



SOCIETY OF ACTUARIES

## Actuarial Jobs At Risk?

### San Antonio Spring Meeting Presentation

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## Agenda

- Historical Context for challenges profession faces
- Mission and Strategic Plan of SOA
- Research/Survey Results
  - Member
  - Employer/marketplace
- Board of Governors Decisions
  - Expanded Roles in Traditional Markets
  - New Opportunities in Broader Financial Services market
  - Image Building Campaign
- Future of actuarial profession - examples

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## Traditional Actuarial Jobs at Risk – Historical Context

- Insurance Industry:
  - Intense competition
  - Scarce \$\$\$ resources
    - => Consolidation , mergers and acquisitions, demutualization wave
  - Shift in focus - Insurance to Annuities
    - Required paying closer attention to investment and earning adequate returns => fund management
  - Rise of financial reinsurance
  - Technological advances
- Broader Economy (more recent developments)
  - Convergence of financial services providers
  - Series of accounting scandals
  - Congressional act – Sarbanes-Oxley
  - Volatile markets
  - Growing awareness for more prudent management of an enterprise

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## Traditional Actuarial Jobs at Risk – Historical Context

- Health Industry:
  - Intensive price competition
  - Medical inflation difficult to predict
    - => encroachment of predictive capabilities by MBA's and Economists
  - Technological advances, predictive modeling, etc.
- Pensions
  - Decrease in defined benefit plans
  - Increasing need for new approach / Financial Economics
  - ALM causing more investment expertise in pension funding
  - Increasing competition

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## How These Trends Affected Actuaries

- Traditional actuarial employment:
  - Diminished scope of traditional roles
  - Technological advances made it easier to do basic actuarial work
  - Consolidation within industry, convergence of financial services providers, and focus on management of funds required broader sets of skills
  - International expansion of insurance companies:
    - Needed to be able to do things different than US regulations require
- Non-traditional actuarial employment:
  - Actuarial exams include finance and investment topics
  - Actuaries started taking this broader knowledge to new areas of practice
  - Regulators begin to focus on ALM and Enterprise Risk Management

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## How These Trends Affected Actuaries

- ⇒ Actuaries have the potential to understand the complete picture of risk management better than any other professionals!
- ⇒ But not recognized as such yet....while other professions are already starting to establish themselves!

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## **SOA Vision:**

**The vision of the SOA is for actuaries to be recognized as the leading professionals in the modeling and management of financial risk and contingent events.**

=>SOA Strategic Plan helps direct SOA work towards the vision

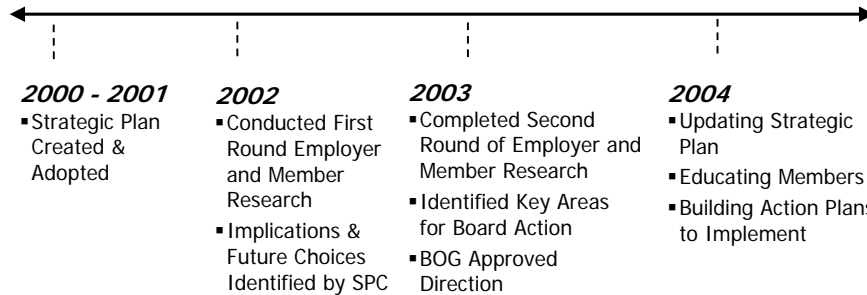
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## **Strategic Planning Activity**

- Board formed Strategic Planning Committee (SPC) and established Strategic Plan in 2001
- SOA Strategic Plan:
  - governs board activity
  - sets strategic direction – consistency between presidencies
  - reviewed and updated at least every 3-4 years (currently being revised)

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## SPC Activities: 2000 – Present



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## HIGH LEVEL Questions – Addressed by BOG and SPC in 2003 and 2004

1. How do we expand in traditional markets? What roles are appropriate for actuaries in the future?
2. Do we enter Broader Financial Services?
3. How should the current value of the actuarial skill set and the actuary be enhanced?
  - Image
  - Skills
4. What, if any, other credential and/or education should SOA seek to offer? What skills need enhancement for future success?

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**SOA FINDINGS:**

**Missing Skills and Potential Opportunities –**

**Membership Survey**  
**Market Survey** (traditional and broader financial services (BFS) employers)

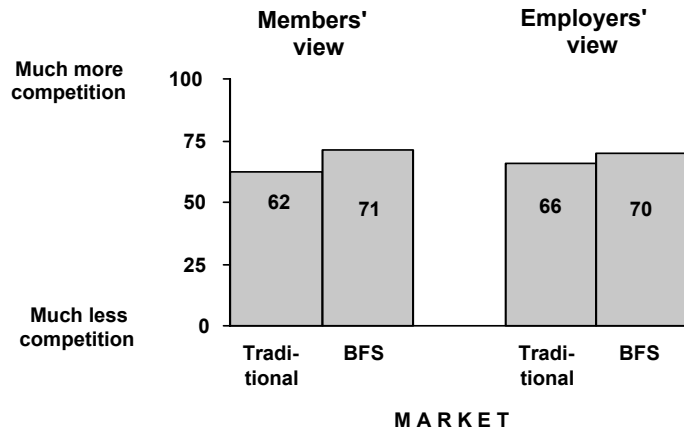
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**Excellent Response Rate: 33%**

<b>Practice area</b>	<b>Number</b>	<b>Percent</b>
Finance/Investment, ERM	497	10.7
Health Benefits Systems	853	18.3
Life Insurance	1642	35.2
Retirement Systems	1165	25
Property & Casualty	50	1.1
Regulatory	83	1.8
Academic	60	1.3
No information provided	310	6.7
<b>Total</b>	<b>4660</b>	<b>100</b>

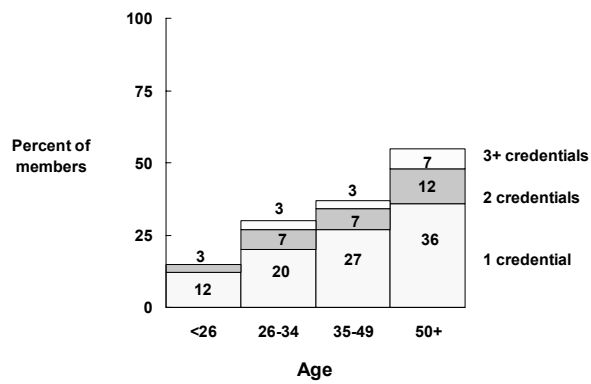
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## Do Actuaries Face More or Less Competition?



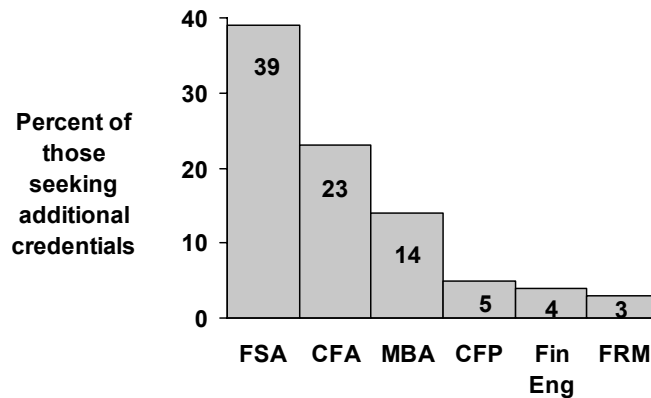
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## Acquisition of non-actuarial credentials



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## Credentials that Members Pursue Today



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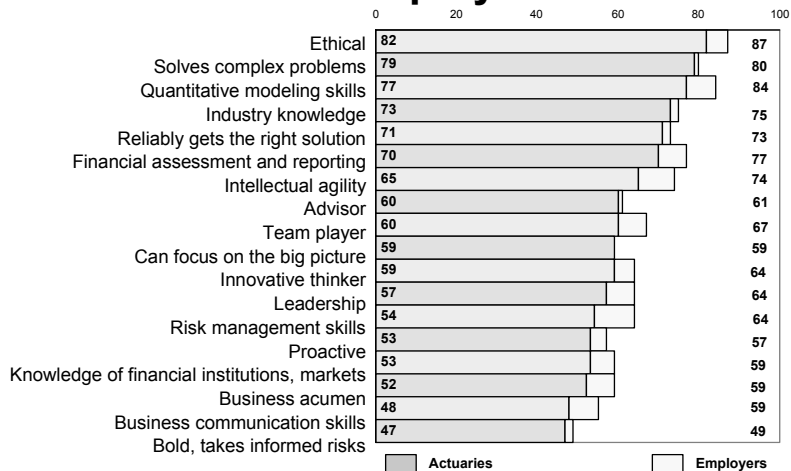
## What Did the Credential Do for You?

	Motivation 0 - 100	Impact 0 - 100	Difference 0 - 100
Increase career options	76	51	-24
Greater knowledge of my industry	58	42	-16
Improved business skills	60	44	-16
Increased level of compensation	44	32	-12
Increased recognition, prestige	57	49	-8
Intellectual interest	62	58	-4
Improved technical skills	53	54	1
Confidence, sense of accomplishment	50	57	7
Improved communications skills	29	40	11

*Results include all credentials except FSA, ASA*

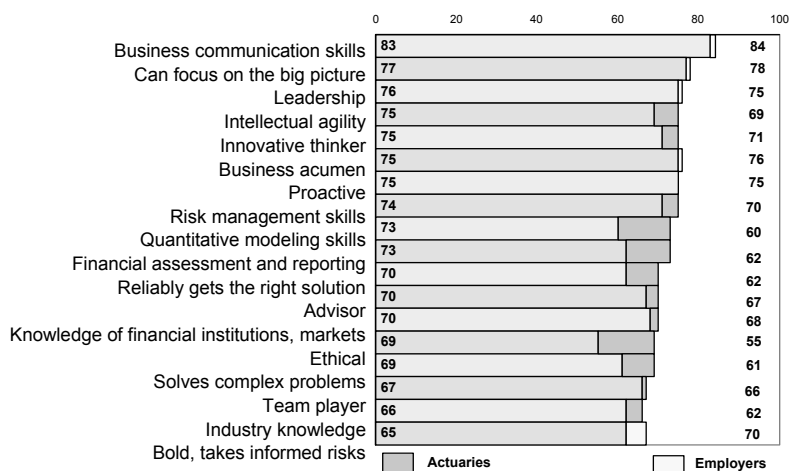
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## Skill Performance Actuaries vs. all Employers



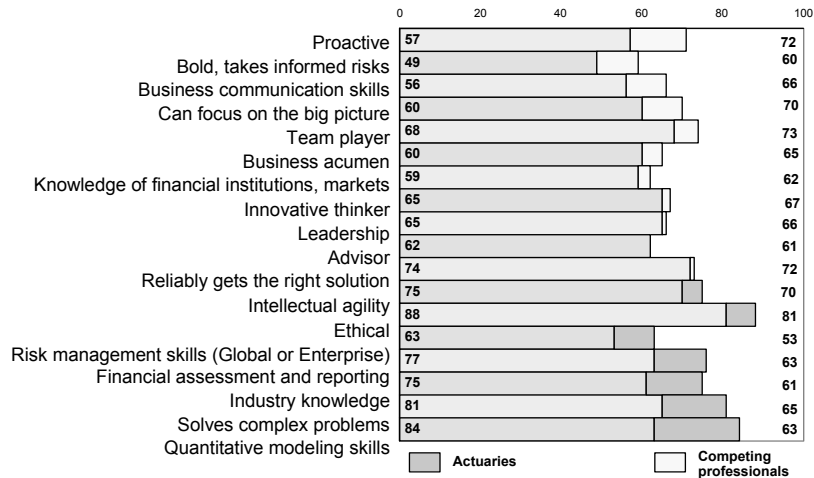
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## Skill Importance of Improvement: Actuaries vs. Employers



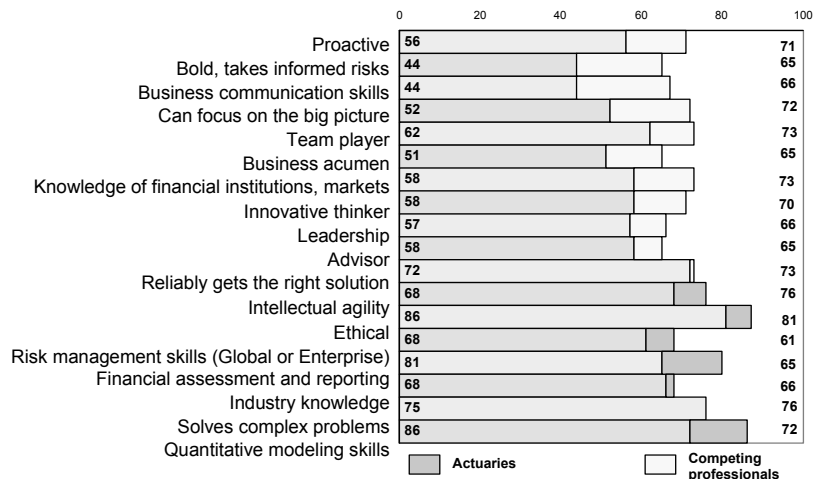
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## Traditional Employer Ratings of Performance: Actuaries vs. Competing Professionals



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## BFS Employer Ratings of Performance: Actuaries vs. Competing Professionals



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## Skills Findings: Current Performance of Actuaries

Employers' rating of Actuaries Skills	
<b>Highest</b> Performance Rating	<ul style="list-style-type: none"> <li>▪ Ethical</li> <li>▪ Quantitative (Modeling)</li> <li>▪ Solving Complex Problems</li> <li>▪ Financial Assessment and Reporting</li> </ul>
<b>Lowest</b> Performance Rating	<ul style="list-style-type: none"> <li>▪ Bold, Takes Informed Risks</li> <li>▪ Business Communications Skills</li> <li>▪ Proactive</li> <li>▪ Can Focus on Big Picture</li> <li>▪ Business Acumen</li> </ul>

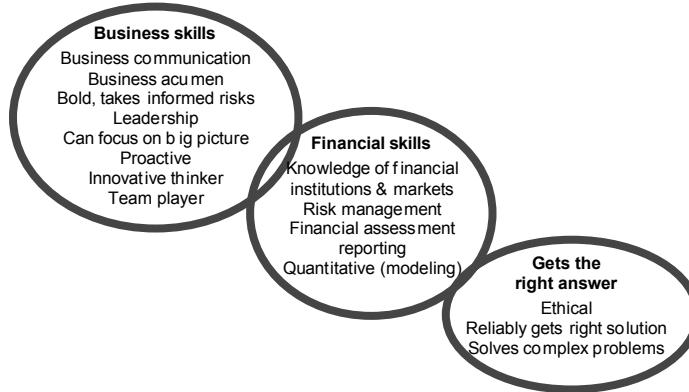
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## Skills Findings: Current Performance of Competing Professionals

Employers' rating of Competing Professional	
<b>Highest</b> Performance Rating	<ul style="list-style-type: none"> <li>▪ Ethical</li> <li>▪ Team Player</li> <li>▪ Reliably Gets Right Solution</li> <li>▪ Intellectual Agility</li> <li>▪ Proactive</li> </ul>
<b>Lowest</b> Performance Rating	<ul style="list-style-type: none"> <li>▪ Risk Management</li> <li>▪ Industry Knowledge</li> <li>▪ Bold, Takes Informed Risks</li> <li>▪ Advisor</li> </ul>

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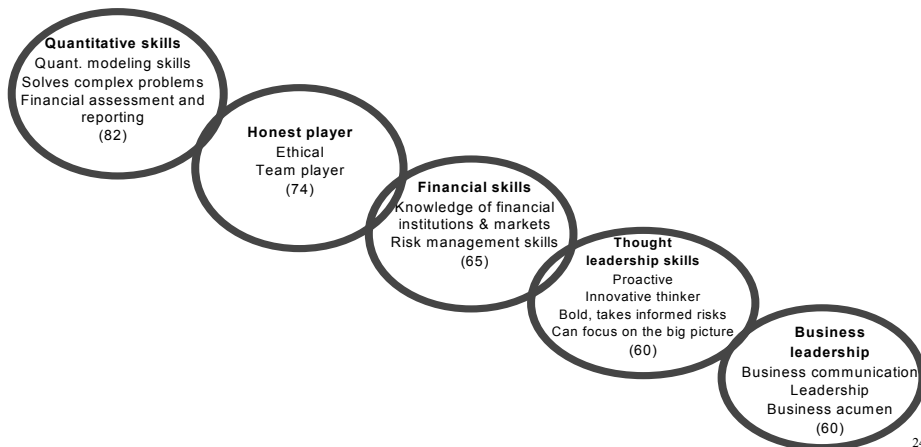
## Dimensions of the Image: Actuaries' View



<b>Performance</b>	<b>54</b>	<b>63</b>	<b>76</b>
<b>Need for Improvement</b>	<b>70</b>	<b>74</b>	<b>72</b>

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## Dimensions of the Image: Employers' View of Actuarial Performance



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## Value of the Credential (Roles) Findings

Primary Responsibilities Typically Performed	Insurance	Reinsurance	Consulting	BFS
Product Develop. & Pricing	X	X	X	
Financial Valuation, Reporting, Planning & Analysis	X	X	X	X
Risk Mgmt.	X	X	X	X
Pension Plan Design, Funding & Acctng.			X	
Financial Advising				X
Asset/Fund Mgmt. & Investment				X

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## Value of Credentials: Details

	Percent			
	Actuaries Hold	Actuaries Seek	Traditional Employers Consider	BFS Employers Consider
FSA	62	39	85	18
ASA	100	NA	64	8
Chartered Financial Analyst (CFA)	4	23	22	63
MBA	4	14	14	59
Accountant	1	2	15	18
Masters, Ph.D. in Mathematics	12	2	6	16
Financial Eng., Masters, Ph.D., Finance	1	4	2	33
Financial Risk Manager (FRM)	0.4	3	1	20

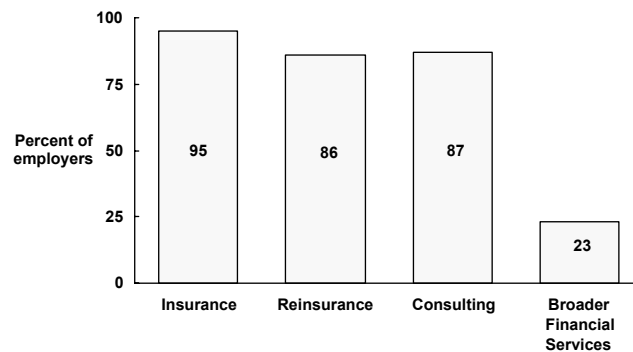
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## Value of the Credential (Hiring) Finding

Credential used for hiring	Insurance	Reinsurance	Consulting	BFS
FSA	X	X	X	
ASA	X	X	X	
CFA	X	X	X	X
Financial Engineer				X
MBA			X	X
CPA		X		X
Higher degree in Mathematics	X	X	X	

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## Employers Who Consider an SOA Credential When Hiring



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## Skills Findings – Top Skills Required for Mid and Top Level Risk Management Positions

Risk Mgmt. skills viewed as important	Insurance		Reinsurance		Consulting		BFS	
	Mid Levels	Top Levels	Mid Levels	Top Levels	Mid Levels	Top Levels	Mid Levels	Top Levels
Market/Financial Risk Mgmt.	X		X	X	X	X	X	X
Suitable Knowledge of Industry	X	X	X	X	X	X	X	X
Strategic & Envir. Risk Mgmt.		X	X	X	X	X		X
Asset/Liability Mgmt.					X		X	
Operation-Specific Risk Mgmt.		X			X			
Credit Risk Mgmt.							X	

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## Key Image Questions to be Answered by 2003 Research – What We Found

- Do members and employers share the same perception of actuarial skill sets?  
**YES**
- Is the employers' perception of the actuarial profession driven by the set of current skills being credentialed? Or by the employers' level of knowledge about actuarial skill sets? **IT IS BOTH**

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## **Key Image Questions to be Answered by 2003 Research – What We Found**

- Do we need a clearly defined identity for the profession? How should the actuarial image be changed or enhanced?

=> THERE IS A CLEARLY DEFINED EXISTING IDENTITY THAT IS VALUED FOR TECHNICAL SKILL.

=> THE IMAGE NEEDS TO BE ENHANCED ALONG THE DIMENSIONS OF:

- 1) Business leadership and business acumen
- 2) Knowledge of financial institutions, markets

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## **Key Traditional Markets Questions to be answered by 2003 Research – What We Found**

1. How do we expand in traditional markets?  
NEED TO ENHANCE CERTAIN SKILLS AND ADVANCE BUSINESS LEADERSHIP OPPORTUNITIES; What roles are appropriate for actuaries in the future? RISK MANAGEMENT AND BUSINESS LEADERSHIP
2. What skills need enhancement for future SUCCESS? RISK MANAGEMENT (some areas), BUSINESS SAVVY, FINANCIAL MARKETS, LEADERSHIP

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**Key Broader Financial Services Questions  
to be Answered by 2003 Research  
– What We Found**

1. Do we enter Broader Financial Services?  
**YES**
2. What, if any, other credential and/or  
education should SOA seek to offer?  
**EDUCATION/SKILLS - RISK MANAGEMENT, BUSINESS SAVVY,  
FINANCIAL MARKETS; certificates are being explored**

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**Resulting Decisions made by Board**

1. Do we enter Broader Financial Services? **YES**
2. Should we expand in traditional markets? **YES**
3. How should the current value of the actuarial  
skill set and the actuary be enhanced?
  - Image **BOTH**
  - Skills
4. What, if any, other credential and/or  
education should SOA seek to offer **To be  
explored**

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## **BOG Decisions:**

### **(1) Develop an Image-Enhancing Program To:**

- Re-brand and strengthen recognition of the actuarial profession
- Improve recognition of actuaries as thought leaders
- Expand awareness and relevance of actuaries in non-traditional markets
- Work in cooperation with other actuarial organizations world-wide to accomplish these goal
  - => first step - CRO publicity campaign launched in April
  - => Image Campaign is planned to be launched at the SOA Annual meeting

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## **BOG Decisions**

### **(2) Strengthen Position of Actuaries in Traditional Markets by:**

- Enhancing the value actuaries provide (skills development)
  - Leadership and business skills
  - Thought leadership
  - Communication
- Enhancing credentials to incorporate skills that are evidenced as desirable in the marketplace (E&E Redesign – Risk mngt, asset knowledge)
- Examining additional means of acquiring these skills (CE, certificates, partnerships, etc)

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## **BOG Decisions**

**(3) Work to Create a Position for Actuaries in the BFS Market by:**

- Enhancing current credentials to help actuaries expand into new roles and markets
- Evaluating potential new credentials or certificates to be offered
- Exploring partnerships with other organizations for development of skills and expansion of role

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## **Potential Non-traditional Opportunities for Actuaries - all industries**

- Chief Risk Officers and other leadership roles
- Market Risk Management
- Credit Risk Management
- Operational Risk Management
- Insurance/Underwriting Risk Management
- ALM
- Investment
- Long-term forecasting and strategic business planning
- Special event advisory (eg Sidney Olympics)

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## **Example: Energy Industry**

- exploring for oil and gas reserves
- trading of oil on international markets
- marketing and retailing of petroleum products and their derivatives – domestic/international considerations
- Efficiency of use and conservation => risk management issues
- Energy products and services include complex embedded options and derivatives
  
- Potential actuarial involvement in these areas:
  - assessment and modeling of demographic changes and energy demands internationally
  - modeling, financial projections, financing arrangements, valuation of contingencies and options
  - risk management

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## **Example: Actuary in Energy Consulting**

- **Listed by: QPL Limited Sydney**
  
- **Actuarial Consultant - Energy Industry**
- Our client is a leading Actuarial Consultancy practice specialising in advice on financial risks and management solutions across a range of industries. As a consultant in the Energy and Utilities Practice your role will include:
  - Risk Consulting ,Modelling , Pricing Analysis
  - Valuations, including for complex derivative products.
  - You will also be building strong client relationships.
  - You will be working in a good team environment with excellent career and training opportunities.
  - The successful candidate may be a qualified actuary but could also be a graduate in statistics, mathematics or economics.
  - You will have strong modelling and quant skills. Electricity Industry experience is desirable but not essential.

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**Questions???**

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