Actuarial Involvement in Program Business

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About Us

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Disclaimer: AmTrust and Glencar are two independent and unaffiliated entities. This presentation was combined in the hope that it allowed a smoother flow of information.

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Poll #1

Introduction

- Attendees, how would you categorize your familiarity with program business?
    - ➢ None to Minimal
    - ➢ Conversational at best
    - ➢ Some work related experience
    - ➢ Actively involved at your company helping manage / write program business

Define a Program

Introduction

- An insurance program is a book of generally primary business consisting of generally homogeneous exposure that is underwritten and administered by a Managing General Agent (MGA) or a Managing General Underwriter (MGU), aka the Program Administrator (PA), and written on an insurance company's paper

- Examples
  - Niche/specialty class (craft brewery, lawyer's PL, religious orgs.)
  - Franchises of a given franchise
  - Business segment in a given state (public transportation in Nevada)
  - Countrywide professional program
  - Group of insureds / associations with similar risks looking to reduce insurance expenses
  - Insureds that require specialty coverages or products not readily available (RBT, events)

Define a Program

Introduction

- Doesn't have to be a niche class, can have other attributes:
  - Single LOB over numerous classes (WC, Contractor's GL, etc.)
  - Regional focus writing multiline coverages
  - Competition here will often include many more carriers
- Covers most (or all) lines of business:
  - Workers' Comp and Commercial Auto very common
  - Package, monoline GL or Prop, Prof Liab, Inland Marine
- Majority of programs write commercial lines, but personal line programs do exist:
  - Cat zones, non-standard lines, high net worth
- Admitted vs Non-Admitted

By the Numbers

Introduction

- A $30 billion per year market, estimated to be 13% of P&C commercial lines market in 2014

- 5-yr growth of 7-10% per year outpacing P&C industry

- Estimated 900 – 1,000 program administrators in the space

- Program size in annual GWP?
  - Small = $0-$10M
  - Medium = $10M - *$50M*
  - Large > *$50M*

- Majority of carriers target programs with $10M-$15M in annual premium, though appetite does exist for larger programs especially by larger carriers

Carrier Appeal

Introduction

- Access to alternative/additional source of business
- Access to external U/W expertise
- Ability to acquire large volume with a single action
- Low cost and barriers to entry and exit
- Program business may have desirable characteristics
  - Program may be single class/single state stable homogeneous business
  - MGA may be a specialist in a specific business segment
  - Historical program results may have outperformed
  - Program may represent a specific desirable niche

General Considerations

New Program Due Diligence

- What is the competitive advantage of the program
- Evaluate the underwriting expertise of the MGA?
- How are claims handled?
- Are proposed commission levels realistic?
- Why is the program seeking to move to a new carrier?
- Policy issuance, rating software, data collection, IT needs?
- Is our carrier capable of writing this program (filings, rate levels, etc)

Actuarial Considerations

New Program Due Diligence

- What type and how much data does the PA have on their program?
  - How current is data?
  - Is history representative of current book?
- Loss & claims data
  - Years of data present; triangle or single evaluation
  - IBNR estimates available or just paid/case/incurred
  - Large loss detail
- Premium & exposure data
  - Written vs earned; AY vs PY
  - Rate change detail
- Industry data and/or carrier's proprietary data
  - Is industry data readily available for this class?
  - Does your carrier have experience with this type of program?

Opportunity Arises

New Program Due Diligence

- Seeking out new programs
  - ➢ PA seeking carrier (via broker, other contacts)
  - ➢ Carrier seeking PA
  - ➢ Questions for the PA

- Actuary's task to review and analyze data

- Data challenges may often arise:
  - ➢ Start-up program or even class
  - ➢ Numerous carriers in past 5-10 years
  - ➢ Only 1 or 2 loss diagonals
  - ➢ Data validity

- Pricing considerations as the final step for actuaries

Data Challenges

New Program Due Diligence

- Example 1 – Numerous carriers in past 5-10 years
  - GWP provided by PY; Loss data provided by AY

Policy Year	Package GWP	Carriers
2008	5,400,000	*Program with Carrier A*
2009	4,000,000	*Program with Carrier A*
2010	6,800,000	*Transitioning from A to B*
2011	6,800,000	*Program with Carrier B*
2012	7,700,000	*Program with Carrier B*
2013	6,700,000	*Placed with numerous*
2014	10,300,000	*Program with Carrier C*
Total	$47,700,000	

Accident Year	Policy Year Written Premium	PY WP to AY EP Conversion Instructions	Proxy Earned Premium
2008	5,400,000	50% of PY '08	2,700,000
2009	4,000,000	50% of PY '08, 50% of PY '09	4,700,000
2010*	4,300,000	25% of PY '10	1,075,000
2011	6,800,000	75% of PY '10, 50% of PY '11	6,625,000
2012	7,700,000	50% of PY '11, 50% of PY '12	7,250,000
2013**	0	50% of PY '12, 0% of PY '13	3,850,000
2014	10,300,000	0% of PY '13, 50% of PY '14	5,150,000
Total	$38,500,000		$31,350,000

*Carrier A's AY '10 losses not available, hence only Carrier B's WP for PY '10 included and not Carrier A's PY '10 WP

** Loss data for PY '13 policies not available, hence PY '13 reflects zero premium

Data Challenges

New Program Due Diligence

- Example 2 – Only 1 or 2 loss diagonals
    - Need for own carrier/industry LDFs to perform analysis
    - Request additional loss run if several months or more have passed

Policy Year	Incurred Loss @ 5/31/14	Incurred Loss @ 9/30/14
2010	2,900,000	2,900,000
2011	2,400,000	2,800,000
2012	3,300,000	4,600,000
2013	2,400,000	2,500,000
2014	100,000	200,000
Total	$11,100,000	$13,000,000

Limits claim emerged in PY '12

Data Challenges

New Program Due Diligence

- Example 3– Data Validity
  - Prior Carriers' historical results shown below
  - $50k+ Loss Experience
  - Our actual results shown below for first 12-months on program
  - Major difference in just one year

Policy Year	$50k+ Losses	ITD Reflects PY 2005 - 2012	
2008	265,000	$20,200,000	= ITD Earned Premium
2008	187,000	$9,900,000	= ITD Incurred Loss
2011	100,000	49.0%	= ITD Loss Ratio
2011	83,000		
2009	81,000	1.3	= $50k+ Claims/Yr
2007	74,000		
2007	64,000	5.1%	= $50k+ Loss Ratio
2006	61,000		
2006	60,000		
2006	54,000		
Total	$1,029,000		

Policy Year	$50k+ Losses	1st Year Experience	
2013	117,000	$1,300,000	= Earned Premium
2014	88,000	$900,000	= Incurred Loss
2014	63,000	69.2%	= Loss Ratio
2014	57,000		
2013	52,000	6.0	= $50k+ Claims/Yr
2014	51,000		
Total	$428,000	32.9%	= $50k+ Loss Ratio

Poll #2

New Program Due Diligence

- Given the following two scenarios for potential new programs, and assuming your target loss ratio is 60%:

   1) Monoline program with 5-yr ultimate loss ratio = 87%, detailed data/triangles provided, class of business and LOB very familiar to your company. Detailed plan in place to improve loss ratio.

   2) Monoline program with 5-yr ultimate loss ratio = 52%, only one loss run with gaps in data, class of business and LOB unfamiliar to your company.

- Which program(s) would you be willing to insure?
   - Scenario 1
   - Scenario 2
   - Both
   - Neither

Analyzing Results

New Program Due Diligence

- External actuarial report provided
  - ➢ How recent of a report?
  - ➢ From previous carrier or did PA hire consultant?

- Key actuarial inputs
  - ➢ LDFs (Internal benchmark, Sch P, etc)
  - ➢ APLRs (Sch P, Cape Cod, varying *a priori*)
  - ➢ On-leveling, trending

- Cat experience, capacity, modeling

- Pricing considerations

Cat Losses

New Program Due Diligence

- Example 4 – Historical vs Modeled
  - Following program writes commercial properties for a single class
  - Experienced Significant hail damage, made numerous U/W changes to mitigate wind/hail

Table 1) Historical Loss Experience - as of 12/31/14

Accident Year	Earned Premium	Incurred Loss & ALAE	Incurred Loss & ALAE Ratio	Cat Loss & ALAE	Cat Loss & ALAE Ratio	Wind/Hail Loss & ALAE	Wind/Hail Loss & ALAE Ratio
(1)	(2)	(3)	(4) = (3)/(2)	(5)	(6) = (5)/(2)	(7)	(8) = (7)/(2)
2007	11,600,000	9,600,000	82.8%	4,200,000	36.2%	7,100,000	61.2%
2008	10,100,000	12,200,000	120.8%	6,700,000	66.3%	8,200,000	81.2%
2009	7,500,000	4,800,000	64.0%	500,000	6.7%	3,000,000	40.0%
2010	6,400,000	4,300,000	67.2%	500,000	7.8%	1,000,000	15.6%
2011	3,800,000	8,200,000	215.8%	300,000	7.9%	1,900,000	50.0%
2012	7,600,000	3,500,000	46.1%	500,000	6.6%	1,300,000	17.1%
2013	8,700,000	9,500,000	109.2%	0	0.0%	800,000	9.2%
2014	5,700,000	2,800,000	49.1%	1,500,000	26.3%	1,700,000	29.8%
Total	**$61,400,000**	**$54,900,000**	**89.4%**	**$14,200,000**	**23.1%**	**$25,000,000**	**40.7%**

Table 2) Internal Cat Modeling Results

AAL	Average Rate	TIV	Premium Proxy	Cat Loss Load (ex ALAE)	ALAE Load	Indicated Cat Load
(9)	(10)	(11)	(12) = (10)x(11)/100	(13) = (9)/(12)	(14)	(15) = (13)x(14)
$2,600,000	$0.10	$3,633,100,000	$3,633,100	71.6%	1.071	76.6%
$2,600,000	$0.25	$3,633,100,000	$9,082,750	28.6%	1.071	**30.7%**
$2,600,000	$0.40	$3,633,100,000	$14,532,400	17.9%	1.071	19.2%

With Average rates in the $0.20 - $0.30 range; even post U/W changes the modeled indications were too high for comfort

Pricing Considerations

New Program Due Diligence

- Proprietary (Custom or Own) Rating
  - ➢ Filing considerations for admitted
  - ➢ Reliance on MGA for non-admitted

- Advisory Loss Costs
  - ➢ LCMs – Yours vs Prior Carrier(s)

- Prospective rate change upon inception

- Setup rate monitoring procedures

Overview

Pricing Issues

- Credibility
- Loss Development
- On-Leveling
- Removal of Poor Results from Historical Experience
- Consistency of Exposures
- Emerging Risks
- Pricing for Aggregate Features
- Risk/Reward Considerations

Credibility

Pricing Issues

- General Liability Program: Standard Analysis

Accident Year	On Level Earned Premium	Trended Inc Loss Unlimited	Unlimited LDF	Trended ULT Loss Unlimited	Loss Ratio
2011	1,124,000	346,000	1.300	450,000	40.0%
2012	2,300,000	596,000	1.350	805,000	35.0%
2013	5,873,000	4,891,000	1.600	7,826,000	133.3%
2014	12,952,000	3,199,000	2.250	7,198,000	55.6%
2015	20,009,000	3,445,000	3.500	12,058,000	60.3%
Total	42,258,000	12,477,000		28,337,000	67%

Credibility

Pricing Issues

- General Liability Program: Examine frequency of large losses

Accident Year	Claim Count	Claim Count > 100k	Claim Count > 200k
2011	15	1	0
2012	28	1	0
2013	97	6	3
2014	267	4	0
2015	265	3	0
Total	672	15	3

Credibility

Pricing Issues

- General Liability Program: Limited Loss Ratio Analysis

Accident Year	On Level Earned Premium	Trended Inc Loss Limited to 100k	Limited LDF	Trended ULT Limited (100k) Loss	Loss Ratio
2011	1,124,000	236,000	1.250	295,000	26.2%
2012	2,300,000	487,000	1.300	633,000	27.5%
2013	5,873,000	1,843,000	1.500	2,765,000	47.1%
2014	12,952,000	2,964,000	2.000	5,928,000	45.8%
2015	20,009,000	3,196,000	3.000	9,588,000	47.9%
Total	42,258,000	8,726,000		19,209,000	45%
				Implied ILF	1.475
				Industry ILF	2.000

Credibility

Pricing Issues

- General Liability Program: Excess Credibility

Accident Year	On Level Earned Premium	Trended Emerged Loss Excess of 100k	Expected Emerged Loss Excess of 100k Industry ILF
2011	1,124,000	110,000	217,846
2012	2,300,000	109,000	450,855
2013	5,873,000	3,048,000	1,612,917
2014	12,952,000	235,000	2,305,333
2015	20,009,000	249,000	2,282,857
Total	42,258,000	3,751,000	6,869,808

50% Credibility Standard 10,000,000

Implied ILF	1.475
ISO ILF	2.000
Credibility	41%
Selected ILF	1.786
Selected ELR	81%

Loss Development

Pricing Issues

- No program historical development patterns
  - WHY??
  - Did they have severe development!!!???!!!

- Divergence of paid and incurred ultimates or divergence from default patterns. Further investigation is essential. Some suggested diagnostics:
  - Claim severity trends by year for paid and incurred, and for program vs industry
  - Average case O/S to average paid severities
  - Comparison of settlement ratios at comparable development points

- "Large losses do not develop"!!!???!!!!
  - In general, development patterns for high limits is more severe than for low limits!!!!

- Especially if claims are from a TPA, multiple diagnostics should be used to test reserve adequacy

On-Leveling

Pricing Issues

- How accurate/reliable is rate level history?

  - If it is based on rate filings:
    - Does it reflect the class and territory mix in the program?
    - Does it include effect of changes in rating variables o/t base rate and exposure mods?

  - If it is based on renewal comparisons:
    - Are changes in exposure, limits, deductibles, class mix, etc… reflected?
    - How is rate level of new business accounted for?

- Where possible, on-level should be supplemented by extending exposures at current rates and average mods

Removal of Poor Results from Historical Experience

Pricing Issues

- How can you be confident this is not happening without your knowledge?

- When can you intentionally remove such exposure?

  - When due to an exposure no longer covered???

  - When expectation is that such an event is a 1 in 20 year event, can you take it out and load 5%???

  - In all cases need to be concerned with possibility of other similar events that have not yet emerged.

Other Items

Pricing Issues

- How consistent is exposure?
  - Is exposure growth reflected
  - Analyze movement by state and class
  - If possible conduct pure premium analysis and establish base rate levels
- Any emerging exposure not included in experience?
  - Law Enforcement liability
  - Cyber liability in D&O coverages
- Does program have any aggregate features?
  - An aggregate loss model is necessary to evaluate any contingent commission agreement, aggregate retention, etc…
- Risk/Reward considerations
  - A program where the insurer keeps only the tail risk requires much higher risk or profit loads
  - Examples include:
    - Insurer writes program on a first dollar basis and cedes most of the lower layer risk to a captive
    - Insureds keep very high SIRs and possibly an aggregate deductible in a pool

Reporting and Monitoring

Additional Items

- Each program is a small insurance company
- Data reporting is key
  - Single/consistent framework for all PAs, or adapt to their systems
  - Can carrier accommodate MGA/MGU reporting and data collection needs?
  - Automate ongoing monitoring of bound business
- Monitoring the program
  - Perform regular business planning reviews
  - Continue monitoring rates and profitability on regular basis
  - Group discussion including actuarial, U/W, claims, finance
  - Actual vs Expected
- Remember – MGA/MGU has Underwriting authority; establish process to monitor actual exposures against expectations
- Reserving a program
  - Program analyzed separately
  - IBNR allocated to a program level from separate analysis

Actuarial Involvement at MGA/PA

Additional Items

- Few employ own actuaries, becoming more common?
- Hire actuarial consultants
  - Assist with finding new home for program
  - MGA seeking pricing support
  - MGA is on the risk (i.e. captive participation)
- Carriers' actuaries provide support for the program / MGA book
- Reliance on broker's actuaries
  - Stemming from reinsurance purchasing
  - Working with broker to find new carrier
- More the merrier, my preference would be to see MGAs and PAs utilize actuaries for pricing support to a greater extent
- Carriers should always perform independent due diligence / analysis

ANY QUESTIONS?