

Farmers Commercial Price Monitoring

10/4/2009



FARMERS

Index



Rolling Pricing Parallelogram – Tracks pricing change on a monthly cohort of renewal policies over twelve months

Other Considerations – New Business, Coverage, Exposure, Premium Modification, and Company Placement

Actuaries and Parallelograms



How an actuary with his parallelogram is like a dog with his bone

- A dog never forgets his first bone.
- A dog doesn't need bones to survive, but they sure make life more enjoyable.
- A dog will bury his favorite bone so he can come back and chew on it later.
- A dog has to crack through the hard outer layer to get to the juicy stuff inside.
- No one wants to touch a bone after a dog has chewed on it for a while.
- I wouldn't trust a dog who doesn't like bones.

Rolling Pricing Parallelogram



Explanation

- Consider a cohort of policies with the same effective month.
- Calculate the price change during when renewal processing begins and monthly thereafter.
- Pricing Change = $\frac{\text{Renewal Premium} - 1.00}{\text{Expiring Premium}}$
- Expiring premium annualized for short terms, mid-term endorsements, etc.
- Non-renewals excluded
- Cancellations excluded
- New Business excluded
- No adjustments for changes in coverage, exposure, premium modification, or company placement.

Rolling Pricing Parallelogram



Example Calculation - Actual calculations rely on system generated values. The example below is constructed to illustrate what is included (excluded) in the estimates.

- 1,000 in force policies with renewal dates in March – the March cohort.
- In January underwriters begin processing March renewals. Of 450 policies processed, 10 will not be renewed. Renewals sent out for the remaining 440.
- Renewal premium for the 440 policies is \$542,000. Expiring in-force premium is \$513,000.
- January estimate of the pricing change for the March cohort is

$$542 / 513 - 1.00 = 5.7\%$$

- In February, the remaining 550 policies are processed – 5 will not be renewed. Renewal premium on the remaining 545 is \$673,000. Expiring in-force premium is \$641,000.
- 10 policies of the 440 processed in January are cancelled. Renewal premium is \$14,000, and expiring in-force premium is \$12,000.
- February estimate of the pricing change for the March cohort is

$$(542 - 14 + 673) / (513 - 12 + 641) - 1.00 = 5.2\%$$

- Perform the same calculation monthly for all cohorts.

Rolling Pricing Parallelogram – Illustration Only



Renewal Month	Valuation Month									
	2009 Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
'08 Jan	-2.6%									
Feb	-1.1%	-1.2%								
Mar	-2.9%	-2.9%	-2.9%							
Apr	-2.0%	-2.3%	-2.4%	-2.4%						
May	2.0%	1.9%	2.2%	2.1%	1.8%					
Jun	2.6%	2.2%	2.2%	2.2%	2.2%	2.2%				
Jul	2.2%	1.7%	1.6%	1.4%	1.6%	1.8%	1.7%			
Aug	3.0%	3.3%	3.4%	3.4%	3.2%	3.3%	3.3%	3.2%		
Sep	4.3%	4.1%	4.0%	4.3%	3.8%	3.7%	3.8%	4.2%	3.4%	
Oct	6.3%	5.5%	5.6%	5.8%	5.9%	5.8%	5.1%	5.4%	5.3%	
Nov	3.9%	3.5%	3.5%	3.3%	3.3%	3.4%	2.7%	2.3%	2.9%	
Dec	3.8%	3.2%	2.9%	2.3%	2.2%	2.0%	2.2%	2.3%	2.1%	
'09 Jan	6.2%	5.3%	3.8%	3.5%	3.2%	2.8%	2.6%	2.7%	2.7%	
Feb	6.2%	4.9%	3.2%	2.5%	1.5%	1.5%	1.6%	1.7%	1.5%	
Mar		5.7%	5.2%	5.4%	5.0%	4.6%	4.7%	4.7%	5.6%	
Apr			5.4%	5.1%	4.4%	3.3%	2.9%	3.1%	3.4%	
May				6.3%	6.3%	5.2%	5.1%	4.8%	4.6%	
Jun					8.8%	8.2%	7.7%	5.7%	5.8%	
Jul						5.8%	5.4%	4.7%	4.4%	
Aug							5.4%	4.9%	3.4%	
Sep								5.9%	5.0%	
Oct									6.1%	
YTD		5.3%	3.5%	3.9%	3.6%	3.6%	4.2%	4.0%	4.0%	
Roll 12	1.7%	2.1%	2.3%	2.9%	3.3%	3.4%	3.7%	3.8%	3.8%	

Non-renewal

Cancellation

Rolling Pricing Parallelogram – Illustration Only



Renewal Month	Valuation Month								
	2009								
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
'08 Jan	-2.6%								
Feb	-1.1%	-1.2%							
Mar	-2.9%	-2.9%	-2.9%						
Apr	-2.0%	-2.3%	-2.4%	-2.4%					
May	2.0%	1.9%	2.2%	2.1%	1.8%				
Jun	2.6%	2.2%	2.2%	2.2%	2.2%	2.2%			
Jul	2.2%	1.7%	1.6%	1.4%	1.6%	1.8%	1.7%		
Aug	3.0%	3.3%	3.4%	3.4%	3.2%	3.3%	3.3%	3.2%	
Sep	4.3%	4.1%	4.0%	4.3%	3.8%	3.7%	3.8%	4.2%	3.4%
Oct	6.3%	5.5%	5.6%	5.8%	5.9%	5.8%	5.1%	5.4%	5.3%
Nov	3.9%	3.5%	3.5%	3.3%	3.3%	3.4%	2.7%	2.3%	2.9%
Dec	3.8%	3.2%	2.9%	2.3%	2.2%	2.0%	2.2%	2.3%	2.1%
'09 Jan	6.2%	5.3%	3.8%	3.5%	3.2%	2.8%	2.6%	2.7%	2.7%
Feb	6.2%	4.9%	3.2%	2.5%	1.5%	1.5%	1.6%	1.7%	1.5%
Mar		5.7%	5.2%	5.4%	5.0%	4.6%	4.7%	4.7%	5.6%
Apr			5.4%	5.1%	4.4%	3.3%	2.9%	3.1%	3.4%
May				6.3%	6.3%	5.2%	5.1%	4.8%	4.6%
Jun					8.8%	8.2%	7.7%	5.7%	5.8%
Jul						5.8%	5.4%	4.7%	4.4%
Aug							5.4%	4.9%	3.4%
Sep								5.9%	5.0%
Oct									6.1%
YTD		5.3%	3.5%	3.9%	3.6%	3.6%	4.2%	4.0%	4.0%
Roll 12	1.7%	2.1%	2.3%	2.9%	3.3%	3.4%	3.7%	3.8%	3.8%

Considerations



New Business Pricing

Coverage Changes

Exposure Changes – e.g. Additional Locations

IRPM / Schedule Modification

Experience Modification

Company Placement

Farmers Commercial Price Monitoring



Questions

Comments

Snide Remarks