

UCSB ACTUARIAL CLUB SEPTEMBER 30, 2015

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WHY I'M AT UCSB TODAY

- ▶ An invitation was extended through my friend Ian Duncan
 - To exchange ideas and meet with new actuaries
 - To pass along “words of wisdom” such as I received from my **mentors**

AGENDA

- ▶ **What is an Actuary?**
- ▶ **What do Life/Annuity Actuaries do?**
- ▶ **Job Hunting**
- ▶ **Q&A**
- ▶ **Takeaways**

DESCRIPTION OF AN ACTUARY

- ▶ Generically: A quantitative risk manager
- ▶ Works in special areas:
 - Insurance (life, health, P&C, etc.)
 - Personal financial security (retirement, health, etc.)
- ▶ Types of employers:
 - Private sector employers:
 - Insurance companies
 - Financial companies
 - Consultants
 - Government
 - Academia

WHAT DO LIFE/ANNUITY ACTUARIES DO?

LIFE INSURANCE & ANNUITIES

- ▶ The risk of dying prematurely (**Life Insurance**)
- ▶ The risk of living longer than expected (**Annuities**)

These are both mortality risks but are VERY DIFFERENT risks!

WHAT DO LIFE/ANNUITY ACTUARIES DO?



LIFE/ANNUITY ACTUARIES WORK

- ▶ Price (set premiums) for new policies
- ▶ Calculate reserves for financial statements
- ▶ Other
 - Mortality studies
 - Persistency studies
 - Financial projections

LIFE/ANNUITY PRODUCT PRICING ASSUMPTIONS

- ▶ Mortality
- ▶ Persistency
- ▶ Investment return
- ▶ ROI / capital requirements
- ▶ Expenses
- ▶ Sales (volume)
- ▶ Competitive analyses
- ▶ Statutory requirements
- ▶ Taxation related items
- ▶ Financial reporting (statutory, GAAP, tax, etc.)

LIFE/ANNUITY PRICING SOURCES

- ▶ Mortality/ Persistency
 - SOA studies
 - Company studies
 - Medical publications/studies
- ▶ Investment return
 - Working with internal and external investment advisors
 - Observing “the markets”
- ▶ Sales (volume) / Competitive analyses
 - Working with company marketing department
 - Company history
- ▶ Taxation related items
 - Read and study tax code
 - SOA Taxing Times newsletter

TYPES OF LIFE POLICIES

- ▶ Length of coverage:
 - Term (x years)
 - Whole Life
- ▶ Benefit:
 - Level
 - Decreasing
- ▶ Premium payment period:
 - Same as coverage period
 - Shorter than coverage period
- ▶ Design
 - Guaranteed benefits
 - Non-guaranteed elements (mortality & investment returns)
 - Participating
 - Variable Life
 - Universal Life

TYPES OF ANNUITY POLICIES

- ▶ Benefit commencement:
 - In the future (deferred annuities)
 - Longevity protection (e.g., starting at age 85)
 - At time of issue (immediate annuities)
- ▶ Plan features:
 - Guaranteed
 - Non-guaranteed (mortality & investment returns)
 - Tax status:
 - Non-qualified
 - Qualified (tax benefit / pension plans)

RESERVES

- ▶ The company's liabilities for the risks it has assumed
- ▶ Types of reserves:
 - Statutory
 - GAAP
 - Tax
 - Other

LIFE/ANNUITY RESERVE FACTOR ASSUMPTIONS or BASES

- ▶ Mortality
- ▶ Persistency
- ▶ Investment return
- ▶ ROI / capital requirements
- ▶ Expenses
- ▶ Sales
- ▶ Competition
- ▶ Statutory requirements
- ▶ Taxation
- ▶ Financial reporting (statutory, GAAP, tax, etc.)

SOCIETY OF ACTUARIES' SECTIONS FOR LIFE/ANNUITY ACTUARIES

- ▶ Sections = special interest groups
- ▶ Newsletters
 - Current topics
 - General topics
- ▶ Section sponsored meetings:
 - Webinars
 - Face-to-face sessions
- ▶ Sections provide a place to find and connect with fellow actuaries having similar interests

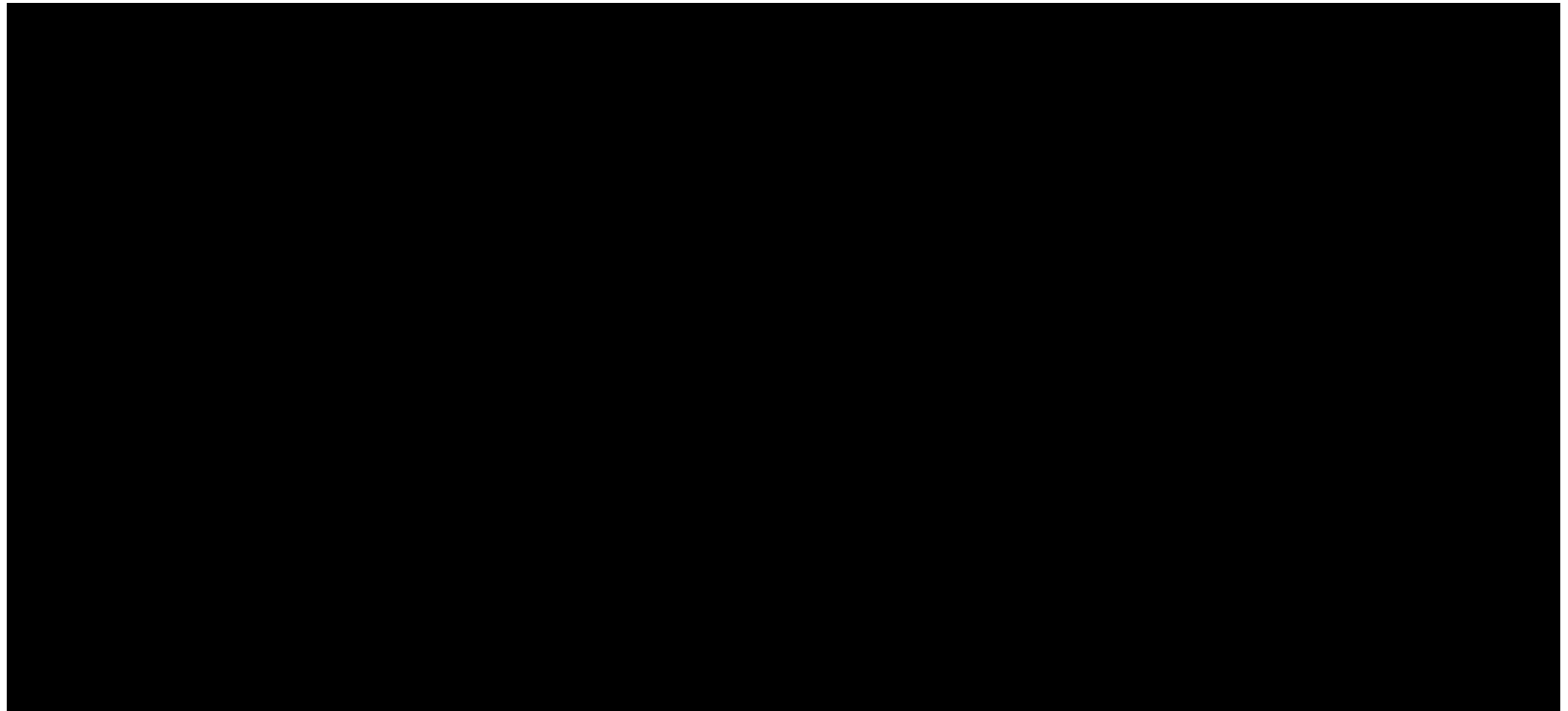
SOA LIFE/ANNUITIES SECTIONS

- ▶ Financial Reporting
- ▶ Investments
- ▶ Marketing & Distribution
- ▶ Product Development
- ▶ Reinsurance
- ▶ Smaller Companies
- ▶ Social Insurance and Public Finance
- ▶ Technology

JOB HUNTING



5 / 3 BANK COMMENCEMENT COMMERCIAL, 2015



JOBS AND THE REAL WORLD

- ▶ The trend is increasingly larger companies to:
 - Achieve operational economies of scale
 - Deal with an increasingly complex regulatory environment and higher capital requirements
- ▶ Result = M&A --- recent examples:
 - Health care business acquisitions
 - Consultant mergers
- Implications:
 - Fewer employees (including actuaries) needed
 - Likely to hire more educated and skilled employees

**“ACTUARIAL TALENT”
ECONOMIST INTELLIGENCE UNIT
REPORT
DECEMBER, 2014**

[ftp://eiusoa:e1us0a@ftpus1.economistgroup.com/eiusoa/EIU Actuarial Talent_English.pdf](ftp://eiusoa:e1us0a@ftpus1.economistgroup.com/eiusoa/EIU_Actuarial_Talent_English.pdf)

ACTUARIAL TALENT REPORT HIGHLIGHTS

- ▶ **OVER SUPPLY** of graduates seeking actuarial employment 2014–2022
- ▶ **SKILL GAP** in predictive modelling and advanced analytic
- ▶ Actuaries lack **COMMUNICATION SKILLS**
- ▶ Shortage of **CAREER DEVELOPMENT OPPORTUNITIES**

DEALING WITH THE ACTUARIAL TALENT REPORT

- ▶ OVER SUPPLY: **Look for a job >2022**
- ▶ SKILL GAP: **Become adept at predictive modelling and advanced analytics**
- ▶ COMMUNICATION SKILLS: **Learn to effectively present what you know**
- ▶ CAREER DEVELOPMENT OPPORTUNITIES: **Build skills in many areas**

FINDING YOUR FIRST JOB

- ▶ Read the **Actuarial Talent Report**
- ▶ Adopt a **Long Term Personal Perspective**
 - The next 5–10 Years
 - The next 10–20 years
 - >20 years from now
- ▶ **Sell yourself** --- what is unique or special about you?
- ▶ **Prove** your ability to pass the actuarial exams
- ▶ Don't be afraid to move jobs or get into a new area of the profession to **Gain Experience** and **Find Your Passion.**

FIRST JOB LIFE EXPECTANCY for 2016 Graduates

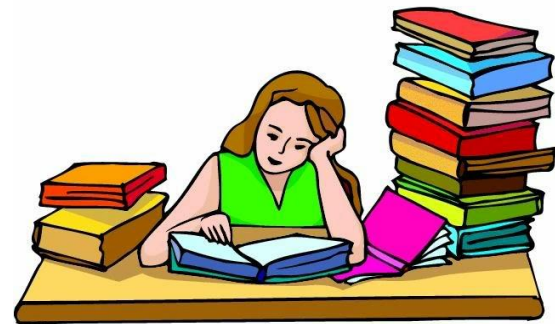
Period	Probability
Lifetime	Nearly impossible
20 Years	Highly improbable
10 Years	Possible but unlikely
5 Years	Maybe
3 Years	Most likely

THE OLD CARNEIGE HALL STORY



ADVICE FOR PASSING THE ACTUARIAL EXAMS

- ▶ Time management
- ▶ Commitment
- ▶ Target: pass anytime you sit for an exam



PICKING YOUR FIRST JOB

**THE ONE WHERE YOU
EXPECT TO GAIN THE
MOST EXPERIENCE AND
KNOWLEDGE**

FINDING YOUR NEXT JOB

- ▶ **MAINTAIN** a long term personal outlook
 - The next 5–10 Years
 - The next 10–20 years
 - >20 years from now
- ▶ **SELL YOURSELF** --- what is unique or special about you?
- ▶ Proof that you **PASSED** the actuarial exams
- ▶ Your prior jobs & experiences **HAVE MADE YOU A BETTER ACTUARY**
- ▶ Reread the **ACTUARIAL TALENT REPORT**

YOUR MOST VALUABLE JOB FINDING TOOL Pre-2000



YOUR MOST VALUABLE JOB FINDING TOOL Post-2000



OPPORTUNITIES EXIST IN THE MOST UNEXPECTED PLACES: A TRUE STORY



BEING SUCCESSFUL

- ▶ Develop communication skills:
Writing, Speaking and Listening
- ▶ Something unique or special
 - Actuarial areas of expertise
 - Managerial skills
 - Experiences (e.g., lived or worked in >1 country)
- ▶ Know what makes you happy!
- ▶ Be willing to **Take a Risk!**

ACTUARIAL CONTINUING EDUCATION: AFTER YOU'RE QUALIFIED

- ▶ **Continuous** activity
- ▶ **Personal** to each individual
- ▶ It is **expected** of a professional
- ▶ It is **necessary** in a rapidly changing world
- ▶ Needed to **improve and/or add to skills**

EDUCATION

- ▶ Bachelors: the absolute minimum
- ▶ Masters: almost expected/needed in today's environment
- ▶ CE or CPD: expected of a professional
- ▶ **Humanities**: this is what makes you a human being and a better actuary
- ▶ **Community**: be sure you make some contribution to a better society

THE 800 POUND ORANGUTANS FACED BY THE ACTUARIAL PROFESSION



THE 800 POUND ORANGUTANS FACED BY THE ACTUARIAL PROFESSION



THE CONNECTIONS BETWEEN ORANGUTANS AND TECHNOLOGY

- ▶ Name recognition
- ▶ Access to **BILLIONS** of names
- ▶ Bleeding edge technology
 - The customer experience
 - Confidence in the provider
 - Access to information
 - The most streamlined underwriting possible
 - Continuing contact / customer engagement

THE NEW SKILLS

- ▶ Artificial intelligence
- ▶ Machine learning
- ▶ Deep learning
- ▶ Voice recognition
- ▶ Biostatistics
- ▶ Etc.



TAKEAWAYS