



Outsourcing Actuarial Work – A Discussion

Southwestern Actuaries Conference

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Why Outsource?

Allows For Additional Resources At Less Than Market Costs

– Enables Development Of Needed Skills For:

- Routine, repeating processes
- Analytics, both elementary and advanced
- Surge resources, special projects

Can Provide Expertise In Targeted Areas Once COEs Are Developed

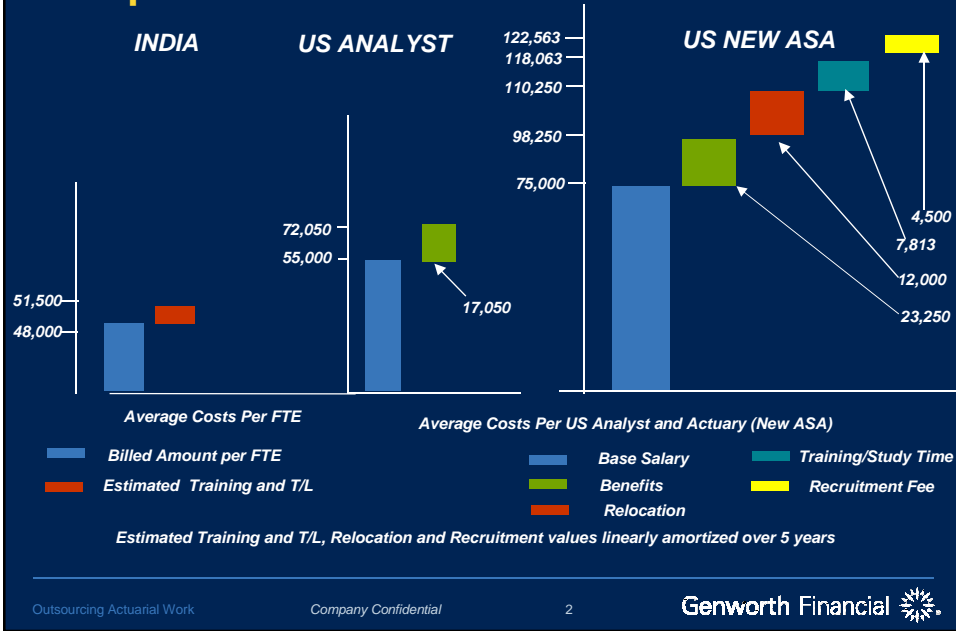
Helps Organization Remain Competitive

Can Contribute To A Better Work / Life Balance

Advanced Math And Statistics Skills Available

English Speaking

Comparative Costs



What's Needed Internally?

Full Support From Senior Actuaries

- They Can't Sit On The Sidelines
- Must Help Drive The Processes

Offshore Associates Must Be Thought Of As Actual EE's

- Can't Be Thought Of As "Us" Vs. "Them"

Long Range Goal MUST Be A True COE

- A Full-functioning Consulting Firm Supporting Your Actuaries
- All Areas Should Be Addressed
 - Pricing
 - Valuation
 - Projections

What's Needed Externally?

Controllership And Management By Outsourcing Group

- Consistency In Hiring Process
- Install Appropriate Performance Metrics
- Advertise Capabilities To Your In-house Actuaries

Implement Training To Target Needs

- Apply Existing Skills Where Possible
- Develop Additional Ones Where Needed

Look To Be Fully Utilized Throughout Enterprise

- Help Your Actuaries Realize Cost Efficiencies
- Allow Projects On “Back Burner” To Be Addressed
- Take Advantage Of Exclusion Of Headcount

Requirements For Outsourcing Work

More Cost Efficient Than If Performed In The US

Quality Of Work Product Must Be Equal To US Standards

Accurate And Reliable Output

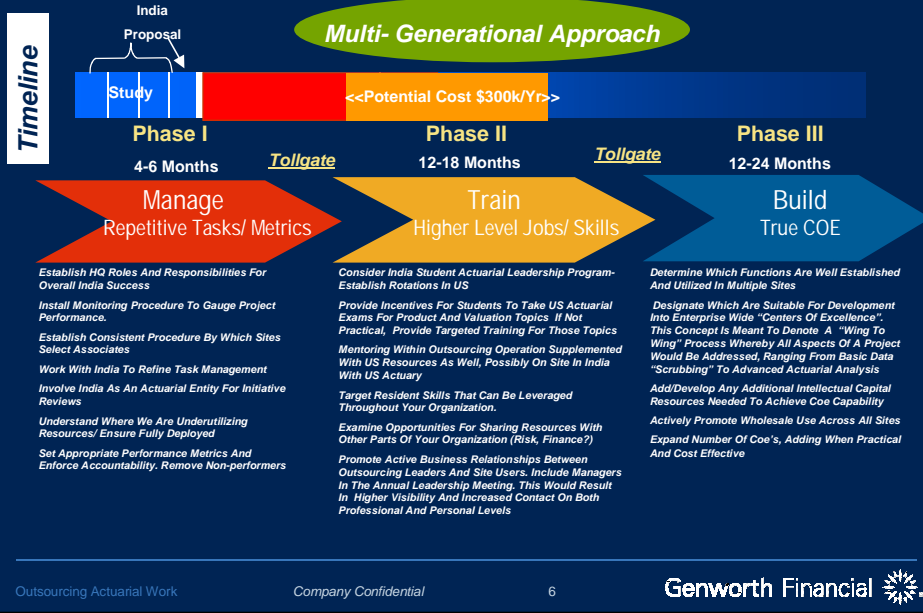
Timely Delivery / Quick Turnaround

Well Understood Processes That Work

- Backed Up And Documented Thoroughly
- Easily Recoverable Back To The US

Effective Communications Network Needs To Be Established

Implementation Timetable



Phase II Refinements

Increase Training

Find US Actuary To Spend 2-3 Years In India OR Several US Actuaries Travel To India Per Year

- 1-2 Month Stays
- Selected To Target Specific Actuarial Areas Deemed Weak
- Builds Familiarity And Long-term Relationships Among Senior Actuaries

Develop Targeted Training Materials

- Possibly For On-line Use

Include In Company Special Programs

Develop US / India Mentoring Program

Attend Selected SOA Functions

Encourage Participation In SOA Exam Syllabus

Develop Effective Student Program

Expand Usage

Identify Skill Sets That Can Be Leveraged Throughout The Organization

- Catalog Of Tasks
- Individual Skill Sets

Extend Process To Include Examination Of Responsibilities Not Currently Transferred That Could Be Considered

Encourage / Facilitate Transfer Of Additional Tasks

- Allow US Actuaries To Focus On Business Issues Instead Of Procedural Or Computational Ones

Phase II Refinements

Increase Communication

Continue Phase I Process Control Reviews

- No Less Frequent Than Quarterly

Distribute High Level Dashboard To Senior Site Actuarial Leadership

Continue Actuarial Initiative Reviews With India

Consider Participation In The Annual Leadership Meeting

Other

Look for Opportunities To Team Up With Other Areas

- Finance
- Risk

Incorporate Specific India Use Targets In Each Site's SLA And Emphasize During Review

Limit Ability Of Sites To Hire Additional Domestic Resources

- Do Not Penalize For Outsource Usage

Current Assignments (Group Incl. For Illustration)

	Term/UL	Annuities	Group	LTC	Corp	International
Experience Studies	Exp Analysis	Exp Analysis	Preparation Of Reports	Exp Analysis		
Valuation	Valuation	Valuation	C F Testing Valuation Reporting	Stat Reporting		Claims Reserving
Projections	MG-ALFA Development	Financial Projections			MG-ALFA Development	
Product Development	Product Development	Illustration Software	Special Studies			
OBV					OBV Analysis	
Risk Management					EC Support	
Associates	6	5	2	2	4	2

Other Considerations Back-Up Planning & Cross-Training

Objective

Creation Of Back-Up For Actuarial Processes And Cross-Training Of Individuals To Ensure

- Knowledge Retention
- Continuity Of Processes During Absence Of Individual
- Enhancement Of Individuals' Technical Capabilities

Design Of A Peer Review Mechanism To Ensure Output Quality In Terms Of

- Data Accuracy
- Validity Of The Inputs, Logic, And Methodology Used

Competency Mapping

Identify the Parameters Required For Flawless Process Execution

Map Individuals Against Each Process In Terms Of Their Current Ability To Work On A Process And The Level Of Additional Training Required To Do The Process

Assess The Individual's Software Knowledge And The Level Of Training Required In The Relevant Area

Creation Of Back-Up For Each Process Taking Into Account The Competency Of The Individuals

Other Considerations Back-Up Planning & Cross-Training

Current Status

Annuity Product Development Process

- Three-member Team
- Back-ups In Place

HQ Projection Team

- One Member
- Needs Immediate Consideration

Life Experience Studies

- Two-member Team Handling Common Processes
- Natural Back-up

Other Experience Processes

- Need For Back-up Creation

Proposed Road Map

Buy-In From The Site Actuarial Leaders On The Proposal

Identify Back-Ups Based On Technical Capability And Current Workload

Establish System Capability

Establish Timelines for Cross-Training

Draw Up Individual Training Plans For Individuals

Document the Processes; Prepare Training Material

Establish The Metrics For Successful Cross-Training And Back-Up Creation

Design A Peer Review Mechanism Using The Trained Individuals For Each Process

Other Considerations

Competency Mapping For Selected Processes

Sr.No	Business	Process	Task	Assoc 1	Assoc 2	Assoc 3	Assoc 4	Assoc 5
1	Life	Projections	Building Model Populations					
2	Life	Projections	Building projection models in PTS					
3	Life	Projections	Building projection models in ALFA					
4	Life	Projections	Determining PTS Reports					
5	Life	Projections	Updating Report templates					
6	Life	Projections	PV of Future Commissions					
7	Life	Valuation	Average Credited Report					
8	Life	Valuation	Disability Reserve valuation - Product Line 1					
9	Life	Valuation	Disability Reserve valuation - Product Line 2					
10	Life	Valuation	Interpolated Terminal Reserve quotes					
11	Life	Valuation	VPL Illustrations					
12	Life	Valuation	Stat Strain Monitors					
13	Life	Product Development	Infocase & Sales Illustrations					
14	Life	Product Development	Building pricing models in ALFA					
15	Life	Product Development	Building pricing models in PTS					
16	Life	Product Development	APL Illustrations					
17	Life	Experience Studies	Policy 6.0					
18	Life	Experience Studies	Death Claim Variance Reports					
19	Life	Experience Studies	Experience System - Product Line 1					
20	Corporate	Actuarial	VBA					
21	Corporate	Actuarial	OBV					
22	Corporate	Actuarial	RBC					
23	Other	Valuation	Daily Reporting of Premium Received and Claims Paid					
24	Other	Valuation	Lapse Reporting					
25	Other	Valuation	Earnings by Source Report, Quarterly					
26	Other	Valuation	Cash Flow Testing					
27	Other	Valuation	LTD Reserve Calculation					
28	Other	Valuation	Reserve Analysis (Manual Adjustments, Margins)					
29	Other	Valuation	Quarterly Updating of Reserve Rollforwards					
30	Other	Valuation	Running Reports and Update Premium Waiver Reserve					
31	Other	Valuation	Annual Statement/ State Reporting					
32	Other	Valuation	RBC Analysis					
33	Other	Valuation	Monitoring Asset Portfolio Earnings Rates					
34	Other	Valuation	Capital Gains Impact Report					
35	Other	Valuation	Actuarial Review Presentation					
36	Other	Valuation	Green Belt Project - Reserve Margins					

Mapping based on: Actuarial Knowledge
 Current Job Responsibility
 Process Knowledge

Legends

- Working knowledge
- Moderate training required
- Comprehensive training required

Other Considerations Peer Review Mechanism

Methodology

Establish The Back-Ups For All Processes And Complete The Cross Training

The Individual Back-Ups For Each Process Would Be The Natural Peer Reviewers

Frequency Of Review To Depend On Work Type

Identify The Sub-Processes That Need To Be Reviewed—Critical / Non-Critical

Peer Review Process:

- Documentation Of Procedures For Performing The Process And Acceptable Standard Of Work
- Completeness Of The Required Inputs
- Reasonableness Of The Results Obtained
- Accuracy Of Data And Methodology Used
- Feedback To The Individual

Concerns

Level And Seasonality Of Workload Of Individuals Will Determine The Success Of Peer Review Mechanism

Varied Level Of Expertise Of Team Members May Increase The Time Taken For Peer Review Process

Need To Decide On The Time That An Individual May Spend On Peer Review On A Regular Basis

Need To Make The Peer Review Process “Independent”

Need To Track The Effectiveness of Peer Reviewing

Other Considerations Constraints

System Requirements

Obtain The System Access Required For Each Process

- Access To Mainframe
- Access To Local Servers

List The Software Used For Performing Each Process And List Any Additional Requirements

- PTS
- MG-ALFA (Currently India Actuarial Team Has 10 MG-ALFA Licenses And Site License For PTS)

Other Questions

Time To Cross Train Will Depend On The Workload Of The Individual

- How Do We Address This?

There May Be Additional Cost Incurred Due To System Requirements

Should We Back Up Only The Business Critical Processes? Can We Pilot the Initiative With A Few Critical Processes And Replicate The Same For The Remaining?

How Do We Identify The Metrics For Successful Cross-Training And Back-Up Creation?

Other Considerations

Associate Not Able To Work Alongside US Process Manager

Large Time Difference

- 9 ½ Hours For Standard Time (East Coast)
- 10 ½ Hours For Daylight Savings Time

English Is Not Always English

Some Cultural Differences

- Work Ethic Is There - BUT
 - Little familiarity with US Actuarial Practices (ASI is not the SOA)
 - Little or NO understanding of how Americans think
 - Reluctance to disagree—even though they actually do

Retention A Problem

Although Slowing, Market In India Is Still Growing

- Salary Increases Of 50% - 75% Not Uncommon

Other Possible Locations

West Indies

The University Of The West Indies Has An Actuarial Program

- Approximately 20 Students Are Admitted Each Year

Advantages

- Close To Home (Eastern Time Zone)
- English Spoken That Is More Easily Understood
- Many Take SOA Exams

Unknowns

- Cost Differential
- Feasibility / Cost Of Starting A Dedicated Practice

Some Final (Genworth) Thoughts

Outsourcing CAN Work, BUT There Are Limitations

Ability To Send Advanced Actuarial Work Questionable

- Pre ASA Work Predominantly Sent
- Need Significant Training To Raise Level Of Assignment

Turnover And Continuity Will Continue To Be A Problem

Cost Savings May Not Last Much Longer

- Weakening Dollar
- Rapidly Growing Indian Insurance Market

Constant “Push Back” From Front Line Actuaries

- Voiced In Terms Of Poor Performance **BUT**
- In Many Cases, A Concern About Job Security

Appendix

Development Of Domestic Actuarial Costs

Cost Items	NEW ACTUARIAL HIRE	NEW ASSOCIATE	NEW FELLOW	EXPERIENCED ASSOCIATE	ACTUARIAL ANALYST
1 Base Compensation	50,000	75,000	100,000	87,500	55,000
2 Benefits @ 31% of Salary	15,500	23,250	31,000	27,125	17,050
3 Training (Opportunity Cost)	4,688	7,813	0	9,115	0
4 Relocation Expense	2,200	12,000	12,000	12,000	0
5 Recruitment Fee	0	4,500	6,000	5,250	0
6 Incentive Comp	0	0	10,000	0	0
TOTAL COST	72,388	122,563	159,000	140,990	72,050

Training Cost based on assumed 200 hours per year study time, proportional to salary.

Benefit gross up @ 31%

Relocation expense based on 2003 budgeted amount amortized linearly over 5 years - \$11,000 for renter, \$60,000 for homeowner

Recruitment fee at 30% of salary, amortized linearly over 5 years

Actuarial Analyst assumed to be skilled actuarial resource not on an exam track

Actuarial Society Of India Exam Format

Series	Number of exams	Description
100	9	Basic actuarial theory.
200	1	Communication.
300	4	Core areas of actuarial work. Candidates have to pass four subjects from a choice of five.
400	1	Fellowship exam, testing higher-level skills. Candidates have to choose from four subjects.

Actuarial Society Of India Exam Format

Exam	Description	Components
101	Statistical Modeling	Statistics, Hypothesis Testing, Analysis Of Variance
102	Financial Mathematics	Theory Of Interest
103	Stochastic Modeling	Actuarial Modeling, Monte Carlo Simulations
104	Survival Models	Analysis Of The Various Forms Of Decrement
105	Actuarial Mathematics I	Mathematic Techniques Relating To Actuarial Work In Insurance
106	Actuarial Mathematics II	Similar To 105, But Emphasizes Non Life Insurance
107	Economics	Macroeconomics
108	Finance And Financial Reporting	Basic Understanding Of Corporate Finance
109	Financial Economics	Development Of Skills To Construct Asset-liability Models
201	Communications	Effective Actuarial Writing Skills
301	Life Insurance	Investment And Asset Management
302	Life Insurance	Knowledge Of Insurance Products And Uses
303	General Insurance	Knowledge Of Commercial Insurance Products
304	Pensions And Other EE Benefits	Knowledge Of Pension Plans
401	Investment And Asset Management	Advanced Topics
402	Life Insurance	Application Of Principles To India Company
403	General Insurance	Similar To 402 Except Applies To Commercials
404	Pensions And Other EE Benefits	More In Depth Pension Topics