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Interview with Michael Frank

By *The Independent Consultant*

Interview with Michael L. Frank, ASA, FCA, MAAA, president and actuary of Aquarius Capital and an adjunct Professor at Columbia University.

1. Please tell us what made you decide to become an actuary?
   I thought that becoming an actuary would be a good idea since actuarial work combines finance and math. I graduated from the University of Michigan, which has a strong actuarial program. Many companies recruited on campus.

2. Were there any subjects (as part of the exam system) that you found particularly useful or enjoyable?
   I found the material on life contingencies very useful. As a matter of fact, I still use it. When working at Prudential, my supervisor (Andy Sforzini) and I modeled the cash flow of Corporate Owned Life Insurance. It was great to find real world applications to the Secant method that I learned while studying for the Numerical Analysis exam. This took place more than 25 years ago. Andy and I had a great laugh over this, though an inside joke since nobody else in our underwriting unit really had much interest to hear about it. Today, the same exercise can be done with the "solve" function in spread sheets, but it is always cool to be able to apply the knowledge acquired from exams directly to work projects.

3. You are one of the relatively few actuaries that are involved in academia. What prompted you to follow this path?
   I started teaching to give back to the profession. I have taught to more than 300 students at Columbia University, been a presenter in seminars at other universities and worked as instructor for the Society of Actuaries' LEARN program, teaching reinsurance to regulators. Participating at seminars in universities opened the doors to teaching. Noor Rajah, who ran the actuarial program, recruited me to teach at Columbia. I have also been involved with various research products with students.
   My academic endeavors have created new opportunities for me, such as becoming a

member of the boards of directors of several companies and, perhaps surprisingly, being approached to become part owner of a professional basketball team. Although the latter did not materialize, it was fun to pretend I was Mark Cuban for a day. Academia has also helped me in my work as expert witness because people in the jury do not know what an actuary is, but they understand the type of work that professors do.
It has also been a positive experience since I have been able to interact with actuaries and non-actuaries that are faculty and administrators of universities in and outside of the U.S. It has also been great to hear updates from many of my former students about their success stories.

4. What entry barriers do actuaries who would like to become involved in academia face? What can they can do to overcome them?
Actuaries in general like to be helpful. Many of the actuaries I know enjoy teaching in different capacities (e.g., speaking at conferences, mentoring, etc.). Mentoring students and presenting university seminars is one way to get exposure and explore potential opportunities in academia. Getting involved in public speaking or presentations in the industry is also beneficial in that it gives you enough practice in speaking publicly and thereby increases your comfort level with speaking in front of students.

5. Is the actuarial profession gaining recognition among young people? What motivates students in your university to become actuaries?
The actuarial profession combines business and mathematics, subjects that are of interest to many students. I worry about the next generation of actuarial students since with technology, companies do not need as many actuaries, hence the supply of actuarial students is now far outweighing the demand. If I were president of the Society of Actuaries, this situation would keep me awake at night—what can be done about the shrinking demand for actuarial students? We need to find more career paths for future actuaries (current students) within the actuarial profession, including expanding roles of what people are doing in the profession for future generations.
[Publisher's note: The SOA has been actively working on the situation of supply of actuaries outweighing demand. The SOA is actively engaged in a strategic initiative titled "Opportunities for Actuaries." This initiative is working to expand opportunities for actuaries into non-traditional roles.]
It bothers me to hear recruiters telling students that they are passing too many exams too quickly. When I entered the profession, the advice was to move as quickly as possible through the exams. Now, with the over-supply of students taking exams, we are slowing down their progress so that they do not price themselves out of the market. This is a problem that has to be focused on.

6. What are the areas of actuarial practice that are popular among students?
   More and more, students are interested in investments and ERM, so I can see the profession expanding in these areas, but only if there are enough jobs available to accommodate the supply of talent. Expansion of the job market would require, among other things, recognition of the value that actuaries bring to investment banking and finance outside of insurance.
   I have also seen a large interest in insurance and risk management among students and young professionals and I am currently working with Columbia University to develop a program, which is an M.S. in insurance management. We have recruited an advisory board and a good number of faculty already, and this program will be rolled out within the next year or two. This program is not necessarily focused on actuarial science, though some of this subject will be included along with claims management, underwriting, compliance, investments, reinsurance and other topics in the insurance and employee benefits arena.

7. What do students at your university think about the health care system in the United States? Is there much discussion and interest about topics on public policy?
   I am co-teaching a class with Don Rusconi at Columbia University called a *Global Perspective of the Health Insurance Market* We study the health care systems of 25 countries, including the United States. The common theme is that Americans can access the health care system quickly, but it is extremely costly. Students, especially those that come from other countries, find it difficult to understand the U.S. health care system. Many have never paid for health care, so the interaction between provider, insurer and member is a bit foreign to them. In class I have shown some of my personal medical bills to students along with the explanation of benefits from insurance companies so that students can see how providers bill and how insurance companies adjudicate claims. Many students were shocked by the high costs and wonder how it is possible that a provider bills more than $2,000, but accepts less than $50 from an insurance company, but no less from an uninsured consumer. They would be shocked by the invoices for my recent hip surgery, which was less than a two-hour surgery with a one night stay with no complications, but exceeded $150,000. Explaining how the system works has been an eye-opening experience for the students, and also for other people in the profession. A large number of them have expressed an interest in becoming involved in public policy to help solve the problem.
   An interesting aspect of the class that we taught was that students did research papers and presentations on a variety of countries with focus on health care systems as well as the actuarial profession. Although the research

was done by students, so it did have limitations, outside organizations have benefited directly from it. For example, a team of Duke University faculty used the research done by the students as a part of their training prior to going to India to research the country's health care system.

8. What do students at your university think about Social Security? Are they concerned that under the current pay-as-you go system they might end up contributing more (perhaps much more) than they will receive?
   For our international students, this is not a matter of concern since they don't expect to be exposed to these problems. As we studied other health care systems outside of the United States and saw how an aging population puts financial pressure on health care systems and pension systems for a country, we saw that some of our students became very interested in learning how they can develop solutions or be part of the solutions for their own countries. This is one of the more rewarding parts of teaching—watching students become interested in public policy. U.S. students know that the Social Security system is in crisis as people are living longer and outgo far exceeds income. Many believe that benefits might not be available (or substantially reduced) by the time they retire, or that they will pay in a lot more than they would get back. Some would volunteer their time to solve the problem if they had an opportunity to do so.

9. Why do you think only a relatively small number of actuaries are active in public policy? It seems that our voice would be a valuable addition in important areas such as Health Care Reform. I think more individuals would be interested in helping if there were opportunities to do so. I am one of them. I would be willing to offer some assistance, particularly on health care topics and social security. I have consulted in all the financial aspects of health care, from health plans, to providers, to consumers, and I have seen a lot of troubling things first hand. I believe our health care system is in trouble based on the experiences that I have had first hand, but with health care being 17–18 percent of GNP and a sector that has significant influence in the elections. Ten years ago, you would rarely see health care and health insurance in the news and now it is one of the top subject matters on every news station.
   Another challenge for actuaries in public policy is that actuaries are typically known for "wearing the black hat" since they will be the ones that are usually delivering financial results, or many times, unfavorable results, to management. I have a lot of respect for actuaries in public practice. I point to folks like Richard Foster, retired chief actuary at Medicare, and John Bertko as individuals that have contributed significantly in public policy, and there are many others. In public policy, there is the balance of politics and facts, and

sometimes those areas get blurry. Just watch the news and see how a statistic can be used to help a political agenda.

10. What do you think about the actuarial education system? If you could make changes, in what areas would you focus?
    I think that the education process is a good one since it standardizes industry knowledge. I would like to see more universities create internship programs such as Columbia's *Integrated Project* in which students get real world exposure. Mentors, including practicing actuaries, develop projects to enhance the student's understanding of what the profession is about. I recently completed one that deals with the use of life insurance as collateral for personal loans.
    It would be great to see employers bring back in-house training programs. When I was at Prudential, my first employer out of college in 1987, I received training classes from the actuarial program as well as the departments that I worked in. My first two rotations were tax and underwriting and both had their own internal training programs, and were not specific to actuaries. It would be great to see our profession go back to those days though there is a bottom line implication of doing so. I think that our profession's continuing education requirements are good since it forces us to continue to be students of our profession.

11. It seems that a small but growing number of actuaries are supplementing their actuarial education with other credentials (e.g., CFA) or academic degrees (e.g., MBA). Do you think there is value in pursuing these credentials and degrees? If so, why? Are there certain credentials or degree that you feel would be well suited for actuaries?
    I think actuaries should try to expand their roles since the profession is, to some extent, limiting itself. ERM is one of the few areas that reaches beyond insurance. If a student has an undergraduate degree and wants to be an actuary, then I would suggest just to pass exams and maybe down the road get another credential (e.g., CFA, insurance broker license, etc.). Spending another $50k+ per year to pay for graduate school is a big investment. It probably does not pay off for actuaries, since the actuarial credential takes first place, everything else comes as a distant second. Our profession does not compensate actuaries that pursue MBAs. I think that the CFA is a great credential. My business partner, Don Rusconi, at Aquarius Capital and co-professor at Columbia holds the designation. I even think that actuaries should consider getting a broker's insurance license since they can learn a lot about a product by understanding how it is sold. (My one piece of advice to students that are looking for internships is to go work for a broker to see how a policy is sold and a claims administrator to see how a claim is adjudicated since you can learn a lot as an actuary in that area.) I have a hard time telling

aspiring actuaries to spend any more dollars on education (graduate degrees) since the return on investment is not there, especially if they are focused on being an actuary—where exams (getting your credential) are critical and everything else is a far second.

12. Do you see actuaries expanding their professional roles in fields such as risk management or do you see other professions entering areas that have traditionally been the domain of actuaries?
    I think that many professions are trying to reinvent themselves. Finance people (actuaries and non-actuaries) are looking at risk management. The actuarial training definitely helps with risk management, but risk management is not exclusive to actuaries, so expect a lot of individuals to gravitate to that area. (More and more actuaries are looking at roles in reinsurance and risk management, since they get involved in more macro decisions with their organizations plus exposed to other aspects of the business (e.g., underwriting, claims) that they may not see in a traditional insurance company actuarial position.This is confusing) An actuary can provide a lot of value in the risk management process since it is one of the core competencies of the profession.

13. What are your views about the future of the profession? Job satisfaction, employment opportunities and monetary rewards, to mention a few, are surely important considerations for young candidates.
    A great thing about the actuarial profession is that we as actuaries are constantly learning, which is a core value of the profession. However, supply is getting much greater than demand, which means that the value of actuarial designations will diminish and push salaries down. This situation will frustrate students because passing exams does not guarantee a job anymore.
    I think that this is a great profession. We operate in an economy where insurance plays a major role, but insurance companies can operate with a lot fewer actuaries today than in the past, so we have to help actuaries move to other areas. We are asking students and new actuaries to find non-traditional roles. I think that the Society of Actuaries, American Academy of Actuaries and other actuarial organizations can help here. We need to identify new professions where actuarial skills will be valuable.

14. Can you think of a non-actuarial discipline (literature, psychology, etc.) that would be useful in the career of young and not-so-young actuaries?
    Analytics is becoming a core competency in many professions. Aspiring actuaries can apply that type of training broadly. Since more and more actuaries are being required to speak in public, I suggest actuaries become proficient in public speaking (e.g., toastmasters, a comedy club, etc.). It is also important to do

something that involves interaction with people and takes you outside your comfort zone.

15. s there a non-actuarial book that you would recommend?
    Just read whatever you want. Life is too short.

Columbia University, M.S. in Actuarial Science—Program Overview

- Columbia University—Founded in1754 as King's College by royal charter of King George II of England is the oldest institution of higher learning in the state of New York and the fifth oldest in the United States.
- The M.S. in Actuarial Science program was formed in 2006. It has 23 credentialed actuaries as faculty (three full-time and 20 part-time).
- The program enrolls approximately 200 students per semester. Students come from more than 20 countries, including the United States (approximately 30 percent), Bermuda, Canada, China, Cyprus, Germany, India, Italy, Japan, Korea, Spain, Taiwan, Thailand, United Kingdom.
- Program Philosophy
    - Rigorous study program beyond test prep.
    - Study multiple disciplines with industry practitioners and thought leaders.
    - Instills a strong foundation in traditional and non-traditional disciplines.
    - Experience through internships and research projects.
    - Prepares students to work and excel in their chosen industry.
    - Strong relationships in mature and emerging markets.

Academic Vision

- Core Curriculum—Target students to pass associate level exams for SOA and CAS plus earn all validation by educational experience.
- Specialty Electives—More than 30 comprehensive electives focusing on topics including property/casualty, pensions, life insurance, reinsurance and health insurance with training in pricing, valuation, mergers and acquisition and other financial disciplines internationally. Students also can work on “Integrated Project” program whereby students work on a variety of special projects with industry experts in the actuarial and insurance industry.

- Business and Communication Skills—Students are mentored to develop critical business skills and presentations. Students also work in a team environment and research with practitioners.
- Mentor Programs—Students are given mentors including former presidents of SOA, and active CEOs and chief actuaries of large insurance/reinsurance companies.
- Proseminar—Students attend regular (twice per week) seminars and training from industry experts in actuarial science and insurance/reinsurance industry.
- Internships—Many organizations (U.S. and international) in the actuarial, insurance and banking industry have partnered with Columbia University Actuarial Program with more than 50 organizations providing internship programs to Columbia students.

Visit here for details on the program.

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