

Yes, there is life after runoff!

Jean-Claude Jacob, ACAS, MAAA CAS Seminar on Reinsurance June 6, 2013 Southampton, Bermuda

Agenda



- I. Revenue drivers of a runoff (re)insurer
- II. Reserving process of a (re)insurer in runoff
- III. Commutation pricing considerations
- IV. Runoff consolidation

Revenue drivers of a runoff (re)insurer



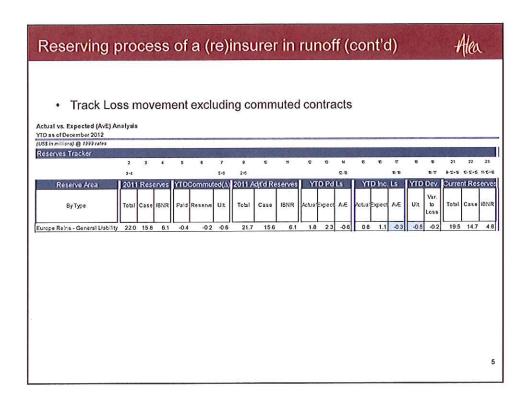
- · No Premium income
- · Revenues are driven by:
 - · Investment income from invested assets
 - · Active claim management (settling claims for an economic profit)
 - · Favorable commutations
 - · Acquisition of other runoff portfolios/legal entities

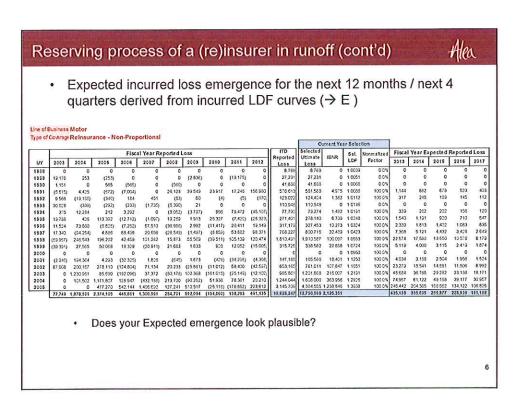
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Reserving process of a (re)insurer in runoff



- Annual fully fledged reserve analysis followed by quarterly Actual vs.
 Expected (AvE) reserve review for the following 4 interim quarters
- Exclude all commuted contracts from paid and incurred loss development triangles
- Track loss movement excluding commuted contracts
- · Work very closely with claims management
- Update paid and incurred Loss Development Factors (LDFs) and derive updated ultimate loss
 - Special emphasis on Expected incurred loss emergence for the next 12 months / next 4 quarters derived from incurred LDF curves (→ E)
 - Special attention on timing of future Expected paid loss derived from paid LDF curves (-> one key driver of commutation pricing)





Reserving process of a (re)insurer in runoff (cont'd)



 Special attention on timing of future Expected paid loss derived from paid LDF curves (→ one key driver of commutation pricing)

ype of	Coerage		Reinsu	rance - N	on-Prop	portiona								Time:	1	2	3	4	5	- 6	7	8	9	10
														ted Factor	0.8758	0.5406	0 9030	0.5009	0.8322	0.7589	0.7569	0.7363	0.7068	0.57
											C	urrant Yes	r Select	boa										/
		Fiscal Year Paid Loss										Selected Total	Sel. No	Normalized	Fiscal Year Expected Paid Loss									
UY	2003	2004	2005	2005	2007	2008	2009	2010	2011	2012	Loss Reserve		LOF	Factor	2013	2014	2015	2016	2017	2018	2019	2020	2021	202
1918	0		0	0	0	0	0	0	0	0	8.759	0	1.4406	0.2%	0	0	0	0	0	0	0	0	0	
1933	0	0	0	0	0	. 0		0	0	0	27,251	0	1 4892	0.2%	(2)	(3)	(2)	(3)	(9	(9)	(3	(9)	(3)	
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1991	37,251	1,856	15,923	(18.571)	. 0	3 389	53 921	538	(1,030)	39,185	581,588	239,335	1 5365	112 P%	10.097	9,453	8,584	8.356	7,872	7,429	7.021	6.543	6.299	55
1992	3343	(3.030)	324	45	(5.3)	O	122	59	(1.045)	(75)	124,404	2,868	1 5753		129	121	113	106	100	64	89	84	79	
1993	17,654	2.251	1,172	31,661	1,530	6 013	4,758	0	0	0	110,948	0	1.6213		0	0	0	0	0	0	0	. 0	٥	
1994	878	487	225	8,755	0	254	0	0	0	696	79.274	43 182			2,030	1,891	1,795	1,651	1,547	1,453	1,366	1,257	1,25	1,
1995	9.735	11,742	7,502	30,482	608	25 503	14343	6,524	16,543	9 842	278 140	80 568			3,398	3 523	3375	3 151	2,647	2.762	2.563	2.439	2 258	2
1996	4,191	43 130	9 827	28,940	0	43 362	2.237	5,730	35,225	123	327,453	77,069		53.0%	3.501	3 525	3.273	3.064	2.551	2.608	2,439	2 343	2.207	2.0
1997	15,903	145 254	59 573	63 062	60,558	35 833	4143	(1.833)	5918	15,994	800,715	259, 4G?	1876		13 129	12 152	11,272	12.09	9,752	2,112	£ 523	7,968	7,500	7.5
1998	54,264	13 599	303,963	125 134	39,329	110,373	196,423	52,415	23.579	114,321	1,910,567	625 384			32,526	30,045	27,810	25,797	23,950	22 339	20 554	19 506	18 260	17.1
1993	30 341	3 350	73 929	6,755	34,477	1.095	0	0	22 138	1,073	338 582	155 354		63.7%	8 519	8,130	7.510	6.951	6.443	5 994	5.584	5 212	4.875	4
2000	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	. 0	0	· c	0	0	
2001	0	0	25,961	(429)	8,126	(844)	65 134	(429)	7,973	15.512	165 588				13:4	1,208	1,111	1,025	8-45	878	£13	755	7.4	
2002	6,960	1,561	9 596	122 371	117,438	0	41,433	117,957	156 379	13 006	761,011	135 755		28.8%	7,839	7,194	6.613	€ 066	5.511	5 182	4,757	4,450	4,138	31
2003	0	C	0	0	20 334	3,415	472.138	25 564	17,107	13.479	1,201,868	646 531			35 143	35,563	32 237	29.534	27,273	25,142	23 223	21,400	19 640	18 :
2004	0	0	0	0	12,032	62967	22.587	58 138	3-3-057	45,723	1,608,000			8.5	65,451	60,393	55 543	51,043	45,920	43 183	36 539	36,770	34,035	31.5
2005	0	0	0	0	0	8 372	15,567	BC 567	295 349	4,808	4,304,555	353,472			241,689	224 561	207,206	190 565	175,125	150 562	145 158	136 524	125,158	1157
2005	0	0	0	0	0	0	0	0	0	0	0		4856	1000%	0	0	0	.0	0	0	0	0	. 0	211.5
	183,636	225.551	508,185	403,137	254,370	306,960	\$14,225	347,180	908,824	274,582	12,750,898	7,357,572			428,854	297,309	364,724	327,915	211,382	257,214	265,325	245,562	207.725	4

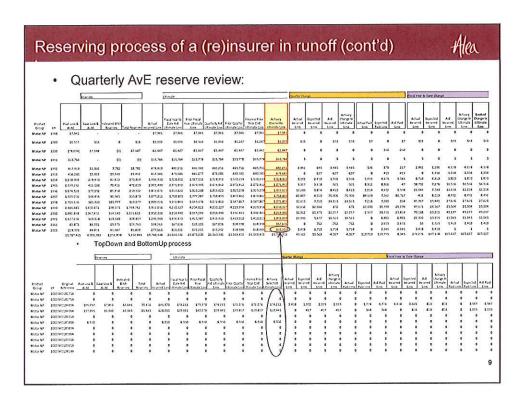
· Does your loss pay-out forecast look plausible?

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Reserving process of a (re)insurer in runoff (cont'd)



- · Quarterly AvE reserve review:
 - Drill-down functionality (from LoB_Underwriting Year (UY) to reinsurance contracts/insurance programs_UY level) requires smart/sensible allocation of IBNR from LoB_UY to reinsurance contracts/insurance programs
 - · Slice and dice functionality
 - · Closely monitor Actual incurred/paid loss movement <or> than a \$ threshold
 - Segregate tabular claims and large claims (actively interact with claim management)
 - Derive ceded/retroceded reserves by direct allocation of Gross IBNER/IBNYR to reinsurance contract/claim (this process needs to reflect the mechanism of retroceded/ceded reinsurance)



Commutation pricing considerations



- · What should one consider?
 - · Complete versus partial commutation
 - · Cedant may elect partial commutation
 - · Reinsurer's interest is normally to commute the entire relationship
 - · Discount rate to be applied to future expected paid losses
 - · Risk free rate? or
 - Expected rate of return on invested assets supporting the liabilities to be commuted?
 - Loss incurred and loss pay-out patterns
 - Cedant specific patterns?
 - · LoB patterns? or
 - Industry proxy?
 - · A combination of the above?
 - Collateralized cedant reserves versus non collateralized
 - · Treatment of unpaid balances and large claims in commutation pricing
 - · Impact of commutation on reinsurance assets

Commutation pricing considerations (cont'd)



- · What should one consider?
 - · "In and Out" effect of the commutation on the company's portfolio
 - · Should the commutation be priced in isolation? Or
 - Should one also consider the effect of the commutation on the remaining reserves of the company?

				A Accounts to be commuted					B Fotal LoS including Accounts to be commuted				l				D=B-C			
													Total Loil garduding Accounts to be commuted				Difference (in / out)			
TIMOS STANONOS PERONAS PERO		/ fotal LoB	Care Reserves / Fotal Loti Care				Booked Paid Loss	Total	Incurred losses	Case Reserves	Selected (BNR	Total motives	Booked Incurred Loss Exc	Case	Selected	Total	Incurred Ioues	Case Reserves	Implied IENR	Total reserve
				Rosses	Reserves	IEVE	Excest	Reserve	127,051	1,429	0	1409	Cat	Reserves	HNR	reserves	Posites	0		1676.11
NA-Misc, Non Frop		0.0%	0.0%						65.933	1,439		14.5	63,333	1,409		1,439	, i			
NA-Misc, Non-Frop		0.0%							(245,566)	503		503		503	0	523	0			
NA-Misc, Non Prop	1990		0.0%						875,092	2.0		203	(245,566)	503		503				
NA-Misc, Non-Frag		0.0%	0.0%						379,729	12,077	0	12,077	875,092 579,729	12,077		12,077	, o			
NA-Misc, Non Prop				1000000	190	104	20000		1.813.508	32,204	4.07	36,642				36,054	241,177		543	51
NA-Misc, Non Frop		13.3%	0.0%	241,177			241,177		1,913,449		9,373		1,578,331	32,204	3,849		427,463	155.010	2.087	151,05
NA-Misc, Non Frop		22.3%	86.9%	437,463	159,010	2.697	268,453	161,706	1.559.933	133,062 55,351	15,476	192,436 70,828	1,491,586	24,053	7,286	31,339	653,888	51,326	15,476	65.80
NA-Misc, Non Frop		42.3%	92.7%	619,818	51,326	7,234	608,562	58,624				63,731	900,045	4,025		4,026	\$19,439	11.083	50,648	63,73
NA-Misc, Non Prop		23.4%	100.0%	513,409	13,083		506,356	13,063	2,213,709 1,685,645	13,083	50,648	228.814	1,700,270				173,293	15,102	26,080	42.183
NA-Misc, Non-Frop		10.3%	63.15	173,258	15,102 337,253	365.151	157,195	16,102 702,406	6.837.513	534,570	52,304 339,728	874,797	1,512,347	150,408	26, 224	186,631	1,774,566	337,253	218,147	565,400
NA-Misc, Non Prop		25.0%		1,774,566		-								197,317	111,580	308,897			25,155	52,331
NA-Mic, Non Prop		8.7%	55.0%	706, 206	25,166	26 166	680,039	52,102	8,081,458	47,602 308,737	47,602	95,205	7,375,292	21,436	21,436	42,872	706,206 787,902	26,166 143,846	201,068	344,91
NA-Miss, Non-Prop		35.1%	45.6%	787,902		278,209	644,056	422,056	2,246,207		266,107	574,844	1,458,305	164,851	65,038	229,930			191,361	
NA Misc, Non Prop		53.5V	£3.9%	934,179	226,438	271,426	637,741	497,864	1,728,068	354,249	232,765	\$87,014	803,839	127,812	41,403	169,215	924,179	225,438	41,724	41,724
NA-Mist, Non Prop		0.0%	0.0%						450,386	139,138	70,975	210,113	450,386	133,138	29,251	168,389	0			41.724
NA-Misc, Non-Prop	2003		2710			-			115,048		-		115,048	0	- e	۰			(mu)	
Total N.A. Misc, Non Prop		22.7%	32.4%	5,214,117	973,226	80 BD	3,240,861	1,924,173	10,065,139	1,858,495 (Loughly	2,947,912	23,851,071	\$25,272	G06,068	A 191.341	6,214,117	973,224	[123,34]	2, 120,371

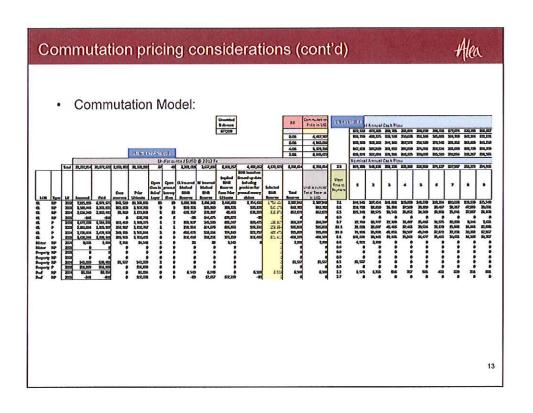
Is \$951K IBNR too high?

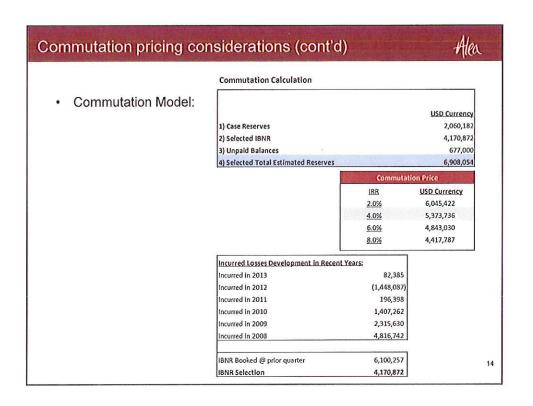
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Commutation pricing considerations (cont'd)



- · Commutation Model:
- · Needs to be efficient and practical
 - · Minimize travel time to extract contracts in scope
 - · Establish a full inventory of contracts in scope vs. entire relationship
 - Compare historical loss experience of the cedant to company's historical loss experience (cedant's LDFs vs. company's vs. industry proxy's), (in and out effect of the commutation to the rest of the company portfolio)
 - · Quantify # and size of open claims
 - Quantify # and size of open precautionary claims reported to the company
 - · Segregation of large claims and tabular claims
 - · Treatment of unpaid balances
 - · Payout patterns for tabular claims and large claims
 - · Provide technical price at several IRRs/discount rates





Runoff Consolidation



Means of consolidation:

- · Legal Liabilities transferred (usually require regulatory approval)
 - Sale/Acquisition of a company/legal entity
 - Novation
 - · Transfer part of a business
- Legal Liabilities transferred (private arrangement between 2 parties)
 - · Reinsurance to Close (RITC)
 - · Loss Portfolio Transfer (LPT)
 - · Adverse Development Cover (ADC)
 - · LPT and ADC combined

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Runoff Consolidation (cont'd)



Legal and accounting requirements:

- · UK legal requirements:
 - When legal liabilities are unchanged
 - · Policyholders normally not involved
 - · Regulatory permission normally not required
 - When legal liabilities are transferred
 - The transfer scheme needs approval from the court, not necessarily from regulators (FSA)
- UK accounting effects:
 - For a traditional LPT: cedant net liabilities are reduced by the nominal value of the transferred reserves and assets are reduced by the premium paid (gross liability remains unchanged on the BS of the cedant)
 - Reinsurance transactions involving only timing risk can be accounted for as reinsurance
 - The reinsurer may reserve the transferred liabilities at a different level to that agreed at the pricing of the transaction (mirror accounting not required)

Runoff Consolidation (cont'd)



Legal and accounting requirements:

- · US legal requirements
 - · Normally set at the state level
- · US accounting effects:
 - Most significant accounting rules FASB 113 (applies to public company reporting in accordance with US GAAP)
 - Forbid immediate recognition gains from ceding reinsurance contracts unless ceding company's obligations are extinguished
 - Differentiate between long (e.g. Life) vs. short (most P&C contracts) duration contracts
 - FASB 113 requires transfer of significant risk (timing and underwriting risks) in order for a contract to be recognized as reinsurance
 - For retrospective contracts (LPT/ADC) underwriting profit resulting from the ceded reserves and the reinsurance premium must be recognized over the entire period of the contract

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Runoff Consolidation (cont'd)



LPT/ADC

Basic principle: transfer outstanding claims to a reinsurer

Reinsurer agrees to pay claims from a retention level (usually lower than the existing reserves) up to a pre-set limit (at or a little above existing reserves)

Reinsurer assesses probable pay-out of claims and receives a premium equal to the sum of the discounted value of the expected claim payment + risk charge and fee

Adverse Development Cover protects against adverse development of claim levels beyond current level up to a pre-set limit

Reinsurer takes timing and investment risks and may take reserving/underwriting risks

Particularly suitable for liability portfolios with long settlement periods and subject to volatile reserve development (e.g. Asbestos, Pollution, WC liabilities)

Runoff Consolidation (cont'd)



LPT/ADC - risk transfer requirements under US GAAP:

- 1) <u>Underwriting risk:</u> the risk that the premiums collected (generally set to cover expected claims plus transaction costs) are insufficient to cover the actual claims payments;
- 2) <u>Credit risk:</u> the risk that a (re)insurer will not fully satisfy all of its contingent obligations to its cedants;
- 3) Investment risk: the risk that the income generated by a (re)insurer from the invested premium will be below the expected income reflected in the (re)insurer's premium pricing;
- 4) <u>Timing risk:</u> the risk that actual paid loss occurs earlier than expected and that the invested assets including investment income are insufficient to fund those claims when claims need to be paid
- In order for a retrospective contract to qualify as a true reinsurance contract under US GAAP, it must have material risk transfer of all 4 of the above categories
- A LPT without ADC features embedded in the contract would not qualify as a reinsurance contract under US GAAP, since it would not have underwriting risk

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Runoff Consolidation (cont'd)

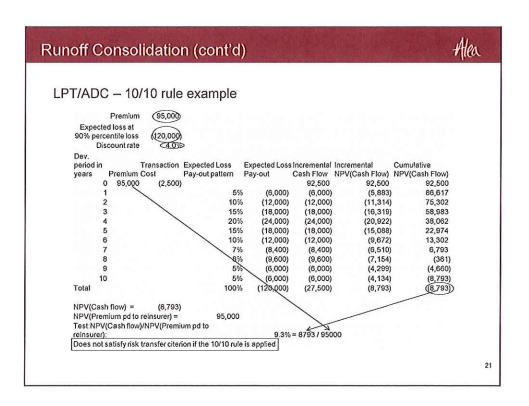


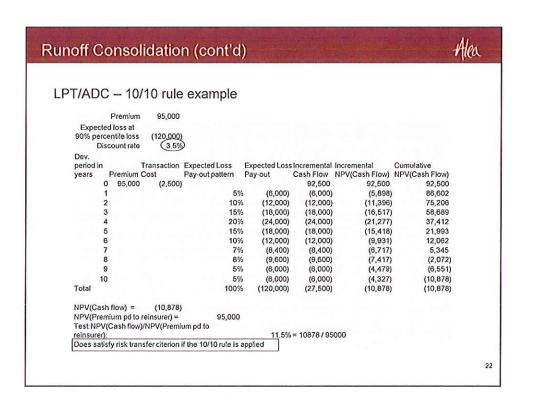
LPT/ADC - What constitutes material risk transfer under US GAAP?

The 10/10 rule of thumb: if there is at least a 10% probability that the reinsurer would suffer a loss of at least 10%, the policy was deemed to have material risk transfer (this used to be the norm)

Following some widely publicized controversies about finite/structured contracts, many favor a 15/15 rule and in some instances as much as 25/25 rule

In addition a more precise definition of the 10/10 rule of thumb: if there is at least a 10% probability that the reinsurer would suffer **Present Value (PV) loss** of at least 10%, the policy was deemed to have material risk transfer





Sources and reference papers:



- Sources and reference papers:
 - AAA reinsurance attestation supplement 20-1: Risk transfer testing practice note (AAA Committee on Property and Liability Financial Reporting (November 2005)
 - Non-traditional solutions for Liability Exposures by Stuart Shepley
 - The Uses and Abuses of Finite Risk Reinsurance by Christopher L. Culp and J.B. Heaton (A Morgan Stanley Publication. Summer 2005
 - · Loss Portfolios Transfers (2002 Giro Working Party Paper)
 - Risk Transfer Training (Introduction and Risk Metrics) Guy Carpenter October 2008

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Is there life after runoff?

Jean-Claude Jacob, ACAS, MAAA CAS Seminar on Reinsurance June 6, 2013 Southampton, Bermuda