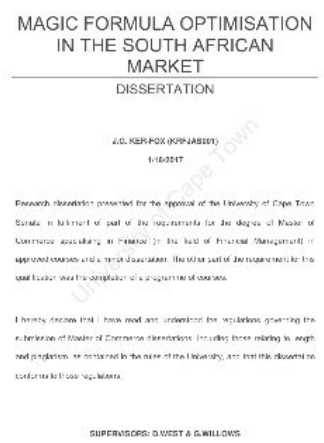
# Magic formula optimisation in the South African Market




MAGIC FORMULA OPTIMISATION IN THE SOUTH AFRICAN MARKET

DISSERTATION

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Research dissertation presented for the approval of the University of Cape Town in fulfilment of part of the requirements for the degree of Master of Commerce specialising in Finance (in the field of Financial Management) in approved courses and a minor dissertation. The other part of the requirement for this qualification was the completion of a programme of courses.

I hereby declare that I have read and understood the regulations governing the submission of Master of Commerce dissertations, including those relating to length and plagiarism, as contained in the rules of the University, and that this dissertation conforms to those regulations.

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## Abstract

The purpose of this study is to investigate the performance of the value investing strategy commonly referred to as the "Magic Formula", which was first introduced by Greenblatt (2006) and uses the return on capital and earning yield ratios as the basis for stock selection, in the South African market. The study will build on the work previously performed by Howard (2015) by challenging the "Magic Formula" portfolio composition assumptions. In doing so, optimal combinations of holding period and portfolio size which: maximise the geometric mean return, minimise the volatility of returns and maximise the risk adjusted return, shall be determined. The scope of this study includes all companies, excluding financial services entities, listed on the Johannesburg Stock Exchange, which exceed a market capitalisation of R 100 million, for the period 1 October 2005 to 30 September 2015. The results showed that by adjusting certain portfolio parameters the overall performance of the "Magic Formula" on both a geometric mean and risk adjusted basis can be increased. However, the "Magic Formula" still provides an insufficient amount of evidence to conclude, on a statistically significant basis, an outperformance of the investment strategy relative to the Johannesburg Stock Exchange All Share Index. Accordingly, the study makes several contributions to the literature. Firstly, it provides direct evidence of the relationship between value investing portfolio composition and the returns generated, indicating that excess returns can be achieved when the portfolio composition is adjusted. Secondly, albeit not on a

## Keywords

Financial Management

## Reference: