REPUBLIC GROUP℠

Pricing Analytics for the Small and Medium Sized Company

RPM 2014

Michael Moss

Where Relationships Matter℠

Antitrust Notice

- The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws. Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings.
- Under no circumstances shall CAS seminars be used as a means for competing companies or firms to reach any understanding – expressed or implied – that restricts competition or in any way impairs the ability of members to exercise independent business judgment regarding matters affecting competition.
- It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.

2

The Republic Group

- Republic is a regional carrier writing Personal and Commercial lines in 6 states – TX, LA, MS, OK, AR, and NM.
- For Personal Lines, our volume of business is:
  - Auto: $38.3M
  - Homeowners: $91.9M
  - Dwelling Fire: $18.1M
- Republic also writes Commercial lines – GL, WC, Auto, and Property
  - Smaller than Personal Lines but growing.
- Most business written through independent agents.

3

REPUBLIC GROUP℠

Program Monitoring

Where Relationships Matter℠

Program Monitoring – Types of Standard Reports at Republic

- Accident Year Results
  - By State
  - By LOB – Auto, Homeowners, Dwelling Fire
    - Auto also by Coverage
  - By Quarter and CAY and FAY for past 5 years
- Accident Year Cause of Loss reports
  - Frequency, Severity, Pure Premium, and Partial Loss Ratios by peril, by state.
- Quality of Business reports
  - Compares New Business to Renewals by state, by insurance score, deductible, dwelling limit, BI/PD limit, preferred/standard/non-standard tiers, territory, etc.
  - Data gets thin, so look at past month, as well as past 3, 6, and 12 months compared to in force.

Program Monitoring – Accident Year Results

- Screenshot of an AY Report for a **new product** in one state
- Starting with only 500 exposures.
- Can you tell anything from this much detail on book this small?

Accident Quarter	Earned Premium	Average Policy Exposure	Ultimate* Claim Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)	Avg. Pure Premium (ex Cats)	Average Earned Premium	Ultimate* Claim Counts (Cats)	Ultimate** Loss Dollars (Cats)	Ultimate Loss Ratio (Cats)	Ultimate Loss Ratio Total
2008-1	129,011	519	9	98,404	76.3%	0.0694	10,934	759	995	3	14,083	10.9%	87.2%
2008-2	263,278	1,057	16	388,479	147.6%	0.0605	24,280	1,470	996	13	165,123	62.7%	210.3%
2008-3	425,279	1,680	32	1,003,161	235.9%	0.0762	31,349	2,388	1,012	12	92,587	21.8%	257.7%
2008-4	572,839	2,223	30	117,568	20.5%	0.0540	3,919	212	1,031	0	0	0.0%	20.5%
2009-1	694,414	2,718	44	848,992	122.3%	0.0648	19,295	1,250	1,022	14	78,456	11.3%	133.6%
2009-2	879,863	3,352	53	409,864	46.6%	0.0632	7,733	489	1,050	29	194,385	22.1%	68.7%
2009-3	1,061,098	3,971	69	1,041,056	98.1%	0.0695	15,088	1,049	1,069	1	2,333	0.2%	98.3%
2009-4	1,218,735	4,494	68	638,552	52.4%	0.0605	9,390	568	1,085	4	15,175	1.2%	53.6%
2010-1	1,315,393	4,816	59	495,241	37.6%	0.0490	8,394	411	1,092	50	339,786	25.8%	63.5%
2010-2	1,421,759	4,944	78	834,105	58.7%	0.0631	10,694	675	1,150	33	196,695	13.8%	72.5%
2010-3	1,529,534	5,039	75	1,027,431	67.2%	0.0595	13,699	816	1,214	0	0	0.0%	67.2%
2010-4	1,569,892	4,944	57	707,267	45.1%	0.0461	12,408	572	1,270	4	6,110	0.4%	45.4%
2011-1	1,532,720	4,831	65	833,856	54.4%	0.0538	12,829	690	1,269	13	87,450	5.7%	60.1%
2011-2	1,528,364	4,688	46	228,077	14.9%	0.0393	4,958	195	1,304	133	1,287,822	84.3%	99.2%
2011-3	1,502,499	4,484	75	1,011,157	67.3%	0.0669	13,482	902	1,340	20	106,884	7.1%	74.4%
2011-4	1,485,291	4,385	38	1,452,182	97.8%	0.0347	38,215	1,325	1,355	4	13,120	0.9%	98.7%
2012-1	1,451,688	4,276	49	352,803	24.3%	0.0458	7,200	330	1,358	11	66,660	4.6%	28.9%
2012-2	1,430,849	4,149	50	238,872	16.7%	0.0482	4,777	230	1,380	27	118,783	8.3%	25.0%
2012-3	1,425,946	4,012	44	461,285	32.3%	0.0439	10,484	460	1,422	38	161,852	11.4%	43.7%
2012-4	1,402,658	3,822	53	322,131	23.0%	0.0555	6,078	337	1,468	0	0	0.0%	23.0%

Fiscal Year Ending 12th Month of	Earned Premium	Average Policy Exposure	Ultimate* Loss Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)	Avg. Pure Premium (ex Cats)	Average Earned Premium	Ultimate* Loss Counts (Cats)	Ultimate** Loss Dollars (Cats)	Ultimate Loss Ratio (Cats)	Ultimate Loss Ratio Total
2008	1,390,407	1,370	87	1,607,613	115.6%	0.0635	18,478	1,174	1,015	28	271,793	19.5%	135.2%
2009	3,854,110	3,634	234	2,938,464	76.2%	0.0644	12,558	809	1,061	48	290,349	7.5%	83.8%
2010	5,836,578	4,936	269	3,064,043	52.5%	0.0545	11,390	621	1,183	87	542,592	9.3%	61.8%
2011	6,048,874	4,597	224	3,525,272	58.3%	0.0487	15,738	767	1,316	170	1,495,276	24.7%	83.0%
2012	5,711,141	4,065	196	1,375,092	24.1%	0.0482	7,016	338	1,405	76	347,295	6.1%	30.2%

Cal/Acc Year	Earned Premium	Average Policy Exposures	Ultimate* Loss Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)	Avg. Pure Premium (ex Cats)	Average Earned Premium	Ultimate* Loss Counts (Cats)	Ultimate** Loss Dollars (Cats)	Ultimate Loss Ratio (Cats)	Ultimate Loss Ratio Total
2008	1,390,407	1,370	87	1,607,613	115.6%	0.0635	18,478	1,174	1,015	28	271,793	19.5%	135.2%
2009	3,854,110	3,634	234	2,938,464	76.2%	0.0644	12,558	809	1,061	48	290,349	7.5%	83.8%
2010	5,836,578	4,936	269	3,064,043	52.5%	0.0545	11,390	621	1,183	87	542,592	9.3%	61.8%
2011	6,048,874	4,597	224	3,525,272	58.3%	0.0487	15,738	767	1,316	170	1,495,276	24.7%	83.0%
2012	5,711,141	4,065	196	1,375,092	24.1%	0.0482	7,016	338	1,405	76	347,295	6.1%	30.2%

Program Monitoring

- Looking at just exposure counts
- Grew from 500 to 5,000 quickly, adding about 500/qtr.
- Much faster than expected.
- In 2.5 years, became second largest state for this line.
- Marketing probably ecstatic.
- Implies initial premiums too low and/or underwriting not strict enough.

Accident Quarter	Earned Premium	Policy Exposure
2008-1	129,011	**519**
2008-2	263,278	**1,057**
2008-3	425,279	**1,680**
2008-4	572,839	**2,223**
2009-1	694,414	**2,718**
2009-2	879,863	**3,352**
2009-3	1,061,098	**3,971**
2009-4	1,218,735	**4,494**
2010-1	1,315,393	**4,816**
2010-2	1,421,759	**4,944**
2010-3	1,529,534	**5,039**
2010-4	1,569,892	**4,944**
2011-1	1,532,720	**4,831**
2011-2	1,528,364	**4,688**
2011-3	1,502,499	**4,484**
2011-4	1,485,291	**4,385**
2012-1	1,451,688	**4,276**
2012-2	1,430,849	**4,149**
2012-3	1,425,946	**4,012**
2012-4	1,402,658	**3,822**

Fiscal Year Ending 12th Month of	Earned Premium	Average Policy Exposure	Ultimate* Loss Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)
2008	1,390,407	1,370	87	1,607,613
2009	3,854,110	3,634	234	2,938,464
2010	5,836,578	4,936	269	3,064,043
2011	6,048,874	4,597	224	3,525,272
2012	5,711,141	4,065	196	1,375,092

Cal/Acc Year	Earned Premium	Average Policy Exposures	Ultimate* Loss Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)
2008	1,390,407	1,370	87	1,607,613
2009	3,854,110	3,634	234	2,938,464
2010	5,836,578	4,936	269	3,064,043
2011	6,048,874	4,597	224	3,525,272
2012	5,711,141	4,065	196	1,375,092

Accident Quarter	Policy Exposures
2008-1	519
2008-2	1,057
2008-3	1,680
2008-4	2,223
2009-1	2,718
2009-2	3,352
2009-3	3,971
2009-4	4,494
2010-1	4,816
2010-2	4,944
2010-3	5,039

7

Program Monitoring – Accident Year Results

Let's drill down into the loss experience.

Accident Quarter	Earned Premium	Ultimate* Claim Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)	Avg. Pure Premium (ex Cats)	Ultimate* Claim Counts (Cats)	Ultimate** Loss Dollars (Cats)	Ultimate Loss Ratio (Cats)	Ultimate Loss Ratio Total
2008-1	129,011	9	98,404	76.3%	0.0694	10,934	759	3	14,083	10.9%	87.2%
2008-2	263,278	16	388,479	147.6%	0.0605	24,280	1,470	13	165,123	62.7%	210.3%
2008-3	425,279	32	1,003,161	235.9%	0.0762	31,349	2,388	12	92,587	21.8%	257.7%
2008-4	572,839	30	117,568	20.5%	0.0540	3,919	212	0	0	0.0%	20.5%
2009-1	694,414	44	848,992	122.3%	0.0648	19,295	1,250	14	78,456	11.3%	133.6%
2009-2	879,863	53	409,864	46.6%	0.0632	7,733	489	29	194,385	22.1%	68.7%
2009-3	1,061,098	69	1,041,056	98.1%	0.0695	15,088	1,049	1	2,333	0.2%	98.3%
2009-4	1,218,735	68	638,552	52.4%	0.0605	9,390	568	4	15,175	1.2%	53.6%
2010-1	1,315,393	59	495,241	37.6%	0.0490	8,394	411	50	339,786	25.8%	63.5%
2010-2	1,421,759	78	834,105	58.7%	0.0631	10,694	675	33	196,695	13.8%	72.5%
2010-3	1,529,534	75	1,027,431	67.2%	0.0595	13,699	816	0	0	0.0%	67.2%
2010-4	1,569,892	57	707,267	45.1%	0.0461	12,408	572	4	6,110	0.4%	45.4%
2011-1	1,532,720	65	833,856	54.4%	0.0538	12,829	690	13	87,450	5.7%	60.1%
2011-2	1,528,364	46	228,077	14.9%	0.0393	4,958	195	133	1,287,822	84.3%	99.2%
2011-3	1,502,499	75	1,011,157	67.3%	0.0669	13,482	902	20	106,884	7.1%	74.4%
2011-4	1,485,291	38	1,452,182	97.8%	0.0347	38,215	1,325	4	13,120	0.9%	98.7%
2012-1	1,451,688	49	352,803	24.3%	0.0458	7,200	330	11	66,660	4.6%	28.9%
2012-2	1,430,849	50	238,872	16.7%	0.0482	4,777	230	27	118,783	8.3%	25.0%
2012-3	1,425,946	44	461,285	32.3%	0.0439	10,484	460	38	161,852	11.4%	43.7%
2012-4	1,402,658	53	322,131	23.0%	0.0555	6,078	337	0	0	0.0%	23.0%

Fiscal Year Ending 12th Month of	Earned Premium	Average Policy Exposure	Ultimate* Loss Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)	Avg. Pure Premium (ex Cats)	Average Earned Premium	Ultimate* Loss Counts (Cats)	Ultimate** Loss Dollars (Cats)	Ultimate Loss Ratio (Cats)	Ultimate Loss Ratio Total
2008	1,390,407	1,370	87	1,607,613	115.6%	0.0635	18,478	1,174	1,015	28	271,793	19.5%	135.2%
2009	3,854,110	3,634	234	2,938,464	76.2%	0.0644	12,558	809	1,061	48	290,349	7.5%	83.8%
2010	5,836,578	4,936	269	3,064,043	52.5%	0.0545	11,390	621	1,183	87	542,592	9.3%	61.8%
2011	6,048,874	4,597	224	3,525,272	58.3%	0.0487	15,738	767	1,316	170	1,495,276	24.7%	83.0%
2012	5,711,141	4,065	196	1,375,092	24.1%	0.0482	7,016	338	1,405	76	347,295	6.1%	30.2%

Cal/Acc Year	Earned Premium	Average Policy Exposures	Ultimate* Loss Counts (ex Cats)	Ultimate** Loss Dollars (ex Cats)	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)	Avg. Pure Premium (ex Cats)	Average Earned Premium	Ultimate* Loss Counts (Cats)	Ultimate** Loss Dollars (Cats)	Ultimate Loss Ratio (Cats)	Ultimate Loss Ratio Total
2008	1,390,407	1,370	87	1,607,613	115.6%	0.0635	18,478	1,174	1,015	28	271,793	19.5%	135.2%
2009	3,854,110	3,634	234	2,938,464	76.2%	0.0644	12,558	809	1,061	48	290,349	7.5%	83.8%
2010	5,836,578	4,936	269	3,064,043	52.5%	0.0545	11,390	621	1,183	87	542,592	9.3%	61.8%
2011	6,048,874	4,597	224	3,525,272	58.3%	0.0487	15,738	767	1,316	170	1,495,276	24.7%	83.0%
2012	5,711,141	4,065	196	1,375,092	24.1%	0.0482	7,016	338	1,405	76	347,295	6.1%	30.2%

8

Program Monitoring - Dashboards

- As expected, loss ratios very inconsistent.
- Have to look at them, but other metrics can be more telling.
- The big story here is that **CY Paid loss ratios** looked very different: **45% - 50%**

Accident Quarter	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)
2008-1	**76.3%**	0.0694	10,934
2008-2	**147.6%**	0.0605	24,280
2008-3	**235.9%**	0.0762	31,349
2008-4	**20.5%**	0.0540	3,919
2009-1	**122.3%**	0.0648	19,295
2009-2	**46.6%**	0.0632	7,733
2009-3	**98.1%**	0.0695	15,088
2009-4	**52.4%**	0.0605	9,390
2010-1	**37.6%**	0.0490	8,394
2010-2	**58.7%**	0.0631	10,694
2010-3	**67.2%**	0.0595	13,699
2010-4	**45.1%**	0.0461	12,408
2011-1	54.4%	0.0538	12,829
2011-2	14.9%	0.0393	4,958
2011-3	67.3%	0.0669	13,482
2011-4	97.8%	0.0347	38,215
2012-1	24.3%	0.0458	7,200
2012-2	16.7%	0.0482	4,777
2012-3	32.3%	0.0439	10,484
2012-4	23.0%	0.0555	6,078

9

Program Monitoring - Dashboards

- Frequency fairly steady at 6%.
- **Consistently** 50% higher than the average of our other states.

Accident Quarter	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)
2008-1	76.3%	**0.0694**	10,934
2008-2	147.6%	**0.0605**	24,280
2008-3	235.9%	**0.0762**	31,349
2008-4	20.5%	**0.0540**	3,919
2009-1	122.3%	**0.0648**	19,295
2009-2	46.6%	**0.0632**	7,733
2009-3	98.1%	**0.0695**	15,088
2009-4	52.4%	**0.0605**	9,390
2010-1	37.6%	**0.0490**	8,394
2010-2	58.7%	**0.0631**	10,694
2010-3	67.2%	**0.0595**	13,699
2010-4	45.1%	**0.0461**	12,408
2011-1	54.4%	0.0538	12,829
2011-2	14.9%	0.0393	4,958
2011-3	67.3%	0.0669	13,482
2011-4	97.8%	0.0347	38,215
2012-1	24.3%	0.0458	7,200
2012-2	16.7%	0.0482	4,777
2012-3	32.3%	0.0439	10,484
2012-4	23.0%	0.0555	6,078

10

Program Monitoring - Dashboards

- x-Cat Severity volatile due to small volume, but obviously extremely high.
- All locations severity = $7,000.

Accident Quarter	Ultimate Loss Ratio (ex Cats)	Annualized Frequency (ex Cats)	Average Severity (ex Cats)
2008-1	76.3%	0.0694	**10,934**
2008-2	147.6%	0.0605	**24,280**
2008-3	235.9%	0.0762	**31,349**
2008-4	20.5%	0.0540	**3,919**
2009-1	122.3%	0.0648	**19,295**
2009-2	46.6%	0.0632	**7,733**
2009-3	98.1%	0.0695	**15,088**
2009-4	52.4%	0.0605	**9,390**
2010-1	37.6%	0.0490	**8,394**
2010-2	58.7%	0.0631	**10,694**
2010-3	67.2%	0.0595	**13,699**
2010-4	45.1%	0.0461	**12,408**
2011-1	54.4%	0.0538	12,829
2011-2	14.9%	0.0393	4,958
2011-3	67.3%	0.0669	13,482
2011-4	97.8%	0.0347	38,215
2012-1	24.3%	0.0458	7,200
2012-2	16.7%	0.0482	4,777
2012-3	32.3%	0.0439	10,484
2012-4	23.0%	0.0555	6,078

11

Program Monitoring

- Significant rate and U/W revisions made 1/1/10.
- Within a couple of quarters, exposures started shrinking.
- Additional monitoring revealed lost policies were ones generating disproportionate losses.
- 2012 Results:
  - Frequency: 4.5%
  - Severity: $7,016
  - Avg EP: Up 20%
  - Loss Ratio: 24%
- **AY reports critical for Actuary. CY reports are cheaper to produce, but miss early trends.**

Accident Quarter	Earned Premium	Policy Exposure
2008-1	129,011	**519**
2008-2	263,278	**1,057**
2008-3	425,279	**1,680**
2008-4	572,839	**2,223**
2009-1	694,414	**2,718**
2009-2	879,863	**3,352**
2009-3	1,061,098	**3,971**
2009-4	1,218,735	**4,494**
2010-1	1,315,393	**4,816**
2010-2	1,421,759	**4,944**
2010-3	1,529,534	**5,039**
2010-4	1,569,892	**4,944**
2011-1	1,532,720	**4,831**
2011-2	1,528,364	**4,688**
2011-3	1,502,499	**4,484**
2011-4	1,485,291	**4,385**
2012-1	1,451,688	**4,276**
2012-2	1,430,849	**4,149**
2012-3	1,425,946	**4,012**
2012-4	1,402,658	**3,822**

Accident Quarter	Average Policy Exposure
2008-1	519
2008-2	1,057
2008-3	1,680
2008-4	2,223
2009-1	2,718
2009-2	3,352
2009-3	3,971
2009-4	4,494
2010-1	4,816
2010-2	4,944
2010-3	5,039
2010-4	4,944
2011-1	4,831
2011-2	4,688
2011-3	4,484
2011-4	4,385
2012-1	4,276
2012-2	4,149
2012-3	4,012
2012-4	3,822

12

Competitive Analysis

Where Relationships Matter℠

Competitive Analysis – Pros and Cons

- Pros
  - Limited internal data, so competitive data is good supplement. You don't have to have any internal data.
  - Are your rates in line with the market?
  - Is your rate structure competitive? Do you have the features the market offers?
  - Personally, I find this one of the best, but <u>often most underused</u>, sources of information for small companies.
- Cons
  - Are your rates in line with the market, even if your own data says something different. Who is right?
  - Even with Comparative Raters, can you determine competitor tier placement? Insurance Score models? Don't underestimate how hard this is.

Competitive Analysis – Primary Sources of Information

- Agent Feedback
  - Too quick to dismiss as "anecdotal".
  - They represent your company – right or wrong.
- Rate Filings
  - Hard to get complete manuals this way.
  - Time consuming and/or expensive for a small company to find and analyze filings.
- Comparative Raters
  - Can be extremely useful, but also expensive for a small company.
  - Have to be sure you can invest time to justify cost.
    - Competitor underwriting tiers and IS.
    - Can you get internal acceptance.
  - For a small company, vendor may not have <u>your</u> competitors.
  - Analysis isn't dependent on how much data you have.

Competitive Analysis – Actual Use of Data

- Competitive information used to help justify a significant rate increase,
  - Rate increases usually capped by DOI.
  - Competitive info showed we were well below market, creating internal capacity issues.
  - Filing approved with this data after several unsuccessful prior attempts.

Republic Territory	1	2	3	4	5	6
Competitor 1	463	463	469	558	558	702
Competitor 2	658	658	702	788	948	948
Competitor 3	758	758	888	901	942	942
Competitor 4	596	596	647	735	918	918
Competitor 5	738	738	746	746	1,061	823
Avg. Competitor Rate	643	643	690	746	885	867
Republic Current (Example)	384	401	445	445	575	561
Avg Compet/Republic	**1.67**	**1.60**	**1.55**	**1.68**	**1.54**	**1.54**

REPUBLIC GROUP℠

Modeling

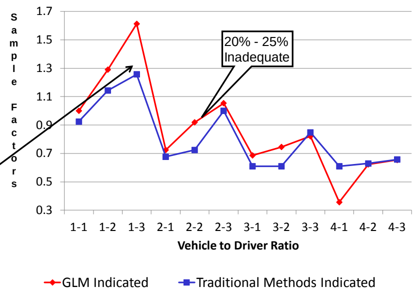
Where Relationships Matter℠

Can Small to Mid Size Companies Model?

- Critical considerations before trying.
  - Time
  - Internal by-in
  - Manage expectations
  - Self-fulfilling prophesy
- Data Needs.
  - You probably have enough for good results of core segments
  - Will have to group more than large companies
  - Validate results with external sources
  - DO NOT let IT run the data acquisition project
- Manage the above and you will gain more *insight* into your book.

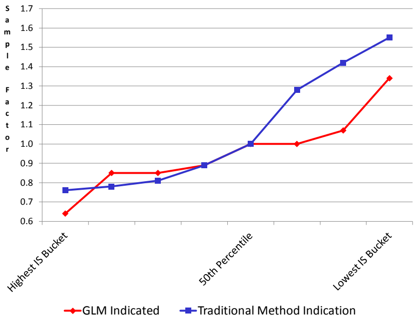
GLM vs. Traditional – Vehicle to Driver Ratio

- Vast majority of policies are 2 vehicles, 2 drivers. Modeled results indicate inadequate rate.
- Model really points out poor results for 1 car/3 drivers.
- Over 25% difference indicated.



GLM vs. Traditional – Insurance Score

- Again, additional insight gained from modeling.
- GLM suggests a rate 15% lower than traditional methods.
- Surprisingly, the model output does not penalize low scores as significantly.
- Highlights need to analyze low scores more.



Cat Modeling

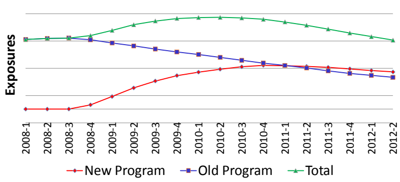
- Currently, two largest factors in market disruption:
  - Rate Changes
  - Exposure Management
- Rate analytics and Cat Management are interrelated.
  - Pricing needs to take into account:
    - Expected Cat Costs
    - Reinsurance Costs
    - Cost of Capital
  - In many states, cat provision much larger than the x-cat losses.

Scenario Testing

Where Relationships Matter℠

5 Year Results

- **Implemented new GLM based program in 2008**.
- Initially positive growth.
- Net growth has been negative since early 2011.



- Loss results for program higher than expected.
- New Program runs about a 10 – 15 point higher loss ratio than old program (our baseline).

Total LR by Program

Year	Original Program	New Program
2008	64.6%	**82.7%**
2009	61.0%	**66.7%**
2010	54.0%	**68.9%**
2011	58.5%	**62.8%**
2012	62.3%	**91.2%**

23

Retention by Tenure

- Normal pattern is for retentions to increase the longer a policy is with us.
- New program retentions started lower than old program and **continues to drop**.

	Old Program	New Program
New	74% - 76%	70% - 72%
1st Renewal	78% - 80%	70% - 71%
2nd Renewal	83% - 84%	67% - 68%
3rd + Renewal	80% - 85%	

- Retention no where near our target baseline.
- When product was in development, the expected retention rate by the 2nd renewal was projected to be 85% based on:
  - Target Market
  - Competitive Position
  - Market analysis

24

New Program Volatility in Renewal Premiums due to Modest IS Change

Driver	BI/PD Limits	Vehicle	Accidents/ Convictions	Insurance Score (IS)	Annual Premium	Increase from small reduction in IS
Single Female - 33	100/300/ 100	2010 Mitsubishi Eclipse	Incident Free	760	$1,036	
				745	$1,174	$138 **(+13%)**

Driver	BI/PD Limits	Vehicle	Accidents/ Convictions	Insurance Score (IS)	Annual Premium	Increase from small reduction in IS
Single Female - 33	100/300 Liability Only	2001 Honda CRV	Incident Free	760	$745	
				745	$960	$215 **(+29%)**

Difficult to Explain Renewal Effects from Dropping Vehicles

Drivers	Vehicles	Accidents/ Convictions	Annual Premium	Change after dropping Vehicle
Single Female - 33	2012 Mercedes 2001 Honda CRV	Incident Free	$2,061	
	2012 Mercedes		$1,962	-$99 (-4.8%)

- Not enough scenario testing.
- **Program design and modeled output** looked good, and initially worked great for new business.
- Additional scenario testing would have revealed impact on renewals.

- Based on experience, scenario testing is one of the first items trimmed to shorten development timelines.

Final Thoughts

- Small and Mid-Sized companies can compete in Pricing Analytics.
  - May take more creativity.
  - Be willing to find good partners.
- Everything hinges on your data.
  - Do not try to bite off too much quickly.
  - Quality beats Quantity.
- Once you get started, it seems like additional progress comes faster.