



UNIVERSITY OF TORONTO  
FACULTY OF ARTS & SCIENCE

Master of Mathematical Finance Program

# 10 YEARS AFTER MMF

MMF VIEWPOINT

*FEATURING*

Paul Stubbs

Dean Charette

Timothy Fong

David Ha

**BOUNDLESSMMF**

5th Edition, DEC. 2014



**A message from the Director, Luis Seco:**

The MMF family continues to grow. This year, the age difference between the youngest and oldest alumnus will be about 20 years, half of the average professional life. MMFs have married MMFs. It has been reported that the children of MMFs are playing with children of other MMFs. The MMF family is becoming multidimensional.

In February 2015, we are launching the first MMF Summit at the Westin Trillium House, Blue Mountain. This event aims at two objectives: to bring together professionals and the wealth of their combined acumen and experience to discuss the current state of affairs in the financial sector; it is also an opportunity for MMF alumni to share and witness the evolution of MMF. We are privileged to have Ron Mock, President and CEO of the Ontario Teachers' Pension Plan, deliver our keynote address.

All this will take place at the bottom of the enchanting hills of the Blue Mountain Resort on the weekend of February 19-22, 2015. We foresee very high participation numbers, and every one is encouraged to attend. Moreover, we also encourage you to bring colleagues, supervisors and employees to come and join the event. We know that some MMFs living outside Canada are planning to attend the Summit, and we are looking forward to seeing them all there.

This year, once again, we had the pleasure of meeting alumni in the cities where they live. We have had gatherings in New York, Mexico, London and Dubai. It is highly stimulating to witness the MMF family thriving throughout the world.

We are looking forward to seeing you all at Blue Mountain in February 2015.

 <b>UNIVERSITY OF TORONTO</b> FACULTY OF ARTS & SCIENCE	<b>MMF SUMMIT 2015</b> <b>FEBRUARY 19-22</b> Master of Mathematical Finance Program
<b>KEYNOTE SPEAKER RON MOCK</b> PRESIDENT & CEO, ONTARIO TEACHERS' PENSION PLAN	

Thursday February 19	Friday February 20	Saturday February 21	Sunday February 22
Registration	Panels I:	Panels II:	MMF: A Retrospective
Welcome & Networking	Banking	Reception	Brunch
	Risk Management	Keynote Address	
	Pensions	Dinner	
	Chinese New Year's - Celebration		

[summit2015.mmf.utoronto.ca](http://summit2015.mmf.utoronto.ca)  
Registration opens December 1, 2015



**Paul Stubbs**  
Westport Connecticut  
AIG – ERM Corporate  
Class of 1999

Paul Stubbs is married with 3 children living in Westport Connecticut. He is an avid tennis player. He is kept busy on the weekends shuttling his children to and from various sporting venues.

Prior to MMF, Paul worked as both a Quantitative Analyst and a Derivatives Trader at the Bank of New Zealand. He then moved to the UK where he consulted with 3 financial institutions. Paul came to Toronto for the MMF program and graduated in 1999.

After MMF he joined CIBC as Director of Market Risk Management and spent four years in that role focused on the Debt Capital Markets business.

He joined AIG in 2003 where he has had various roles in risk management. Currently he is based in New York as Head of Market Risk.

### **Paul how did you come to the MMF program?**

Before the MMF program I had significant financial markets experience – I started out as a quantitative analyst on a financial engineering desk in New Zealand and this eventually led me to become a derivatives trader.

I left New Zealand primarily to travel extensively through Europe, but I was also able to further my career in London by consulting in the risk management space on short term assignments. This gave me a great perspective on the financial industry and also helped me figure out what I wanted to do and more importantly what I didn't want to do.

At the end of my time in Europe I was not ready to return home and wanted to fulfill a childhood dream to live and work in North America. I realized, however, that I needed to update and expand my skill-set to be successful in what I perceived as a very competitive market. I identified a number of programs in North America for this purpose and eventually chose the MMF program in Toronto.

I identified early in my career how valuable it is to be able to communicate effectively with both quants and traders. The MMF program helped strengthen the base of my quantitative knowledge and helped me carve out my career at the intersection of these two groups.

**What would you say are the biggest challenges facing your industry at this time?**

Increased regulation is the most significant challenge facing the financial industry. It is however fully justified given the events that have unfolded over the last decade. As a consequence the entire competitive landscape is changing, and in particular the risk vs reward relationship is being recalibrated. To meet the increased standards financial institutions have to invest significantly in infrastructure and people, or alternatively they may exit those businesses altogether. We are already starting to see some unintended consequences of these regulations, such as reduced competition, and reduced liquidity.

**What part of the MMF program was most valuable to your career?**

Without a doubt the internship was the most valuable. It served as my introduction to the Canadian financial markets and allowed me to get a good feel for the various jobs within a large risk management function. It certainly helped me target the type of role that I wanted to pursue at the end of the Program.

**Paul who was a person that has had an immense impact on you, and why?**

This is a tough question. There are many people throughout my career and life that have had an impact. I still remember fondly my first boss at BNZ who was able to recognize my potential and invest heavily in seeing me reach it. Also, one of my first bosses at AIG recognized early on my enthusiasm and curiosity for financial innovation, and he constantly challenged me in this direction. Most recently, the former CEO of AIG, Bob Benmosche, who truly defined for me what a leader is and how a leader should act. The most impactful person however would have to be my Mum. She taught me the importance of education and hard work, and she has supported and believed in me throughout.

**Did you have a favourite class?**

Yes, I really enjoyed the computer labs where we worked with VBA. This allowed us to take the theoretical models/concepts that we learned in class and apply them to financial problems in a structured and efficient manner.

**Are there any classmates that you continue to keep in touch with?**

I am still in touch with people from my year. In fact, Omar Becerril is the godfather to one of my children. ■



## **Dean Charette**

Director of Analytics  
Topaz Power Group  
Class of 2000

Dean Charette has over 14 years of commodity experience, holding quantitative roles in investment banking (UBS), IPPs (NRG), and Private Equity (Topaz).

Dean began his career as a quantitative analyst at Ontario Power Generation. He then moved to New York to work in UBS's Global Commodity Group, initially in model vetting, and then in the front office, where he served as Head Structurer in both the Stamford and London UK offices. In these roles, he led teams of analysts in valuing and marketing energy options to both institutional and corporate clients. Also at UBS, he acted as commodity lead in the firm's CVA desk, where he hedged commodity credit risk across commodity/fx/index desks via CDS and commodity options. During his time at NRG Energy, Dean served as Senior Structurer with a focus on managing risk in the PJM and NY markets, specializing in M&A and capacity markets. In his current role at Topaz Power Group, Dean acts as lead quant across portfolios (assets hedging, long-term forecasting). In this position, he is currently implementing Topaz's first ever risk management system. Dean has a Math/Philosophy B.A. from Laurentian University and a Masters in Mathematical Finance from the University of Toronto as an NSERC scholar. He is an avid runner, and has placed 5th place in the Indianapolis Marathon with a notable time of 2:32.

### **Dean what was the most relevant MMF course for your career?**

What turns out to be the most relevant subject is likely a function of your background prior to the program. Coming from a math/philosophy background, the corporate finance courses were the most useful. This is where I began to understand how funds flowed and what drives value. If I had come from a finance background, I am sure that the math courses would have been more beneficial.

### **What characteristics do you use to choose between two equally qualified candidates?**

There are three things I look for in junior candidates: one, do they know what they say they know? Two, if they do not know it, will they say as much? Three, if they do not know it, are they able to learn it

quickly? To the first question, in my opinion, it is more important to know a small number of things well, then to know a large number of things superficially. Junior roles are highly specialized, and no one expects you to know everything. That said, I do want to be assured that if you are given a project, you will vet it thoroughly. The second question primarily speaks to integrity, but also ensures that you will be willing to ask questions if you do not know (again, you are not expected to know everything). The third point, the most difficult to assess, is how quickly you can learn something. While you are not expected to know everything, I do want to ensure that you will be able to pick up the majority of material on your own.

### **What would you say are the biggest challenges facing your industry at this time?**

The biggest challenge, though cliché to say, is change. People who spent 8 years building careers in mortgage structures suddenly found their business all but eliminated. People trading credit suddenly had to learn an entirely new, and highly regulated, market framework. People in my industry (energy) are consistently involved with mergers and bankruptcies on the physical side, and elimination of businesses on the finance side.

### **Dean who was a person that has had an immense impact on you, and why?**

While difficult to name a particular person, the characteristics I've always admired are those who can make the quantitative relevant to non-quants. Understanding the fundamentals of quant finance is non-trivial. But being able to relate, at least the results of those skills to those without formal training can be even more of a challenge. That said, those who can do so are likely the most valuable in our speciality.

As a side note, it has been my experience that those who can explain complicated ideas such as Black Scholes, real-options, and so on, in clear ways, are the ones who understand the material the best. As they say, 'if you can't explain it, you don't know it'. The corollary being, 'if you know it, you can explain it'.

### **In addition, here are a few tips:**

- Although everyone says 'facetime does not matter', the truth is, facetime matters (get in early, leave late).

- Before going to ask a question at least try to come up with an answer yourself – people are much more willing to help someone who put some time in prior to approaching them.
- As mentioned prior, admit when you do not know something – you will avoid going far down the wrong path and wasting your team’s time.
- If your team is the sort that does social things together, take part in those events – not only is it part of the job, you will likely learn more in those lunches/evenings than in the equivalent time on your desk (you always have weekends, etc., to catch up on projects) ■

### Attention all MMF Alumni:

**Go to the MMF Alumni website to ensure that you are receiving all job postings, reception invitations, news, and information on upcoming events.**

[http://alumni.mmf.utoronto.ca/validate\\_credentials.html](http://alumni.mmf.utoronto.ca/validate_credentials.html)



#### **Timothy Fong**

Managing Director  
Risk Measurement and Analytics  
OSFI  
Class of 2001

Timothy Fong is the Managing Director at the Office of the Superintendent of Financial Institutions Canada (OSFI). He is not only an alumnus of the University of Toronto’s Master of Mathematical Finance Program but is also an award-winning instructor at the University of Toronto’s School of Continuing Studies, receiving the Excellence in Teaching Award in 2008.

He was a recipient of the Queen Elizabeth II Diamond Jubilee Medal in 2013 in recognition of both his significant contributions to Canada through his employment with OSFI, and his professional and personal achievements. He has also been a leader in OSFI's efforts to advance the risk measurement and analytics capabilities at financial institutions.

Timothy is an excellent example of a Canadian who has taken a positive role in maintaining confidence in our financial institutions. At the international level, he has effectively represented Canada in several forums at the Basel Committee for Banking Supervision (BCBS). The BCBS is part of the Bank for International Settlements (BIS), whose mission is to pursue monetary and financial stability, as well as fostering international cooperation.

The BIS also develops the regulatory framework for internationally active banks, known as the Basel Accords. Timothy has played key roles in drafting and implementing what is known as "Basel 2.5" for trading activities at global systemically important banks (GSIBs).

He continues to contribute to the University of Toronto as an education leader: creating the Certificate in Financial Trading and Option Strategies; teaching a number of innovative courses in financial trading and risk management; and acting as a mentor to cohorts of international banking professionals studying at the University of Toronto.

In addition, Timothy established a scholarship, "The Timothy Fong & Enrico Chir Award for Excellence in Financial Trading" to recognize not only academic excellence but also community contributions made by financial professionals. Timothy has demonstrated a clear example of leadership by encouraging the growth and professional development of community-minded professionals.

**Tim can you describe the kinds of steps an MMF student can take in order to achieve your level of success after graduation?**

Recently, I made a presentation on a similar topic to the Fields Institute for the 2014 Quantitative Finance Career Day, and perhaps I could share that with you here in the newsletter. It was entitled "Top 10 Things Every Quant Should Know/Do"

1. The environment for quants is changing.
2. Your qualitative skills could become the binding constraint.
3. Your integrity and judgement are key to success (i.e. don't blame the models!).
4. Don't forget about the business.

5. Pay attention to regulatory changes and industry trends rather than the proceeds.
6. Continuous learning and ongoing professional development are important.
7. Complexity  $\neq$  Accuracy.
8. Teaching and/or writing research papers are quite useful in keeping your math skills sharp once you are working in the industry.
9. Enjoy the process more than the proceeds.
10. Give back to the community.

**What would you say was the most relevant MMF course for your career?**

I liked all the courses taught throughout the program but the workshops taught by industry experts in the second half of the program were the most relevant for my career. Those projects gave us great opportunities to not only apply what we learned from the program to solve real-world problems but also get practical perspectives from the industry experts.

**Tim tell us something about yourself that is not on your resume?**

Although I am not a musician by any means, I enjoy singing and going to karaoke with friends/colleagues a couple times a year. The following may surprise you: I actually won karaoke contests when I was in high school. So, please invite me the next time when you are going to karaoke.

**Are there any classmates that you continue to keep in touch with?**

Yes, I do keep in touch with a few of them. The MMF alumni network is quite global in the sense that our alumni work in different cities around the world.

**What advice would you give to MMF students to make the most of their internship?**

Talk to as many people as you can within the firm during your internship, “who you know is as important as what you know.” Make sure that you do a very good job and leave a good impression; do not underestimate how much you can contribute in a few months. ■



**David Ha**  
Managing Director  
Interest Rates Trading  
Goldman Sachs Japan  
Class of 2004

David Ha has been working for Goldman Sachs in Tokyo, Japan since April of 2008. He is currently Managing Director and head of non-linear rates trading in Japan, where he manages a book that consists of vanilla and exotic options on Japanese interest rates. He trades interest rate swaps, Japanese Government Bonds, interest rate swaptions, caps and floors, bermudan options, options on yield curve, quanto products, and structures linked to Japan inflation.

Before Goldman Sachs, David had worked for Barclays Capital and Toronto Dominion Bank in various trading, structuring and quantitative analyst roles. He has worked in Toronto, London, and Hong Kong before settling down in Tokyo.

David earned a Bachelor Degree's in Engineering Science and the MMF degree, all from the University of Toronto. He was the recipient of the Natural Sciences and Engineering Research Council (NSERC) Scholarship and Ontario Graduate Scholarship.

### **David what is the most relevant course for your career?**

John Hull and Alan White's courses on derivatives. My advice is to also attempt to do all the questions in brain teaser puzzle books such as "Heard on the Street". Being able to think and solve problems from first principles is extremely important, and books such as these can help improve one's problem solving skills.

### **What would say are the biggest challenges facing your industry at this time?**

Regulation and technology are currently the biggest factors affecting the finance industry. Not just banks in general, but also insurance companies, asset managers and hedge funds. It is important to understand the new regulatory environment and embrace new developments in technology in order to adapt to the fast changing world.

**If you had to choose between two equally qualified candidates for a position, what other characteristics would you at look to help you decide?**

I would choose the candidate with a more colourful personality and a sense of humour.

**David did you have a favourite class in the Program?**

Actually my fondest memories were playing poker outside the classroom of the MMF lab with my classmates, and constantly losing. This actually goes a long way to remind myself that academics does not translate into successful trading, and that sometimes it is better to be lucky than to be smart. This indirectly taught me the importance of humility in the tough world of trading.

**Do you still keep in touch with any of your MMF classmates?**

Yes, some of my closest friends were in my MMF class, and some have eventually left finance to become entrepreneurs in other fields. ■

Congratulations to MMF Alumna, Class of 2004, Dalia Kronenberg Yunger for completing the New York City Marathon on Sunday, Nov. 2, 2014, with a time of 4:34! Great time for a day with 20-40mph.





As valued donors to the MMF Program Michael and Faye Thorek established a scholarship in 2008 to be awarded annually to an MMF student who demonstrates academic excellence. We are proud to announce Maria Yifan Zhan as this year's winner.

[www.thorekscott.com](http://www.thorekscott.com)

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