



FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

Centre for Applied Risk Management

Annual Report 2018

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Date: 31 March 2019

Prepared by: Neels Erasmus & Hermien Zaaiman

Approval Sheet

Title: Centre for Applied Risk Management Annual Report 2018

Synopsis: The report provides a retrospective view of the activities undertaken and outputs delivered by UARM during 2018, as well as a view of the road ahead.

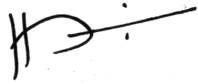
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Prepared by: Neels Erasmus & Hermien Zaaiman

Approved by: 

Prof Hermien Zaaiman
Leader: Centre for Applied Risk Management

Note on report coverage:

This report covers all the activities of the centre that took place during 2018, as well as the Class of 2018 Graduation, which occurred in 2019. The date of the report is 31 March, being the date on which the results of the Class of 2018 were finalised.

Distribution Sheet

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Executive Summary

The Centre for Applied Risk Management (UARM) was established in June 2012 at the Vaal Triangle Campus of the North-West University. UARM's main aims are postgraduate teaching at master's and PhD levels, ground-breaking qualitative research in applied risk management with behavioural risk management as specific research focus, as well as developing behavioural risk tools that can be used in practice.

Staff Profile

In 2018, the Centre had three full-time permanent, three contracted academic and operational management staff members, and one shared administrative assistant. The team also included four extra-ordinary professors, two from Vrije Universiteit, Amsterdam, one from the Erasmus University Rotterdam, and one from Wageningen University and Research.

Teaching Profile (Students)

The total number of registered UARM masters students in 2018 was twenty two.

- Split per academic year: Fifteen students enrolled for the first academic year (of which one was a historic second year) and seven for the second academic second (mini-dissertation), of which one was a historic third year (mini-dissertation). All seven the academic second years graduated.

The following is a summary of the total student body in 2018 compared to 2017

- The ACIW (African/Coloured/Indian/White) breakdown of the 22 students was 12/1/4/5 (7/1/2/7 in 2017)
- Gender: 14 out of 22 = 64% of the students were female (6 out of 17 = 35% in 2017)
- The average enrolment age for master's students was 37 years, varying between 27 and 50 years (41 years, varying between 24 and 61 years in 2017)
- Seven 2018 second year master's students graduated, with 3 achieving the degree with distinction (5 in 2017, with 1 distinction)

Training Profile (Dissertations)

All the seven students who registered for their second year mini-dissertations in 2018, fulfilled all the requirements for the MCom degree in Applied Risk Management. The total minimum duration throughput rate for the programme (% of candidates completing the qualification in two years), is now 59% (59% in 2017). The total throughput rate for the programme (overall % from all possible graduates of enrolled students that have graduated) is now 67% (66% in 2017). The average time to graduate in this two-year programme is 2.1 years (2.1 in 2017)

Research Profile

The behavioural risk research focus of the Centre was redefined in 2016 to primarily focus on Risk Culture. All seven masters level mini-dissertations that were completed in 2018 addressed a risk-culture-related topic, consisted of an applied research project in the candidate's organisation, focused on either a qualitative risk culture study or a quantitative study through the application of the UARM Risk Culture Scale to a risk-culture-related research topic .

Centre Income

The total teaching, research and consultation income generated by the Centre in 2018 was R2.238m (R1.846m in 2017).

Centre Highlights

The top achievement for UARM in 2017 was the delivery of another seven masters graduates, with three of these achieving distinctions in the programme. Also noteworthy is the progress that has been made in promoting the UARM training and research programme, specifically in the public sector. Another aspect worth mentioning is the broadening of its international academic network, with the appointment of another three extra-ordinary professors. The incorporation of the UARM research programme into the Optentia Research Focus area also augurs well for the future.

Centre Challenges

The biggest concern is the little time that UARM team members have for their own research, given their teaching loads.

The Road Ahead

Going forward, the main focus for the Centre will be to start generating academic publications from its research programme. A secondary priority is the further development of the UARM Risk Culture Scale with the view to generate research-based consulting income. However, fulfilling these aims will require investment from the NWU into expanding the UARM small permanent staff cohort. We look forward to building the UARM programmes with the support of the NWU management and in particular the Optentia Research Focus Area.

1. Introduction

The Centre Applied Risk Management (UARM) was established in June 2012 at the Vaal Triangle Campus of the North-West University, with the aim of doing postgraduate training and research on risk management as an applied discipline. This applied approach includes qualitative risk education and training at masters and PhD levels and behavioural-risk-related research projects, and more specifically, risk culture. UARM's two-year part-time MCom in Applied Risk Management is a taught programme with main aim to satisfy the need of full-time employees across the public and private sectors. The Centre's qualitative approach to risk management was intended to fill the gap created by the dominance of quantitative risk management academic programmes at the tertiary level.

The remainder of this report is structured as follows: The next section provides a summary of the personnel (full-time and part-time/contract) involved in UARM in 2018. This is followed by Section 3 which contains graphs and tables summarising the UARM student profiles and in Section 4 the current status of master's dissertations and PhD theses since the inception of the programme. Section 5 provides an overview of the research profile of the Centre including published research and research in progress. This is followed in Section 6 by the international profile of the Centre. Section 7 summarises teaching income generated from study fees and subsidies, compared to the total income generated by the Centre (Teaching, Research and Consultation). This is followed in Section 8 with an overview of UARM's highlights during 2018, which is then juxtaposed with the challenges experienced in Section 9. The report is concluded in Section 10 with an overview of the road ahead. Appendix A provides a summary of the UARM research focus, followed by Appendix B that contains a summary of the external industry and academic collaborative networks that the Centre has formed in support of its mission. Appendices C and D provide some comments from students and other stakeholders respectively, and Appendix E finally provides some photos of notable events that took place during the year.

2. Staff Profile

The Centre has a small team of full-time staff members, complimented by part-time contributors and contractors to the programme. The composition of the team has changed over time – Table 1 provides a summary of the status as at the end of 2018.

Table 1: UARM Staff Overview

| Name | Roles/Responsibilities | Comments |
|--|--|--|
| Prof Hermien Zaaiman | <ul style="list-style-type: none"> • Full-time Associate Professor • UARM Manager • MARM teaching (taught three modules, coordinated the dissertation research module, supervised three mini-dissertations in 2018, PhD study supervision two students) • UARM Research Leader | |
| Mr Fred Goede | <ul style="list-style-type: none"> • Full-time Senior Lecturer • MARM teaching (taught two modules, assisted with teaching in a third module, supervised two MARM dissertations in 2018) • Researcher & Workshop Facilitator • Fellow of Institute of Risk Management South Africa, responsible for CRM Prof Board exam • NWU Ethics committee member (EMS-REC) | Registered PhD student, supervisor dr.ir. Gert Jan Hofstede, Wageningen University and Research. |
| Dr Sonja Gilliland | <ul style="list-style-type: none"> • Part-time Senior Lecturer • MCom Leader (mini-dissertation supervisor, supervised one MARM dissertation in 2017) • Researcher | Part-time role in UARM; Subject Head of IT in the School of IT |
| Mr Emmanuel Mulambaya | <ul style="list-style-type: none"> • Full-time Lecturer from 1 Jun 2016 • MARM teaching (taught one module, assisted with teaching in two other modules, and supervised two MARM dissertations in 2018) • Researcher | PhD student (NWU) Registered in 2018 Expected to complete PhD in 2020. |
| Ms Hedre Pretorius | <ul style="list-style-type: none"> • Part-time contractor on the data analysis of the UARM RCS studies • Co-researcher on research projects • Data analysis on master's dissertations and research projects | Employed by XDS |
| Dr Neels Erasmus | <ul style="list-style-type: none"> • Part-time Consultant: UARM Ops Manager • Networking with industry and research institutions on research initiatives • Contribute to teaching in the UARM modules – Statistics workshops for M1 and M2 students. • Back-up examiner of mini-dissertation projects in case of emergency | Extra-ordinary Professor (NWU Potch Campus Faculty of Natural and Agricultural Sciences) |
| Ms Helei Jooste | <ul style="list-style-type: none"> • Administrative Staff • Part-time UARM Administrative Assistant | |
| Prof Theo Kocken (Vrije Universiteit) | <ul style="list-style-type: none"> • Extra-ordinary professor Vrije Universiteit Amsterdam • Teaches in the 821 module. • Risk culture research contact. | |
| Prof Marise Born (Erasmus University) | <ul style="list-style-type: none"> • Part of UARM research team | UARM/Optentia Extra-ordinary professor |
| Prof Henk van der Flier (Vrije Universiteit) | <ul style="list-style-type: none"> • Part of UARM research team | UARM/Optentia Extra-ordinary professor |
| Prof Gert Jan Hofstede (Wageningen University) | <ul style="list-style-type: none"> • Part of UARM research team | UARM/Optentia Extra-ordinary professor |

3. Teaching Profile (Students)

Figure 1.1 shows the profile of the registered master’s students since the first intake in 2014, from 12 in 2014 until 22 in 2018. The negative DNR numbers (the red bars in the graph) indicate students that were on the programme in the previous year but chose to not register again in the current year, e.g. four of the registered students in 2017 did not register again in 2018. The graph is further subdivided to show the students per historical year, e.g. three of the registered students in 2016 were registered for the third time on the programme, therefore taking (at least) three years to complete this part-time degree.

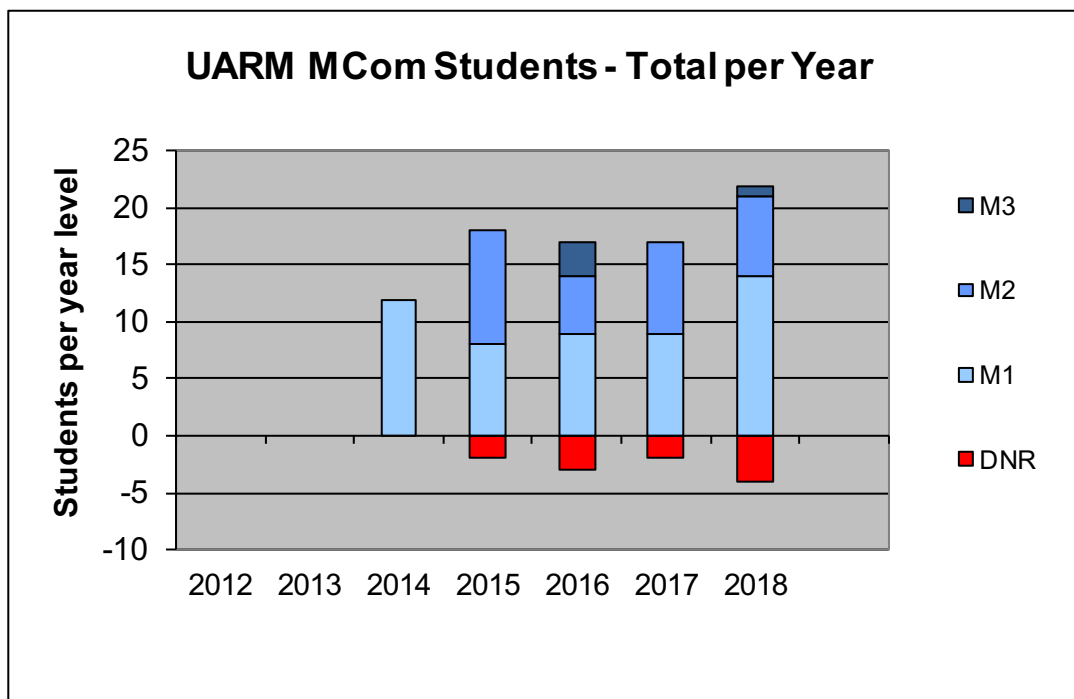


Figure 1.1

| | | UARM MCom Students | | | |
|------------|-------------|------------------------------------|-----------|-----------|--------------|
| | | Total per Calendar & Historic Year | | | |
| DNR | MCom | M1 | M2 | M3 | Total |
| 0 | 2012 | 0 | 0 | 0 | 0 |
| 0 | 2013 | 0 | 0 | 0 | 0 |
| 0 | 2014 | 12 | 0 | 0 | 12 |
| -2 | 2015 | 8 | 10 | 0 | 18 |
| -3 | 2016 | 9 | 5 | 3 | 17 |
| -2 | 2017 | 9 | 8 | 0 | 17 |
| -4 | 2018 | 14 | 7 | 1 | 22 |
| | | 0 | 0 | 0 | 0 |

DNR = Student from previous year did not re-register in following year.

Figure 1.2 provides a breakdown the 22 students registered in 2018 into historical and academic years, showing that fifteen students enrolled for the first academic year (of which one was historic second year) and seven for the mini-dissertation in the academic second year (of which one was historic third year).

| Data Table | | | | |
|---------------|-----------|----------|----------|-----------|
| Acad Year | M1 | M2 | M3 | Tot |
| MFirst | 14 | 1 | 0 | 15 |
| MScnd | 0 | 6 | 1 | 7 |
| Total: | 14 | 7 | 1 | 22 |

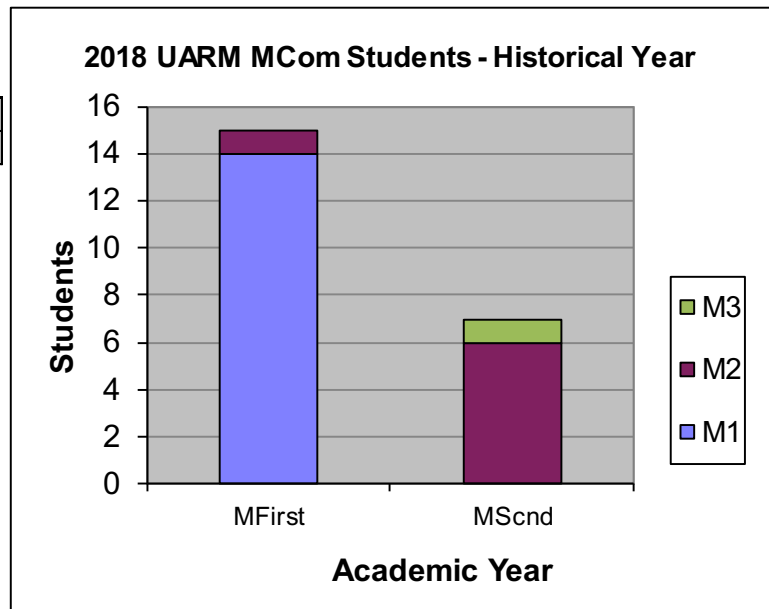


Figure 1.2

Not shown here is a PhD student in Risk Management that was registered from 2012 to 2015 at UARM, but then changed to a different area in the School of Economic Sciences in 2016 to complete her qualification. Emmanuel Mulambya registered for his PhD in 2018.

Figure 2 shows the throughput rate profile of the master’s graduates over time, measured with respect to their first year of enrolment. Of the 12 that enrolled in 2014, 7 (58%) graduated within the prescribed two years and a further two (17%) took three years to graduate. The remaining three have not graduated and we have no knowledge of their intentions – they may well re-join the programme in future, which means that the split between the “> 3 Years” and “Not graduated” categories may still change in future.

The entries in the table for 2015 and 2016 are interpreted in a similar fashion. Of the 10 students that enrolled in 2017, 6 (60%) graduated in the prescribed two years, i.e. in 2018. The throughput for three years is not yet available at this time, so the remaining 4 (44%) are classified as “Not graduated”

Taken over the duration of the programme, an average of 59% of students have graduated within the minimum of two years has so far, with a maximum of 63% for students enrolled in 2015 and a minimum of 56% for students enrolled in 2016. In addition, the “TOTAL” line in the table shows that 67% of the enrolled students have graduated from the programme to date, with an average duration 2.1 years.

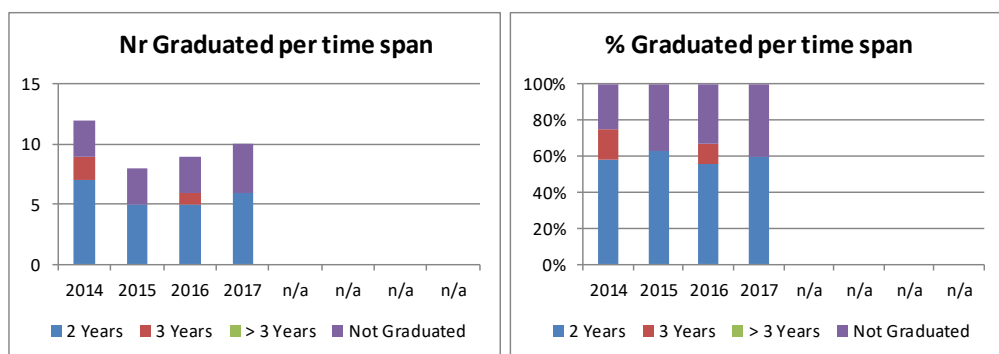


Figure 2

| Year first Enrolled | Number Enrolled | Nr graduated per time span | | | Total Graduated | Total not Graduated | % Graduated per time span | | | Total % Graduated | Total % not Graduated |
|---------------------|-----------------|----------------------------|----------|-----------|-----------------|---------------------|---------------------------|---------|-----------|-------------------|-----------------------|
| | | 2 Years | 3 Years | > 3 Years | | | 2 Years | 3 Years | > 3 Years | | |
| 2014 | 12 | 7 | 2 | 0 | 9 | 3 | 58% | 17% | 0% | 75% | 25% |
| 2015 | 8 | 5 | 0 | 0 | 5 | 3 | 63% | 0% | 0% | 63% | 38% |
| 2016 | 9 | 5 | 1 | n/a | 6 | 3 | 56% | 11% | n/a | 67% | 33% |
| 2017 | 10 | 6 | n/a | n/a | 6 | 4 | 60% | n/a | n/a | 60% | 40% |
| n/a | | | | | 0 | | | | | 0% | |
| n/a | | | | | 0 | | | | | 0% | |
| n/a | | | | | 0 | | | | | 0% | |
| n/a | | | | | 0 | | | | | 0% | |
| TOTAL: | 39 | 23 | 3 | 0 | 26 | 13 | 59% | | | 67% | 33% |

Average time (in years) to graduate = 2.1

Figure 3.1 and 3.2 show the race profile (broken down into African/Coloured/Indian/White) of the registered students, over time (Figure 3.1) as well as for 2018 only (Figure 3.2), with the latter broken down per academic year. Figure 3.3 shows the A/C/I/W split for all the graduates up to 2018.

Data Table

| | A | C | I | W | Tot |
|------|----|---|---|---|-----|
| 2012 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 0 |
| 2014 | 2 | 2 | 5 | 3 | 12 |
| 2015 | 5 | 2 | 5 | 6 | 18 |
| 2016 | 4 | 2 | 5 | 6 | 17 |
| 2017 | 7 | 1 | 2 | 7 | 17 |
| 2018 | 12 | 1 | 4 | 5 | 22 |
| | 0 | 0 | 0 | 0 | 0 |

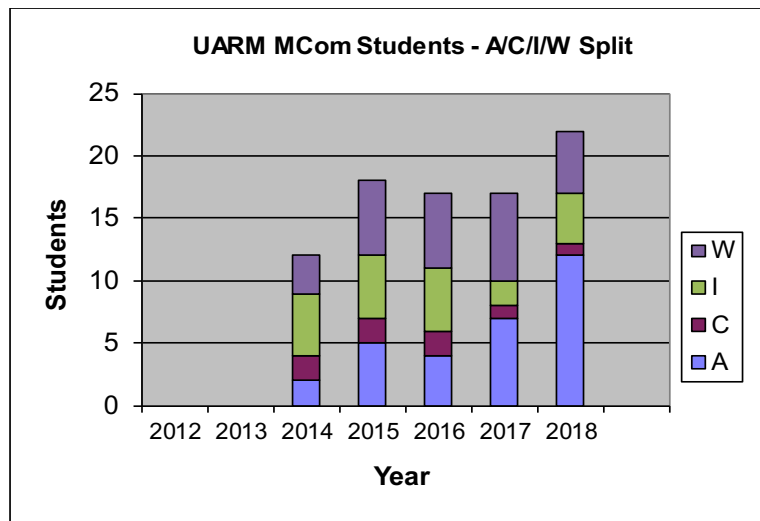


Figure 3.1

Data Table

| Acad Year | A | C | I | W | Tot |
|-----------|----|---|---|---|-----|
| MFirst | 11 | 0 | 3 | 1 | 15 |
| MScnd | 1 | 1 | 1 | 4 | 7 |
| Total: | 12 | 1 | 4 | 5 | 22 |

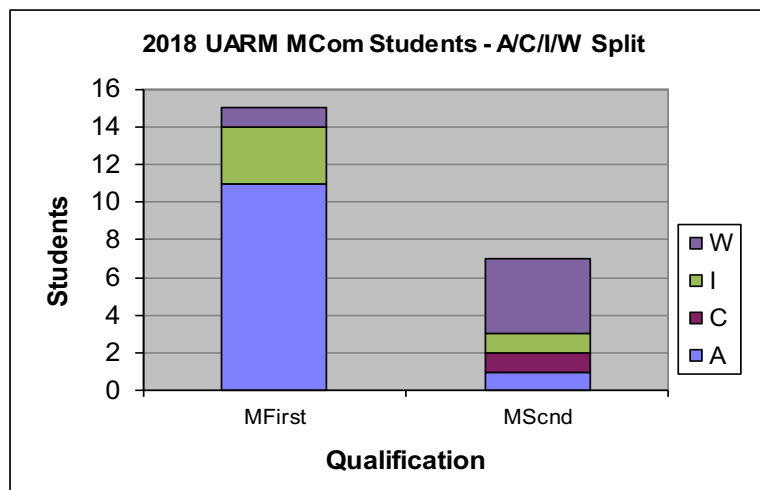


Figure 3.2

Data Table

| | A | C | I | W | Tot |
|--|---|---|---|----|-----|
| | 6 | 3 | 6 | 11 | 26 |

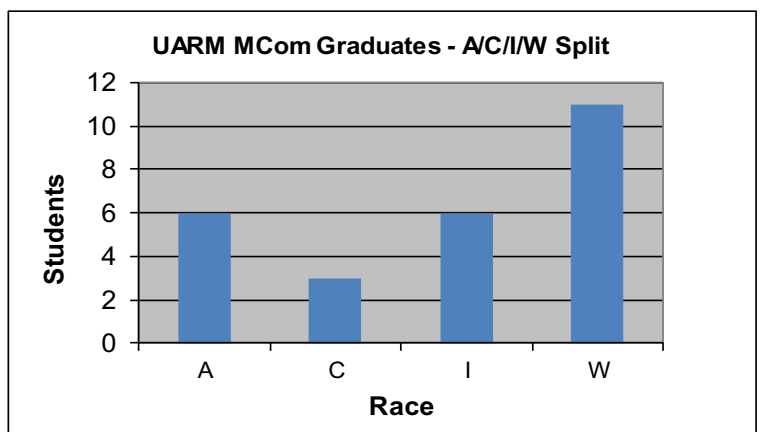


Figure 3.3

Figure 4.1 and 4.2 show the Male/Female profile of the active students, over time (Figure 4.1) as well as for 2018 only (Figure 4.2), with the latter broken down per academic year. Figure 4.3 shows the Male/Female split for all the UARM graduates up to and including 2018.

Data Table

| | M | F | Tot |
|------|----|----|-----|
| 2012 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 |
| 2014 | 10 | 2 | 12 |
| 2015 | 12 | 6 | 18 |
| 2016 | 11 | 6 | 17 |
| 2017 | 11 | 6 | 17 |
| 2018 | 8 | 14 | 22 |
| | 0 | 0 | 0 |

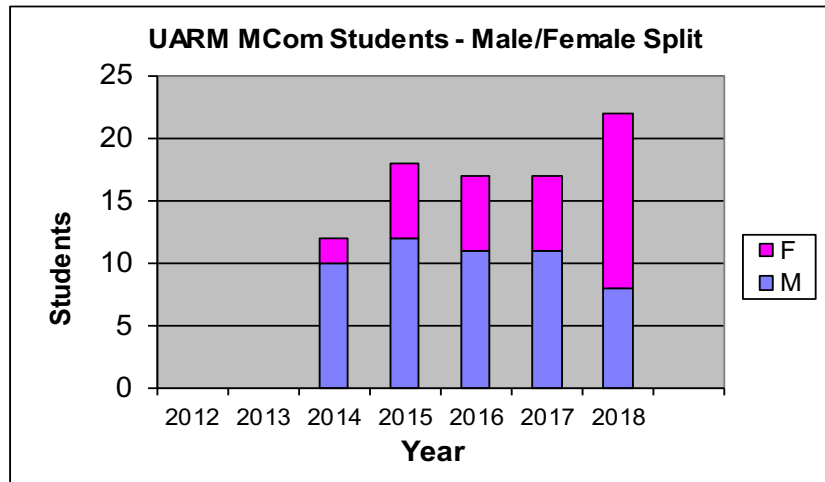


Figure 4.1

Acad Year
Data Table

| | M | F | Tot |
|--------|---|----|-----|
| MFirst | 2 | 13 | 15 |
| MScnd | 6 | 1 | 7 |
| Total: | 8 | 14 | 22 |

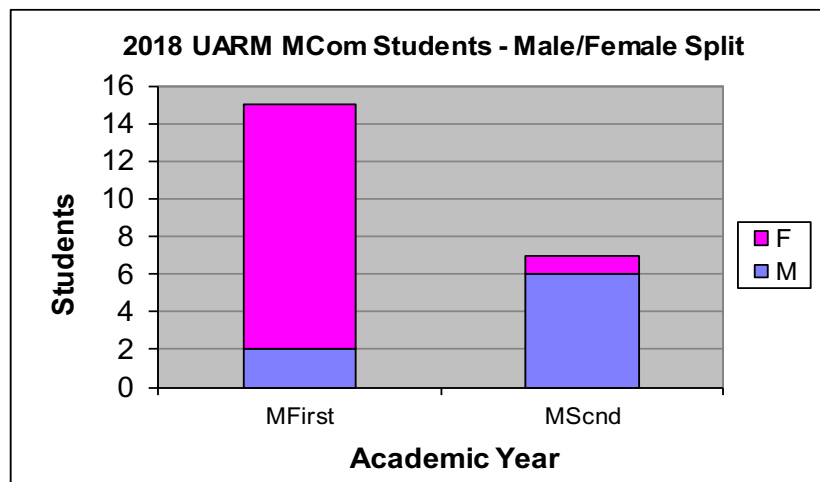


Figure 4.2

Data Table

| | M | F | Tot |
|--|----|---|-----|
| | 17 | 9 | 26 |

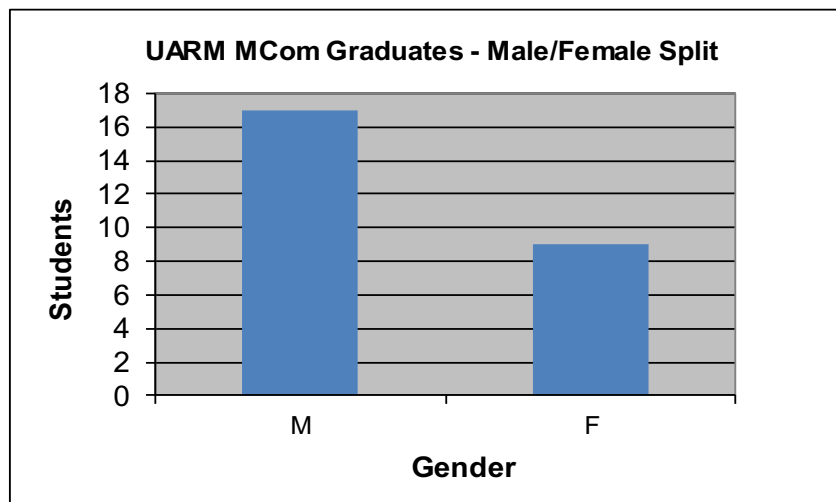


Figure 4.3

Figure 5.1 shows the age profile of the registered new intake master’s students over time, with the age taken as the candidate’s age at the start of the year when he/she first enrolled for the master degree. The graph is a so-called “box and whiskers plot”, which summarises the underlying distribution by using the minimum, first quartile, median, third quartile and maximum values.

It is apparent that there was a significant downward shift in the 2016 age distribution compared to the previous years, followed by a significant upward movement in 2017, followed by a downward shift in 2018 again.

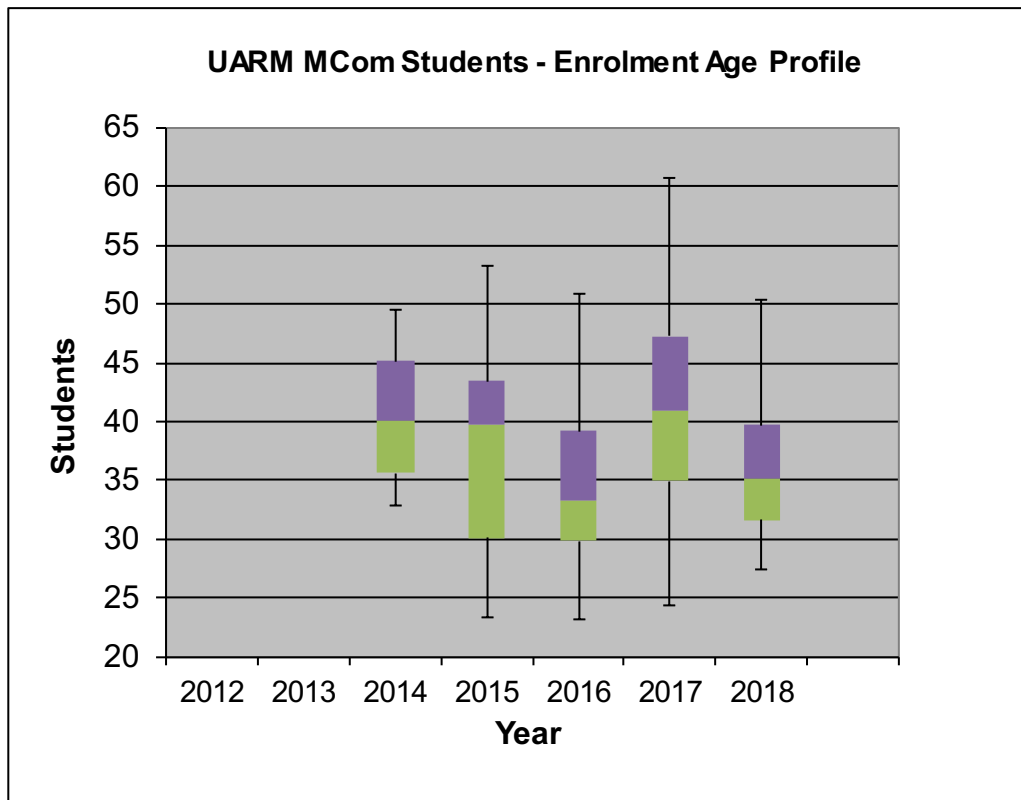


Figure 5.1

UARM MCom Students

Age of new intake at start of first year of enrolment

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------|------|------|------|------|------|------|------|
| #Students: | 0 | 0 | 12 | 8 | 9 | 9 | 14 |
| Mean: | - | - | 40.6 | 38.0 | 34.7 | 41.0 | 36.8 |
| Minimum: | - | - | 32.9 | 23.3 | 23.2 | 24.3 | 27.4 |
| Q1: | - | - | 35.7 | 30.1 | 29.9 | 34.9 | 31.7 |
| Median: | - | - | 40.1 | 39.7 | 33.2 | 41.0 | 35.1 |
| Q3: | - | - | 45.1 | 43.4 | 39.2 | 47.3 | 39.7 |
| Maximum: | - | - | 49.4 | 53.3 | 50.8 | 60.7 | 50.4 |

Figure 5.2 similarly uses a box and whiskers plot to show the enrolment age profile of all the masters graduates up to and including 2018. This graph shows that 50% of our 19 master’s graduates were between 33 and 44 years of age when they first enrolled, with a median age of 39.

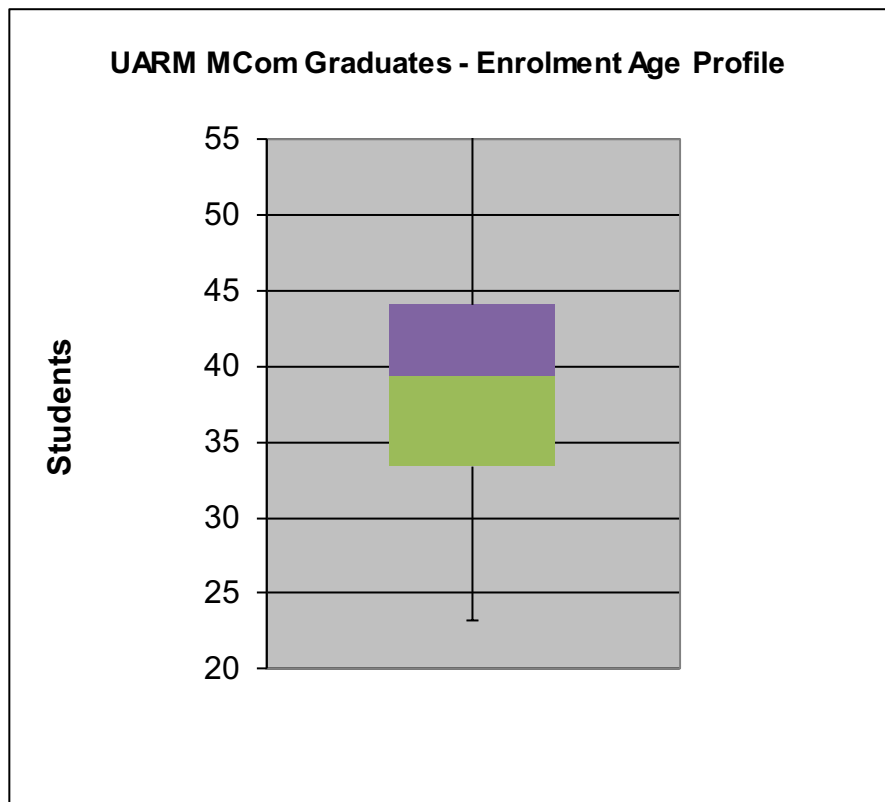


Figure 5.2

UARM MCom Students
Age of graduates at start of first year of enrolment

| | |
|-------------------|------|
| #Students: | 26 |
| Mean: | 39.3 |
| Minimum: | 23.2 |
| Q1: | 33.4 |
| Median: | 39.4 |
| Q3: | 44.1 |
| Maximum: | 60.7 |

Figure 6.1 shows the number of master’s graduates over time, Figure 6.2 the module marks profile for the 2018 master’s graduates and Figure 6.3 the average marks for the modules over time.

The relative consistency of the marks (in Figure 6.3) on the externally examined mini-dissertation (873) (two independent examiners per dissertation), against that of the module marks reflects the preparation of the students to do a research project during the modules, plus the hard work of the students and UARM staff members with the students during the students’ final research project.

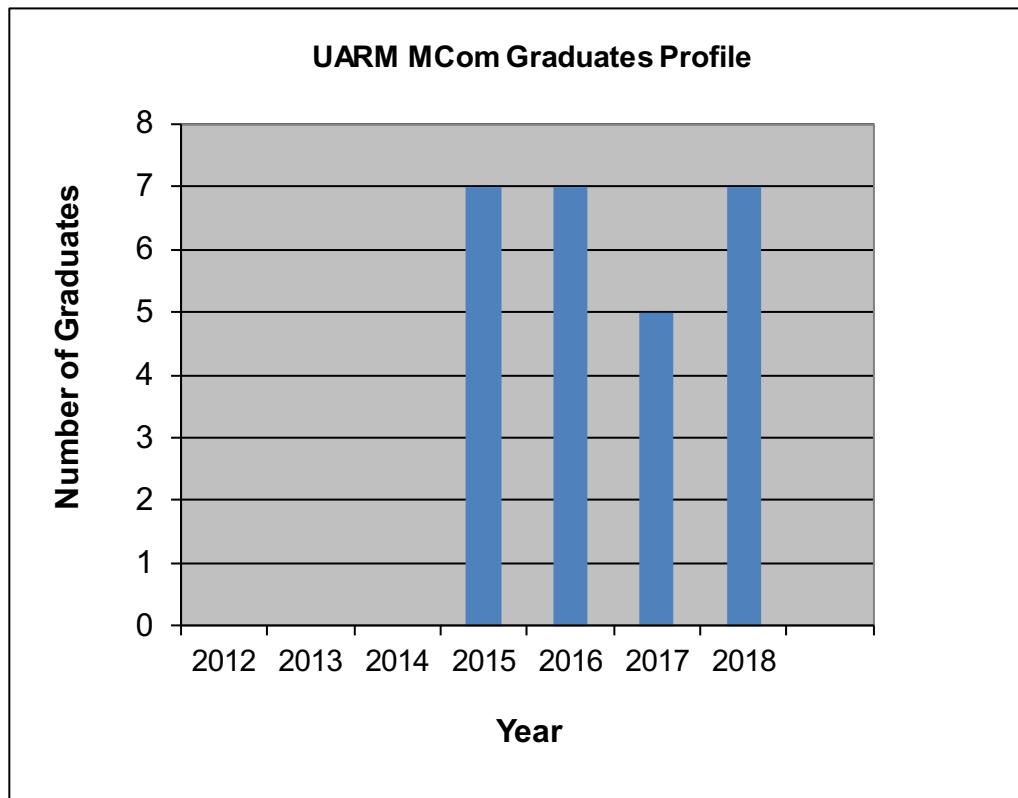


Figure 6.1

| UARM MCom Graduates | | | | | | | |
|---------------------|------|------|------|------|------|------|------|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| # MCom Grads | 0 | 0 | 0 | 7 | 7 | 5 | 7 |

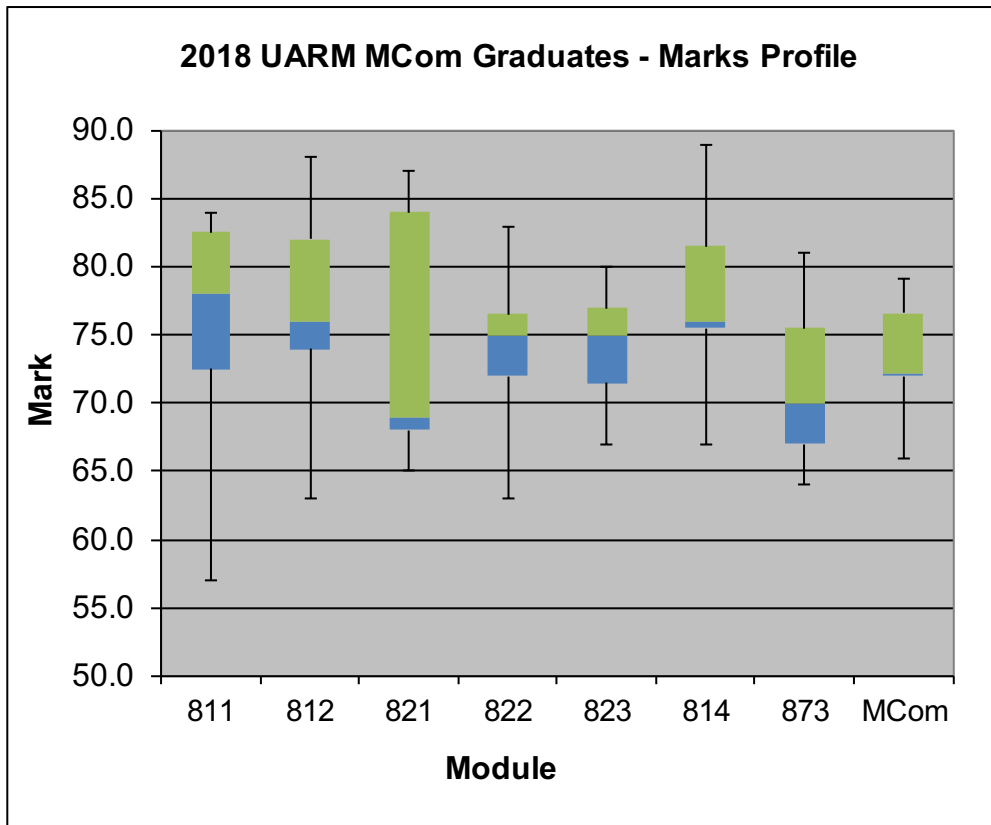


Figure 6.2

2018 UARM MCom Graduates - Marks Profile

Module number - UARM:

| | 811 | 812 | 821 | 822 | 823 | 814 | 873 | MCom |
|-----------------------|------|------|------|------|------|------|------|------|
| #Students | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| #Distinctions: | 5 | 5 | 3 | 4 | 5 | 6 | 2 | 3 |
| Mean: | 75.6 | 77.0 | 75.0 | 74.0 | 74.1 | 78.0 | 71.4 | 73.4 |
| Minimum: | 57.0 | 63.0 | 65.0 | 63.0 | 67.0 | 67.0 | 64.0 | 66.0 |
| Q1: | 72.5 | 74.0 | 68.0 | 72.0 | 71.5 | 75.5 | 67.0 | 72.0 |
| Median: | 78.0 | 76.0 | 69.0 | 75.0 | 75.0 | 76.0 | 70.0 | 72.0 |
| Q3: | 82.5 | 82.0 | 84.0 | 76.5 | 77.0 | 81.5 | 75.5 | 76.5 |
| Maximum: | 84.0 | 88.0 | 87.0 | 83.0 | 80.0 | 89.0 | 81.0 | 79.0 |

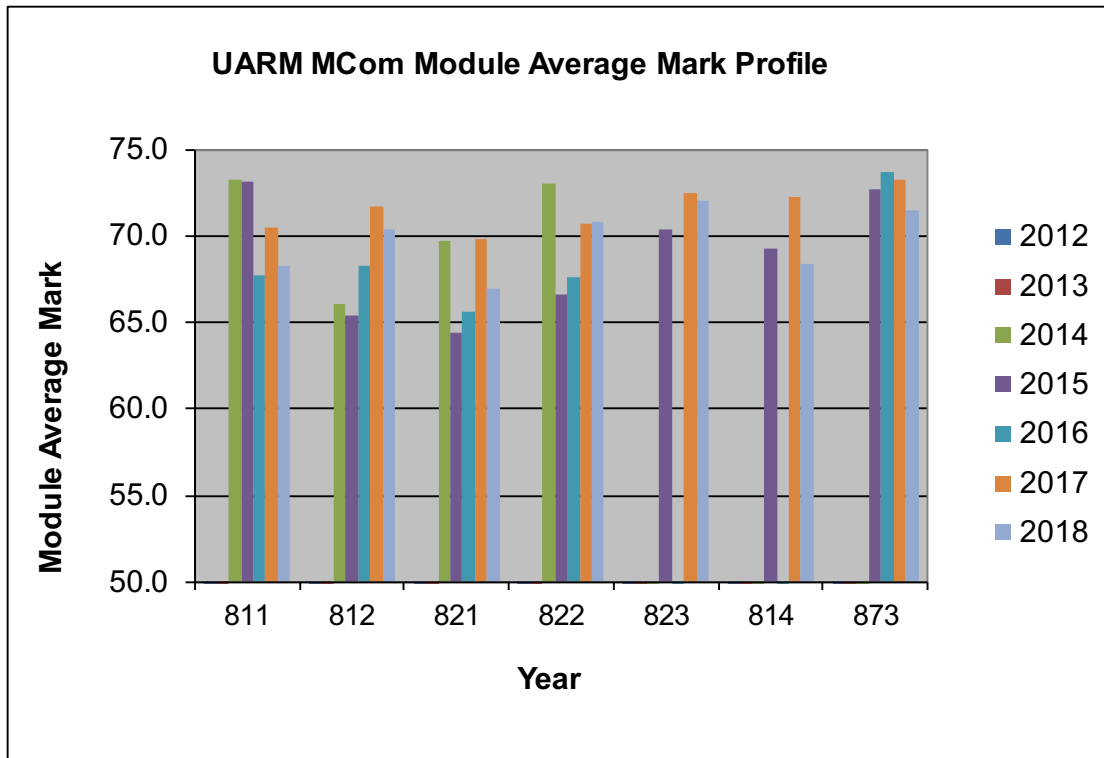


Figure 6.3

UARM MCom Average Marks per Module

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-----|------|------|------|------|------|------|------|
| 811 | | | 73.2 | 73.1 | 67.8 | 70.5 | 68.3 |
| 812 | | | 66.1 | 65.4 | 68.3 | 71.7 | 70.3 |
| 821 | | | 69.7 | 64.4 | 65.6 | 69.8 | 66.9 |
| 822 | | | 73.0 | 66.6 | 67.6 | 70.7 | 70.9 |
| 823 | | | | 70.4 | | 72.5 | 72.1 |
| 814 | | | | 69.3 | | 72.3 | 68.4 |
| 873 | | | | 72.7 | 73.7 | 73.2 | 71.4 |

Note that for this report, the 2016 marks for the 823 and 814 modules are shown as 2017 marks, as a result of the transition arrangement from the MCom Finance and Risk Management to the MCom in Applied Risk Management.

4. Training Profile (Dissertations)

All seven masters students who were registered for 873, completed their mini-dissertations and fulfilled all the requirements for the MCom degree in Applied Risk Management, as per Table 2 below.

Table 2: Completed Mini-Dissertations

| Document Nr | Title | Student, Supervisor(s) | Class. |
|-------------|---|--|--------------------------|
| UARM18a0020 | Risk culture insights from annual reports: a big six South African banking group study http://hdl.handle.net/10394/32236 | Cavaleros, G (George); Zaaiman, H (Hermien) | No |
| UARM18a0021 | Telecommunication risk cultures: an African head office-subsiidiary comparison http://hdl.handle.net/10394/32240 | Jeffries, M (Michael); Zaaiman, H (Hermien) | No |
| UARM18a0022 | Retail banking risk culture: a comparison of South African and Kenyan operations | Kekana, F (Fedile); Mulambya, E (Emmanuel) | Yes Until 31/12/20 |
| UARM18a0023 | Applying the Basel Committee on Banking Supervision risk culture guidelines: a credit risk investigation | Maritz, C (Corne); Zaaiman, H (Hermien); Erasmus, CM (Neels) | Yes Until 31/12/20 |
| UARM18a0024 | Cyber security risk culture: a telecommunications risk reporting study | Maritz, G (Gerrit); Mulambya, E (Emmanuel) | Yes Until 31/12/20 |
| UARM18a0025 | Management and non-management perception of risk culture in a South African retail bank | Moodley, N (Nigel); Goede, F (Fred) | Yes Until 31/12/20 |
| UARM18a0026 | Comparing senior and middle manager perceptions of risk culture in a mining company | van Wyk, J (Jaco), Goede, F (Fred) | Yes Until 31/12/20 |

The structured format of the document number UARMyyxnnnn is as follows:

yy = year of publication / complying with the requirements for the degree (15, 16, ...)

x = series code:

a = mini-dissertations; b = PhD theses; c = internal UARM research reports;

d = Management reports; e = Consultation reports

nnnn = sequence number, unique per series code (i.e. it does not reset per year)

As part of a continuous drive to ensure that our mini-dissertation research project focus on issues that have business relevance, we ask the line managers of the graduates upon completion of their studies to assess the business value-add of the projects. This is done on a 5-point scale, with 1 = Very little to 5 = Excellent. Table 2 below gives a summary of these assessments over time (note that we have only started requesting this feedback in 2017 and also that we do not receive response to all the requests)

Table 3: Mini-Dissertations Business Value-Add Assessments

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-----------------------|------|------|------|------|------|------|------|
| #Dissertations | 0 | 0 | 0 | 7 | 7 | 5 | 7 |
| #Assessed | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Mean: | - | - | - | - | - | 3.75 | 4.75 |
| Minimum: | - | - | - | - | - | 3.75 | 4.50 |
| Maximum: | - | - | - | - | - | 3.75 | 5.00 |

5. Research Profile

We focus on topics related to risk culture in our research. More detail on the rationale underlying this research focus is provided in Appendix A.

The masters mini-dissertations were all chosen to focus on assessing aspects related to the risk culture within the candidate's organisation. The mini-dissertations were delivered in article format. Experience has shown that the dissertations have to be reworked for submission for publication in accredited journals. This has resulted in a decision to focus on only the best master's articles to be reworked and submitted for publication in future. Due to high staff workload, the ex-students have to drive this process, which means that the probability of publishing this work is low.

Table 4 provides a summary of the 2018 staff research and management projects as well as conference papers in the Centre. Number 10390 was presented at the Risk and Uncertainty Conference, Amsterdam in June 2018 (<https://www.rucamsterdam.org/>). Number 10410 was presented at the DST Risk Research Conference at the CSIR in June 2018 (https://drive.google.com/open?id=1LHbq5Q_mWcWJdm1ZDHRvIMqhSivURZed) and number 10420 was a published internal management report.

Table 4: UARM Projects in 2018

| SeqNr | DocNr/Author | Category | Title/ Description | Collaborators |
|-------|--------------|-----------|---|---|
| 10400 | Goede, F | ConfPaper | Communication challenges from safety incident investigations - learnings from sociotechnical systems design | Goede, F (Fred) |
| 10410 | Zaaiman, H | ConfPaper | Which risk culture? On developing a value-of-risk approach for the financial services sector | Zaaiman, H (Hermien) |
| 10420 | UARM18d0003 | Mgmt | Centre for Applied Risk Management Annual Report 2017 | Erasmus, CM (Neels); Zaaiman, H (Hermien) |

Towards the end of 2018, the UARM research activities joined the Optentia Research Focus Area as a research program entitled "Enhancing Risk Culture", with the goal of "focusing on research on

contemporary risk-culture-related issues in public and private sector organisations, and specifically on how to improve active consideration of risk when decisions are made” See <http://www.optentia.co.za/unit.php?unitid=NA%3D%3D> for more details.

6. International Profile

Two of the academic staff members are studying towards their PhDs, one at UARM and one at Wageningen University in the Netherlands.

Staff studying internationally, as well as appointment of International academics as extraordinary professors in the programme¹, support internationalisation as propagated by the DRAFT POLICY FRAMEWORK FOR THE INTERNATIONALISATION OF HIGHER EDUCATION IN SOUTH AFRICA (2017)

Other notable international contacts that UARM has established are:

- Prof Gert Jan Hofstede from The Wageningen Univ and Research (via Fred Goede PhD), appointed extraordinary professor Oct 2018;
- Prof Theo Kocken (Cardano and Vrije Univ Amsterdam), extraordinary professor since 2013;
- Prof Marise Born (Erasmus Univ Rotterdam), appointed extraordinary professor Oct 2018;
- Prof Henk van der Flier (Vrije Univ Amsterdam), appointed extraordinary professor Oct 2018;
- Prof Jochen Runde (Judge Business School, University of Cambridge), acting as examiner;
- Wijnand Nuijts (Head of the Expert Centre for Governance, Behaviour and Culture at De Nederlandsche Bank), for possible cooperation in the further development and testing of the UARM Risk Culture Scale;

7. Income

Figure 7 below shows the income generated by the Centre for masters and PhD students, broken down into registration fees, study fees, input subsidy and output subsidy. The total for 2018 amounted to R2.1m, with the cumulative amount since inception equal to R6.7m. Note that the input and output subsidies apply with a two year lag, i.e. we will receive the input subsidies for the 2015 intake in 2017.

¹ Prof Theo Kocken from the Vrije Universiteit in the Netherlands is our current extra-ordinary professor and teaches in the UARM Behavioural Risk module (he has had a long-standing relationship with UARM)

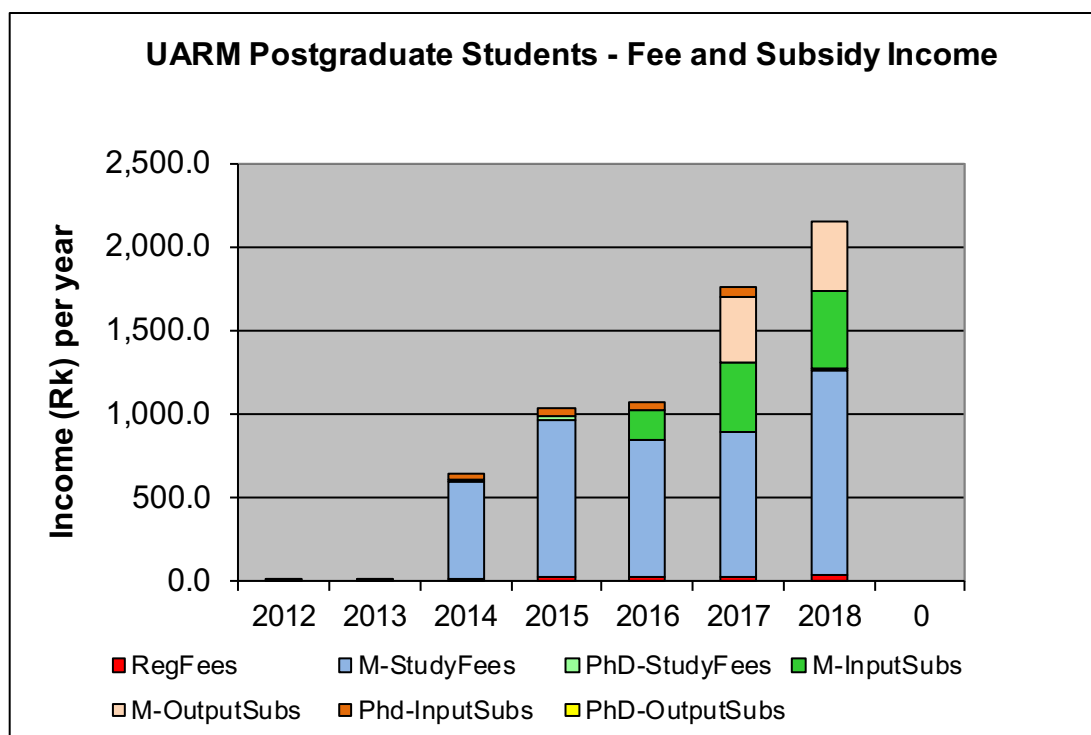


Figure 7

UARM Postgraduate Students Income (Rk)

| | Reg Fees | MCom Study Fees | PhD Study Fees | MCom Input Subs | MCom Output Subs | PhD Input Subs | PhD Output Subs | Total |
|---------------|--------------|-----------------|----------------|-----------------|------------------|----------------|-----------------|----------------|
| 2012 | 1.1 | 0.0 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 10.7 |
| 2013 | 1.2 | 0.0 | 11.6 | 0.0 | 0.0 | 0.0 | 0.0 | 12.8 |
| 2014 | 17.7 | 575.0 | 12.8 | 0.0 | 0.0 | 38.3 | 0.0 | 643.8 |
| 2015 | 28.3 | 941.8 | 14.0 | 0.0 | 0.0 | 50.3 | 0.0 | 1,034.3 |
| 2016 | 25.3 | 819.3 | 0.0 | 175.2 | 0.0 | 51.3 | 0.0 | 1,071.1 |
| 2017 | 27.3 | 862.1 | 0.0 | 414.4 | 395.7 | 61.3 | 0.0 | 1,760.8 |
| 2018 | 39.5 | 1,219.1 | 15.4 | 465.4 | 408.5 | 0.0 | 0.0 | 2,147.9 |
| 2018 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total: | 140.4 | 4,417.3 | 63.3 | 1,054.9 | 804.2 | 201.1 | 0.0 | 6,681.3 |

- Notes: 1) Input subsidy is only received 2 years after the year of enrolment
 2) Output subsidy is only received 2 years after the year of graduation
 3) Output subsidy consists of Teaching and Research - the total is reported above

Table 4 shows the registration and study fees applicable to the masters and PhD programme since inception. Note that the MCom total column is calculated as the total paid for the qualification by a student who completed the degree in that year².

Table 4: Student Registration and Study Fees

| | MCom | | | MCom Total | PhD | PhD | PhD Total |
|-------------|-------------|------------------|------------------|----------------|-------------|---------------|---------------|
| | Reg Fees | Study Fees M1 | Study Fees M2 | | Reg Fees | Study Fees | |
| 2012 | | | | | 1,100 | 9,555 | 10,655 |
| 2013 | | | | | 1,230 | 11,590 | 12,820 |
| 2014 | 1,360 | 50,000 | 50,000 | 0 | 1,360 | 12,805 | 14,165 |
| 2015 | 1,490 | 54,620 | 54,625 | 107,475 | 1,490 | 13,990 | 15,480 |
| 2016 | 1,490 | 54,620 | 54,625 | 112,225 | 1,490 | 13,990 | 15,480 |
| 2017 | 1,610 | 55,530 | 48,585 | 106,305 | 1,610 | 15,110 | 16,720 |
| 2018 | 1,740 | 59,970 | 52,465 | 111,345 | 1,740 | 15,395 | 17,135 |

Finally, Table 5 shows the total income generated by the Centre since 2012³. The teaching income is the same as in Table 4, and the consultation income has been subjected to the standard NWU profit-sharing model, where 20% of the invoiced amount is allocated to the university.

Table 5: UARM Total Income (R'000)

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------|-------------|-------------|--------------|----------------|----------------|----------------|----------------|
| INCOME | | | | | | | |
| - Teaching | 10.7 | 12.8 | 643.8 | 1,034.3 | 1,071.1 | 1,760.8 | 2,147.9 |
| - Research (DST) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 70.0 | 90.0 |
| - Consultation | 25.7 | 32.4 | 7.6 | 7.0 | 77.6 | 15.5 | 0.0 |
| Total Income | 36.3 | 45.2 | 651.4 | 1,041.3 | 1,148.7 | 1,846.2 | 2,237.9 |

² For example, the total study fee for a student who registered for the first time in 2014 and graduated in 2015 was R107,475 calculated as 2014 Reg Fees + 2014 M1 Study Fees + 2015 Reg Fees + 2015 M2 Study Fees.

³ Note that this is not a true Income Statement in the sense that capital expenditure is excluded, consultation income excludes interest, and it is accounted for in the year that it occurred.

8. Highlights

During 2018, the Centre achieved the following notable highlights:

- Class of 2018: All seven students passed their mini-dissertations, with three distinction.
- Hermien Zaaiman presented a paper on “Which risk culture? On developing a value-of-risk approach for the financial services sector” at the DST Risk Research Conference in July 2018, which resulted in a significant strengthening of UARM’s local industry network.
- Fred Goede presented a paper on Communication challenges from safety incident investigations at the Risk and Uncertainty Conference in Amsterdam in June 2018.
- The successful merge into the Optentia Research Focus Area will provide a significant increase in support for the UARM research programme, which should lead to a concomitant improvement in research outputs.

9. Challenges

The achievements mentioned in the previous section were counterbalanced by the following challenges:

- UARM team work overload: Little time for UARM team members to do own research leading to concerns about own academic career development;
- The risk culture research focus has proved to be an exciting and potentially business value-adding focus, but capacity to meet expectations is a problem.

10. The Road Ahead

The following are the main objectives of the Centre for 2018:

- Building the UARM Risk Culture research programme, including publishing papers from research projects;
- Nurturing potential PhD candidates (however, having only one permanent staff member with a PhD on the UARM team, who also manages the programme, severely limits our capacity to supervise PhD studies) ;
- Appoint suitable contract and (if possible) full-time staff members to strengthen the team.

APPENDICES

A: External Collaborative Networks

Because of the discipline-independent nature of the UARM training and research we have had students with different academic backgrounds but with an established interest and experience in risk management attracted to the programme. The profile of guest lecturers is similarly varied.

Table B1 below gives a breakdown 2018 of the MARM graduates and guest lecturers per economic sector up to 2018⁴. This is followed by Tables B2 depicting the role profiles of the graduates and similarly for the guest lecturers in Table B3.

Table A1: MARM Graduates and Guest Lecturers per Economic Sector

| | MARM Graduate | MARM Graduate & Guest Lecturer | MARM Guest Lecturer | Grand Total |
|----------------------|----------------------|---|----------------------------|--------------------|
| Communications | 3 | 1 | 1 | 5 |
| Energy | 1 | | 1 | 2 |
| Fin and Bus Services | 11 | | 7 | 18 |
| Logistics | | 1 | | 1 |
| Mining | 1 | | | 1 |
| Other | 2 | | 1 | 3 |
| Public Sector | 4 | 1 | | 5 |
| Tourism | 1 | | | 1 |
| Grand Total | 23 | 3 | 10 | 36 |

⁴ The table also shows that some of the UARM graduates have maintained their relationship with UARM as guest lecturers

Table A2: MARM Graduates Organisational Roles⁵

| | MARM Graduate |
|---|----------------------|
| Asst Mgr: Group Risk & Regulatory | 1 |
| Asst Mgr: Insurance Risk | 1 |
| Business Owner & Managing Director | 1 |
| Compliance and Risk Manager | 1 |
| Credit Risk Basel Analyst | 1 |
| Director: Risk Management | 3 |
| Executive Head: Business Risk Management | 1 |
| General Manager: ERM, Transnet | 1 |
| GM: Risk, Compliance and Assurance | 1 |
| Managing Executive: Corporate and Security Mgmt | 1 |
| Operational Risk Manager | 1 |
| Principal Specialist: Governance | 1 |
| Risk Coordinator: ERM | 1 |
| Risk Integration Manager | 1 |
| Risk Manager | 3 |
| Senior Manager: Operational Risk | 3 |
| Senior Specialist: ERM | 1 |
| Specialist Manager: Credit Risk | 1 |
| Technology Security | 1 |
| Retired | 1 |
| Grand Total | 26 |

Table A3: MARM Guest Lecturer Organisational Roles

| | MARM Guest Lecturer |
|--|----------------------------|
| Auditor | 1 |
| CEO: Compliance Institute Southern Africa | 1 |
| Chief Risk Advisor: IRMSA | 1 |
| Chief Risk Officer: Vodacom | 1 |
| Consultant: Project Risk Analysis and Planning | 1 |
| CRO: MMI Holdings | 1 |
| Director: Risk Management, National Treasury | 1 |
| Enterprise Risk Manager: Sasol | 1 |
| General Manager: ERM, Transnet | 1 |
| Head of IA: Models, Credit & FCC, FirstRand Group | 1 |
| Head: Model Risk Management, Retail Credit, FirstRand | 1 |
| Managing Executive: Corporate and Security Mgmt, Vodacom | 1 |
| Independent | 1 |
| Grand Total | 13 |

⁵ The MARM graduates that have become guest lecturers are counted in both Tables A1 and A2.

B: Previous Student Comments

Fedile Kekana, Assistant Manager: Insurance Risk, Absa (Class of 2018)

'After a rigorous application process I have been selected to participate on the first phase of a Compliance Rotation Programme. I must say what really made me stand out (this was a comment from the recruiting team) was the survey study I conducted in the organisation. The qualification is really opening doors for me in the organisation. I appreciate the effort the UARM team has been putting into the programme, it is indeed yielding fruits for us. I just wanted to share this great news. I believe I will learn a lot from this programme.

Once again a BIG THANK YOU for all of your efforts!!'

Jaco van Wyk, Former Chief Risk Officer, Fraser Alexander (Class of 2018)

'Well done to all. A very good outcome considering the overseas marking of some of the dissertations. Thanks to the UARM team for challenging our thinking, giving us new insight and teaching us to write up our dissertations. Thanks to all my class mates for sharing your risk worlds, these learnings have truly shaped my risk thinking'.

Bongani Monareng, Risk Coordinator: ERM, NHBRC (Class of 2017):

'Firstly, I would like to say 'THANK YOU' to Prof Hermien, the NWU UARM and Kerlick Teams for all the support and guidance provided throughout the programme. May God bless you all. Secondly, I would like to CONGRATULATE all my 2017 classmates, most importantly Malora on her big achievement. Well done!!! Indeed, hard work does pay off eventually.'

Roland Carries, Risk Manager, FirstRand (Class of 2017):

'Thank you Prof, Emmanuel, Fred, Helei, Neels, Sonja for the guidance and making this journey memorable and rewarding. Grateful also for the assistance from the two smiling, pencil carrying editorial assassins aka the Kerlick team. Please pass my deep gratitude to them.'

Wilna Meiring, Managing Executive: Corporate Risk and Security Mgmt, Vodacom (Class of 2016):

'I am still astounded at how much I grew and learned during the past two years. The masters gave me so much more than I thought it could. Unbelievable at how positive it assists in my work. We have changed our whole approach to ERM in business and this makes me so excited.'

Eddie Lindeque, Class of 2016 graduate and General Manager: Enterprise Risk Management, Transnet:

'Dear Hermien

I just want to thank you for opening up a new world of behavioural risk management to me this year. It was a good learning experience and I have grown, even as a mature ERM specialist, in knowledge and what academia has contributed to the science of risk management. All the knowledge sharing and differences of opinion added the necessary spice to the learning experience.'

Other student responses received to the question: "What did you like about the course?"

- *"I liked the course because it is applied and research based. It allows me to conduct research on current issues and that I am to apply those in my working environment"*
- *"The content The invited speakers on specialised areas The environmental scanning project was extremely useful"*
- *"Case studies that are dealt with during the lectures, gives us an opportunity to have meaningful discussions of real life examples"*
- *"I enjoyed the course content, for most parts it was practical and refreshing and not just text book styled and theoretical. The international angle with the colleagues from Holland was the stand out learning points to date"*
- *"The practical nature of it. I had to opportunity to perform various exercises that I would never have been able to do at work. I also like that the presenters also have "practical work" experience and that they are not pure academics. There is a big difference between theory and practice. I also like the small class and the very personal feedback after each assignment"*
- *"The networking and sharing of information. Especially where we can see and experience how other people implemented the theory. That I could make the case studies practical and add value to my current work"*

C: Other Stakeholder Comments

Bafana Mabale, Manager: Enterprise Risk Management, North-West Development Corporation
(following a workshop on risk culture conducted with them in January 2018):

'Dear Prof Zaaiman

On behalf of the CEO, Management and the staff in general, the NWDC hereby wishes to send our thanks and gratitude for a captivating interactive workshop on risk management that you presented on 25 January 2018. The knowledge and the information that you imparted is certainly going to be a helpful tool in the day to day business activities of the NWDC.

We feel truly honoured to have associated with you in this venture and we hope you will accede to similar requests in future should we need to be invigorated again'

National Treasury, following a workshop on risk culture conducted with them in August 2017:



Enquiries: Bheki Gutshwa Tel: (012) 395 6694 Fax: (012) 315 5890 e-mail: bheki.gutshwa@treasury.gov.za

Prof Hermien Zaaiman
Associate Professor Risk Management
Manager: Centre for Applied Risk Management
Faculty of Economic and Management Sciences
North West University
Vaal Triangle Campus
South Africa

APPRECIATION OF YOUR PARTICIPATION AT THE RISK MANAGEMENT FORUMS

The Office of the Accountant General would like to thank you for your insightful presentations on *"Risk Management Professionalisation"* and *"The Components of Risk Culture to be considered when assessing a Risk Culture"* at the Risk Management Forum for Departments and Non-Delegated Municipalities and the Risk Management Forum for Public Entities, held on 31 August and 07 September 2017 respectively.

The presentation made a valuable contribution in strengthening the delegates' understanding of the risk management culture challenges faced in their institutions, as well as the great interest shown by risk officers in professionalising risk management. This is substantiated by the responses from the delegates' evaluation of the forums, which exhibits an overwhelming level of appreciation on the knowledge imparted by you.

A total of one hundred and seventeen (117) delegates attended the two forums. Our general expectation is that the knowledge gained in such forums will be outspread to a much wider audience in their respective areas of work.

Your availability to participate in our future initiatives will be much appreciated.

Thank you and regards

A handwritten signature in black ink, appearing to be "BG", written over a horizontal line.

Mr Bheki Gutshwa
Risk Management Support
Office of the Accountant-General
Date: 14 September 2017

D: Photo Gallery

- **2019 Apr 15:** UARM Graduation - Class of 2018, comprising of seven graduates.



Front: Emmanuel Mulambya, Michael Jeffries (Graduate), Dr. Elisabeth Lickindorf, Corne Maritz (Graduate), Nigel Moodley (Graduate), Fedile Kekana (Graduate), Prof. Hermien Zaaiman
Back: Jaco van Wyk (Top Graduate), Gerrit Maritz (Graduate), Prof. Neels Erasmus, Fred Goede, Dr. Graham Baker

- **2019 Apr 15:** Jaco van Wyk won the prize as the top student of the Class of 2018.



- 2018 Nov: UARM joins the Optentia Team



- 2018 Nov 19: Extraordinary professorial acceptance lecture by Prof. Gert Jan Hofstede.



Front: Dr. Elisabeth Lickindorf, Dr. Sonja Gilliland, Prof. Hermien Zaaiman, Prof. Gert Jan Hofstede, Prof. Linda du Plessis, Prof. Herman van der Merwe, Prof. Lucius Botes

Back: Fred Goede, Emmanuel Mulambya, Dr. Graham Baker, Prof. Ian Rothman, Prof. Neels Erasmus

- 2018 Oct: Annual screening of the Boom-Bust-Boom movie as part of the Behavioural Risk Management contact session

