



SOCIETY OF ACTUARIES

**US GAAP for International Life Insurers – Hong Kong
June 2008**

Session 18: IES

US GAAP for International Life Insurers

**Hong Kong
June 23-25, 2008**



SOCIETY OF ACTUARIES

Society Of Actuaries International Experience Study (IES)

Bill Horbatt

Co-Chair of SOA's IES Working Group



SOCIETY OF ACTUARIES

AGENDA

SOA IES Overview

“ Beware Greeks Bearing Gifts ”

SOA Experience Study “Tool”

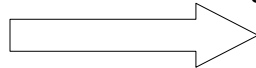


**Origins Of the SOA’s
International Experience Study**

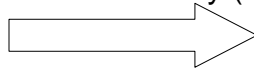


HISTORY

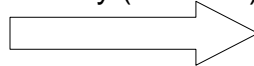
2002 “Brainstorming”



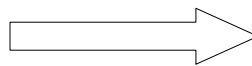
2003 International Survey (Phase I)



2004 International Survey (Phase II)



2005 Country Initiative and IES “Tool” (Phase III)



2006 + Expanding Reach



PUBLISHED RESULTS

- Publication of Results (updated as data becomes available)
 - <http://soa.org/professional-interests/international/intl-international-experience-study.aspx/>



LOCAL COUNTRY INITIATIVE

- Expand to include local companies
- “Empower” local country actuaries
- SOA Confidentiality & Technical Support



Local Country Initiative

- **Local Industry Meetings**
 - Rio de Janeiro – September 2004
 - Warsaw – October 2004
 - Guatemala – August 2005
 - Taipei / Seoul / Bangkok – August 2007
 - Hanoi – July 2008
- **SOA International Section Sponsorship**
 - Caribbean Actuarial Association - 2006



Local Country Initiative – Why Participate?

Actuarial Incentives - Improved Product Pricing

- Mortality
- Persistency
- Non commission acquisition costs (Agents)
- Financial assumptions



Local Country Initiative – Why Participate?

Accounting Incentives

- **International Accounting Standards (IFRS & EEV)**
 - Loss Recognition Testing
 - Embedded Value Assumptions
 - Fair Value (“mark to model”)
- **US GAAP**
 - SFAS 60 Era Assumptions
 - SFAS 97 / 120 Dynamic Assumptions
 - Loss Recognition Testing



Local Country Initiative – Why Participate?

Management Incentives

- **ROI**
 - Agent Training Allowances
- **Competitive Benchmarking**
 - Expected values
 - Deviations within “normal” range
- **Strategic Planning**
 - New market entrance
 - M&A pre-due diligence



Local Country Initiative – Why Participate?

- **Regulatory Incentives**
 - Resource for updating valuation tables
 - Solvency II
 - Resource for understanding variability between companies and over time (solvency management)



Local Company Initiative – Experience Study “Tool”

An Incentive to Participate

- **Microsoft Access / Excel Program**
- **Joint SOA / Company Sponsorship**
 - ING, MetLife, New York Life, Prudential



Experience Study “Tool”

- **Technical Advantages**
 - Consistent exposure formulas
 - Uniform Excel output
- **Practical Advantages**
 - Efficiency – actuaries focus on data and analysis
 - “Built in” Data validation tools



Results International Experience Study



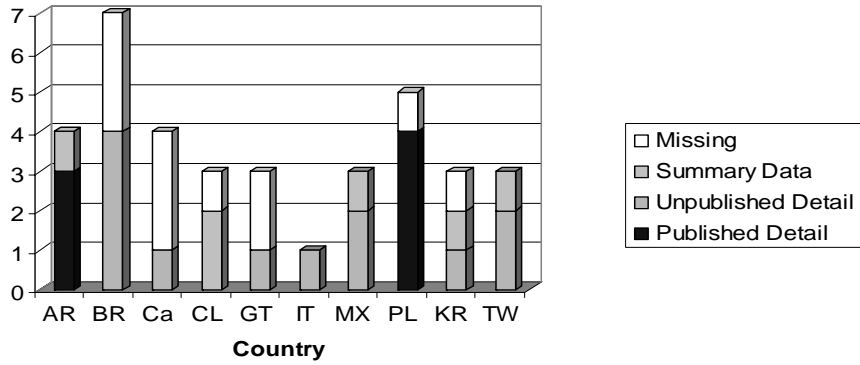
Contributing Companies (parent only)

- AEGON
- Aspecta
- AIG
- AXA
- Bradesco
- Brazil Previdenza
- China Life
- Dangbu Life
- Guardian Life
- Generali
- G&T
- ICATU Hartford
- ING
- MassMutal
- MetLife
- NY Life
- Occidente
- Pru (US)
- SH&C Life
- Zurich



Work in Process – Company Progress

Contributing Companies



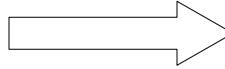
In Depth Country Studies

ARGENTINA



In Depth Country Studies Argentina

- Peso Devaluation



Study Policy Counts Only

Studied

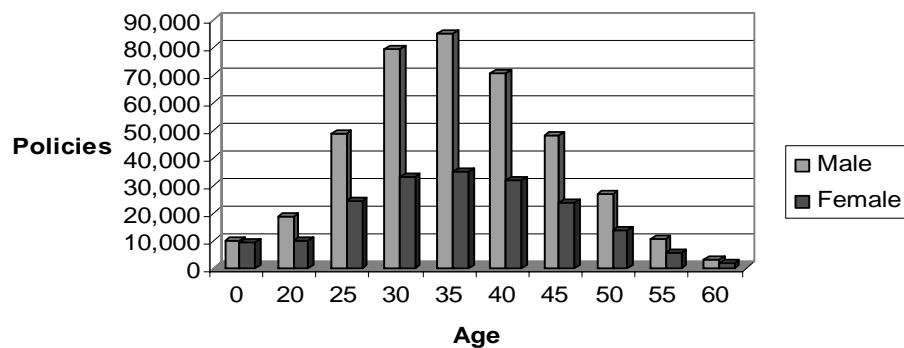
- Mortality
- Persistency
- Agent Retention



SOCIETY OF ACTUARIES

In Depth Country Studies Argentina Mortality Exposure

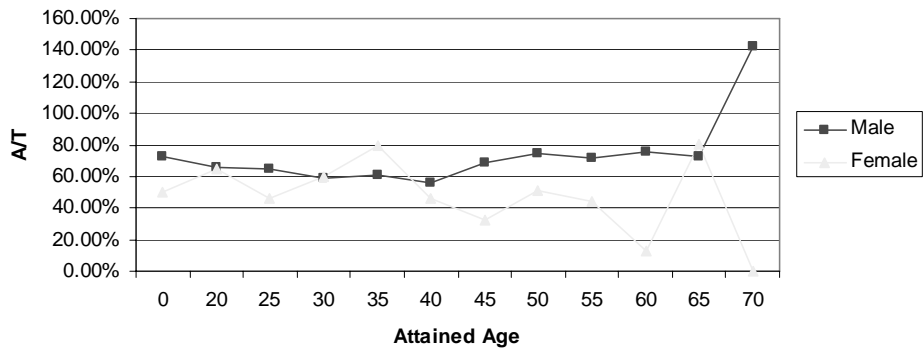
Policies Exposed



SOCIETY OF ACTUARIES

In Depth Country Studies Argentina Mortality

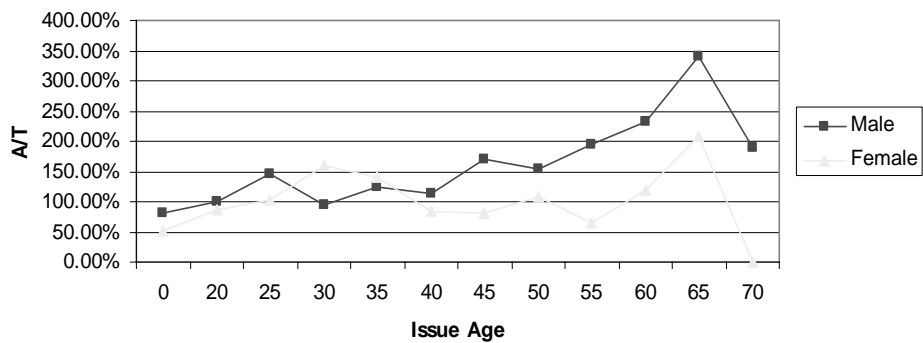
A/T Mortality (Ultimate2001 VBT)



SOCIETY OF ACTUARIES

In Depth Country Studies Argentina Mortality

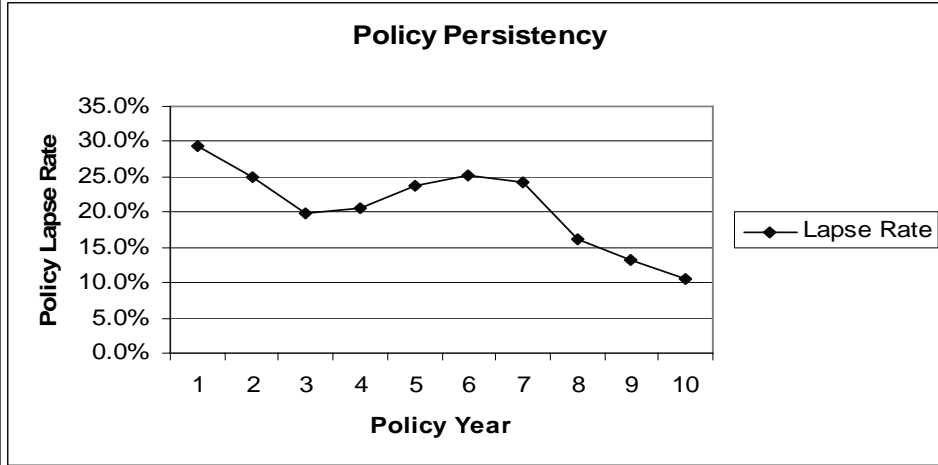
A/T Mortality (Select 2001 VBT)



SOCIETY OF ACTUARIES

In Depth Country Studies Argentina Persistency

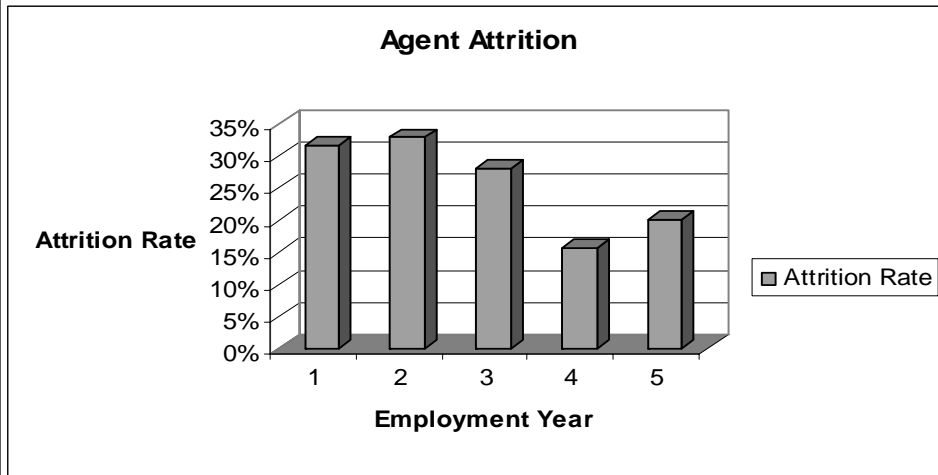
Actuaries
Risk Is Opportunity.™



SOCIETY OF ACTUARIES

In Depth Country Studies Argentina Agent Retention

Actuaries
Risk Is Opportunity.™




SOCIETY OF ACTUARIES

In Depth Country Studies

POLAND



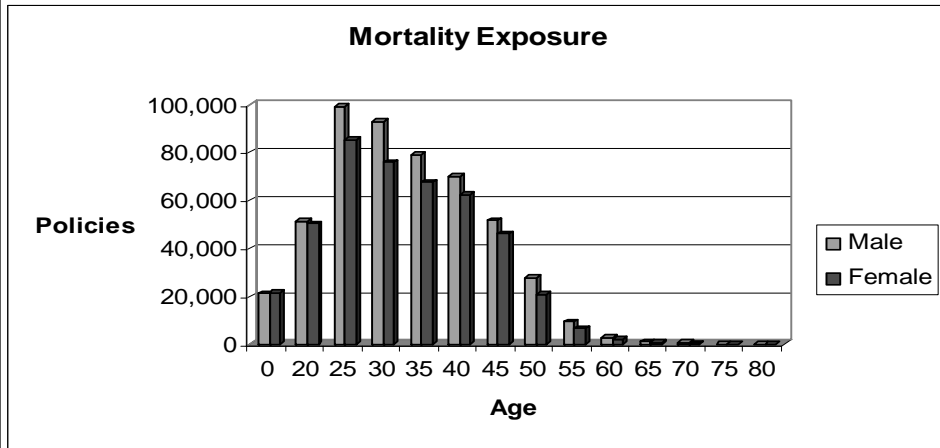
In Depth Country Studies Poland

- Studied
 - Mortality (policy  insurance)
 - Persistency (policy)
- Lines of business
 - Studied – individual risk/savings
 - Plan to study –
 - individual risk separate from savings
 - Group life



In Depth Country Studies Poland Mortality Exposure

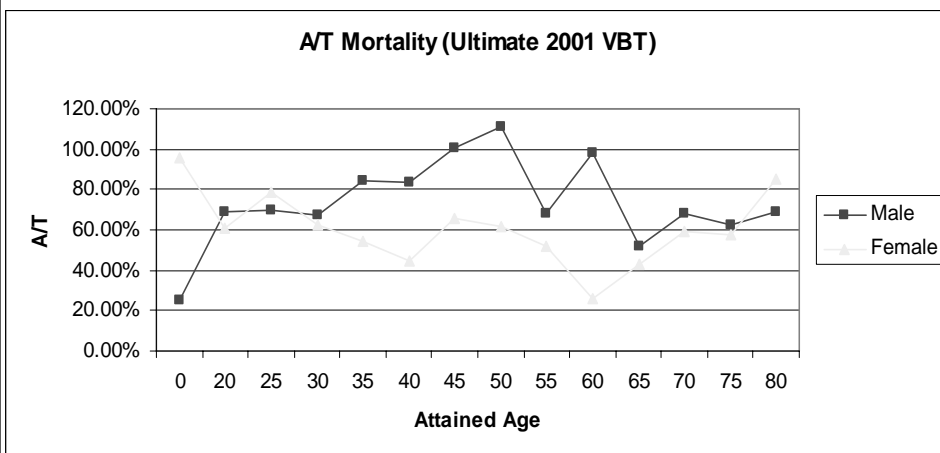
Actuaries
Risk Is Opportunity.™



SOCIETY OF ACTUARIES

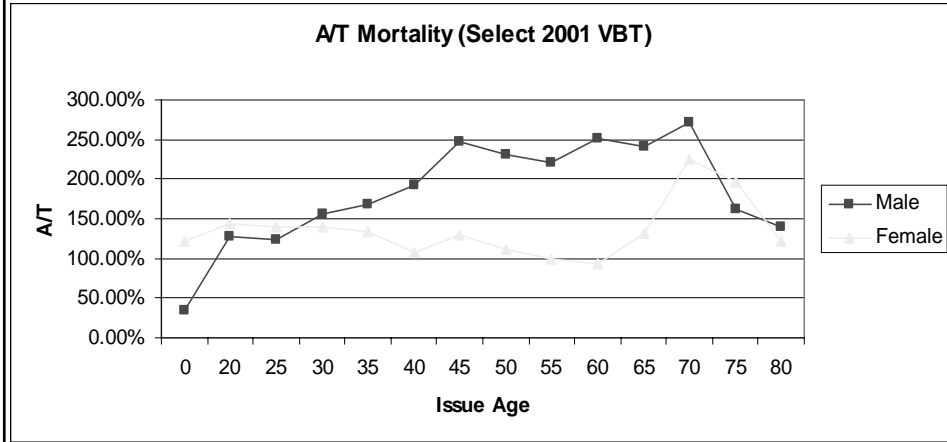
In Depth Country Studies Poland Mortality

Actuaries
Risk Is Opportunity.™

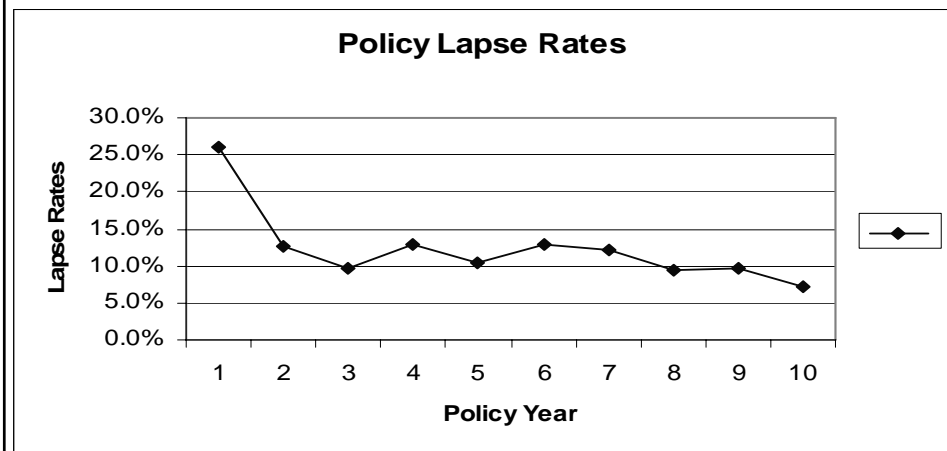


SOCIETY OF ACTUARIES

In Depth Country Studies Poland Mortality with Selection



In Depth Country Studies Poland Persistency

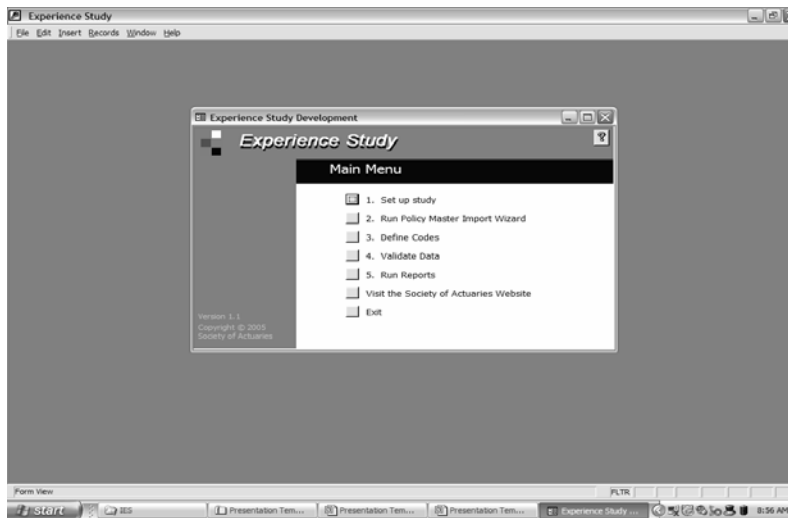


IES Microsoft Access / Excel “Tool”

DEMONSTRATION



Main Menu



Selecting Data File to Input

Define the tables and codes for the extract data

Enter the Access database where the extract is stored

ExperienceSimpleData.mdb

Table name for extract:
PolicyMaster-SampleTbl

The existing Policy Master Table will be deleted and replaced.

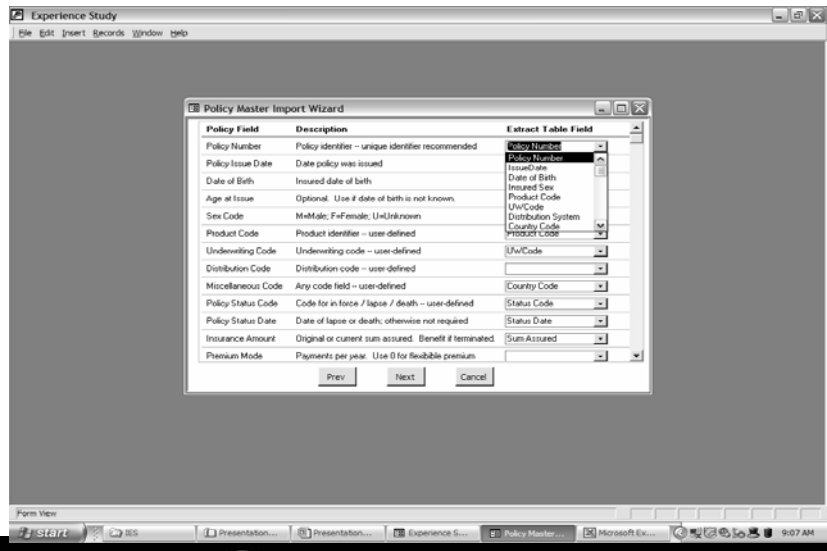


Mapping Data Fields

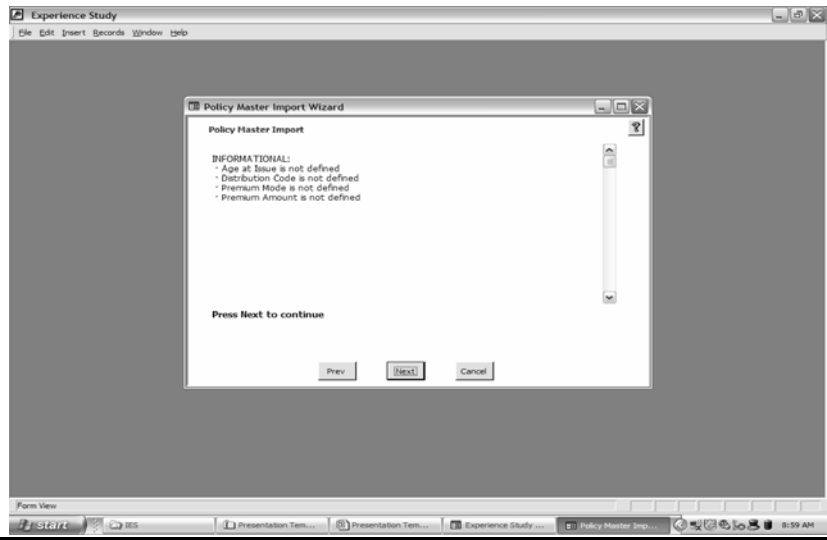
Policy Field	Description	Extract Table Field
Policy Number	Policy identifier - unique identifier recommended	PolicyNumber
Policy Issue Date	Date policy was issued	IssueDate
Date of Birth	Insured date of birth	Date of Birth
Age at Issue	Optional. Use if date of birth is not known.	
Sex Code	M-Male, F-Female, U-Unknown	Insured Sex
Product Code	Product identifier - user-defined	Product Code
Underwriting Code	Underwriting code - user-defined	UwCode
Distribution Code	Distribution code - user-defined	
Miscellaneous Code	Any code field - user-defined	Country Code
Policy Status Code	Code for in force / lapse / death - user-defined	Status Code
Policy Status Date	Date of lapse or death, otherwise not required	Status Date
Insurance Amount	Original or current sum assured. Benefit if terminated.	Sum Assured
Premium Mode	Payments per year. Use 0 for flexible premium	



Selecting Data Field Definitions



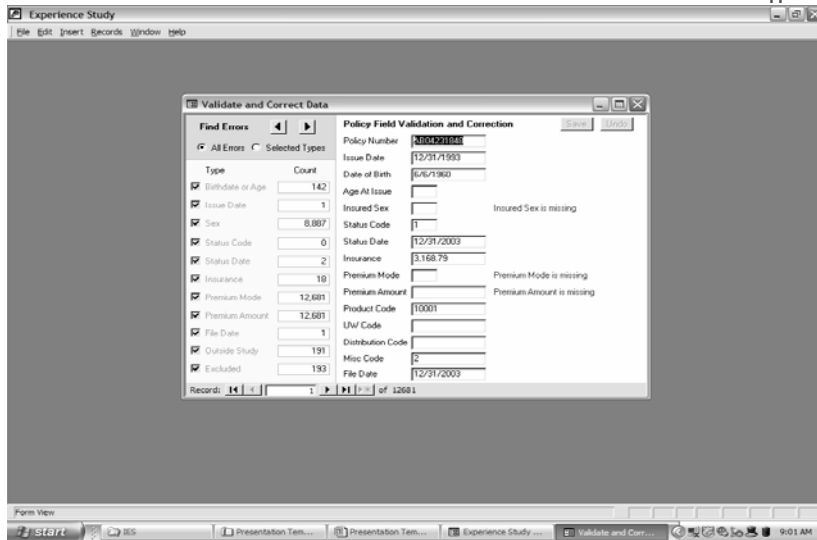
Error Messages



Mapping Field Codes



Data Validation



Mortality Report Request

Actuaries
Risk Is Opportunity.™



SOCIETY OF ACTUARIES

Mortality Report (Excel)

Actuaries
Risk Is Opportunity.™

From	To	Exposure	Actual Claims	Actual Claim Rate	Expected Claims	Tabular Claim Rate	Actual / Tabular
0	19	1774	0	0.00%	1	0.00%	0.00%
4	24	706	0	0.00%	1	0.14%	0.00%
5	25	1233	0	0.00%	1	0.12%	0.00%
6	26	2032	0	0.00%	2	0.11%	0.00%
7	26	2793	1	0.04%	4	0.12%	26.64%
8	44	3305	4	0.12%	8	0.20%	59.32%
9	45	6345	11	0.20%	19	0.29%	68.62%
10	54	6350	10	0.16%	36	0.57%	33.27%
11	55	4094	19	0.46%	45	0.95%	48.17%
12	44	4797	34	0.71%	73	1.54%	46.43%
13	45	5176	51	1.00%	89	2.53%	39.89%
14	74	2501	25	1.00%	99	3.97%	25.19%
16	75	1682	57	3.42%	304	6.17%	55.30%
17	85	1662	100	6.02%	206	6.42%	93.23%
17	Unknown	320	-	0.00%	0	0.00%	-
19	Total	43340	322	0.73%	724	1.69%	44.54%



SOCIETY OF ACTUARIES

Input Data Matrices



Microsoft Excel - ExperienceStudy1

File Edit View Insert Format Tools Data Window Help

Summary/SCS2 & "Exposures"

A	B	C	D	E	F	G	H	I	J	K	L
1	Mortality		Policy Count								
2	Exposures		Policy Year →								
3	Age at Issue	Total	1	2	3	4	5	6	7	8	9
4	Total	43,948	5,748	5,815	5,836	5,565	5,044	4,530	3,954	2,916	1.1
5	0	74	16	14	12	10	7	6	5	3	
6	1	96	18	19	14	12	9	7	3	3	
7	2	68	14	16	15	10	6	5	2	0	
8	3	66	13	14	15	11	6	5	2	0	
9	4	57	10	12	12	9	6	5	2		
10	5	46	11	11	10	7	4	2	1	0	
11	6	130	21	25	26	20	15	12	6	3	
12	7	68	13	12	12	11	7	4	3	2	
13	8	102	15	18	20	13	11	9	6	3	
14	9	68	11	12	13	9	7	5	3	2	
15	10	88	15	19	17	14	10	8	3	2	
16	11	89	14	16	15	13	11	10	6	3	
17	12	140	20	22	21	17	16	17	11	7	
18	13	67	8	9	9	6	6	5	4	5	
19	14	99	12	13	15	13	11	11	10	6	
20	15	110	15	15	14	13	13	13	11	9	
21	16	119	10	15	18	14	16	19	13	7	
22	17	77	12	14	13	10	7	7	5	4	
23	18	122	14	15	16	14	13	12	10	8	
24	19	97	13	16	16	15	13	10	6	4	
25	20	144	18	22	23	23	20	18	13	7	
26	21	87	11	8	9	9	9	10	10	7	
27	22	116	16	17	16	18	15	13	8	5	
28	23	134	16	20	20	17	18	15	12	8	
29	24	224	22	33	34	33	32	30	18	13	
30	25	182	25	28	25	24	22	18	13	11	
31	26	237	22	25	29	34	31	27	23	18	
32	27	275	33	36	38	30	27	27	27	22	
33	28	271	38	40	37	34	29	27	22	14	
34	29	249	43	39	34	36	31	21	17	15	

Ready



SOCIETY OF ACTUARIES



Next Steps International Experience Study



SOCIETY OF ACTUARIES

Next Steps Geographical Expansion

<u>Current</u>	<u>Future?</u>
Argentina	Bolivia
Brazil	China
Caribbean	Hong Kong
Chile *	Hungary
Guatemala	India
Mexico *	Indonesia
Poland	Peru
So. Korea *	Thailand
Taiwan *	Philippines
Vietnam	Venezuela



Next Steps Scope Expansion

<u>Current</u>	<u>Future?</u>
Mortality	Expenses
Persistency	
Agent Retention	
Agent Productivity	
<i>Key Financial Assumptions</i>	



Next Steps

- What it takes in your country?
 1. At least 3 interested companies
 2. Your management's support
 3. Microsoft Access skills
 4. Curiosity!



Next Steps - Contacts

- Ronora Stryker, Research Actuary, SOA
 - rstryker@soa.org
- Bill Horbatt, Co-Chair IESWG
 - horbatt@actuarialconsortium.com

