.80	361.08	92.69	25%	
'01H1	y	1	2001.25	-	-	-	-	-	-	-	-	-	428.08	302.30	125.78	358.37	69.71	41%	
'01H2	y	2	2001.75	-	-	-	-	-	-	-	-	-	629.01	301.63	327.38	355.67	273.34	39%	
'02H1	y	1	2002.25	-	-	-	-	-	-	-	-	-	713.39	300.96	412.43	352.99	360.40	67%	
'02H2	y	2	2002.75	-	-	-	-	-	-	-	-	-	315.24	300.29	14.95	350.33	(35.09)	-50%	
'03H1	y	1	2003.25	-	-	-	-	-	-	-	-	-	430.12	299.63	130.49	347.70	82.42	-40%	
'03H2	y	2	2003.75	-	-	-	-	-	-	-	-	-	390.31	298.97	91.34	345.08	45.23	24%	
'04H1	y	1	2004.25	-	-	-	-	-	-	-	-	-	387.68	298.31	89.37	342.48	45.20	-10%	
'04H2	y	2	2004.75	-	-	-	-	-	-	-	-	-	262.67	297.65	(34.98)	339.91	(77.24)	-33%	
'05H1	y	1	2005.25	-	-	-	-	-	-	-	-	-	211.21	296.99	(85.78)	337.35	(126.14)	-46%	
'05H2	y	2	2005.75	-	-	-	-	-	-	-	-	-	305.53	296.33	9.20	334.81	(29.28)	16%	
'06H1	y	1	2006.25	-	-	-	-	-	-	-	-	-	285.03	295.67	(10.64)	332.29	(47.26)	35%	
'06H2	y	2	2006.75	-	-	-	-	-	-	-	-	-	272.56	295.02	(22.46)	329.79	(57.23)	-11%	
'07H1	y	1	2007.25	-	-	-	-	-	-	-	-	-	267.68	294.37	(26.69)	327.31	(59.63)	-6%	
'07H2	y	2	2007.75	-	-	-	-	-	-	-	-	-	448.75	293.72	155.03	324.84	123.91	65%	
'08H1		1	2008.25	-	-	-	-	-	-	-	-	-	340.14	293.07	47.07	322.40	17.74	27%	
'08H2	y	2	2008.75	-	-	-	-	-	-	-	-	-	302.26	292.42	9.84	319.97	(17.71)	-33%	
'09H1		1	2009.25	-	-	-	-	-	-	-	-	-	251.11	291.77	(40.66)	317.56	(66.45)	-26%	
'09H2		2	2009.75	-	-	-	-	-	-	-	-	-	329.62	291.13	38.49	315.17	14.45	9%	
'10H1		1	2010.25	-	-	-	-	-	-	-	-	-	245.94	290.48	(44.54)	312.80	(66.86)	-2%	
'10H2		2	2010.75	-	-	-	-	-	-	-	-	-	303.59	289.84	13.75	310.45	(6.86)	-8%	
'11H1		1	2011.25	-	-	-	-	-	-	-	-	-	257.85	289.20	(31.35)	308.11	(50.26)	5%	
'11H2	y	2	2011.75	-	-	-	-	-	-	-	-	-	475.19	288.56	186.63	305.79	169.40	57%	
'12H1		1	2012.25	-	-	-	-	-	-	-	-	-	275.50	287.92	(12.42)	303.49	(27.99)	7%	
'12H2		2	2012.75	-	-	-	-	-	-	-	-	-	335.74	287.28	48.46	301.20	34.54	-29%	
'13H1		1	2013.25	-	-	-	-	-	-	-	-	-	286.65			298.94			
'13H2		2	2013.75	-	-	-	-	-	-	-	-	-	286.01			296.69			
'14H1		1	2014.25	-	-	-	-	-	-	-	-	-	285.38			294.45			
'14H2		2	2014.75	-	-	-	-	-	-	-	-	-	284.75			292.24			
'15H1		1	2015.25	-	-	-	-	-	-	-	-	-	284.12			290.04			
'15H2		2	2015.75	-	-	-	-	-	-	-	-	-	283.49			287.86			
'16H1		1	2016.25	-	-	-	-	-	-	-	-	-	282.86			285.69			
'16H2		2	2016.75	-	-	-	-	-	-	-	-	-	282.24			283.54			
'17H1		1	2017.25	-	-	-	-	-	-	-	-	-	281.61			281.40			
'17H2		2	2017.75	-	-	-	-	-	-	-	-	-	280.99			279.29			
'18H1		1	2018.25	-	-	-	-	-	-	-	-	-	280.37			277.18			

Facility Association - Trend Analysis - Industry - OW Approach  
NL - CV  
BI  
as at: Dec 31, 2012

actual observations:	40
excluded observations:	32
# observations used:	8

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 2: latest 5 yrs only, excluding highest and lowest by % change

	df	SS	MS	F	Significance
Regression	1	0.0003	0.0003	0.0145	0.9080
Residual	6	0.1294	0.0216		
Total	7	0.1297			

Multiple R	R2	Adjusted R2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	k
0.0491	0.0024	(0.1638)	0.1469	8	32	2

Runs-Test Result: 4.4195 RESIDUALS RUNS NOT RANDOM  
# parameters with p-value >5%: 2

	Coefficients	S.E.	t-Stat	p-value	C.I. Lower	0.99 Upper	Selected Coeff.
Intercept	14.576	-	-	100.0%	14.576	14.576	36.120 11
Season	-	-	-	n/a	-	-	- 10
All Years	(0.004)	-	-	100.0%	(0.004)	(0.004)	(0.015) 9
Scalar 1	-	-	-	n/a	-	-	- 8
Trend 1	-	-	-	n/a	-	-	- 7
Scalar 2	-	-	-	n/a	-	-	- 6
Trend 2	-	-	-	n/a	-	-	- 5
Scalar 3	-	-	-	n/a	-	-	- 4
Trend 3	-	-	-	n/a	-	-	- 3
Scalar 4	-	-	-	n/a	-	-	- 2
Trend 4	-	-	-	n/a	-	-	- 1

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

	df	SS	MS	F	Significance
Regression	1	(0.0415)	(0.0415)	(1.4539)	#NUM!
Residual	6	0.1712	0.0285		
Total	7	0.1297			

Multiple R	R2	Adjusted R2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	k
#NUM!	(0.3196)	(0.5398)	0.1689	8	32	2

Runs-Test Result: 4.8640 RESIDUALS RUNS NOT RANDOM

	Fitted Annual	Previous Selected	Selected Annual	selected does NOT equal fitted!
past	(0.4%)	(2.5%)	(1.5%)	'12H2 => last period in "past"
future	(0.4%)	(2.5%)	(1.5%)	

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 - '08H1 to '12H2 311.69 actual values  
Selected Model - '08H1 to '12H2 311.69 selected model values  
diff: (0.00) if used, adjust scalar to make diff zero

Option 2: set to minimize mean square error (MSE)  
MSE: 0.0285 NOT USED

