ACAS Month/Year: November 1994 ~ FCAS Month/Year: November 1996

As a Board member, I will embrace the challenges ahead and work hard to position us for a future rich with opportunities for our membership.

ACAS Month/Year: November 1994 ~ FCAS Month/Year: November 1996

Candidate Biographical Form

Education:

- Ph.D., Mathematics, Washington State University, 1991
- MS, Mathematics, Washington State University, 1987
- BS, Mathematics, University of Alaska, Fairbanks, 1984

Current Employment (please include position):

Chief Actuary, Insurance Corporation of British Columbia, 2004-present

<u>CAS Activities and Publications</u> (please include years on committees, years in positions, and dates of publications):

- Member of University Liaison Committee, 2013 present
- Task Force on Board Operations and Structure of the CAS, 2010 2011
- Member of the Program Planning Committee of the CAS, 2007 2011
- President of the CANW, 2006 2007
- Member of the Program Planning Committee of the CANW, 2005 2007
- Vice President of the CANW, 2005 2006
- Secretary-Treasurer of the CANW, 2003 2004
- Vice Chair of Exam 4 Committee, 2000 2001
- Member of the Exam 4 Committee of the CAS, 1999 2001
- Chairperson of the University Relations Committee of the CANW, 1996 1998
- Member of Casualty Actuaries of the Northwest (CANW), 1991 present

Other Actuarial Organizations (please list activities, positions, and years):

• Affiliate of the Canadian Institute of Actuaries (CIA), since 2005

Camille Minogue r 1994 ~ FCAS Month/Year: November 1996 ACAS Month/Year: November 1994

Additional Biographical Information

<u> imployment History - Prior Employers (</u> complete, abridged or recapped):
☐ Chief Actuary and Vice President of Advanced Analytics
Insurance Corporation of British Columbia, British Columbia, Canada, 2004 – Present
☐ Vice President and Chief Actuary
The Mattei Companies, Seattle WA, 2002 – 2004
☐ Assistant Vice President and Actuary Safeco Property & Casualty Companies, Seattle, WA, 1991 – 2002
Membership and Activities in Other Organizations (professional and industry):
(professional and industry).
☐ Member of Insurance Services Office Commercial Casualty Actuarial Panel, 1998 − 2000
☐ Board Member of the State of Washington Midwifery Joint Underwriting Assoc., 1997 – 2002
☐ Member of Advisory Committee for Project EFFECT (Equation for Future Equity in
Curriculum and Technology) – funded by the National Science Foundation, 1997 – 1998
<u>Civic Activities</u> (volunteer, elected, appointed):
☐ Associate Board Member (volunteer), Verity Credit Union, appointed in 2014
Adjunct Professor, Department of Statistics and Actuarial Science at Simon Fraser University,
2013 – 2018
☐ Visiting Instructor in the Department of Statistics and Actuarial Science at Simon Fraser
University, Fall Semesters 2006 and 2008
Other Relevant Information:
Expert Testimony / Public Workshops (selected)
☐ ICBC 2013 Revenue Requirements Application – Oral Hearing (February 2014) and
Public Workshop (September 2013)
☐ ICBC 2012 Revenue Requirements Application - Public Workshop (January 2012)
☐ ICBC 2007 Revenue Requirements and Rate Design Filings – Oral Hearing
(July/August 2007) and Public Workshop (April 2007)
Presentations (selected)
☐ Benefits of a Crown Corporation
Featured Speaker, Milliman Casualty Consultants Forum, Seattle WA, June 2013
☐ Hot Topics in the Actuarial World
Featured Speaker, Canadian Automobile Insurance Rate Regulators Association Conference, Victoria BC September 2010
Actuarial Accounting – A Cautionary Report
Creator & Promoter. Presented by Dan Young, Esq.
2009 – 2010: New Orleans, Houston, Toronto ON, Boston, Las Vegas, Winnipeg MB
☐ ICBC: From Then to Now
Invited Speaker, Automobile Insurance Rate Board, Calgary AB, September 2007

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Question #1: Why do you want to serve on the CAS Board of Directors?

Response:

Service on the CAS Board would be a wonderful opportunity to bring my passion and drive to achieving the goals of the CAS. Throughout my career, I have a track record of being a highly-effective, creative and collaborative contributor. As a Board member, my eclectic set of experiences would add a valuable perspective in addressing the issues the CAS faces going forward.

My background includes significant experience in the U.S. and in Canada, leadership roles, shaping public policy, and extensive involvement in carrying out the educational objectives of the CAS. I began my career in 1991 as a commercial actuary for Safeco in Seattle and currently serve as Chief Actuary & VP of Advanced Analytics for the Insurance Corporation of British Columbia (ICBC), the largest automobile insurer in Canada. An interesting aspect of my job is public policy debates in a regulatory environment. I have enjoyed immensely the public workshops and hearings, where participants of varying perspectives come together to have their input considered. I have established a reputation of being collegial with all participants, as well as open to their viewpoints – traits that have been central to my success in that arena and that would be valuable as a board member.

Keeping alert to trends beyond our profession and outside of North America has always been important and interesting to me. I stay abreast of trends in the use of analytics in other industries and how those trends might compete for the future supply of actuaries. Also, I never miss an opportunity to meet with foreign insurance professionals and regulators to learn about their environments: Chinese regulators, Japanese executives, the CEO of an insurer for East Africa, to name the most memorable. I believe my natural curiosity about how others do things and where trends are heading positions me to be a highly-effective board member, particularly in the area of evolving the CAS goals and vision in response to the changing world.

Education is at the core of what our organization is about. A critical and ongoing challenge for the Board is not only to ensure that our members have the educational materials to keep them well-advised on current issues, but to proactively adapt our educational requirements to meet the changing times. My activities in the area of education are extensive. I am an adjunct professor at Simon Fraser University in British Columbia and periodically teach an Intro to P&C Insurance course to actuarial science students. This keeps me current on the CAS syllabus materials, as well as keeps me attuned to our next generation of actuaries. I also have served on CAS exam and program planning committees. I especially enjoyed the development of programs for our professional meetings and was committed to recruiting high-quality, relevant presentations and even creating new presentations when I found an unmet need. I would enter Board service with full appreciation of the challenges and an eagerness to help chart our course going forward.

I believe my passion for the profession and unique set of career experiences make me an ideal candidate for the CAS Board. I hope you agree too and that I can count on your vote. Thank you!

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Question #2: Candidate Issue(s) Identification and Discussion:

Response:

A key role of the Board is to identify both threats and opportunities for the CAS and to formulate well-informed strategies to address them in a way that strengthens us as an organization. This involves a constant scanning of the landscape in order to identify emerging trends and development of appropriate responses to those trends in a holistic manner. Staying true to this approach and avoiding digressions to solve individual issues in isolation are critical to our organization remaining relevant and vibrant.

Scanning across the industries that casualty actuaries currently serve, and those they currently don't serve, reveals:

- Other professional organizations expanding their horizons in ways that will impact our own
- An era of Big Data and sophisticated analytics, and the implications that will have on attracting talent to our profession
- Other industries not previously served by actuaries that may now benefit from their services (e.g., regulation stemming from the Dodd Frank Act now requires capital adequacy testing for banks and credit unions)
- An apparent trend away from using actuaries for predictive modeling to using statisticians
- Driverless cars that may significantly lessen the need for automobile insurance over time
- New lines of insurance emerging in tandem with new risks (e.g., risk related to climate change)
- Rapid growth of insurance markets in the developing world

Strategically positioning the CAS to meet the future and what it brings is the job of the CAS Board. I look forward to the exciting and challenging opportunities ahead for our organization. With your vote, I would be honored to work on behalf of the membership in harnessing the opportunities in front of us and positioning us for a future full of rich opportunities for our membership.

1. Do you believe that practicing actuaries can add value to the university education of future actuaries? If so, what actions do you think the CAS should take 1) to provide incentives for practicing actuaries to teach in universities, and 2) to facilitate the employment of practicing actuaries in universities?

Not only can practicing actuaries add value to the university education of actuaries, I would suggest this should be a key element of the CAS educational process going forward. In fact, I believe that we will need to take the path of other professions and should work to have universities play a larger role in educating our new members.

On the question of providing incentives for practicing actuaries to teach, I have some thoughts based on first-hand experience. (From time to time, I actually teach a P&C insurance course at a local university.) As one can imagine, there is significant time and effort required in teaching a course, particularly in the planning and development of course content. If the CAS developed a P&C course syllabus, complete with recommended course materials, that could lessen the effort involved. (This is not an incentive per se, but it would remove a disincentive.)

Taking this idea a step further, the CAS could develop and actively promote P&C specific courses to be taught in actuarial science programs, and these courses could potentially serve as part of the qualification requirements of the CAS. (Please see my response to the question on how the CAS can be more innovative and attractive to new members.) Such an approach could facilitate the employment of our practicing actuaries, because they would have the expertise to teach such courses.

2. How would you respond to a large employer of actuaries who wants to see the consolidation of the actuarial profession?

The CAS arose to serve the unique needs of the P&C insurance industry. The CAS has a track record of excellence in producing well qualified actuaries and responding and adapting to changes in the industry over time. This attentive level of service would be in jeopardy if there was a consolidation of the actuarial profession. P&C issues would no longer be the central focus in a consolidated professional organization. CAS actuaries would be a small minority within the consolidated organization, and the leadership would likely have limited CAS representation. Consequently, there would be a dilution of attention to P&C issues, as these issues would vie for attention among a larger set of priorities by a leadership that is less knowledgeable about the P&C industry. The net effect would be an organization that cannot respond and adapt to P&C issues with the same agility and competence of a dedicated organization. Considering the size and importance of the P&C industry, I believe that the industry is best served by a dedicated organization.

3. How can the CAS be more innovative and attractive to new members?

Before we can be more attractive, there first needs to be better awareness of the existence of the CAS. (The university liaison program is an excellent step in building awareness, and the re- branding effort is giving the CAS a fresh face.) But even for those potential new members who already know about the CAS, the actuarial exams represent a significant barrier to entry.

At the same time, demand for analytics talent is accelerating, with experts predicting a severe shortage on the horizon. Some companies are providing inducements to attract top talent. For example, Microsoft woos interns by offering housing, catered food, and housekeeping services. We see alluring new titles, like "data scientist", emerging. And then there are the exciting startup companies, such as HootSuite, which actually advertised an analytics position at the actuarial science department of a local university. Also, in our own industry, employers may have less patience for supporting actuarial exams and may even opt to fill their positions with statisticians or data scientists instead.

It seems inevitable then that the CAS will have to evaluate afresh the qualification requirements. Other professions, such as engineering and accounting, provide an alternative model worth consideration. They prepare their future members through a combination of focused degree requirements, professional exams and practical experience requirements. Furthermore, they have a built-in awareness campaign by virtue of their degree programs at universities. While there are actuarial science programs already, they are generally not geared toward the P&C specialty. Bottom line, we need a strategy to put our practicing or retired actuaries as teachers into these actuarial science programs. These actuaries, whose stories can excite the imagination of the students, are potentially our best recruiters.

4. How can the CAS become more relevant to the careers of our current and future actuaries?

The most extensive touch point the CAS has with its members is the exam preparation process, and there is an opportunity to make this a much more relevant and lasting skill building experience. The types of questions we ask on exams will drive the kind of study activities students engage in. For example, we could ask for conceptual explanations in layman's terms of the results of an analysis (a highly relevant skill), as opposed to testing whether complex calculations can be carried out accurately on a calculator (not a relevant skill). Answers could be graded according to predefined expectations (e.g, conciseness, freedom from jargon and ambiguity, and use of visual depictions, etc.). To have our students incorporate into their long hours of study the important skill of communicating complex concepts in a simple and cogent manner will have lasting career value after the exams are

over. (One cannot say the same about the nearly athletic endeavor of practicing complex calculations on a calculator to gain speed and accuracy for test day.) The review of a designated task force could reveal opportunities for other relevant skill building within the exam process.

5. What ideas do you have moving the actuarial profession beyond development triangles and excel spreadsheets as big data, mobile/cloud computing, analytics and other disruptive technologies flood the market place?

I envision a hybrid approach for the foreseeable future. Big data and more sophisticated analytics will allow actuaries to gain deeper insights into business problems, and those insights can then be used to inform the more traditional actuarial analyses. This is happening already at my own company, where we have the advanced analytics area integrated with the corporate actuarial department, and with powerful synergistic effect. Nevertheless, before we can move completely beyond the profession's favorite data structure (development triangles) and its favorite analysis tool (Excel), there will need to be better alternatives to carry out the required analyses. It will likely be the younger generation who identifies the opportunity and makes it happen.

In defense of the triangle, though, I think it is an amazing data structure. It can summarize millions of records into relatively few numbers, and from it we are able to discern patterns and project future development with reasonable accuracy. Personally, I don't see it going away any time soon, although, if something better turns up I would be happy to embrace it.