



DIRECTOR'S MESSAGE

After two years of hardship and disappointment, AIFMRM hit the ground running in 2022 with in-person teaching and a full suite of activities. Highlights of the year include a highly-successful masterclass on machine learning for quantitative finance and an AIFMRM student winning the national FNB DataQuest competition.

Students and staff contributed to AIFMRM having a highly productive and successful year. The academic and support staff displayed remarkable motivation, dedication, and resilience, often while having to deal with personal challenges. I am fortunate to be associated with all of them and grateful for their commitment to the institute.

I would like to express my gratitude and appreciation to AIFMRM's funders: Absa, FirstRand, Nedbank, Old Mutual, Sanlam and Standard Bank, and to each of their representatives: Parin Gokaldas, Miné van Zyl, Nimalin Moodley, Judy Faure, Lauren Benjamin and Roelof Sheppard for their guidance, trust, and financial support as we pursue our vision and purpose together.

I would also like to extend my sincere thanks to the Dean of Commerce, Professor Suki Goodman, the Head of the Department of Finance and Tax, Dr Lucian Pitt, and the various department staff and faculty members for their ongoing support of the Institute.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Taylor', with a horizontal line above it.

Professor David Taylor
Director - AIFMRM

CONTENTS

DIRECTOR'S MESSAGE	1
CONTENTS.....	2
HIGHLIGHTS	3
MASTER OF FINANCIAL ENGINEERING (MFE)	4
MASTER OF PHILOSOPHY IN MATHEMATICAL FINANCE (MPHIL)	5
MASTER OF COMMERCE IN RISK MANAGEMENT OF FINANCIAL MARKETS	7
EVENTS	9
SHORT COURSES.....	15
RESEARCH	16
PSYCHOSOCIAL SUPPORT	20
OUR PEOPLE.....	21

HIGHLIGHTS

A return to in-person teaching and events, particularly holding the 7th Financial Mathematics Team Challenge (FMTC) in July

Old Mutual renewed their funding agreement with AIFMRM for five years (2023 to 2027)

Andrew Soane completed his PhD

Of the eight journal articles published this year, three appeared in A*-rated journals – the Journal of Banking & Finance, the Journal of Economic Dynamics & Control and the Journal of Financial Intermediation

Final approval for the Master of Financial Engineering degree – the first cohort commences in 2023

MASTER OF FINANCIAL ENGINEERING (MFE)

It's hard to retire a successful programme like the MPhil and replace it with something altogether new. But, after four years of hard work, the new Master of Financial Engineering (MFE) finally received approval (registration) from the South African Qualifications Authority (SAQA) on 18 November.

The new programme was promoted extensively throughout the year with explanations about the curriculum. This intensive and challenging degree combines training in advanced mathematical, statistical, financial, and computing skills with a solid understanding of financial markets, asset pricing theory and quantitative research.

AIFMRM was pleased to note an almost unchanged number (and quality) of applicants for the MFE (89 vs 83 for the MPhil in 2021). In a light-hearted attempt to encourage the transition to the MFE after 10 successful years of the MPhil, a R5 fine process for 2023 was mandated for anyone who refers to the degree as the MPhil!



MASTER OF PHILOSOPHY IN MATHEMATICAL FINANCE (MPHIL)

What students are saying

“Although former MPhil students had set high expectations for this programme, I can say that **my experience exceeded these expectations**. The MPhil programme is more than an academic programme and allows you to form a strong relationship with your class and get exposure to the industry. **Pursuing the MPhil has been an invaluable experience and has prepared me immensely to take on a career in the quantitative finance profession.**”

Alexio Phytides

“AIFMRM has developed and shaped me both personally and professionally and I am honoured to have been a part of the 2022 class and to be a part of the AIFMRM community moving forward.”

Justin Fouché

"Professor David Taylor really cares about education and is passionate about learning and the development of his students. He makes sure that we learn not only theoretically but also practically.

He also personally ensures that every student in the institute has employment and supports us to achieve our goals."

Tebogo Mampuru

"I really got the sense that the AIFMRM staff were invested in our success as students. I have worked harder this year than I had worked in any year prior, and yet I have felt less stressed. I think this can be attributed to the lecturers and administrators of the courses."

Tim Alfeld

MASTER OF COMMERCE IN RISK MANAGEMENT OF FINANCIAL MARKETS

What students are saying

"Nothing in life had prepared me for the challenge I would face when venturing into this programme. **I had to change almost every study technique** or habit that had worked in my undergrad. **You are going to learn to unlearn.** Although, in the beginning, you may feel like you do not have all the skills or adequate exposure to content relative to other students, don't be intimidated! **Before you know it, the playing field will be levelled.** It has been a tremendous honour to learn under an institute that genuinely cares about your well-being and where **you are not just a student number.**"

Liau Kekana

"My advice to the 2023 MCom cohort is: **be yourself, push yourself and enjoy yourself. Take all the opportunities AIFMRM will present to you.** Try not to linger in your comfort zone, explore new things that you can discover about yourself and grow."

Pheko Tsotetsi

"My ability to think and learn has been incredibly enhanced. I also now have a large set of technical skills (which I never knew I wanted or needed) as well as a vast array of knowledge in multiple subjects relating to financial markets and risk management. **It has been a really challenging year, but it has also been my favourite academic year.** This degree has elevated me and my skill set. It has exposed me to incredible employment opportunities."

Hannah Armitage

"The learning environment is unlike anything I have experienced before. Most people doing this degree would never have been educated in such a small class. **This makes for an incredible learning experience.** The degree is structured in a way that your abilities constantly grow, providing you with a well-rounded skillset in the end. **Although it was a difficult year, I feel I have been prepared for the workplace and my transition will be much smoother.** This has been my most fulfilling year to date."

Brandon Pinto

EVENTS

AIFMRM Donor Day

The annual AIFMRM Donor Day took place on 25 March 2022 and was once again a remarkable and memorable occasion. For many students, it was one of the highlights of their year.

One of the aims of Donor Day is for AIFMRM's new cohort to interact with corporate funders and to introduce the students to the Institute and the opportunities they will be presented with. A further objective is for students to understand what to expect after they graduate and enter the workplace.

This year's proceedings began with an introduction and positioning of AIFMRM and the funder relationship by Professor David Taylor. After that, AIFMRM graduates from some of the donors gave short talks on their experience of the student/workplace transition and shared valuable advice on the year ahead.

This year, the presenters were Aisha Hussain and Thayuri Pillay (ABSA), Rakhee Kooverjee, Rohin Jain, Dirk Van Heeswijk and Kebeiloe Sello (FirstRand/RMB) and Lebo Lecheko (Nedbank).





The Financial Mathematics Team Challenge 2022

AIFMRM was able to host the seventh Financial Mathematics Team Challenge (FMTC) from 27 June to 6 July 2022. After a hiatus in 2020 and 2021 due to the pandemic, the competition generated much excitement and anticipation among postgraduate students.

The FMTC provides an opportunity for South African postgraduate students in Financial Mathematics to focus on an industry-relevant research project. To make matters simpler this year (as COVID travel restrictions were still in place at the time) only three teams of UCT Master's and PhD students took part. Team mentors participated from UCT, University College London, the University of Johannesburg, the University of Technology Sydney, and the University of Wuppertal/Quaternion Risk Management.

"While the FMTC was extremely challenging and pushed me to my limits, as somebody who is currently completing my dissertation, I can truly appreciate the research skills that the FMTC equipped me with, which are invaluable to my research," said Alexio Phytides, MPhil student, 2022.

AIFMRM Machine Learning for Quantitative Finance Masterclass

Another feather in the AIRMRM cap was the masterclass on machine learning that was held in Johannesburg on 27 and 28 October 2022. Entitled *Machine Learning for Quantitative Finance* and presented by Adjunct Associate Professor Jörg Kienitz, the workshop was a big industry success.

It provided a detailed overview of machine learning techniques and their application to quantitative finance, covering a range of techniques, including regression, k-means, kernel methods, neural networks, and mixture models.

There were 55 attendees from industry and academia and there was a high level of interaction, discussion, and debate. After the event, Professor Kienitz said, "I would say there is definitely more interest now from industry in machine learning possibilities for quantitative finance than two years ago". Professor Kienitz is Assistant Professor at the University of Wuppertal in Germany and an Adjunct Associate Professor at AIFMRM.

Class of 2023 bursary interviews

Always an exciting day on the calendar, the annual donor bursary selection process for the 2023 cohort took place between 8 and 10 November 2022.

On 8 November, each participating company held a one-hour presentation to the potential bursars. These sessions gave the students an overview of the company and potential opportunities before the bursary interviews. AIFMRM students also received the Donor Guide ahead of the sessions.

This was followed by two panels of company representatives, who held half-hour interviews on 9 and 10 November 2022. A cocktail function on the evening of 10 November marked the end of the first round. On 15 November, AIFMRM held separate group sessions with the graduate recruiters to finalise the process.



AIFMRM Careers and Degrees in Financial Markets

Another key event on campus for AIFMRM is the annual promotion of the Institute's courses and degrees. To this end, on 27 July 2022, the Institute presented an information session to 4th-year undergraduate students in Engineering, Science, Finance, and Actuarial Science on career options in the financial services industry.

The event began with a welcome and introduction by Obeid Mahomed, followed by a talk by Cathy Sims, the Executive Director of the South African Graduate Employers Association (SAGEA), on careers in financial markets. After that, Alex Backwell gave insights into the new Master of Financial Engineering, Mansa Aidoo spoke about the MCom in Risk Management of Financial Markets, and Chun-Sung Huang presented the MCom in Finance. The evening ended with a Q&A session.

The discussion continued afterwards over refreshments. While the 62 students that attended did signify a lower participation than in previous years, this was a good turnout compared to other student events on campus at the start of the resumption of in-person engagements.

CAREERS AND DEGREES IN FINANCIAL MARKETS

CAREERS AND MASTER'S DEGREES IN FINANCIAL ENGINEERING*, RISK MANAGEMENT AND FINANCE Q&A SESSION

(* Previously Mathematical Finance)



AIFMRM and InvestSoc: Women in Finance

AIFMRM once again held a Women in Finance event in collaboration with the UCT student society, InvestSoc. The event's purpose is to encourage female undergraduate students to consider a career in Finance, with the allied aim of increasing the number of female applicants to AIFMRM's Master's degrees. Held on 11 August 2022, it was extremely successful and featured panelists Meeta Gosai (Head of Income Solutions, Momentum Corporate), Rachel Swallow (MSc in Data Science (Financial Markets)), Cheree Dyer (CEO Prescient Investment Management), Daniella Keet, (Head of Private Equity and Strategic Partnerships FNB Commercial), and Tsitsi Matika (Head Retail Investment Specialist, ABSA Wealth and Investment Management).

There were 87 attendees and feedback was overwhelmingly positive, with the only complaint being that the Q&A session was too short. One student commented, "It was very nice to see women owning their power, taking up space and being open about the challenges they've faced while letting us know that it is possible to be like them or even do better than them."



SHORT COURSES

AIFMRM offers two non-credit-bearing, online short courses aimed at working professionals in collaboration with the Faculty of Commerce's online learning partner, GetSmarter.



Business Risk Management

Business Risk Management is a 10-week, online short course that provides a comprehensive overview of enterprise-wide risk management. The target audience is individuals already employed in risk management and those interested in entering the field. It provides a sound foundation of theoretical knowledge and the latest tools and techniques for practical application. The course ran five times during 2022, with a total of 339 participants for the year.



Advanced Business Risk Management

Advanced Business Risk Management is an 8-week, advanced online short course that acts as a comprehensive simulation of the risk management process. The content covers essential theoretical concepts in the appropriate level of detail, yet the focus is ultimately practical and guides students through the application of industry best practices. The course ran twice during 2022, with a total of 49 participants for the year.

RESEARCH

As the influence of the Covid-19 pandemic decreased, research-related activities could once again be held. This included the Financial Mathematics Team Challenge (FMTTC) as well as reviving organisation of the triennial Mathematics in Finance conference to be held in the Kruger National Park in July 2023.

Publications

AIFMRM published **eight journal articles** in 2022, three of which appeared in A*-rated journals:

The Journal of
Banking & Finance

The Journal of
**Economic Dynamics
& Control**

The Journal
of **Financial
Intermediation**

This is an outstanding achievement, given that fewer than 200 A*-rated journals exist in all areas of business-related research (including economics, finance, accounting, marketing, and actuarial science).

Additional publications

Each team participating in the Financial Mathematics Team Challenge (FMTTC) wrote a report containing a critical analysis of their research problem and the results. AIFMRM published the reports in a single volume; 2022 Financial Mathematics Team Challenge Research Reports. The titles of the 2022 research reports were:

**Covered Interest
Parity Arbitrage**

Updating
Volatility
Surfaces

Using Gaussian
Mean Mixtures
for Pricing
American
Options

New research collaboration

AIFMRM held a pioneering research event in 2018 called The Factory. The initiative supports teams of researchers to advance knowledge in mathematical sciences on a topic of their choice. The teams consist of a blend of established, mid-career and young scientists. This endeavour aims to foster collaboration between researchers across career stages and enhance the mutual benefit team members derive.

One of the teams, Team MultiCurve recently produced a new version of their research paper available on the Social Science Research Network. In addition, a follow-on project is also developing. It focuses on identifying and modelling the information differential present in term rates, an area in interest rate theory and markets that is important to decision-making in the context of the LIBOR-to-overnight benchmark transition and relevant to the extraction of the OIS-curve in emerging markets.

Team MultiCurve has presented its work at a succession of seminars and conferences in 2019 to 2021 and in 2022, members of the team formed collaborations on, for example, dynamic term structure models for SOFR futures, consistent management of the LIBOR transition, and discontinuous short rate dynamics and stochastic volatility forward rates.

PhD students

AIFMRM also had four PhD students this year – Obeid Mahomed, Andrew Soane, Mansa Aidoo and Justin van der Merwe. Andrew completed his PhD this year and will graduate in early 2023.

Links with industry

AIFMRM has close ties with the financial services sector and disseminates information and interacts with individuals and companies in several ways. The institute is regularly present or participates in panel discussions or interacts with industry in other events. In 2022, these included the Weekly Seminar Series, MPhil Practitioner Seminars, MCom Current Issues in Risk Management Seminars and the Women in Finance event.

The AIFMRM LinkedIn page distributes information about current developments in financial services, disseminates AIFMRM media articles and notifies members about relevant AIFMRM events. This interest group aims to stimulate discussion among industry, academia, students, regulators, and industry bodies on topical issues in financial markets and risk management and promote AIFMRM and its activities.

African Institute Of Financial Markets And Risk Management
1,275 followers
4mo • 🌐

After graduating from UCT as a mechanical engineer, Mohapi Mohlamonyane found himself dreaming of a more exciting, stimulating career.

Find out how AIFMRM and doing the MCom in Risk Management of Financial Markets opened professional doors for him. bit.ly/3WN7179
[#financialservices](#) [#jobopportunities](#)

AIFMRM
MAGAZINE | NEWS | RESEARCH

“THE SKILLS TAUGHT TO ME ON THE MCOM IN RISK MANAGEMENT OF FINANCIAL MARKETS WERE ABSOLUTE GOLD, MAKING ME SO MUCH MORE MARKETABLE AND IN DEMAND”

Mohapi Mohlamonyane
AIFMRM alumnus

👍❤️🔥 102
8 comments · 2 reposts

Like Comment

African Institute Of Financial Markets ...
1,275 followers
7mo • 🌐

Since 2014 AIFMRM, working closely with key industry partners, has hosted the Financial Mathematics Team Challenge (FMTC). Each year, Masters and PhD students gather to form four or five mixed teams led by a PhD student and mentored by an academic or industry practitioner. The goal of the FMTC is to create an opportunity for postgraduate students (studying in a developing country) to interact with international students and academics.

FMTC is designed in a way that helps students work together in teams on a topical and industry-relevant research project without any distractions. At the same time, the FMTC produces a platform for developing lasting links with other postgraduate studen ...see more

👍❤️🔥 81
1 comment

Celebrate Comment

Give your good wishes...

PSYCHOSOCIAL SUPPORT

AIFMRM recognises the need for wide-ranging student support. It has employed specialist educator Billy Enderstein part-time to provide psychosocial support to the master's students since January 2017. In late 2021, Billy was tasked with finding a service provider (SP) to assist students in transitioning from the fourth year into the intensity of the master's programmes and prepare them psychologically for work in the finance sector. After presenting a range of SPs for consideration, The Space Between Us (TSBU) was selected as the most suitable.

In consultation with Billy and the academic staff in AIFMRM, TSBU provided a ten-month framework that addressed the seasonal and cyclical psychosocial support needs of AIFMRM's students via workshops, resources to support understanding the topics and development of skills empowering students to cope better in their studies.

The workshops covered the following topics:



Self-esteem and self-awareness



Diversity and inclusion in teams



Interpersonal skills



Resilience and Burnout



Racial identity

Students gave positive feedback and therefore TSBU will continue to deliver the psycho-social support for AIFMRM in 2023. Billy Enderstein remains connected to AIFMRM in various invaluable roles.

OUR PEOPLE

AIFMRM has six permanent academic staff:



David Taylor
Director



Obeid Mahomed
Lecturer



Peter Ouwehand
Associate Professor



Alex Backwell
Senior Lecturer



Abhik Mukherjee
Senior Lecturer



Mansa Aidoo
Lecturer



Thomas McWalter
Adjunct Associate
Professor



Tanja Tippett
Adjunct Associate
Professor



Billy Enderstein
Student Psycho-
Social Welfare
Counsellor



Prof Erik Schlögl
Honorary Professor



Prof Peter Ritchken
Honorary Professor



Dr Jörg Kienitz
Adjunct Associate
Professor



Dr Andrea Macrina
Adjunct Professor



Lameez Fakier
Senior Administrative
Officer



Lizzy Starck
Administrative
Officer

African Institute of Financial Markets and Risk Management

Faculty of Commerce

University of Cape Town

aifmrm@uct.ac.za

<https://commerce.uct.ac.za/aifmrm>

