MAF010 Missing Persons from the Population of Unit Trust Investors

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Abstract

Collective investment schemes ('unit trusts') are a popular vehicle to research owing to the vast data available on its participants. However, an inherent sampling bias is present in these populations of investors. This paper analyses survey responses from 416 individuals in an attempt to determine the characteristics of individuals who are not invested in unit trusts and reports the lack of younger investors and investors with lower self-assessed levels of financial knowledge within this grouping. Furthermore, the reasons for not investing in unit trusts appear to be a combination of limited resources, lack of understanding and the preference to invest in alternative ways.

The preference for equity only unit trusts was also assessed, revealing the majority of respondent's avoiding this fund choice are doing so based on the decisions of someone investing on their behalf, whilst the heightened risk of this fund type also came into play.

Keywords: Collective investment schemes, unit trusts, equity, young investors, financial knowledge, risk aversion

INTRODUCTION

With collective investment schemes ('unit trusts') being an increasingly popular mode of investing, often accompanied with vast amounts of researchable data on their client base, the characteristics and behaviour of unit trust investors has attracted much research over time. However, this research contains an inherent limitation in its sampling bias. Whilst this does not necessarily limit the results pertaining to such research, it is important to understand this limitation. The purpose of this paper is to highlight any potential 'missing persons' from such data on unit trust investors.

LITERATURE REVIEW

Unit trusts explained

A collective investment scheme ('unit trust') can be defined as "the pooling of investor's funds into a collective investment" (Correia et al. 2010). These funds are then invested by fund managers in shares, bonds, money market instruments and other assets allowing investors a proportional share of the underlying assets (Van Wyk et al. 2012).

Unit trusts are often seen as an effective and simple way of saving money, whilst obtaining a diversified investment portfolio concurrently and offer some advantages to the investor, such as:

- Unit trusts are easy to access and exit: there's no minimum investment period and large sums are not required to be invested in them (Sanlam Investments 2014).

- The money is generally safe: Protection is offered by the regulations of the Collective Investment Schemes Control Act (CISCA) and the fund manager cannot access the cash owing to the legal structure thereof (Cameron 2014).
- It assists in diversifying the investors' investments.
- Professional fees are relatively low given the level of active management.
- There is complete transparency: Prices are published daily and performance figures are publicly available (Cameron 2014).

Growth in the industry attracting research

The large growth in the unit trust industry has made the area an attractive one to research. The reason for this growth in the industry has been cited to be combination of investors' degree of wealth and education, supply-side competition, and the relaxation of laws and industry regulations (Khorana et al. 2005). Much research ranging from the characteristics of investors to their decision making has been completed and published.

Assessing 11 817 individual investors at a South African investment house, Willows and West (2015) found women to earn a higher return on a risk-adjusted basis, owing to the heightened trading activity of men. These results were supported by Marszalek (2014) and by Junor (2014). However, Junor's (2014) results were only confirmatory when investigating a period before the financial crisis, but not after the financial crisis. These results were hypothesised by Junor (2014) to be owing to the heightened presence of male investors in riskier funds.

Dorn and Huberman (2005) surveyed unit trust investors and noted self-reported risk aversion was the greatest factor explaining investor behaviour, while Wang (2011)'s online survey revealed income, gender, knowledge and experience were important influencers on the younger generations' investment behaviour. Capon et al. (1996) investigated how investment decisions were made by unit trust investors and Alexander, Jones and Nigro (1998) documented the need for improved financial literacy of unit trust investors. These studies reflect a small representation of the literature on unit trust investors.

'Who' are these investors

According to modern finance theory, when investors make investment decisions they look at the risk, return and the covariance of returns with other assets in their portfolio (Naidoo 2014). However, Capon, Fitzsimons and Prince (1996) state this to be a "naïve vehicle for understanding investment decisions" as there are more subtle factors that influence investment decisions. Understanding these factors would assist in identifying the characteristic of investors choosing unit trusts as their preferred method of investing.

Willows (2013) found that close to 40% of the population of individual unit trust investors at a South African investment house were over the age of 60 years and noted an increased bias towards older participants amongst Willows (2013)'s population. Using a smaller population of investors at a different South African investment house, Junor (2014) found the largest proportion (16%) of the population to be between 60 and 70 years of age. An increasing number of investors were noted as the age groupings increased, up until 70 years of age. This research suggest a bias towards older investors amongst unit trust investors.

Looking at gender, neither Willows and West (2015), Marszalek (2014) nor Junor (2014) found any material differences in the representation of each gender within the sample. This suggests less of a gender bias amongst unit trust investors.

Assessing the financial knowledge of unit trust investors, Capon, Fitzsimons and Prince (1996)'s survey based study revealed two groups: those who were highly knowledgeable and informed, and those who were naïve. Only 25% of respondents were found to be familiar with their unit trust investment style and merely 27.7% were aware of the domestic vs. international nature of their investments (Capon, Fitzsimons & Prince, 1996). Financial illiteracy is widespread with women being less financially knowledge than men, and the young and old being less financially knowledgeable than the middle-aged (Lusardi & Mitchell 2011).

Opting out

In an attempt to understand the characteristics of investors choosing to invest in unit trusts, awareness of the disadvantages to investing in a unit trust must be understood. These include:

- Investments are generally medium to long-term investments, which does not always suit all investors.
- Some limitations are imposed as fund managers have to follow investment strategies stated on the prospectus.
- There are certain costs in addition to what would be payable if an investor were investing directly (de Lange 2009).

These barriers could potentially deter investors that have alternative investment strategies in mind, are aware of the costs involved, or are looking for more short term market exposure. Furthermore, the significant losses that were suffered in 2008 and 2009 are still fresh in the minds of investors (Lamprecht 2013), introducing potentially heightened risk aversion amongst investors. If unit trusts are deemed to be a risky type of investment, they could be viewed as an unsuitable investment vehicle by risk-averse investors.

Conclusion

The unit trust industry is a growing one that has attracted much research over the years. Much literature has been published on the characteristics and behaviour of unit trust investors, revealing notable results on the financial knowledge and decision making processes of these investors. However, studies have revealed potential biases in these populations, particularly towards older participants. These need to be considered when concluding on the results of these research pieces.

DATA AND METHODOLOGY

Research questions

The literature review suggests that unit trust investors are potentially older investors and that the deemed risk or cost of these investment vehicles might be barriers to investing in them. The research questions for this paper are as follows:

1. What are the characteristics of individuals not invested in unit trusts?

2. What are the reasons that these individuals do not invest in unit trusts?

These same two research questions will be repeated to focus on South African equity only unit trusts as well.

Research Strategy

An online survey using Qualtrics was developed and cognitively tested by 10 people to evaluate the wording of the survey, its design and to help ensure the completeness of responses received from participants (Presser et al., 2004; Willimack et al., 2004). The suggestions from this testing were then analysed and, where appropriate, changes were made to update the original questionnaire.

Respondents were asked if they directly invest (i.e. not via a pension fund, retirement fund or provident fund) in a South African unit trust. If they selected ‘no’, the reasons therefore were garnered. Further questions discerning socioeconomic characteristics of the respondents as well as their self-assessment of their financial knowledge were also obtained. The self- assessment of financial knowledge was used as a proxy for actual measured financial knowledge, as Lusardi and Mitchell (2007) found the one to be positively correlated to the other.

Lastly, respondents were also asked if they were directly invested in South African equity only unit trusts i.e. a unit trust which only invests in shares of South African companies. The reason for this was to add to current literature on the risk preference of unit trust investors. Once again, if ‘no’ was selected, the reasons therefore were interrogated.

Incremental sampling was used to obtain as many responses to the survey as possible and to improve the robustness of the results. The first sample was staff members, both academic and admin staff, at the University of Cape Town. The next sample included other universities that agreed to partake in the study, namely: Stellenbosch University, the University of the North West (NWU) and the Nelson Mandela Metropolitan University (NMMU). Ethical clearance was obtained at all participating universities.

Research Process

In total, over 6 000 participants were contacted at the participating universities via email with a link to the online survey. An inherent bias is always present when employing a sampling method, however, although this sample was limited to university employees, the reach was across academic and admin staff allowing a broad spread in the sample, both in education, age and income levels.

The total number of participants that completed the survey satisfactorily for purposes of statistically testing was 416. The breakdown of these 416 respondents by socioeconomic characteristics is shown in Table 1. Racial groupings are shown as presented in the survey, with 'Coloured' respondents being defined as those of mixed-race descent.

Table 1: Breakdown of total sample by socioeconomic characteristics

	20-30 yrs	**31-40 yrs**	**41-50 yrs**	**51-60 yrs**	**60+ years**	
Age (n=376)	33% (n=123)	24% (n=89)	17% (n=63)	17% (n=65)	10% (n=36)	
	Male	**Female**				
Gender (n=416)	51% (n=211)	49% (n=205)				
	Black	**White**	**Coloured**	**Indian**	**Other**	**Declined**
Race (n=416)	16% (n=68)	71% (n=295)	5% (n=19)	2% (n=10)	1% (n=5)	5% (n=19)
	English	**Afrikaans**	**isiZulu**	**isiXhosa**	**Other**	
Language (n=416)	31% (n=129)	53% (n=222)	2% (n=9)	2% (n=8)	12% (n=48)	
	Single	**Married**	**Separated**	**Divorced**	**Widowed**	**Living with partner**
Marital (n=416)	33% (n=138)	54% (n=226)	0% (n=2)	4% (n=18)	2% (n=7)	6% (n=25)
	No children	**Children**				
Children (n=416)	50% (n=209)	50% (n=207)				
	Poor	**Fair**	**Good**	**V. Good**	**Excellent**	
Self-Assessment (n=401)	30% (n=122)	42% (n=170)	19% (n=76)	5% (n=22)	3% (n=11)	

Not all respondents provided their date of birth (age) and their self-assessment rating of their financial knowledge, explaining their sampling totals of less than 416. For *statistical testing going forward, smaller subsets of racial and language groupings will be combined. Furthermore, marital status will be divided into two groups i.e. 'married' (including 'married' and 'living with a partner') and 'single' ('single', 'separated', 'divorced' and 'widowed').*

As the socioeconomic characteristics of the entire population of 6 000 was unavailable, it is not possible to weight the sampled population. However, the noticeable majority of 'White', 'Afrikaans', 'Married' respondents is apparent. Furthermore, there appears to be more younger respondents than older respondents and most respondents rate themselves as having only 'fair' or 'poor' financial knowledge. No noticeable differences amongst the genders or the presence of children are noted. These findings will be borne in mind in making conclusions going forward.

RESULTS

What are the characteristics of individuals not invested in unit trusts?

Of the 416 respondents, 271 (65%) were not invested in unit trusts. A two-stage multivariate regression was performed to determine whether there are any causal links influencing non- investment in such a vehicle. The results are shown in Table 2. This analysis was done over two stages, moving from an OLS regression to a logit model. Both models were done using robust standard errors to account for heteroskedasticity.

Table 2: Characteristics of individuals that don’t invest in unit trusts

Variables	Stage 1: OLS	Stage 2: Logit
Age	-0.0462*	-0.209*
	(0.0260)	(0.119)
Gender	0.0269	0.149
	(0.0530)	(0.254)
Marital	-0.00240	-0.0126
	(0.0182)	(0.0932)
Children	-0.0554	-0.275
	(0.0673)	(0.317)
Financial knowledge	-0.0846***	-0.397***
	(0.0262)	(0.125)
Race: Black	0.0220	0.113
	(0.100)	(0.507)
Race: Coloured	-0.00411	-0.0311
	(0.120)	(0.586)
Race: Other	-0.103	-0.487
	(0.0917)	(0.412)
Language: English	0.143**	0.669**
	(0.0570)	(0.277)
Language: African and other	0.170*	0.854*
	(0.0992)	(0.512)
Constant	0.896***	1.803***
	(0.0787)	(0.397)
Observations	363	363
R-squared	0.093	
Preudo R2		0.0738

*This table reports the coefficients of the effect of the independent variables on not being invested in a unit trust. Robust standard errors are reported in the parenthesis; *** p<0.01,*
*** p<0.05, * p<0.1. The decreased sample sizes are as a result of certain non-responses (age and self-assessment rating).*

It appears that a younger respondent has a higher probability of not being invested in a unit trust. This is supported by Willows and West (2015) and Junor (2014) which showed that the majority of investors in the South African investment houses investigated were above the age of 60 years. This finding could be a limitation of funds amongst younger respondents, amongst other reasons which are further assessed in Table 3.

Significant at the 1% level is the self-assessment of financial knowledge. The lower this self- assessment, the higher the probability of not being invested in a unit trust. Lusardi and Mitchell (2007) found a strong a positive correlation between financial knowledge and self-assessments of financial knowledge, which implies that limited to poor financial knowledge decreases unit trust investment.

Lastly, English, African and other language speaking respondents are less likely to be invested in unit trusts than Afrikaans speaking respondents, suggesting potential cultural differences in the preference for this vehicle of investment. With African respondents particularly, this result might be owing to lack of transformation in South Africa and having less disposable income as a result of that.

What are the reasons that these individuals do not invest in unit trusts?

The 271 respondents who were not invested in unit trusts were asked the reasons therefore. Seven pre-determined options were given that each respondent could select along with an additional block for 'other' where they could input their own reason. The reasons given are shown in Table 3. Respondents were allowed to select more than one reason.

Table 3: Reasons for not investing in a unit trust

Invest in alternative ways	**Returns are not sufficient**	**Risk is too high**	**Management fees are too high**	**Don't have enough money**	**Someone else invests on my behalf**	**Don't understand what unit trusts are**
42% (n=114)	7% (n=20)	7% (n=18)	6% (n=17)	30% (n=80)	15% (n=42)	27% (n=74)

Some of the 'other' reasons cited by respondents were "eager to learn on my own" and "I trade myself" as well as more than one respondent stating "I don't have enough knowledge about them". Other respondents stated that they "do not have the time" and "do not know which to choose". This latter reason is supported by Agnew and Szykman (2005) who found that individuals suffer from information overload when too many options are given.

Table 3 shows that the majority of respondents invest in alternative ways. This is promising: that investments are being made, but with the lack of information on the nature of these investments it is undeterminable whether these are more advantageous investments. A fair number of respondents felt that they 'don't have enough money' and 'don't understand what unit trusts are'. The former shows a resource limit or the perception of limited resources by respondents, while the latter reflects a lack of knowledge which could be rectified. From these findings it would be worthwhile obtaining some form of understanding as to the nature of these respondents who don't understand unit trusts, as well as those who invest in alternative ways (as this grouping is the majority reason). These results are shown in Table 4 over two stages, moving from an OLS regression to a logit model. Test 2 was done using robust standard errors to account for heteroskedasticity.

Table 4: Influencers of select reasons for not investing in unit trusts

	Test 1: Invest in alternate ways		Test 2: Don't understand what unit trusts are	
Variables	**Stage 1: OLS**	**Stage 2: Logit**	**Stage 1: OLS**	**Stage 2: Logit**
Age	0.0597*	0.285*	-0.00264	0.00260
	(0.0333)	(0.163)	(0.0301)	(0.209)
Gender	0.0174	0.0705	0.0137	0.0567
	(0.0652)	(0.313)	(0.0623)	(0.392)
Marital	0.0311	0.151	-0.00918	-0.0427
	(0.0248)	(0.117)	(0.0234)	(0.115)
Children	0.0428	0.206	-0.135*	-0.905
	(0.0857)	(0.416)	(0.0817)	(0.562)
Financial knowledge	0.158***	0.789***	-0.178***	-1.560***
	(0.0333)	(0.182)	(0.0308)	(0.380)
Race: Black	-0.425***	-2.201***	0.259**	2.064***
	(0.125)	(0.692)	(0.110)	(0.782)
Race: Coloured	-0.179	-0.867	0.109	0.830
	(0.144)	(0.701)	(0.139)	(0.853)
Race: Other	-0.164	-0.857	-0.0991	-0.614
	(0.119)	(0.607)	(0.0850)	(0.753)
Language: English	0.0106	0.0609	-0.00731	-0.0733
	(0.0725)	(0.350)	(0.0653)	(0.417)
Language: African and other	0.302**	1.546**	0.0166	-0.206
	(0.126)	(0.681)	(0.108)	(0.720)
Constant	-0.0617	-2.717***	0.674***	1.840***
	(0.0997)	(0.534)	(0.0998)	(0.669)
Observations	235	235	235	235
Adj R-squared	0.1499		0.209	
Preudo R2		0.1491		0.2261

*This table reports the coefficients of the effect of the independent variables on reasons for not being invested in a unit trust. Standard (test 1) and robust standard (test 2) errors are reported in the parenthesis; *** p<0.01, ** p<0.05, * p<0.1.*

Test 1 reveals that being older in years appears to increase the probability of investing in alternative ways. Increased self-assessment of knowledge (linked to actual increased financial knowledge (Lusardi & Mitchell 2007)) shows a positive effect, implying that this financial knowledge might move respondents away from unit trusts. Black respondents and those respondents whose primary language is isiXhosa, isiZulu or other i.e. not English or Afrikaans appear less likely to invest in alternative ways. This suggests an alternative reason for non- investment in unit trusts amongst this cohort of respondents.

Upon analysis of respondents who do not understand what unit trusts are, Black respondents, in comparison to White respondents, are more likely to lack this understanding. This is statistically significant at the 5% level and reveals an alternative reason for non-investment in unit trusts as was made apparent in Test 1. This same explanation is not seen for African and other language respondents.

The noticeable racial divide might stem back to the Apartheid years in South Africa, where many non-White South Africans might have experienced sub-standard schooling, or grew up in households with parents who might never have had a formal qualification or exposure to instruments of a financial nature. As financial knowledge is often acquired over a period of time, this might have been a disadvantage to Black respondents.

As expected, self-assessment of financial knowledge is negatively correlated at the 1% level to the lack of understanding what unit trusts are. Furthermore, the OLS regression shows that not having children might influence this lack of understanding suggesting that having dependent children might influence the understanding (or desire to understand). However, this effect is only seen at the 10% level and is not present in the logit model.

Conclusion

The majority of respondents surveyed were not invested in unit trusts and a causal link was found between low self-assessments of financial knowledge and the lack of investment therein. The majority of these non-investors stated that they were invested in alternative ways, but two-thirds also claimed that they did not have enough money or did not understand what unit trusts were. If the 'alternative investments' that these respondents are invested in are retirement funds or similar, the reasoning of not having enough money might be indicative of them maximising their contributions to those retirement funds in order to benefit from the associated tax advantages.

The lack of understanding was found to more probable amongst Black respondents in comparison with White respondents and was negatively correlated with self-assessments of financial knowledge. Investing in alternative ways was positively associated with higher self- assessments of financial knowledge and age.

What are the characteristics of individuals not invested in South African equity only unit trusts?

Of those respondents that were invested in unit trusts (n=145), further enquiry was made as to whether any of those unit trusts were South African equity only unit trusts. 5 respondents had non-responses, but of the remaining 140 respondents, 63 answered negatively. A multivariate regression was performed over two stages, moving from an OLS regression to a logit model, to determine if there were any causal links attached to not investing in South African equity only unit trusts (barring global exposure funds, these funds are generally associated with higher risk). These results are shown in Table 5. The test was limited to a maximum of 5 independent variables only, owing to the reduced sample size for this test.

Table 5: Logistic regression of not investing in South African equity only unit trusts

Variables	**Stage 1: OLS**	**Stage 2: Logit**
Age	0.0709*	0.312*
	(0.0383)	(0.169)
Gender	-0.134	-0.579
	(0.0971)	(0.415)
Marital	-0.0589	-0.263
	(0.0393)	(0.178)
Children	-0.160	-0.690
	(0.103)	(0.449)
Financial knowledge	-0.0460	-0.202
	(0.0482)	(0.207)
Constant	0.634***	0.591
	(0.152)	(0.652)
Observations	128	128
Adj R-squared	0.0338	
Preudo R2		0.0541

*This table reports the coefficients of the effect of the independent variables on not investing in a South African equity only unit trust. Standard errors are reported in the parenthesis; *** p<0.01, ** p<0.05, * p<0.1.*

Table 5 shows that the older a respondent is, the less likely they are to be invested in a South African equity only unit trust. This might imply heightened risk aversion from older respondents. This implication is supported by Willows (2013)'s finding that older participants amongst a sample of 19,021 individual investors had lower variances in return, suggesting heightened risk aversion.

What are the reasons that these individuals do not invest in South African equity only unit trusts?

The 63 respondents who answered negatively were asked their reasons therefore. Once again, five predetermined options were given with the option of selecting 'other' and providing their own reason. Respondents were allowed to select more than one answer. The breakdown of responses is shown in Table 6.

Table 6: Reasons for not investing in a South African equity only unit trust

Prefer to invest in foreign equity	**Risk is too high**	**Management fees are high**	**Returns are not sufficient**	**Someone else invests on my behalf**
11% (n=7)	25% (n=16)	6% (n=4)	13% (n=8)	57% (n=36)

Some of the 'other' reasons cited were that respondents "prefer to invest in a mixed portfolio" or have a "spread of investments", as well as limitations from "pension pay-out investment rules".

The majority of respondents stated that 'someone else invests on my behalf' which shows limited push-back in dictating where their personal funds should be held, but rather relying on the advice of their financial adviser. 25% of respondents not invested in South African equity only unit trusts stated that the 'risk is too high'. Owing to the small sample size (63) of unit trust investors that are not invested in South African equity only unit trusts, analysis thereof is limited to the descriptive statistics performed in Table 6.

Conclusion

Less than half of those respondents invested in unit trusts, were invested in South African equity only unit trusts. This non-investment was found to be influenced by the age of the investor, suggesting heightened risk aversion amongst older respondents. The majority of the investors not invested in unit trusts stated that this was owing to someone else investing on their behalf, whilst a quarter stated that the risk was too high.

SUMMARY, RECOMMENDATIONS AND CONCLUSION

Unit trusts are widely available in South Africa at a number of differing investment houses. Furthermore, an array of different portfolios of unit trusts are also available. Despite this, the majority of respondents surveyed were not invested in unit trusts owing to their decision to invest elsewhere. Furthermore a lack of understanding of what unit trusts are was also found to be influential, particularly amongst Black respondents and those respondents with low self- assessments of financial knowledge. This highlights the need to educate investors on the workings of unit trusts and the potential benefit thereof to different cohorts of investors.

Choosing to not invest in South African equity only unit trusts was found to be the decision of a third party and not the individual respondents themselves. This is concerning, as investors should be aware of their advisors reasoning for investing in or not investing in different portfolios, even if they have delegated that decision to someone else. Furthermore, the heightened risk of investing in equity was substantiated, albeit it not being more risky than global equity funds.

Researchers analysing the characteristics or behaviour of unit trust investors should be aware that their sample might be lacking in younger investors and investors with low levels of financial knowledge, as inferred by their self-assessment thereof.

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References

Agnew, J.R. & Szykman, L.R., 2005. Asset Allocation and Information Overload: The Influence of Information Display, Asset Choice, and and Investor Experience. *The Journal of Behavioral Finance*, 6(2), pp.57–70.

Alexander, G.J., Jones, J.D. & Nigro, P.J., 1998. Mutual Fund Shareholders: Characteristics, Investor Knowledge, and Sources of Information. *Financial Services Review*, 7, pp.301– 316.

Cameron, J., 2014. Five Great Reasons to Invest in Unit Trusts: Wealth Building on a Limited Income. *www.biznews.com*, April.

Capon, N., Fitzsimons, G.J. & Prince, R.A., 1996. Mutual Fund Investment Decisions. *Journal of Financial Services Research*, 10(1), pp.59–83.

Correia, C. et al., 2010. *Financial Management* 7th ed., Cape Town: Juta & Company.

Dorn, D. & Huberman, G., 2005. Talk and Action: What Individual Investors Say and What They Do. *Review of Finance*, 9(4), pp.437–481.

Junor, W., 2014. *Men are from Investment Mars and Women are from Investment Venus*. The University of Cape Town.

Khorana, a, Servaes, H. & Tufano, P., 2005. Explaining the Size of the Mutual Fund Industry Around the World. *Journal of Financial Economics*, 78(1), pp.145–185.

Lamprecht, I., 2013. The Risk of Losing Money in a Unit Trust. *www.moneyweb.co.za*, November.

De Lange, I., 2009. Daily Equity Report. *www.seedinvestments.co.za*, January.

Lusardi, A. & Mitchell, O.S., 2007. Financial literacy and retirement planning: new evidence from the Rand American Life Panel. *CFS Working Paper*, 33, pp.1–32.

Lusardi, A. & Mitchell, O.S., 2011. Financial literacy around the world: an overview. *Journal of Pension Economics and Finance*, 10(04), pp.497–508.

Marszalek, B., 2014. *Invest Like A Woman: An Analysis of Investment Performance in South Africa based on Gender*. The University of Cape Town.

Naidoo, S., 2014. *Gender Differentials Amongst Investors in Emerging Markets: A Review of Literature*. The University of Cape Town.

Presser, S. et al., 2004. Methods for Testing and Evaluating Survey Questions. *Public Opinion Quarterly*, 68(1), pp.109–130.

Sanlam Investments, 2014. Why Unit Trusts? *www.sanlamintelligence.co.za*, March. Wang, A., 2011. Younger Generations' Investing Behaviors in Mutual Funds: Does Gender

Matter? *The Journal of Wealth Management*, 13(4), pp.13–23.

Willimack, D.K. et al., 2004. Evolution and Adaptation of Questionnaire Development, Evaluation, and Testing Methods for Establishment Surveys. In S. Presser et al., eds. *Methods for Testing and Evaluating Survey Questionaires*. New York: Wiley.

Willows, G., 2013. Differential Investment Performance in South Africa Based on Age. In *The 4th International Conference on Business and Economics*. pp. 1–10.

Willows, G. & West, D., 2015. Differential Investment Performance In South Africa Based On Gender. *International Business & Economics Research Journal*, 14(1), pp.221–236.

Van Wyk, K., Botha, Z. & Goodspeed, I., 2012. *Understanding South African Financial Markets* 4th ed., Van Schaik Publishers.