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**The impact of job satisfaction on the share price of companies listed on the
JSE**

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ABSTRACT

This research evaluates the impact of job satisfaction on the share price of companies listed on the Johannesburg Stock Exchange (JSE). Current HRM theory stipulates that job satisfaction can improve retention and employee motivation leading to accrued benefits for the shareholder (Edmans, 2011). In addition over the last few years, studies have shown the JSE to be inefficient as it does not react rapidly by setting its share price when provided with new qualitative news. This research was conducted as a longitudinal study of the relationship between job satisfaction and shareholder returns. This was done through a quantitative approach using a combination of an event based and style research methodology.

The results of this research confirms HRM theory that positive benefits accrued from investing in job satisfaction outweigh the cost. This is shown via a 4.1% pa return over an equal weighted index in the period 2008-2014. In addition the JSE was also shown to be inefficient, as the companies listed on the top employers were still obtaining abnormal returns 59 days after the announcement. The findings of this study thus provide valuable information to traders on the JSE on the returns of listed companies that invest in job satisfaction.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to perform this research.

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1 Introduction to the research problem

1.1 Research title

“The impact of job satisfaction on the share price of companies listed on the JSE”

1.2 Introduction

This research evaluates the impact of job satisfaction on the share price of companies listed on the Johannesburg Stock Exchange (JSE). The impact is established based on the reaction of the market to news about job satisfaction. A positive reaction would be a rise in the share price. A rise in the share price means that investors perceive news about investment in job satisfaction as both new news and good news (Filbeck & Preece, 2003). In addition, the long term impact of investing in job satisfaction will inevitably be reflected in the share price. As a result, if job satisfaction increases a firm's value, firms that invest in job satisfaction should outperform their peers in the JSE. Therefore, this research sets out to find out if there is a relationship between job satisfaction and shareholders return, and the impact job satisfaction has on investors investing in companies listed on the JSE.

Job satisfaction was defined in Locke (1969) as an emotional reaction to one's job, resulting from a comparison of actual and expected outcomes. It is a person's attitude towards his/her job. Recent theory on job satisfaction in the workplace has seen the world move from the traditional doctrine, where employees were seen as raw material, to a Human Resource Management (HRM) approach which values employees as key organisational assets who are able to increase the firm's value by creating new products and building relationships (Edmans, 2011). Theory also states that job satisfaction improves employee motivation levels and this directly has an impact on productivity as each employee internalises the company's objective as their own in what literature refers to as 'citizenship behaviour' (Edmans, 2012). In summary, the theory stipulates that job satisfaction can

improve retention and motivation leading to accrued benefits for the shareholder (Edmans, 2011).

As a result, job satisfaction can serve as a measure of the firm's current and future performance under the appropriate human resource practices. The question is whether JSE investors are aware of this and the effect it could have on share price, as the current valuation strategy used by investors for job satisfaction might predominantly be based on the traditional theory rather than a HRM approach (Edmans, 2011). Therefore, the share price might only be impacted in the long run for companies investing in job satisfaction when job satisfaction provides tangible output such as earnings. This type of reaction where the market does not rapidly react by setting its share price when provided with new information is called market inefficiency. An efficient market according to Fama (1965) is defined as "a market where, given the available information, actual prices at every point in time represent very good estimates of intrinsic values". In other words, an efficient market is a market where the current market share price fully reflects available information.

South African research has mainly focused on the relationship between shareholder return and qualitative measure like Black Economic Empowerment (BEE) by Muller & Ward (2010), and responsible investing by Esterhuysen & Ward (2011). At this stage we are unaware of any research that has tested the relationship between job satisfaction and shareholder return for the companies listed on the JSE in South Africa.

To perform this research we measure job satisfaction by using an annual public report on the best companies to work for. The report is currently produced by a company called the "Top Employers" institute. Top Employers is a global company that certifies companies on their working condition and provides a top 10 ranking of the best companies to work for in over 70 countries. They started operating in South Africa in 1997 but the methodology has only become more robust from 2007, with the inclusion of an auditing and validation stage.

The result of this research confirms that positive benefits accrued from investing in job satisfaction outweigh the cost. The result shows a 4.1% per annum (pa) return over an equal weighted index in the period 2008 to 2014. The result also shows

the JSE as inefficient in handling job satisfaction information as the companies listed on the top employers are still obtaining abnormal returns on the 59th day after publication of the 'top employers'. The findings of this study thus provide valuable information to traders on the JSE on the returns of listed companies that invest in job satisfaction.

1.3 Research significance, motivation and relevance to South Africa

In the last 20 years, there has been a lot of debate on the stakeholder and shareholder relationship. Many scholars outside of the field of finance do not agree that maximising the current share price in the shareholder's best interest maximises the long run firm value (Faleye & Trahan, 2011).

Arguments have been put forward regarding the disadvantages of investing in job satisfaction. The greatest concern is that the cost of investment in practices like job satisfaction can exceed the potential productivity gains. The investment might also create a sense of entitlement among employees, failing to motivate the employees as stipulated earlier.

The answers to the questions stated above concerning the relationship between job satisfaction and firm value have been inconsistent over the years. As a result, a study clarifying the relationship of these variables in developing countries like South Africa adds to the debate on the impact of job satisfaction on shareholder returns.

This research will also assist in adding to the body of knowledge on the efficiency of the JSE in dealing with qualitative information. The results in the past have been mixed but literature over the last few years has shown that the JSE is inefficient when reacting to qualitative news. In general the JSE has reacted positively to qualitative news, implying that the market generally values qualitative information. The questions that stem from the above discussion are as follows:

1. Does the JSE react positively to news about job satisfaction?
2. Is the JSE efficient when handling news on job satisfaction?

3. Does the benefit of investing in job satisfaction outweigh the cost?

1.4 Research objectives

The research aims to establish the impact of job satisfaction on the share price of companies listed on the JSE. To this end we test the impact of job satisfaction as measured in terms of a company being certified as a 'Top Employer'. As stated above, one would expect positive benefits such as reduced employee turnover, higher work morale to outweigh the cost of providing the benefits. This gives rise to the following research objectives:

1. To establish the association between job satisfaction news and the shareholder return for companies listed on the JSE.
2. To establish the association between employee job satisfaction and the long term share returns for shareholders of companies listed on the JSE.

1.5 Research scope

In this research we investigate top employer companies listed on the JSE from 1 January 2008 to 1 August 2014. The reason for the years selected is based on the dataset made available since the change in the Top Employers selection process as explained earlier. We focus on the impact of news of job satisfaction and level of job satisfaction on the share price of these companies.

1.6 Report layout

The seven chapters in this report include:

1. Chapter 1: The introduction provides an outline of the background of the study, gave an indication of the relevance of the study and detailed the research objectives;
2. Chapter 2: This chapter details the relevant literature in this area; we provide details of work done in the area of job satisfaction, EMH and the JSE, and the relationship between job satisfaction and firm value
3. Chapter 3: The research questions and related hypothesis are provided here;
4. Chapter 4: The research methodology used in this study is provided in this section; this includes details of event based and style based methodologies
5. Chapter 5: The results of the research is presented here;
6. Chapter 6: The discussion of results is presented in relation with Chapters 1 through to 5; in particular key findings are discussed in relation to the expected outcome based on the literature review.
7. Chapter 7: The conclusion of the study is provided by detailing the key findings, the implications and the recommendations for future research.

2 Literature Review

Adam Smith argued that individuals, in pursuing their self-interest, would advance the broader interest of the society and that initiatives used to outcompete rivals would lead to lower cost and the production of goods customers want, benefiting both customers and society (Stiglitz, 2006). This assumption is the basis on which most finance and economics literature is written. It justifies the assumption that maximising shareholder interest maximises the long term value of the firm and the welfare of society (Faleye & Trahan, 2011). As a result, managers in most companies implement policies on stakeholders such as employees, the community, regulators and customers, which are seen to maximise the shareholder's best interest.

However the last 20 years has seen a lot of debate on the stakeholder and shareholder relationship. Many scholars outside of the field of finance do not agree that maximising the current share price in the shareholder's best interest maximises the long run firm value (Faleye & Trahan, 2011). Rather, managers have to try to balance both the short term and long term business goals in an attempt to satisfy both stakeholders and shareholders. Therefore managers need to be cognizant and committed to implementing policies and practices that increase shareholder returns while improving stakeholder wellbeing.

The stakeholder focus in this study is the employee. We analysed the impact of employee welfare on value creation, manifested in the form of share returns for shareholders. The rest of this section focuses on job satisfaction and its value to shareholders by providing:

- Details of the relationship between job satisfaction and firm value and how HRM can be used as a means of providing job satisfaction.
- A short overview of the best companies to work for and the definition of job satisfaction with respect to this study.

- A view on the current work done on market efficiency of semi-strong form of EMH.
- Details of the work done in this area and the expected impact on share price. We then highlight the fact that no work has been done to provide an understanding of the relationship between the shareholder returns and job satisfaction for the companies listed on the JSE.

2.1 Job satisfaction

Job satisfaction was defined in Locke (1969) as an emotional reaction to one's job resulting from a comparison of actual and expected outcomes. It is a person's attitude towards his/her job. This attitude can be shaped through the use of the correct Human Resource (HR) practice. Over the years, the need for job satisfaction has grown within organisations, and a number of HR approaches have been used to optimise job satisfaction to produce the right level of productivity.

In the earlier 1900s, traditional theories were based on cost efficiency, due to the level of skills required to complete tasks (Edmans, 2011). Job skill requirements were very low, which implied that employees could be managed in the same way as other inputs, such as raw material. The task of management at the time was to extract maximum output at minimal cost. In this era, employees were simply factors of production and there was little or no concern for job satisfaction. Job satisfaction related to scenarios where employees were underworked or overpaid, thus reducing the firm value (Edmans, 2011).

In the 1930's and the 1940's studies such as the Hawthorne study demonstrated that employee productivity was also affected by certain social and psychological factors (Grobler, Warnich, Michael, Norbeth, & Robert, 2011; Judge, Thoresen, Bono, & Patton, 2001). As a result, during this time, it was asserted that treating employees with dignity would improve job satisfaction and productivity. This approach failed to improve both job satisfaction and productivity for a number of reasons. This included the oversimplification of human behaviour in the

organisational setting, not considering people as individuals, and failing to consider the need for both job structure and control of employees (Grobler et al., 2011).

Current human resource strategy balances the organisational need for effectiveness with the need for employee satisfaction. It considers employees as key assets that need to be managed and developed to provide a long term reward to the organisation in the form of productivity (Grobler et al., 2011). It has become much harder to quantify tasks performed as a measure of employee performance, as the current environment emphasises quality and innovation. This implies that human capital, and not physical capital, has become more important. As a result, a more intrinsic measure that uses job satisfaction enables the determination of task performance (Edmans, 2011).

2.2 Implication of human resource management (HRM) and job satisfaction on productivity

Human resource management (HRM) was defined in Grobler et al., (2011) and Edmans (2012) as matching what people want from their employment and what the firm wants from its employment. This section looks at the benefits of job satisfaction by looking at theoretical channels it uses to impact productivity, and outlines concerns with the theory through literature and empirical findings in this area.

2.2.1 Theoretical benefits of job satisfaction

In general, as stated in Callaghan & Coldwell (2014), studies have found job satisfaction has a positive impact on organizational performance and job dissatisfaction can be associated with different forms of withdrawer such as employee turnover and absenteeism. In this section, we look at two ways job satisfaction can improve firm value via HRM theories.

The first means of improving firm value via job satisfaction is by recruiting and retaining key employees. Contrary to the traditional HRM approach, where retention was not important as workers could be replaced easily, in knowledge-based industry retention comes to the fore (Edmans, 2011). This is supported by the resource-based theory which stipulates that the company cultivates a competitive advantage by developing resources that are valuable and hard to poach. As the current HRM theory identifies employees as valuable resources and assets to the company, it is important to recruit and retain talent in the company. If employees are satisfied with their jobs then the propensity of them leaving will be reduced. In addition, job seekers are more drawn to companies that value and are committed to their employees' welfare (Edmans, 2012). In the South African context, there is currently a significant amount of 'brain drain', it is therefore very important to retain highly skilled individuals. A loss of skilled staff is costly to the organisation and in some cases to the society (Callaghan & Coldwell, 2014).

Secondly, job satisfaction improves employee motivation levels and this has a direct impact on productivity as each employee internalises the company's objective as theirs in what literature refers to as 'citizenship behaviour' (Edmans, 2012).

Organisational citizenship behaviour, according to Organ & Ryan, (1995), is the "individual contribution in the work place that goes beyond role requirement and contractual rewarded job achievements." As implied above, the internalisation process encourages employees to go beyond the call of duty and perform beyond expectations. This also has a direct impact on group and team performance as these employees help other team members and improve the overall performance norms (Stephen & Timothy, 2013).

Job satisfaction has become more important in recent years as an intrinsic source of motivation. This is due to the change from the traditional firms - where workers could be easily motivated with the use of extrinsic motivators like money on a set of output based measures - to the modern firm where worker roles are difficult to quantify (Edmans, 2011). In summary, the HRM theory stipulates that job satisfaction can improve retention and motivation leading to accrued benefits for the shareholder (Edmans, 2011).

2.3 Concerns with investing in job satisfaction

Arguments have been put forward regarding the disadvantages of investing in job satisfaction. The greatest concern is that the cost of investment in practices like job satisfaction can exceed the potential productivity gains. The investment might also create a sense of entitlement among employees, failing to motivate the employees as stipulated in section 2.2. Lastly, the purpose of implementing job satisfaction might be to serve the managers own self-interest in obtaining favour in the form of employee support at the expense of the shareholders (Faleye & Trahan, 2011).

Empirical measurements of the relationship between job satisfaction and firm value have been inconsistent over the years. Many studies instead measure the relationship between job satisfaction and job performance. Meta-analysis over the years provided snapshots of the transition. In the 1950's the conclusion was that job satisfaction had a minute or no relationship with job performance (Brayfield & Crockett, 1955). This view carried on into the 1980's and was confirmed by a number of publications and meta-analysis at the time (Judge et al., 2001). At the turn of the millennium to date there have been more positive results on the relationship between job satisfaction and firm value (Edmans, 2012).

As a result, a study clarifying the relationship of these variables in developing countries like South Africa adds to the debate on the impact of job satisfaction on shareholder returns. It moves closer to answering the question of whether job satisfaction as a means of improving firm value is a 'fad' in South Africa and developing countries.

2.4 Top Employers

To perform this research we will measure job satisfaction by using the annual public report on the best companies to work for. The report is currently produced by a company called the "Top Employers" institute. Top Employers is a global company that certifies companies on their working condition and provides a top 10 ranking

of the best companies to work for in over 70 countries. They started operating in South Africa in 1997 but the methodology has only become more robust from 2007, with the inclusion of an auditing and validation stage. The report is released yearly, usually on the 29th of August.

The report provides a ranking of the top 10 companies and details all the other certified companies in alphabetical order. Job satisfaction in this report is measured in terms of HR excellence and covers all aspects of an employee's proposition. According to Top Employer, a top company to work for is one with optimal employee conditions for their employees, allowing them to develop both personally and professionally, thereby ensuring sustainability and growth of the business.

Companies looking to get certified as a top employer apply to the institute. The institute then issues a "best practice survey" based on over 23 years of HR research experience. This survey is made up of 11 key topics containing 98 questions and 585 practices. In addition these companies furnish supporting documentation to various scoring questions to verify that they actually have the policies and practices in place. These topics are then grouped into the five dimensions below:

- Primary benefits: this includes communication of benefits, accessibility of remuneration policy, base pay, performance pay, share options and pension.
- Secondary benefits and working conditions: this includes employee feedback communication channels, knowledge management practices, innovation Key Performance Indicators (KPI), benefit schemes, leave allowance, recognition reward and work life balance.
- Culture management: this includes bottom up and top down communication, diversity, Corporate Social Responsibility (CSR), networking, integration program.
- Training and development: this includes company and staff competency knowledge, development programs and incentivised participation, senior management role.

- Career development: this includes career path, succession planning, use of best practice, availability of job descriptions, exit procedure.

Each dimension carries a score of 10000 points as a result the dimensions have equal weighing. The company with the highest score becomes the top company to work for in the country. For any other company to get certified, it will have to have at least 60% of the number 1 ranked company's score. Once the report is finalised it is audited by Grant Thornton South Africa. A snippet of the survey is attached in Appendix B. The survey questions are proprietary, but Top Employers was kind enough to provide them for this research.

Fu (2013) demonstrated in his study that professional service firm performance is influenced by HR practices through the creation and efficient usage of human, social and organisational capital resources. This in turn provides the firm with a sustainable competitive advantage. The Top Employers HR practices categories detailed above have all of the three elements required for competitive advantage and increased firm performance. Therefore, the companies listed as "top employers" should have better firm performance than their peers. On release of this information, how quickly will the JSE market react to it through the share price set?

2.5 JSE and social responsible investing

Social Responsible Investing (SRI) also referred to as Responsible Investing (RI) is an investment strategy that balances financial and social benefits. It uses a set of approaches which includes moral, environmental, social and governance considerations together with the financial criteria in decision to select, retain and realize investments (Viviers, Bosch, Smit, & Buijs, 2008). According to Esterhuysen & Ward (2011) there are four main considerations in South Africa for social investing, these include

- Environmental
- Social

- Corporate Governance
- Broad Based Black Economic Empowerment (BBBEE)

Responsible investing encourages investors to invest in companies that balance the shareholder and stakeholder needs. As a result, investing in companies with good job satisfaction forms an aspect of responsible investing. According to Herring, Firer, & Viviers (2009) employee relations is part of the most important Environmental, Social and Governance (ESG) issues in South Africa at the moment. SRI investment adoption rate in the developing countries have lagged behind the developed, as of 2006 in a paper by Viviers et al. (2008) it constitutes 0.7% of all assets invested, whilst 18% of assets invested in the USA are SRI based.

As identified by Herring et al. (2009), one of the key challenges affecting SRI in South Africa is investor concerns about the fund performance. Viviers et al. (2008) notes that the primary reasons for the concerns can be attributed to perceptions amongst assets owners that RI involves financial loss. Herring et al. (2009) also highlighted that a key driver of SRI fund in SA is a stakeholder based corporate governance for the development of a more social and environmental responsible company.

These two key points have been discussed earlier via the HRM theorem. HRM theorem via HR best practice looks to create a more social and environmental responsible company. The stakeholder, shareholder debate as identified earlier raises concerns on the financial profitability of such measures and whether the benefit of implementing job satisfaction outweighs the cost. The results of this research could assist by contributing to the body of work, help alleviate investor concern and encourage more SRI activities South Africa.

2.6 Efficient Market Hypothesis (EMH)

An efficient market according to Fama (1965) is defined as “a market where, given the available information, actual prices at every point in time represent very good

estimates of intrinsic values”. In other words, an efficient market is a market where the current market share price fully reflects available information. The implication of an efficient market is that all investments are expected to return a zero Net Present Value (NPV) at the time the investment is made. As a result, investors get exactly what they pay for when buying security while firms receive exactly the worth of the shares and bonds (Firer, Ross, Westerfield, & Jordan, 2012). This implies excess returns cannot be achieved consistently as the market uses risk and returns in setting an equilibrium share price (Esterhuysen, 2011).

Markets can be differentiated according to the degree of efficiency. There are currently three forms of efficiency in literature, differentiated based on the amount of information reflected in the share price. These forms are:

- Strong form EMH: All information is included in the share price i.e. there is nothing the market is unaware of (Firer et al., 2012). In this form, the share price reflects private and public information. As a result, there is no excess return in the long term (Esterhuysen & Ward, 2011).
- Semi-strong form of EMH: All public information is reflected in the share price. Therefore, searching for mispriced shares in financial statements for example will not work (Firer et al., 2012). Similar to the strong form EMH, excess returns cannot be maintained in this market (Esterhuysen & Ward, 2011).
- Weak form EMH: The current share price at least reflects its own past share price. Therefore analysis of trend will not yield excess return as it cannot serve as a predictor for future price (Firer et al., 2012). This form of efficiency allows for abnormal returns on release of information, as it will result in a random walk, implying the adjusted share price is independent of the initial price. As a result it's unpredictable (Esterhuysen, 2011).

2.7 EMH and the Johannesburg Stock Exchange (JSE)

A number of studies have been conducted on the JSE, with mixed results on the level of efficiency.

Recent results show that the JSE is reasonably information inefficient. We detail the reaction of the JSE to a number of qualitative news in this section. Qualitative (Intangible) news are non-financial news that may affect the future performance of shares price, such as news on the environment, brand value, corporate governance, BEE and job satisfaction. Prior work in this area includes:

- Bhana (2005) where they assess the effect on the wealth of the parent company shareholders of management buyout initiated by companies listed on the JSE. The finding was that a management buyout announcement results in a positive abnormal return for the parent company shareholder with 83% of the return occurring in the first 21 days. Prior to 2005, Bhana studied the impact of a number of different types of announcement on the share price of companies listed on the JSE. Announcements that the market reacted positively to include:
 - Special dividend announcement: this announcement confirms the dividend information hypothesis with an increase in dividend signalling managements believe that the firms earning in the future will cater for the increased rate (Bhana, 1998).
 - Take-over announcement: the market increases the share price as the trading activities increase in the run up to the announcement day. This was seen as evidence of an efficient market (Bhana, 1999).
 - Key executive dismissals announcement: the market reacted positively as expected based on the rational view of organisational change. The change in executive restores confidence with the market as the dismissal is a sign of existing problems in the organisation being remedied (Bhana, 2003).

- Muller & Ward (2010) where they used an event based study to analyse the impact the announcements of BEE deals, which impact equity ownership, have on share price. The research finds that long term market response to BEE deals are strongly positive at 10% peak cumulative abnormal return for companies with market capitalisation of less than 3.5 billion, and marginally negative response for large companies. In addition the market only reacted to the BEE news 80 days after the announcement, which implies the JSE is inefficient when dealing with BEE information.
- Esterhuysen & Ward (2011) where they tested the importance of the information content in Financial Mail's (FM's) Top Company list on the companies listed on the JSE. This test is performed through the use of event-study methodology. FM's top companies rating contain financial and qualitative data. Certain aspects of the qualitative data such as communication and empowerment form a subset of employee welfare as required for job satisfaction. The finding shows positive abnormal returns for new entrants to FM's "top companies" within the first 10 days of publication. The long term holding period of 200 days after publication resulted in a negative return. The deduction was that any new information in FM's "top company" on new companies making the list is of value only to short term traders with low transaction cost.

The literature presented over the last few years show that the JSE has been inefficient when reacting to qualitative news. In general, the JSE has reacted positively to qualitative news, implying that the market values qualitative information. There has been no work done that relates to news on job satisfaction as a qualitative measure to share price in the JSE. The next subsection attempts to bridge the gap and provide a possible base for this research by detailing work done on the New York Stock Exchange (NYSE) relating share price to job satisfaction.

2.8 Stock Exchange and the best company announcement

There has been a handful of studies in this area with the purpose of establishing the relationship between the stock market and job satisfaction in developed economy. The studies include Filbeck & Preece (2003), Faleye & Trahan (2011), Edmans (2011) and Edmans (2012). These studies were conducted through a portfolio of the best companies to work for as stipulated by Fortune Magazine. Prior work in this area include:

- Filbeck & Preece (2003) looked at the impact of the “Fortune 100 best companies to work for in America in 1998” on NYSE. This paper set out with two hypotheses, the first was that there will be a positive firm reaction to the announcement of the best firms to work for. The result from the research showed an abnormal return on the event day of 3.38% with a statistical significance at 1%. The conclusion was that stock markets perceive firms that take care of their workers as a good investment, and the information contained in the award is new and good news. The second hypothesis checks if fostering an exceptional work environment translates into higher annual returns for the company’s shareholders. This was tested by observing the holding period returns of these firms to their shareholders. They observed an overall positive abnormal return in the year following the announcement. For the period of 1987 to 1999 the 100 best companies outperformed the matched sample by 3.64%. The implication is that the market is pricing the net benefit of the job satisfaction programs into their share price. In summary, the results in this study indicate that investors in the stock market believe that satisfied employees may lead to satisfied shareholders.
- Faleye & Trahan (2011) studied the benefit or cost of labour-friendly policies for employees on the shareholder. The research used “Fortune's best company to work for in America 1998-2005” and the KLD research and analytics SOCRATES database. The findings showed that the announcement of labour-friendly policies is positively correlated with abnormal stock returns. They found a statistical significant average return of 1.03% which shows the market values the information contained in the

labour-friendly announcement. The paper stipulates from the finding that the benefits of labour friendly practice outweigh the cost. They also found that the performance benefits of labour friendly firms is higher with the demand for highly skilled labour.

- Edmans (2011) paper analyses the relationship between employee satisfaction and long-run stock return. This was done by using companies selected from the “Fortune 100 best companies to work for in America from 1984-2009” which resulted in alpha of 3.5% and 2.1% above benchmark. The implications are three fold
 - Employee satisfaction is positively correlated with shareholder return.
 - The stock market does not fully value intangibles.
 - Social Responsible Initiative (SRI) may improve returns on associated portfolios.
- This research also stipulates that the reason for non-incorporation of intangible values (qualitative information) fully, was not solely due to lack of information but might be because investors are unaware of the benefits of job satisfaction or the evaluation strategy might not cater for it as it is still based on the traditional theories. As a result, the market does not fully capitalise intangibles implying that intangible values will only be capitalised on realization of a tangible output, so, for example, job satisfaction value will only be realised when it manifests in earning. This view is also supported by Anderson & Smith (2006) where they found that a portfolio of stocks of the Fortunes magazine’s most admired companies outperformed the S&P 500, in an effort to explain the cause, it was attributed to the market’s inability to factor intangible information into its share price.
- Edmans (2012) paper analyses the link between job satisfaction and firm value by using companies selected from the “Fortune 100 best companies to work for in America from 1984-2011” through stock return. The results show that the firm value for the best companies listed on the stock exchange is 2.3% higher per year than their peers from 1984-2011. The result confirms

the validity of HRM theory that job satisfaction is beneficial for firm value. It also showed that job satisfaction is not fully valued by the market and the value is only capitalised when it results in tangibles like earning. As a result, the effects of job satisfaction are only felt in the long run.

As shown in the literature detailed here, the scenarios tested show that positive benefits accrue from job satisfaction to the firm and to the shareholders. This was shown to be true for job satisfaction news and for the long run return of investing in job satisfaction. The implication is that benefits such as reduced turn over, enhanced recruitment and high motivation, would outweigh the cost of providing the benefits.

We currently have no knowledge of any research in South Africa that investigates the relationship between shareholder returns and the best companies to work for. Therefore there is a need to investigate the relationship between job satisfaction and shareholder return to establish if the relationship holds for investors and companies on the JSE.

3 Research Hypothesis

In this section, we restate the aim of the research. We also state the question this research is trying to address. Thereafter, we state the hypothesis that stems from the question.

3.1 Research Aim

The research aims to establish the impact of job satisfaction on companies listed on the JSE. To this end, we test the impact of job satisfaction as measured in terms of a company being certified as a 'Top Employer'. As stated in section 2, one would expect positive benefits such as reduced employee turnover and higher work morale, to outweigh the cost of providing the benefits. This gives rise to the following research question and hypothesis.

3.2 Research Question

Is there a positive association between job satisfaction and shareholder returns for companies listed on the JSE?

3.3 Hypothesis

The association between job satisfaction and shareholder return will be measured in terms of the market's reaction to news on job satisfaction and the long term impact of job satisfaction on companies listed on the JSE. The resulting null hypotheses and the corresponding alternate hypotheses are given below:

Hypothesis 1

The null hypothesis suggests that there is no association between job satisfaction news and the shareholder return for companies listed on the JSE.

$H_0: CAR_{AD} = 0$

The alternate hypothesis suggests that there is an association between job satisfaction news and the shareholder return for companies listed on the JSE.

$H_a: CAR_{AD} \neq 0$

Where CAR_{AD} is the cumulative abnormal return pivoted on the announcement date for the chosen window period.

Hypothesis 2

The null hypothesis suggests that there is no positive association between employee job satisfaction and the long term share returns for shareholders of companies listed on the JSE.

$H_0: \text{Average Growth Rate per annum} = 0$

The alternate hypothesis suggests that there is a positive association between employee job satisfaction and the long term share returns for shareholders of companies listed on the JSE.

$H_a: \text{Average Growth Rate per annum} > 0$

4 Research methodology

In this section we detail the proposed methodology for the research. We state the sample used and the process that was used to analyse the data. We round up by stating the limitations the research has.

4.1 Research design

This research was conducted as a longitudinal study of the relationship between job satisfaction and shareholder returns. This was done through a quantitative approach using a combination of an event based and style research methodology.

Event based methodology has predominantly been used as the main methodology when analysing market reaction ever since it was first used in Fama, Fisher, Jensen, & Roll (1969). In addition, the fact that it is not based on accounting profit has made it very popular. The event based study provides valid financial impact of an event when certain conditions are met, this includes (Esterhuysen & Ward, 2011):

- The market being efficient
- The event not being anticipated
- The nonexistence of confounding effects during the event period

A style is a class of assets with certain fundamental characteristics in common (Barberis & Shleifer, 2003). These characteristics are usually used in choosing a portfolio of shares with the highest return. Therefore, a style methodology provides a way to measure the impact of job satisfaction on a group of companies listed on the JSE. This provides the financial performance gain or loss attributable to job satisfaction and also enables the prediction of returns associated with investing in job satisfaction.

4.2 Universe/Population

The population or universe was the Top Employer companies listed on the JSE from 1 January 2008 to 1 January 2014. The reason for the years selected is based on the dataset made available since the change in the Top Employers selection process as explained in section 2.4.

4.3 Unit of analysis

The units of analysis were the companies listed on the Top Employers report from 2008 to 2014

4.4 Sampling method and size

Three samples were used for this study. These were:

- The 'full list': This list holds all JSE listed companies listed in the Top Employers magazine from 2008 to 2014.
- The 'new entries': This holds all the JSE listed companies published for the first time on the Top Employers magazine from 2008 to 2014.
- The 'repeat entries': This holds all the JSE listed companies that have been published on the list of Top Employers magazine more than once from 2008 to 2014.

4.5 Data collection method

The Top Employers list was requested and received for the years 2008 to 2014. These listings were then used together with abnormal returns (AR) data made available through the work of Muller & Ward (2010). In addition, share price and the financial data was obtained for the JSE listed companies that are 'Top

Employer' certified for the relevant years. The source of the share price data was sharenet.

4.6 Data analysis method

In this section we provide details of the methodologies used in this research. Firstly, we state the key criteria used to ensure data integrity below:

- The total number of days traded on the JSE with value over one million rand for the company in the period (2 years before and one year after the event date) must be higher than half of the total number of tradable days.
- The companies in the period considered must have a financial track record of more than 2 years before the event date.
- The companies in the period considered must have a financial track record of more than one year after the event date.
- Shares with daily actual returns which are greater than or less than 40% of the prior day's value were excluded as data errors by setting them to zero.
- Shares with daily abnormal returns which are greater than or less than 15% of the prior day's value were excluded as data errors by setting them to zero.

4.6.1 The event methodology

The event based methodology implementation adopted here is as defined in Muller & Ward (2010). The JSE listed companies that were in the Top Employers report was retrieved from the period of 2008 to 2014. The list/sample was then adjusted by applying the criteria above. The same process was performed for the repeat and new entries samples.

The event day (date) for the purpose of this research is the day (date) that Top Employers release the report on the top companies to work for. This date is

denoted as t+0. We studied the reaction to the announcement on date t+0 by measuring the daily abnormal returns (ARs) over a 200 days period from t-20 to t+180 to establish the impact the announcement has on the shares of the listed companies. The window period to measure the reaction of the market in relation to the publication is thus

- t-20 to t+180: allows to establish the impact of the announcement on the returns

The choice of benchmark against which the ARs was estimated was a twelve 'control portfolio' of shares. This represents the cross-sectional factor of size, growth/value and resource and non-resource companies. The reason for the use of control portfolio model (CPM) is to address the inadequacies of Capital Asset Pricing Model (CAPM) as it does not adjust the expected return on the basis of company size, growth versus value and resource versus non-resource. Table 4.1 shows the twelve control portfolio of shares (Muller & Ward, 2010).

Table 4.1: Control portfolio

Control Portfolio	Resource or non-resources company	Value or growth company	Company size
SGN	Non-resource	Growth	Small
SGR	Resource	Growth	Small
SVN	Non-resource	Value	Small
SVR	Resource	Value	Small
MGN	Non-resource	Growth	Medium
MGR	Resource	Growth	Medium
MVN	Non-resource	Value	Medium
MVR	Resource	Value	Medium
LGN	Non-resource	Growth	Large

LGR	Resource	Growth	Large
LVN	Non-resource	Value	Large
LVR	Resource	Value	Large

According to Muller & Ward (2010) each listed JSE company was classified by size, value or growth and resource or non-resource. The associated shares of the companies were then classified into one of the twelve portfolios on a quarterly basis to ensure events that happen in the quarter are dealt appropriately. In the case of a share delisting it was held at zero from the day of termination of trade to the end of the quarter, at which point it was removed (Muller & Ward, 2010).

The daily abnormal returns were then calculated using equation 1

$$AR_{it} = R_{it} - (\alpha_{i,t} + \beta_{i,1}SGN_t + \beta_{i,2}SGR_t + \beta_{i,3}SVN_t + \beta_{i,4}SVR_t + \beta_{i,5}MGN_t + \beta_{i,6}MGR_t + \beta_{i,7}MVN_t + \beta_{i,8}MVR_t + \beta_{i,9}LGN_t + \beta_{i,10}LGR_t + \beta_{i,11}LVN_t + \beta_{i,12}LVR_t) \quad \dots \text{Equation (1)}$$

The daily equal-weighted indices for each control portfolio was computed as

$$R_{it} = \log [P_{it}/P_{it-1}] \quad \dots \text{Equation (2)}$$

Where:

AR_{it} is the abnormal return of share j in period t ;

$\alpha_{i,t}$ is the alpha intercept term of security j for day t ;

$\beta_{i,1} \dots \beta_{i,12}$ is the beta coefficients for each control portfolio return;

$SGN_t \dots SGR_t$ is the log-function share price returns

R_{it} is the weighted share return for portfolio i for day t;

P_{it} is the weighted share value of portfolio i at the end of day t.

As a result, this research uses the CPM ARs as calculated in Muller & Ward (2010) above. These ARs are retrieved from an existing database holding a list of ARs for all companies listed on the JSE from 1985 to date.

As a control measure we still deployed the CAPM method to act as a means of verifying or corroborating the results obtained from the CPM method. The ARs for the CAPM method were calculated by using the market model to compute the expected return. This uses a regression over 240 days of the share return and the market index return. As a result, the equation for our abnormal return for the CAPM method is as follows:

$$AR_{it} = R_{it} - (\alpha_{i,t} + \beta_{i,1}R_{Mt}) \quad \dots\text{Equation (3)}$$

Where:

R_{Mt} is the Market return for day t, this is estimated as the J203 return on day t

On obtaining the required ARs for the CAPM and CPM, the Average Abnormal Return (AAR) and the Cumulative Abnormal Return (CAR) was then calculated via Equations 4 and 5.

$$AAR_t = \frac{1}{n} \sum_{i=1}^n AR_{it} \quad \dots\text{Equation (4)}$$

$$CAR_t = \sum_{t=-20}^{180} AAR_t \quad \dots \text{Equation (5)}$$

Where:

n is the number of shares

AAR_t is average abnormal return on day t

CAR_t is the cumulative abnormal return

A two tailed test, together with the boot-strapping process, was then applied to the AARs and CARs respectively, to establish the significance of the result and to either accept or reject the null hypothesis stipulated in section 3. The boot strap is used in addition to t-test because unlike t-test it has no inherent assumption of normality (Muller & Ward, 2010).

4.6.2 Style methodology and style engine

The second methodology used in this research was simulating the data from the JSE and INET through a simulator that provided output based on the style. This simulator is known as the style engine and we followed the methodology as described in Muller & Ward (2013). This is a program that runs off Microsoft Excel and allows for the use of visual basic scripts to manipulated data stored in a Microsoft Access Database. The engine allows for the selection of parameters to create a portfolio/style over a defined time period with a given review cycle. In this research, we used yearly cycles to perform the required analysis. This is because the companies that constitute the portfolio only changed once a year on the release of the Top Employers report. Events that occurred within the cycle were handled as indicated below

- Mergers and acquisitions: we held the results of the two companies involved in the merger or acquisition separate until the end of the quarter, after which we dealt them as the same entity.
- Spinoffs : we held the returns of the subsidiary in the original company until the end of the quarter, after which we dealt them as separate entities
- Dividend pay-outs: dividend pay-outs were included back into the share returns
- Share buybacks: were not accounted for on the basis that they are capital reduction for shareholders that leave the company
- Listing and delisting of shares: we included new shares at the beginning of the next quarter and delisted shares were removed at the end of the quarter by holding them at the last known price.

In general, as illustrated with the handled events above, we required a consistent way to include the returns generated when there is a change in the company or environment to the model/simulation. In addition, we needed to adjust for any known bias such as look ahead bias with respect to the use of financial data. The JSE mandates the companies to release their financial statements at most three months after the financial year end. As a result, in our research we ensure the share prices do not reflect this information by lagging accounting variable by three months after the year end date (Muller & Ward, 2013).

The style methodology test was performed by constructing a portfolio of equal weighted 'Top Employers' and testing it against an equal weighted index over the period 2008-2014. The share in each portfolio was computed based on the share price of its constituent assets. At the end of the year, we retained the values of the portfolio and re-computed the portfolio for the next year. This process was repeated till July 2014. To establish if there is a significant difference between the equal weighted 'Top Employers' and the equal weighted index portfolio, we followed the graphical approach suggested in Muller & Ward (2013) by plotting the cumulative index of each portfolio over the required time frame.

4.7 Research limitations

The limitations identified in this research include

- The measurement of job satisfaction as per Top Employers does not consider employee opinion. This is a view of the HR management team on the policies and practice, therefore the survey does not report on job satisfaction as reported by the employees, but rather provides a measure of the work place quality. This is an advantage, in that it ensures that all the information pertinent to the HR policies and procedures are captured, as employees might not be fully aware of a number of policies. However, a limitation is that management and employee views are not always coherent. As a result the level of employee satisfaction measured might not be accurate. The example given in Filbeck & Preece (2003) for the '100 best firms for working mothers', provides a case where the survey of the company, without surveying the employee, led to the misreporting and exaggeration of the firm's working environment.
- The study was done on data from 2008 onward and therefore does not account for all economic periods. This makes making inference for the research difficult. For example, we will be unable to deduce the relationship between job satisfaction and share return during normal times and through a recession (before, during and after), as the world was recovering from a recession for about 50% of the time period studied in this research.
- As the study years were limited from 2008-2014, the sample size was small and the possibility of a type II error occurring, due to this, is significantly increased.
- Lastly, the fact that firms must apply to be considered. Therefore if companies do not apply they do not make the list. There will be no impact on the list if the reason for not applying was because the firm knew that job satisfaction level in the company was low. On the other hand if a firm does not apply because it knows it has high job satisfaction and does not need

verification, it will impact on the result of the ranking and the certification as companies that are supposed to be on the list are not (Edmans, 2011). Therefore our list of top employers is really a subset of the actual total list of best companies to work for in South Africa. As a result, comparisons and inferences made from using this list will not be accurate.

5 Results

This section provides a description of the results obtained during the simulation of the event study and style engine. We first start by giving a description of the population and samples used. Thereafter we provide the details of the abnormal returns for the CAPM and CPM methods. This is provided by detailing the AAR and CAR result data with particular emphasis on significant values obtained via the t-test and boot strap statistical methods. We round up the chapter with details of results obtained via the style engine.

5.1 Sample descriptive statistics

The sample considered is as stated in sections 4.2 through to section 4.4. The population as stated in section 4.2 is the Top Employer companies that were listed on the JSE from the year 2008 to the year 2014. The population size as a result is a total of 123 companies, with 41 unique companies since some companies are drawn more than once.

On application of the criteria stated in section 4.6, only 82 companies meet the requirements. This sample was then grouped as per the samples to be tested in section 4.4. The samples included the full list, the new entries and the repeat entries. A summary table of the population and sample statistics is given below in Table 5 below.

Table 5: Summary of Top Employer companies listed in the JSE used in this research

Population Size	123
Sample size	82
number of companies by year	82
2008	12
2009	12
2010	12
2011	14
2012	16
2013	16
JSE Sector	82
Basic Material	13
Consumer Goods	5
Consumer Services	18
Financial	20
Health Care	4
Industrials	6
Oil and Gas	2
Telecommunications	14
Number of repeats in the list	53
1	7 times
2	6 times
3	8 times
5	2 time
New entries / Repeat entries / Full list	
2008	12 / 0 / 12
2009	4 / 8 / 12
2010	6 / 6 / 12
2011	1 / 13 / 14
2012	4 / 12 / 16
2013	2 / 14 / 16
Totals	29 / 54 / 83

5.2 AAR and t-test results

In this section, we detail the results obtained for AARs for the CAPM and the CPM methods. The results are also tested for significance through the t-test. The AARs were calculated as specified in section 4.6.1 within the event window $t-20$ to $t+180$. As a result, the window starts 20 days prior to the event date and finishes 180 days after.

5.2.1 AAR and CAPM

The CAPM AARs and its bounds of significance are given in Figure 5.1, Figure 5.2 and Figure 5.3.

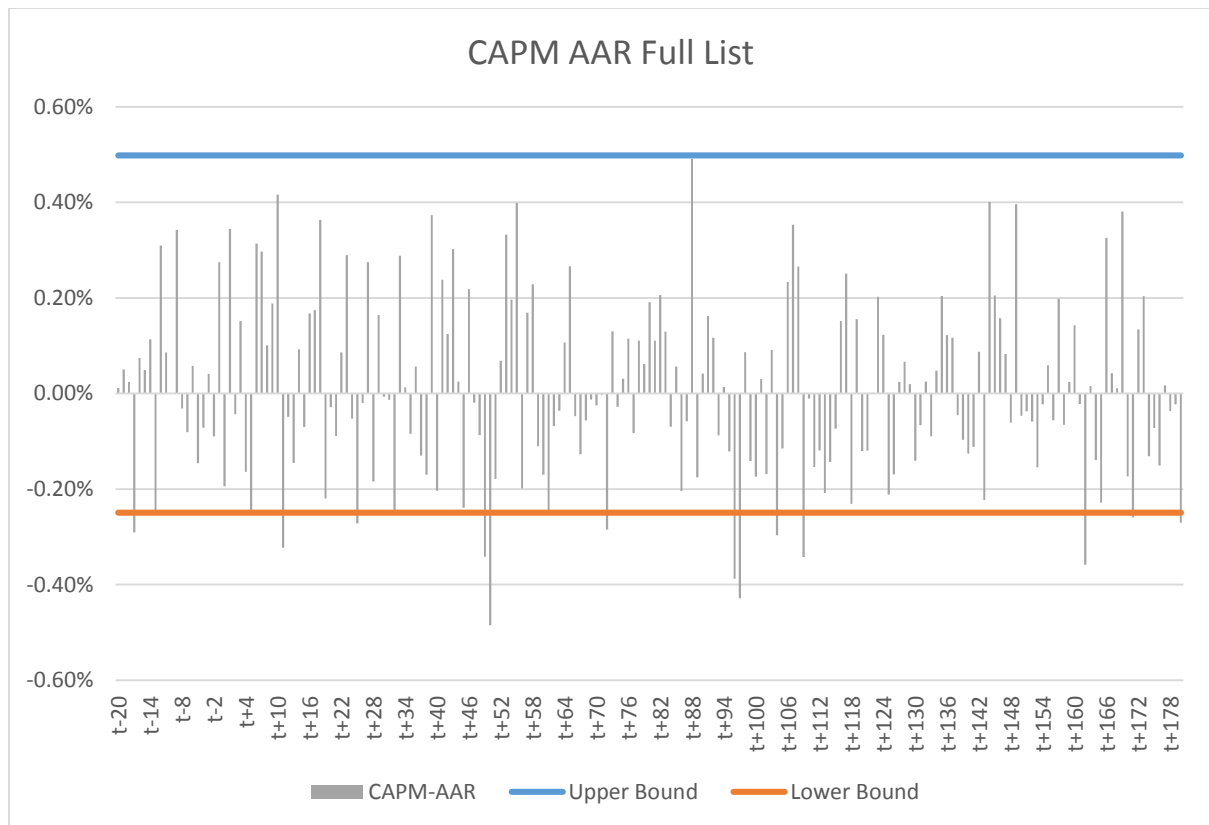


Figure 5.1: CAPM AAR for the full List

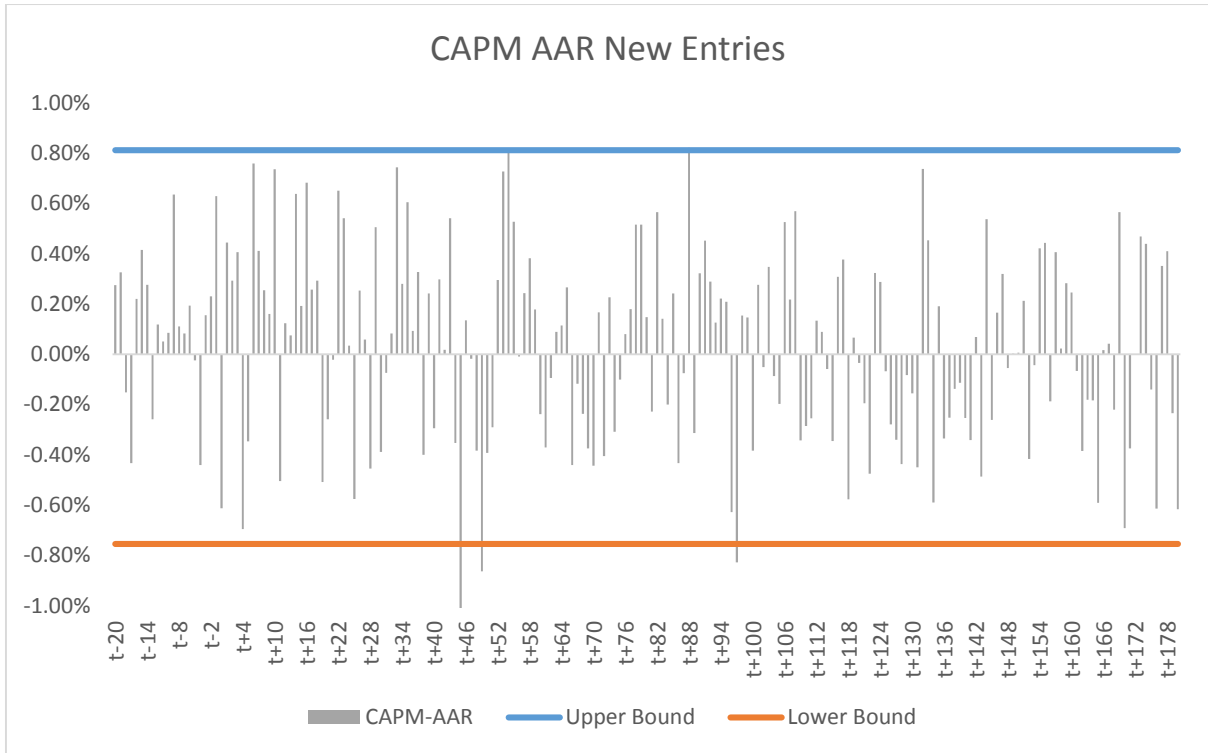


Figure 5.2: CAPM AAR for the new entries

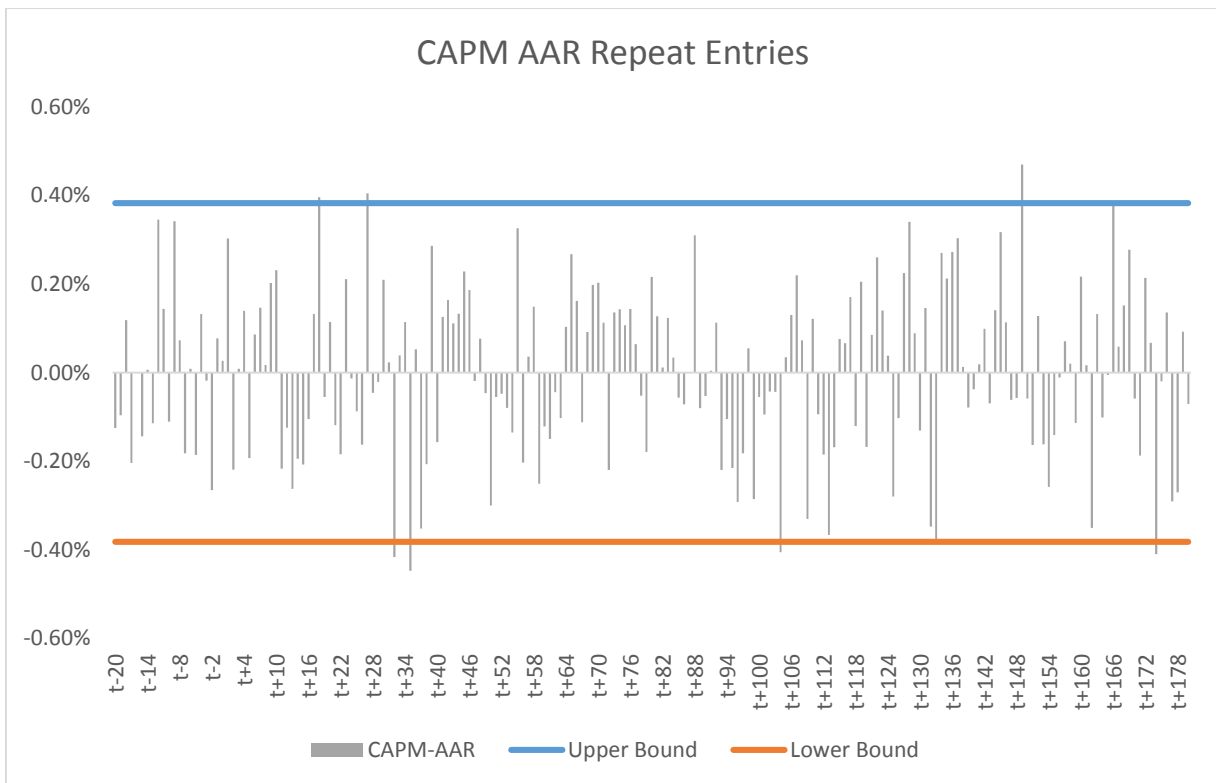


Figure 5.3: CAPM for the repeat entries

The summary of the results produced when applying t-test on the AARs over the t-20 to t+180 is given in Table 5.1

Table 5.1: CAPM t-test summary result for all samples

	Full List	New Entries	Repeat Entries
Mean [-20,0]	0.02 %	0.09%	-0.01%
Mean [0,180]	0.005%	0.02%	-0.01%
Std Dev (σ)	0.19%	0.39 %	0.19%
P-value	0.33	0.23	0.43
$H_{01}: \mu=0$ (5%)	Fail to Reject	Fail to Reject	Fail to Reject

The indication from Table 5.1 is that the alternate hypothesis will be rejected due to the p-values > 0.05 for all three samples tested.

The lower bound and upper bound (equal to $2(\sigma)$ away from the mean) is indicated in Figure 5.1, 5.2 and 5.3 as an orange and blue line running horizontally across the graphs. The line is a measure of the 95% significance interval. The standard deviation was obtained via the pooled variance from the results of the t-test. As a result, all abnormal returns out of this interval cannot be attributed to chance and are significant at the 0.05 significance level.

Table 5.2 shows the significant observations based on the t-stat score from the 10% significant level. This provides a measure of the key significant observations and its impact on null hypothesis.

Table 5.2: CAPM AAR Significance summary table (* is 10% significance, ** is 5% significance and *** is 1% significance)

a) full list of entries (n=82) (t-critical=1.989)			b) new entries (n=29) (t-critical=2.045)			c) repeat entries (n=52) (t-critical=2.006)		
AAR Day	t-Stat	H0:μ=0	AAR Day	t-Stat	H0:μ=0	AAR Day	t-Stat	H0:μ=0
(**) t-17	-2.22	Reject	(*) t+4	-1.85		(*) t-12	1.80	
(*) t-13	-1.97		(*) t+6	1.86		(*) t-9	1.78	
(*) t+0	-1.70		(*) t+10	1.81		(**) t+18	2.07	Reject
(**) t+5	-2.01	Reject	(*) t+33	1.83		(**) t+27	2.11	Reject
(**) t+11	-2.39	Reject	(***) t+45	-3.30	Reject	(**) t+32	2.18	Reject
(*) t+19	-1.84		(**) t+49	-2.28	Reject	(**) t+35	2.34	Reject
(**) t+25	-2.12	Reject	(*) t+53	1.78		(*) t+37	1.84	
(*) t+32	-1.98		(*) t+54	2.02		(*) t+55	1.70	
(*) t+40	-1.75		(*) t+88	2.03		(**) t+104	2.12	Reject
(*) t+45	-1.94		(**) t+97	-2.19	Reject	(*) t+109	1.73	
(**) t+49	-2.49	Reject	(*) t+132	1.81		(*) t+113	1.92	
(***) t+50	-3.26	Reject	(*) t+170	-1.84		(*) t+128	1.78	
(*) t+56	-1.73					(*) t+132	1.82	
(*) t+61	-1.98					(*) t+133	2.00	
(**) t+72	-2.19	Reject				(**) t+149	2.45	Reject
(*) t+86	-1.76					(*) t+162	1.84	
(*) t+88	1.96					(*) t+166	1.99	
(***) t+96	-2.74	Reject				(**) t+174	2.14	Reject
(***) t+97	-2.96	Reject						
(**) t+104	-2.25	Reject						
(**) t+109	-2.50	Reject						
(*) t+113	-1.78							
(*) t+118	-1.90							
(*) t+125	-1.80							
(*) t+143	-1.86							
(**) t+162	-2.58	Reject						
(*) t+165	-1.89							
(**) t+171	-2.05	Reject						
(**) t+180	-2.11	Reject						

The full list sample in Table 5.2 (a) has

- 29 negatively significant CAPM AARs
- 14 significant at 5% significant level
- 3 significant at 1% significant level.

This result, together with $\text{Mean } [0,180] < \text{Mean } [20,-1]$ in Table 5.1, points towards a decrease in CAR after the event date for the full list sample, but this may be superseded by the amount of non-significant positive AAR.

The new entry sample in Table 5.2 (b) has

- 12 significant AAR values
- 3 significant at 5% significant level.
- 1 significant at 1% significant level.
- 7 positively significant AAR values with 3 consecutive positively significant in the first 33 days after the event

This implies a possible rise in CAR in the first 33 days. Also notable in Table 5.2 (b) are the intersect points with the full list sample in yellow.

The repeat entry sample in Table 5.2 (c) has

- 18 significant values.
- 6 significant at 5% significant level.
- 7 positively significant.

The first four significant AARs are positive; two of them before the event day and the rest in the first 28 days after the event day. The trend appears to be generally more negative from there on with positive AARs interleaving at random points. Also notable in Table 5.2 (b) are the intersect points with the full list and new entries samples in green and blue fill respectively.

5.2.2 AAR for the CPM method

The AAR for the CPM method and the threshold is given in Figure 5.4, Figure 5.5 and Figure 5.6.

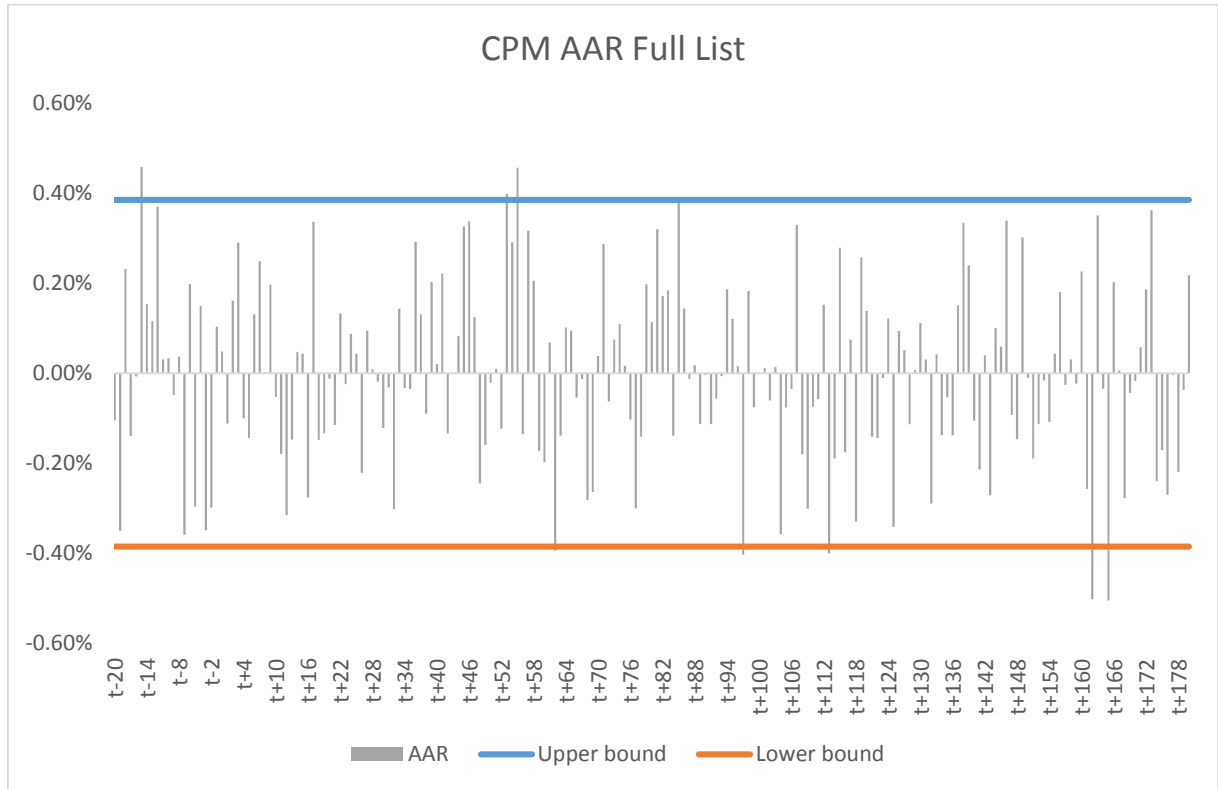


Figure 5.4: CPM AAR for the full list sample

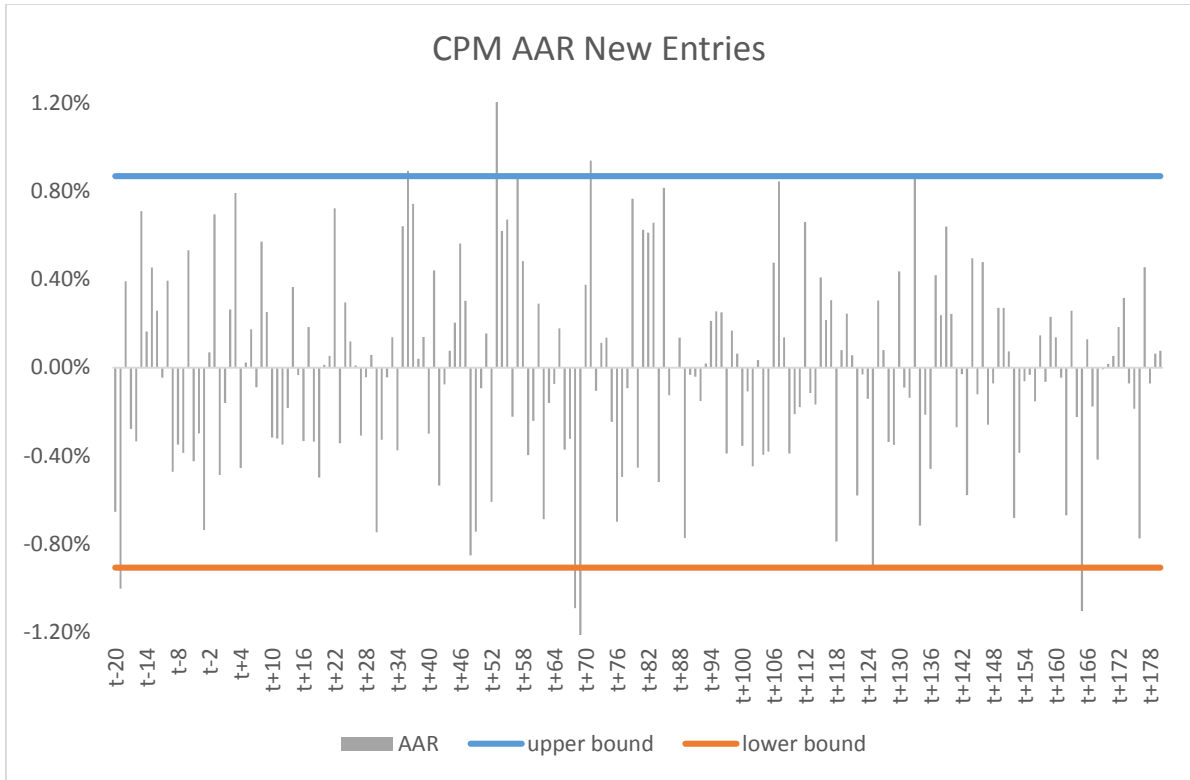


Figure 5.5: CPM AAR for new entries.

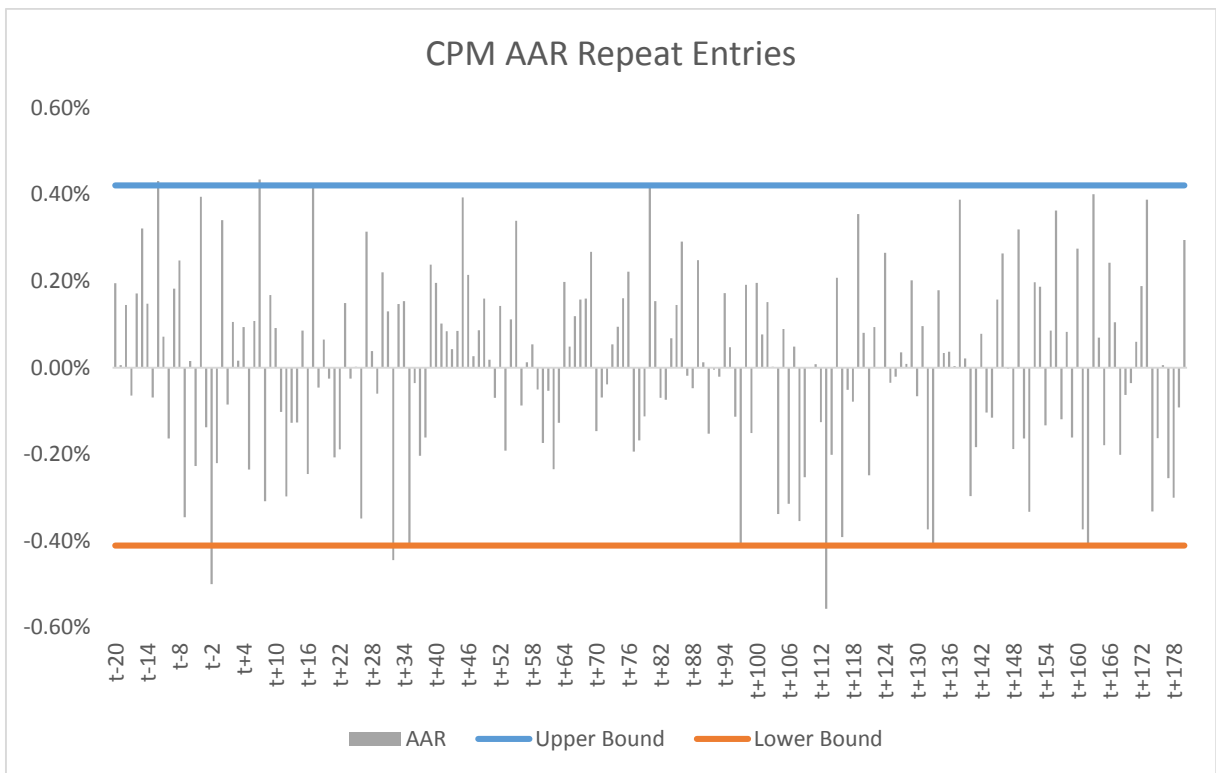


Figure 5.6: CPM AAR for repeat entries.

The summary of the results produced when applying t-test on the AARs in Figure 5.4, 5.5 and 5.6 over the t-20 to t+180 is given in Table 5.5

Table 5.5: CPM AAR results summary for all samples.

	Full List	New Entries	Repeat Entries
Mean [-20,0]	-0.0002%	0.0020%	0.0300%
Mean [0,180]	0.0016%	0.0020%	0.0030%
Std Dev (σ)	0.1900%	0.4400%	0.2100%
P-value	0.4800	0.3100	0.2800
$H_{01}: \mu=0$ (5%)	Fail to Reject	Fail to Reject	Fail to Reject

The indication from summary Table 5.5 is that the alternate hypothesis will be rejected due to the p-values > 0.05 for all three samples tested.

As explained in section 5.2.1, the lower and upper bound (equal to $2(\sigma)$ away from the mean) are indicated in figures 5.4, 5.6 and 5.6 as orange and blue horizontal lines.

Using the results from the t-test, we now tabulate the significant AAR for the full list, new entries and repeat entries in Table 5.6.

Table 5.6: CPM AAR Significance summary table (* is 10% significance, ** is 5% significance and *** is 1% significance)

a) full list of entries (n=82) (t-critical=1.989)			b) new entries (n=29) (t-critical=2.045)			c) repeat entries (n=52) (t-critical=2.006)		
AAR Day	t-Stat	H0: $\mu=0$	AAR Day	t-Stat	H0: $\mu=0$	AAR Day	t-Stat	H0: $\mu=0$
(*) t-19	-1.78		(**) t-19	-2.21	Reject	(**) t-12	2.05	Reject
(**) t-15	2.37	Reject	(*) t+3	1.83		(*) t-7	-1.69	
(*) t-12	1.92		(**) t+36	2.05	Reject	(*) t-4	1.87	
(*) t-7	-1.83		(*) t+37	1.72		(**) t-2	-2.43	Reject
(*) t-3	-1.78		(*) t+48	-1.88		(**) t+7	2.06	Reject
(*) t+17	1.75		(***) t+53	3.38	Reject	(*) t+17	2.00	
(*) t+45	1.70		(*) t+57	2.01		(*) t+26	-1.70	
(*) t+46	1.75		(**) t+68	-2.41	Reject	(**) t+32	-2.16	Reject
(**) t+53	2.07	Reject	(**) t+69	-2.74	Reject	(*) t+35	-1.97	
(**) t+55	2.37	Reject	(**) t+71	2.16	Reject	(*) t+45	1.87	
(**) t+62	-2.01	Reject	(*) t+79	1.77		(**) t+80	2.01	Reject
(*) t+85	1.98		(*) t+85	1.88		(*) t+97	-2.00	
(**) t+97	-2.06	Reject	(*) t+107	1.94		(*) t+108	-1.73	
(*) t+104	-1.82		(*) t+118	-1.73		(***) t+113	-2.71	Reject
(*) t+107	1.71		(*) t+125	-1.99		(*) t+116	-1.91	
(**) t+113	-2.04	Reject	(*) t+133	1.99		(*) t+119	1.68	
(*) t+118	-1.68		(**)			(*) t+132	-1.82	
(*) t+125	-1.74		t+165	-2.44	Reject	(*) t+133	-1.98	
(*) t+138	1.74		(*) t+176	-1.70		(*) t+138	1.84	
(*) t+146	1.76					(*) t+156	1.72	
(**) t+162	-2.57	Reject				(*) t+161	-1.82	
(*) t+163	1.82					(*) t+162	-2.00	
(**) t+165	-2.58	Reject				(*) t+163	1.90	
(*) t+173	1.88					(*) t+173	1.84	

The full list sample in Table 5.6 (a) has:

- 24 significant CPM AARs
- 8 significant at the 5% significance level
- 13 positively significant AARs with 5 appearing in the first 60 days after the event date.

This indicates a growth in CAR for the first 60 days after the event date for the full list sample. This trend does not corroborate what we observed with the CAPM AAR full list. The CPM full lists intersect with the CAPM full list is shown in yellow in Table 5.6 (a). One would notice that the results corroborate the CAPM result from day 97 onwards. An interesting observation occurs at the t+45 intersect where the value is positively significant with the CPM method and negatively significant with the CAPM method.

The new entries list in Table 5.6 (b) has:

- 18 significant AAR values
- 6 significant at 5% significant level
- 1 significant at 1% significant level.
- 10 positively significant AARs with 5 of them happening in the first 60 days after the event date.

Therefore, this indicates a general positive trend for the first 60 days, confirming the trend observed for Table 5.6 (a).

The repeat entries Table 5.6 (c) has:

- 24 significant values
- 4 significant at 5% significant level
- 1 at 1% significant level

There were a total of 11 positively significant AARs for the CPM repeat entries sample result. These positive values are interleaved with negative AARs at spaced intervals resulting in no particular trend.

From the data detailed here, one would expect that the cumulative abnormal returns for the first few (60 days) months to grow or to have a positive slope. This assumption is supported by both the CAPM (new entries sample) and the CPM (new entries and full list samples) tested samples with positive AARs up to 60 days after the event. In addition, we have a number of overlap in significant AARs across models (i.e. CPM and CAPM) and between samples. This serves as confirmation of the robustness of the AAR result on the day for top employer companies.

5.3 CAPM CAR results

In this section, we provide a summary of the CAPM CAR results. The methodology applied is the market model as explained in section 4.6.1. This model uses the regression of the share and the market return. Figures 5.7, 5.8 and 5.9 show the CAR for the full list, new entries and the repeat entries samples.

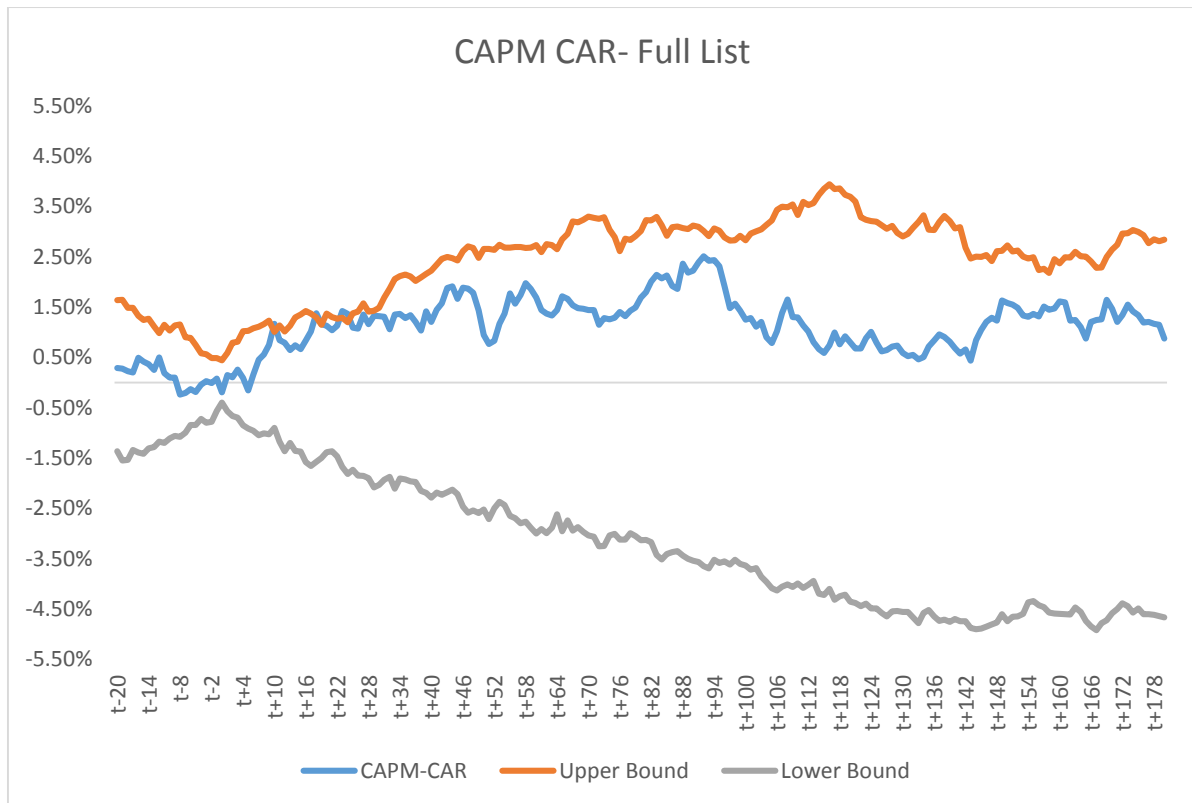


Figure 5.7: CAPM CAR for the full list sample.

The CAPM full list shows a positive growth trend after the event date with significance at 5% level. Figure 5.7 shows:

- A positive trend starting at t+5 going through the significant points as identified in Table 5.7 (a) at t+10, t+18, t+19, t+23 and t+24.
- The CAR values then accumulate and increase up to an insignificant peak of 2.51% at t+92
- Thereafter, the value decreases and closes at an insignificant value of 0.88% at t+180.

Table 5.7: CAPM CAR Significance summary table

a) full list of entries		b) new entries		c) repeat entries	
CAR Day	CAR Value	CAR Day	CAR Value	CAR Day	CAR Value
t+10	1.17%	t+16	3.07%	t+63	-1.06%
t+18	1.38%	t+17	3.34%	t+64	-0.95%
t+19	1.16%	t+18	3.64%	t+102	-1.17%
t+23	1.42%	t+19	3.11%	t+104	-1.63%
t+24	1.37%	t+20	2.85%	t+105	-1.54%
		t+22	3.50%	t+106	-1.47%
		t+23	3.88%	t+107	-1.24%
		t+24	3.91%	t+109	-1.48%
		t+26	3.58%	t+110	-1.34%
		t+27	3.64%	t+111	-1.44%
		t+39	5.48%	t+112	-1.69%
				t+113	-2.00%
				t+114	-2.19%
				t+115	-2.11%
				t+116	-2.05%
				t+117	-1.87%
				t+118	-1.91%
				t+119	-1.71%
				t+120	-1.88%
				t+121	-1.95%
				t+122	-1.69%
				t+123	-1.56%
				t+124	-1.53%
				t+125	-1.82%
				t+126	-1.92%
				t+127	-1.70%
				t+133	-2.02%

The significance CARs according to the CAPM method for the new entries is given in Table 5.7 (b). There are a total of 11 positively significant CARs. This follows a similar growth trend to what was expected based on the AAR results and the trend is similar to the CAPM CAR full list explained earlier. Figure 5.8 show

- The CAR value accumulates and increases through all significant values as given in Table 5.7 (b).
- The positive CAR trend reaches insignificant peak values of 7.09 % at t+94 and 6.96% at t+108.
- Thereafter, it decreases to a value of 4.28 % at t+180.

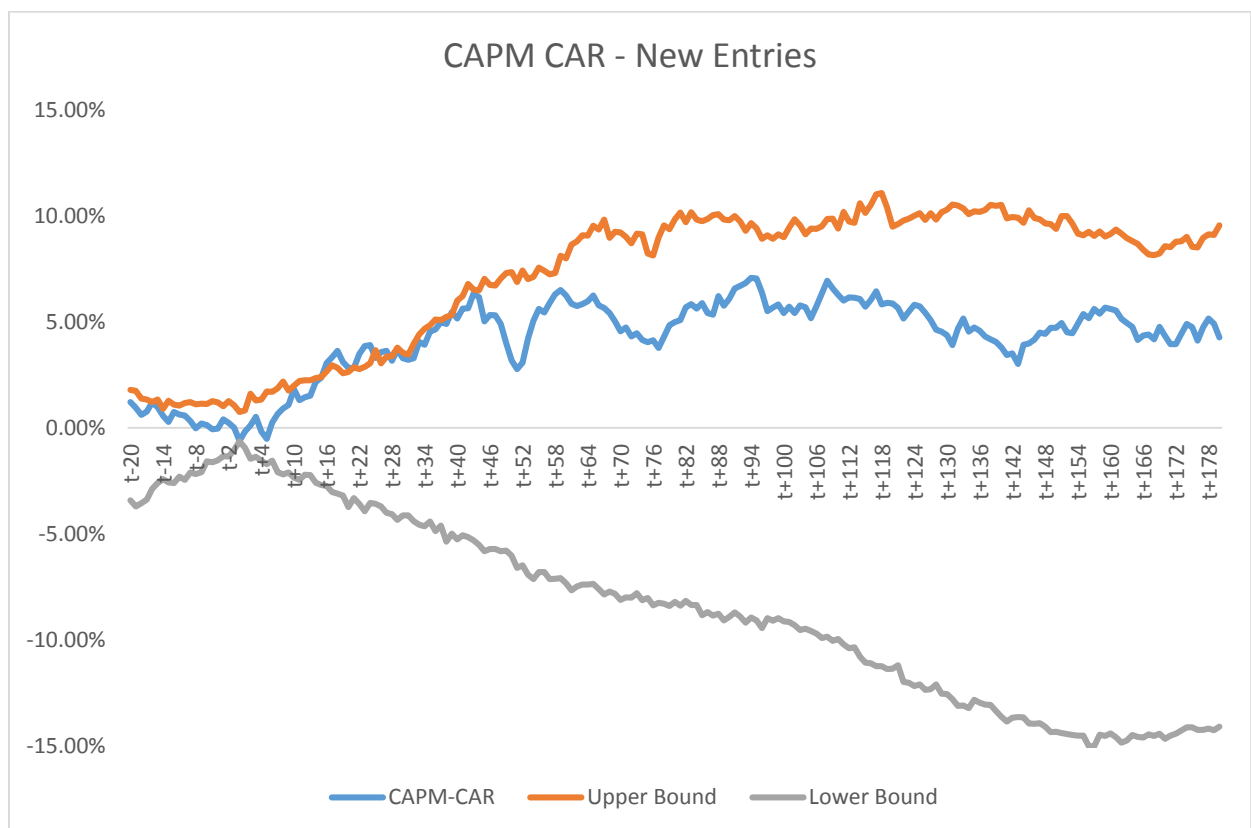


Figure 5.8: CAPM CAR for the new entries sample

Lastly, as shown in Figure 5.9, there is no positive significant value for the repeat entries. There is a general reduction in the CAR value over time. This is observable, via the reduction in subsequent peaks, as the CAR oscillates from positive to

negative. The erratic decrementing movement of the repeat entries is different from the CAPM full list and the new entries sample described thus far. Figure 5.9 shows:

- Negative significant values observed are after t+100 from t +105 to t+122.
- The peak of this sample is at t+10 with value of 0.81%.
- The trend closes at an insignificant value of -0.94% at t +180.

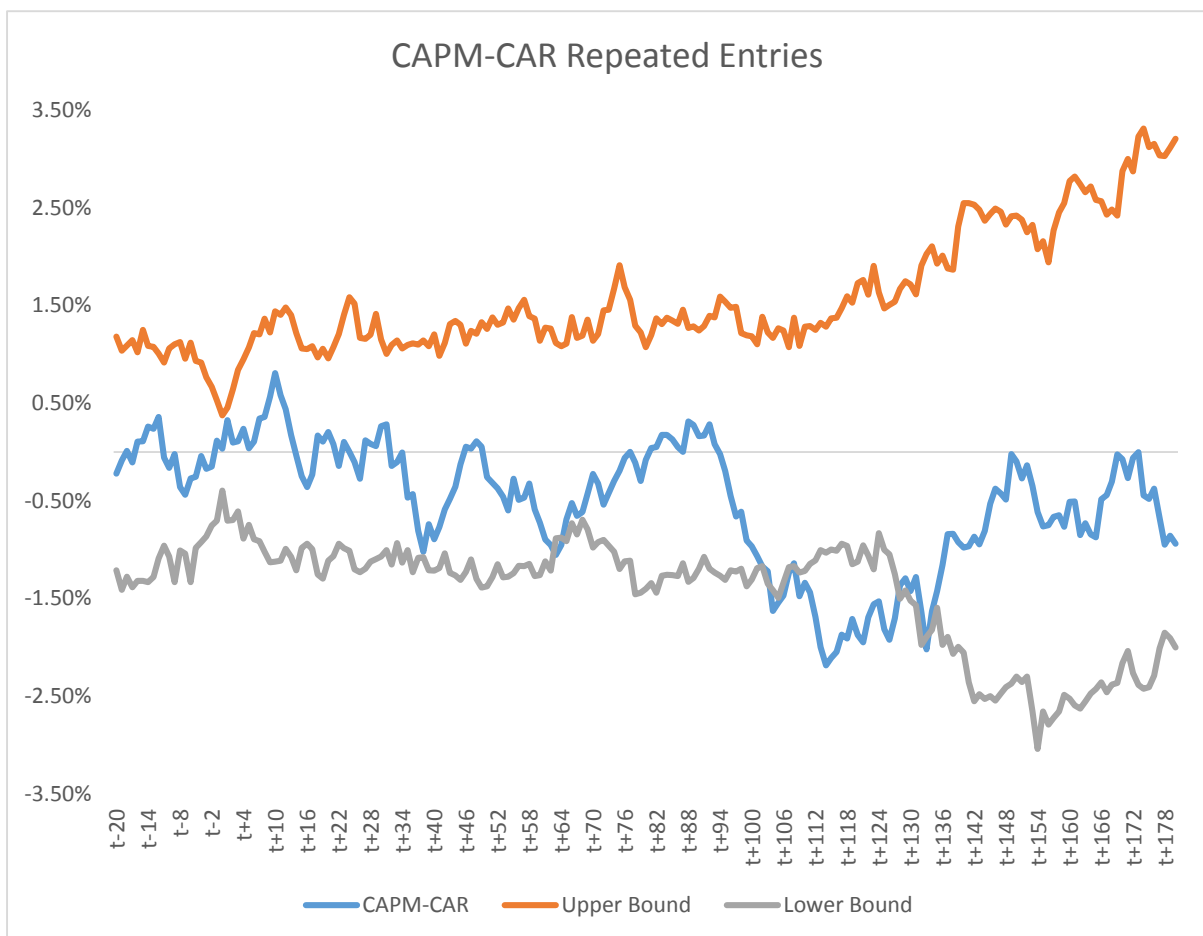


Figure 5.9: Significant CAPM CAR for repeat entries

The CAPM results displayed in general, thus far favour an increase in the share price of companies up to 39 days after the event date.

5.4 CPM CAR Results

In this section, we provide the control portfolio data results. The methodology used in achieving these results is given in section 4.6.1

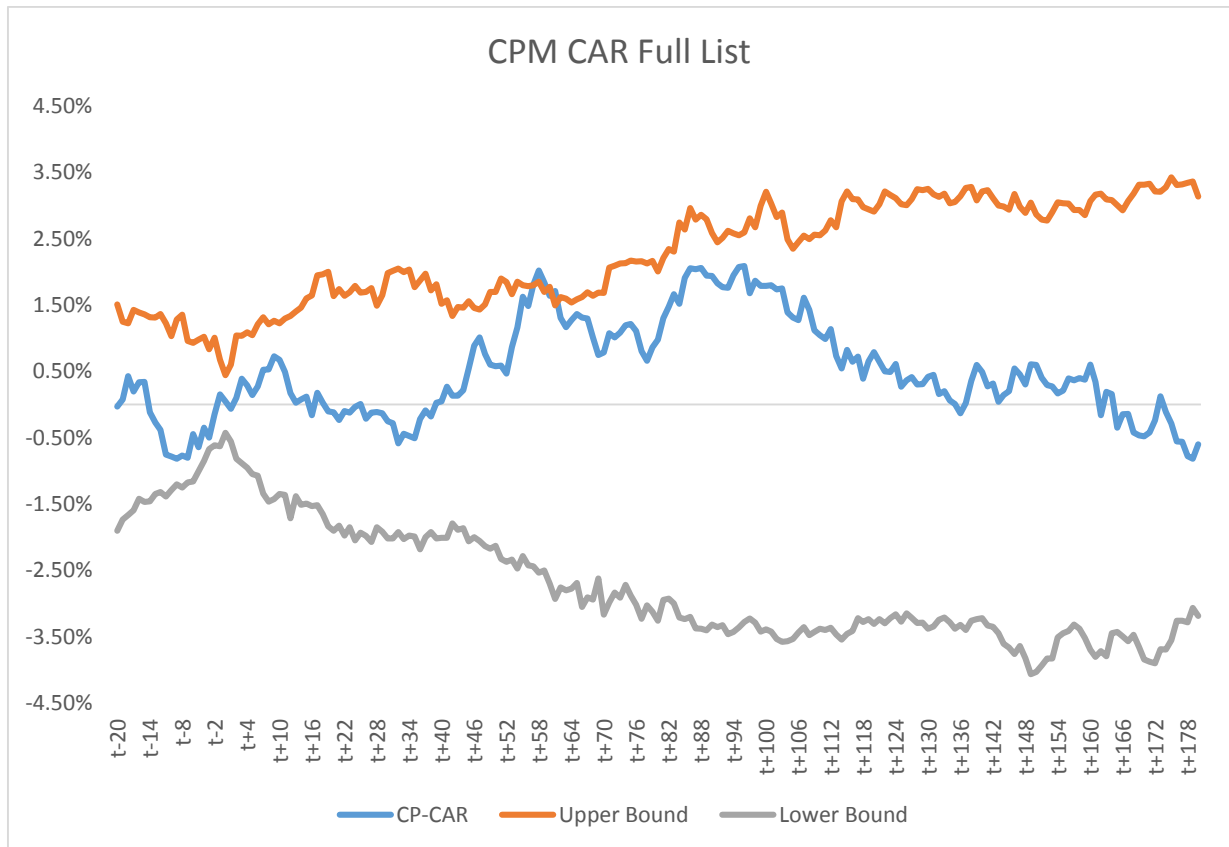


Figure 5.8: CPM CAR full list sample

The full list sample results are shown in Figure 5.8. There are 4 positively significant values at the 0.05 significance level as shown in Table 5.8 (a). The trend of the CPM full list is similar to what was observed for the CAPM full list and new entries samples. Figure 5.8 shows:

- A positive growth trend from t+35
- Increases to a significant peak value of 2.25% at t + 58 and an insignificant subsequent lower peak value of 2.09 at t +96
- After peaking at t+96 the CAR decrease to an insignificant closing value of -0.60.

Table 5.8: CPM CAR Significance summary table at 0.05 significance level ((* Significant at 10%)

a) full list of entries		b) new entries		c) repeat entries	
CAR Day	CAR Value	CAR Day	CAR Value	CAR Day	CAR Value
t+57	1.81%	t+55	2.06%	(*)t+90	2.62%
t+58	2.25%	t+57	2.73%		
t+59	2.08%	t+58	3.23%		
t+61	1.97%	t+59	2.82%		
		t+60	2.57%		
		t+61	2.87%		
		t+62	2.16%		
		t+63	2.00%		

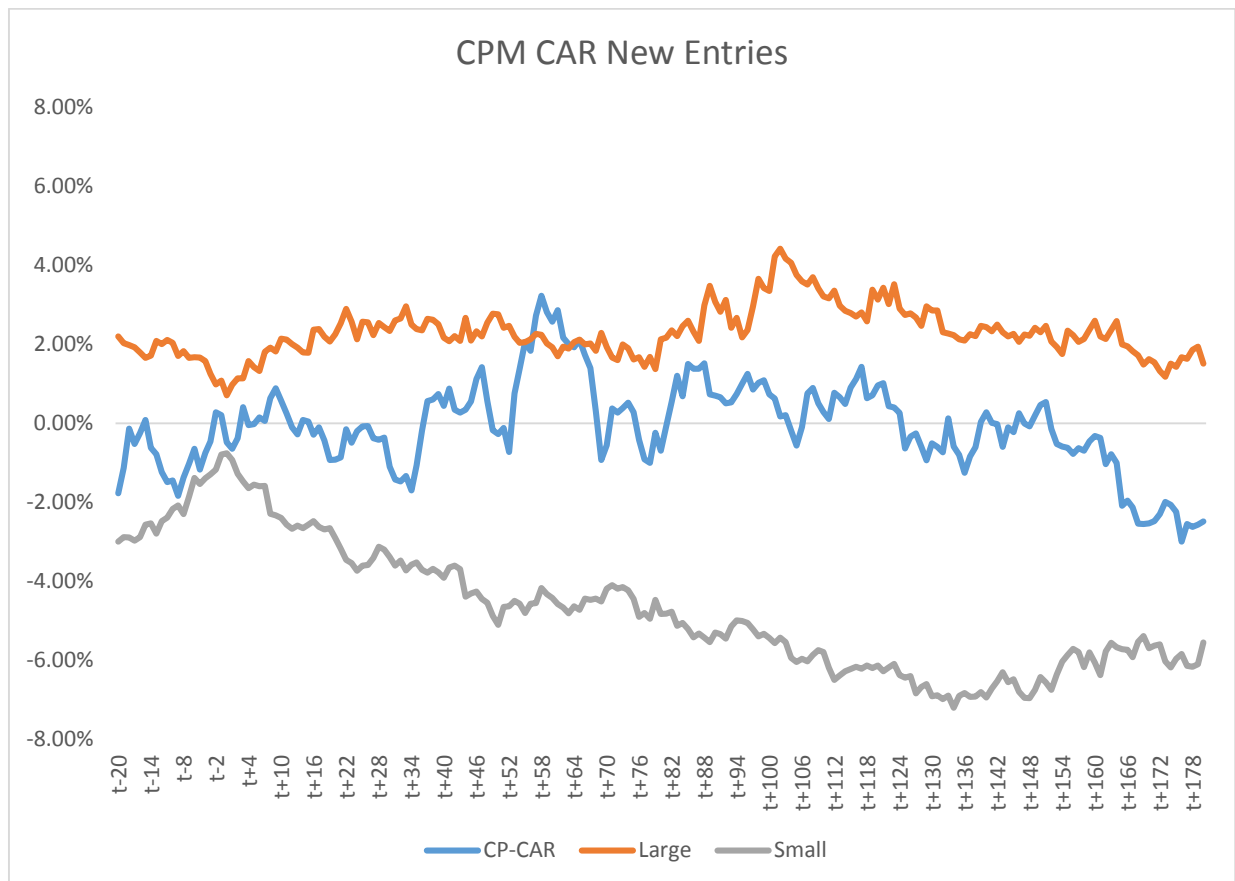


Figure 5.9: CPM CAR new entries sample

The new entries sample as shown in Figure 5.9 follow trends similar to what we have observed earlier for the CAPM full list, new entry and the CPM full list. This is because:

- The CAR increases up to a peak value of 3.23 at t+58. An interesting observation about this peak is that values to either side of it are all significant, giving rise to a significantly positive range from t+55 to t+63 as shown in Table 5.8 (b).
- Thereafter, the CAR decrease and closes at an insignificant CAR value of -2.49 at t+180.

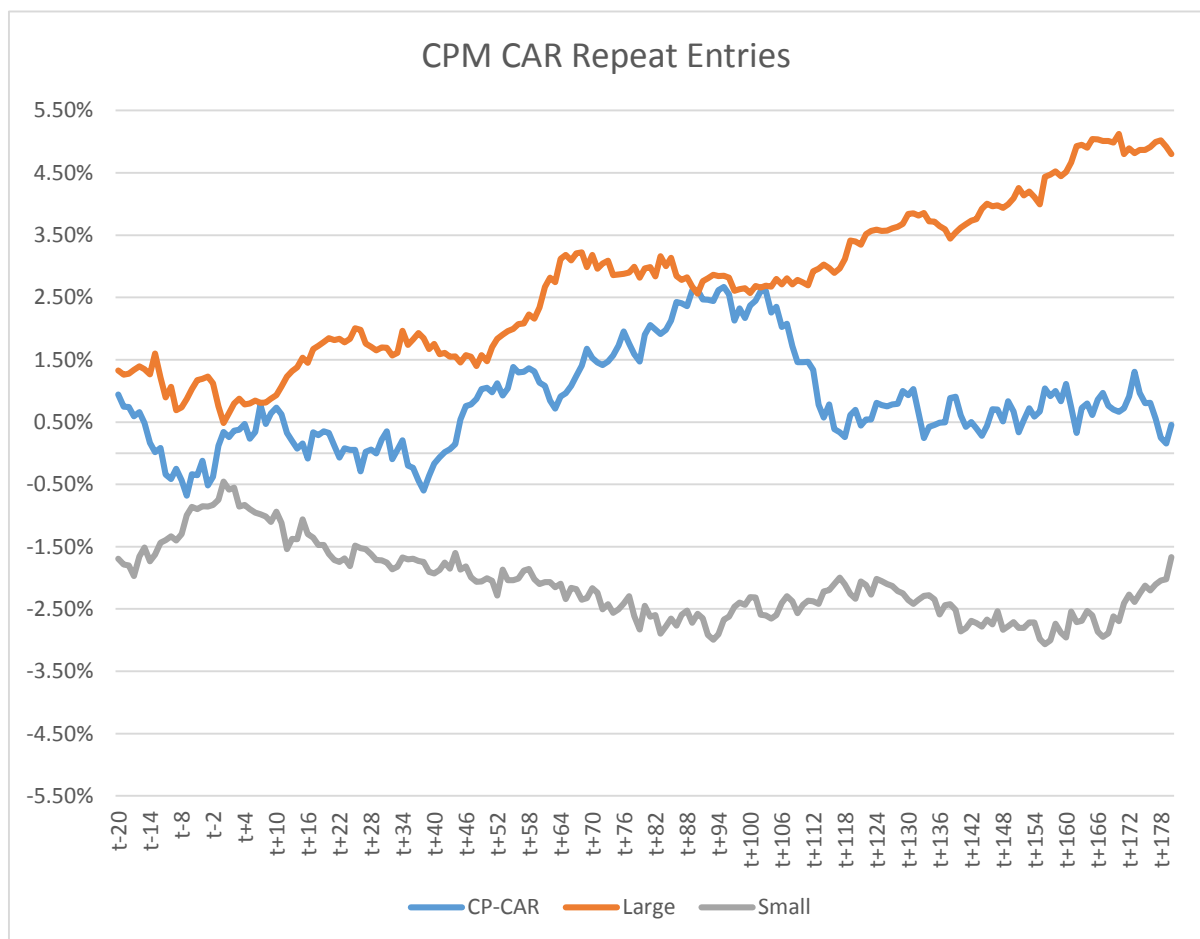


Figure 5.10: CPM CAR repeat entries sample

Surprisingly the CAR repeat entries, given in Figure 5.10, have a similar trend to the full list and new entries result samples for both the CAPM and CPM method.

This was not expected as the CAPM method trend for the repeat entries was decreasing erratically and did not lend itself to further analysis. However, as all values are insignificant, we are unable to draw any deductions from the trend observed. We observe:

- An increase to an insignificant peak value of 2.62 at t+90 at the 5% level but significant at the 10% level.
- Thereafter, from t+103 to t+118 there was a sharp decrease in the CAR value from 2.60% to 0.26%.
- The CAR then stagnates and closes at a value of 0.45% at t+180.

5.5 Style methodology

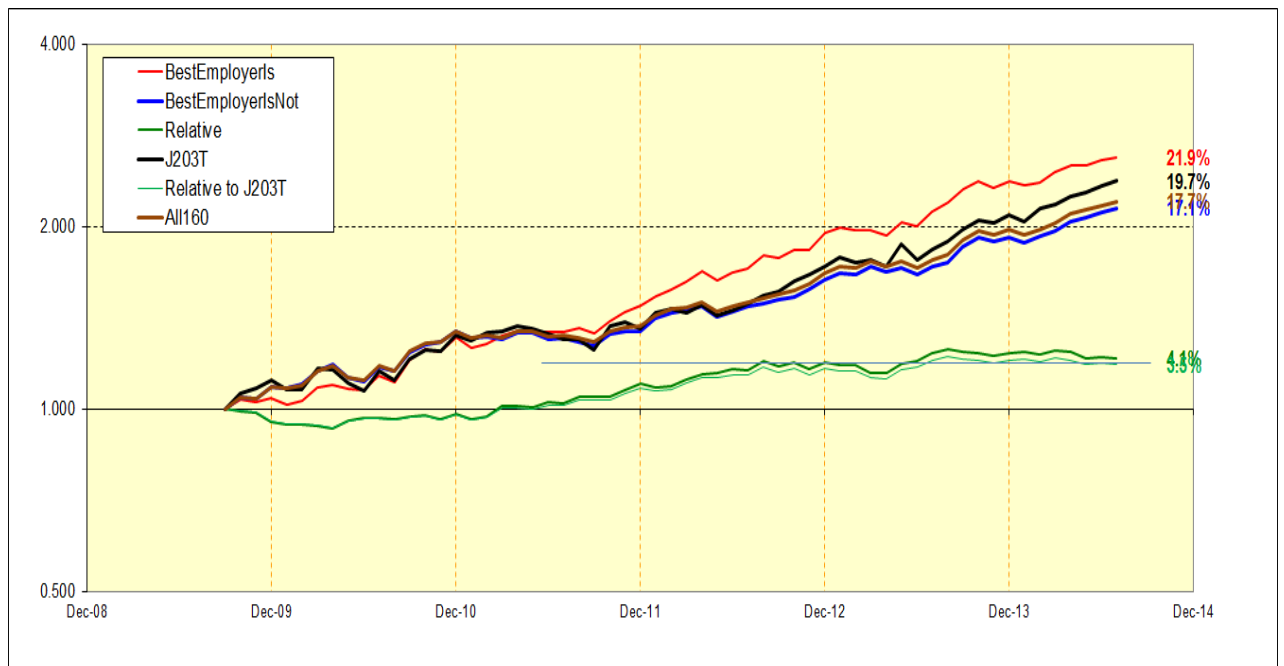


Figure 5.11: Style methodology simulation results for the full list sample.

The style methodology was applied as explained in section 4.6.2. The results of the style methodology are given graphically in Figure 5.11. The figure shows the output of the full list of companies' sample. The legend includes:

- **BestEmployerIs**: This is the full list sample i.e sample 1.
- **BestEmployerIsNot**: These are all the companies in the JSE All160 that are not in the Full List sample on a yearly basis (i.e all companies in the JSE All160 index not in yearly published list of top employers).
- **Relative**: This is the price relative of BestEmployerIs to BestEmployerIsNot. This is obtained by dividing the value of the BestEmployerIs by the value of BestEmployerIsNot
- **J203T**: This is the J203T index value
- **Relative to J203T**: This is the price relative of BestEmployerIs to the J203T index.
- **All160**: This is the JSE All160 index value.

The trend in Figure 5.11 shows that the BestEmployerIs initial increases at a faster rate than the BestEmployerIsNot and the J203T from 2009 to 2012. This is observed by noting that the price-relative slopes in this period are upwards for the “relative” and the “Relative to J203T” line. After 2013 the slopes flattens indicating that there is no difference in the growth rate of BestEmployerIs and BestEmployerIsNot, BestEmployerIs and J203T in the period 2013 to 2014.

6 Discussion of Results

In this section we discuss the results obtained. We start by going through the AAR results and provide an indication of what implications the result has on the hypothesis, we then move on to the CAR results. Thereafter, we analyse the style methodology result and finish the chapter with a discussion of the implication of the results on South Africa and the JSE.

6.1 CPM vs CAPM

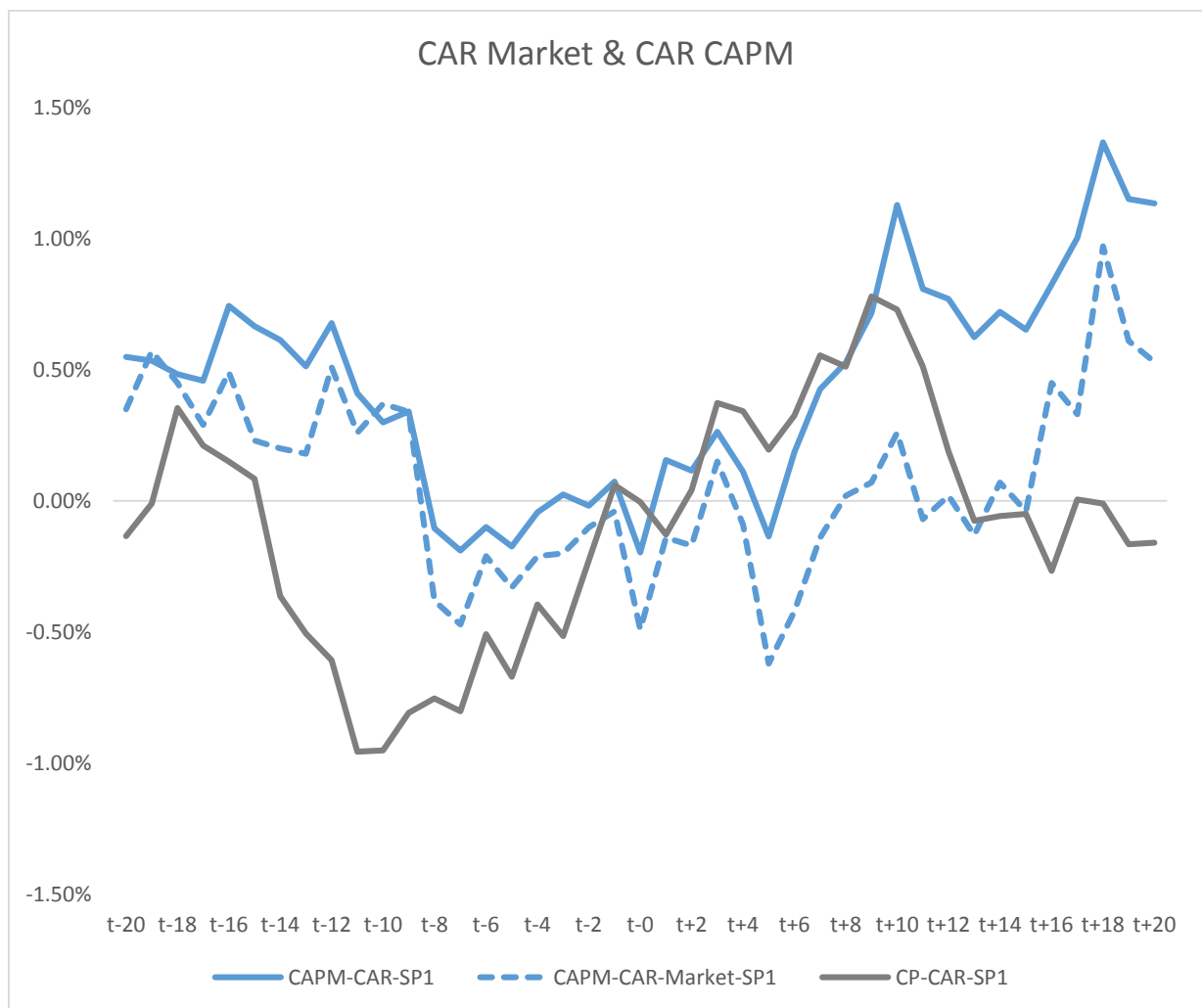


Figure 6.1: CARs for CAPM, market and CPM methods

The results of the two methods used, CPM and CAPM method is detailed in Chapter 5. As the two methods do not always agree, we make an attempt to choose one in this section. As stated in section 4.6.1 the CPM method is used in this research, due to the fact that CAPM is biased, and does not take into consideration company size, growth versus value and resource versus none resource in its expected return value.

To establish the model that best predicts the expected return we follow the method used in Esterhuysen (2011) that introduces the market model by setting the beta coefficient to 1. Figure 2 shows the CARs obtained for each of the methods in consideration from t-20 to t+20. As can be seen in the figure the CAPM method closely follows the market model and its CAR deviates more from zero than the CAR of the CPM method.

In addition, Table 5.5 in section 5.2.2 shows that the mean of the AAR for the CPM method is closer to zero than the mean of the AAR for the CAPM method in Table 5.1. As the standard deviation of the AARs for the two methods are relatively the same, we can conclude that the CPM method is a better predictor.

Another contributing factor to the need to choose a method was shown in section 5.3, with the CAPM method having a significant positive CAR in a different range compared to CPM method. Further to this, as stated in section 5.2.2, the CPM and CAR method differ on the result for the AAR observed at day t+45. The CPM method was significantly positive, whilst the CAPM method was significantly negative. Due to CPM method not always supporting CAPM's deduction and being more accurate, we chose the CPM method as our main analysis method in this section.

6.2 AAR result significance

The results in section 5.2.2 for the CPM AAR's show that for the 200 days event window:

The **full list** sample in Table 5.6 (a) has:

- 24 significant CAPM AARs
- 7 significant at 5% significant level
- 13 positively significant.

The **new entries** sample in Table 5.6 (b) has:

- 18 significant AAR values
- 6 significant at the 5 % significant level
- 1 significant at 1% significant level.

The **repeat entries** sample in Table 5.6 (c) has a total of 24 significant values.

The t-test for all three samples was insignificant. This is because the full list, new entries and repeat entries had p-values of 0.48, 0.31 and 0.21 in Table 5.5 which are all greater than 0.05. Therefore the AARs after the event are not significantly different from the AARs before the event. However, considering that we do have a number of significant values from the full list, new entries and repeat entries, the cumulative effect of these AARs may result in a net positive or negative CAR significant value. Applying this to the trend observed and noted in section 5.2.2 one would expect a net positive significant CAR within the first 60 days after the event.

6.3 CAR Result significance

In this section we provide significance of the results obtained for the CPM CAR data results. These results include

Full List: There are 4 positively significant values

- Starting from t+57 at 1.81% to t+59 at 2.08%
- Peaking at a value of 2.25% at t+58
- With the last significant value of 2.15% at t+61.

New Entries: There are a total of 8 positively significant values

- Starting from t+55 at 2.06% to t+63 at 2.00%
- With a peak at t+58 at 3.28%.

Repeat Entries: There are no significant values at the 5% level but one at the 10% significant level with value of 2.62% at t+89.

From the results summarised above, it is clear that the new entries sample outperforms the full list and the repeat entries sample. The peak from the new entries sample has a value of 3.28% at t+58, in comparison to the full list peak of 2.25% at t+58, and the repeat entries sample has no significant value at the 5% significant level. The results presented here, are also in line with the AAR results detailed in Table 5.6, as the initial net positive AARs give rise to a peak positive CAR.

Therefore, one can conclude the following about the CAR for the three samples studied:

- Significantly positive for
 1. Full List: The first 59 days with peak at the 58th day
 2. New Entries List: The first 66 days with peak at the 58th day.
- Insignificant for
 1. Full List: The overall window of t-20 to t+180
 2. New Entries List: The overall window of t-20 to t+180
 3. Repeat Entries List: The overall window of t-20 to t+180.

Therefore, one can conclude that the full list, new entries and the repeat entries samples on the last day of the window (i.e t +180) are insignificantly different from the mean value. Based on the bootstrap results, the three samples and the associated window tested in this research is insignificant. However, within this window there are significant results, which provide a reason to justify an association

within the window period. As a result, an alternate window size in this case 59 days after the event date shows an association.

6.4 Style result deduction

The summary of the results in Figure 5.11 shows that

1. Prior to 2009 there is no difference between portfolio of equal weighted 'Top Employers' (bestemployerls) and an equal weighted index (J203, bestemployerlsnot)
2. From 2009 to about mid-2013, the two green lines show an upward slope, indicating that 'Top Employers' out performs the benchmarks in J302 and bestemployerlsnot
3. Thereafter, there appears to be no difference as can be observed from the flat slope of the green lines.

As the price-relative is flat lining after mid 2013 (the last year of the simulation), one cannot conclusively say that there is an impact in the long run to shareholders return, as more data might reveal something different. Overall, since we got 4.1% per annum improvement from the bestemployerls relative to bestemployerlsnot and J203, our results support a rejection of the null hypothesis.

6.5 Hypothesis test

Hypothesis 1: There is no association between job satisfaction news and the shareholder return for companies listed on the JSE.

Tested via the event study

$$H_0: CAR_{t+180} = 0$$

$$H_a: CAR_{t+180} \neq 0$$

Based on the results discussed in sections 6.3 we reject the null hypothesis. Even though

1. The CAR values at the end of the window period for all samples tested were insignificant.
2. The T-test for all three samples was insignificant. The full list, new entry and repeated entries had p-values of 0.48, 0.31 and 0.21 respectively, which are all greater than 0.05.

The exception of a significant period in the results of the full list and the new entries sample as detailed in section 6.3, shows that the JSE reacts to job satisfaction news. As a result, we cannot accept the null hypothesis which is based on the premise of no association between job satisfaction and the JSE share price. We therefore reject the null hypothesis and accept the alternate hypothesis.

Hypothesis 2: There is no positive association between employee job satisfaction and the long term share returns for shareholders of companies listed on the JSE

Tested via the style methodology

H₀: Average Growth Rate per annum=0

H_a: Average Growth Rate per annum>0

Based on the results discussed in section 6.4 we accept the alternate hypothesis. This is because the value of the style methodology results obtained showed that the style for the best employees increases at a rate of 4.1% per annum against an equal weighted index over the period 2008 to 2014.

6.6 Result implication

This section provides details of the implication of the hypothesis test result.

6.6.1 Job Satisfaction news and JSE share price

To provide a better understanding of the results and to enable easy comparison with prior work, we segment the window for the event study as below

- Short term: This window is in the range of $[t-20, t+20]$
- Medium term: This window is in the range of $[t-20, t+59]$
- Long term: This window is in the range of $[t-20, t+180]$

The hypothesis is rejected, in both the short and the long term, due to the CAR values obtained from the boot strap statistically test being insignificant on the last day of the short term and the long term period. Although in the short term, we do have a net positive accumulation for the samples that peak between $t+7$ and $t+9$, we are unable to make any deduction as the findings are insignificant. Therefore, with regards to the short term, the findings does not follow literature as Filbeck & Preece (2003), Faleye & Trahan (2011) and Esterhuysen & Ward (2011) found that job satisfaction does accrue a net positive benefit for shareholders in the short term.

In the medium term the positive benefits obtained does outweigh the cost for the full list and the new entries at 5% significance, with closing values of 2.25% and 3.23% for the full list and the new entries sample respectively. A possible explanation of the trend observed for the full list and the new entries sample with a positive significant values peaking at $t+58$, might be because the JSE is not efficient when processing qualitative news as observed in literature in section 2.6 and in studies like Muller & Ward (2010), where the JSE only reacts to the BEE news 80 days after the event date.

The reason for the market not reacting to the information might be because it is unable to cater for qualitative information, as it uses the traditional theory based on physical assets, rather than a human resource management approach (Edmans, 2011). Therefore information, such as job satisfaction news, will only be factored in the share price when it results into tangible information like earnings.

The implication of this finding is that traders could gain in the medium term if they buy newly mentioned shares and hold for a period of 59 days. As there are no other

significant periods in the full list and new entries samples, we are unable to deduce the trend of the result. As a result, we are unable to say when the positive significant value started accumulating and how long it last. One thing that is clear though is that t+58 has a positive return on an investment that outperforms the market.

6.6.2 Job Satisfaction Level and JSE share price

The style methodology results confirm HRM theories that positive benefits accrued from investing in job satisfaction outweigh the cost. The result shows a 4.1% pa return over an equal weighted index in the period 2008 to 2014. As detailed in section 2.7, similar results were found in prior studies conducted on the NYSE. The studies include:

- Filbeck & Preece (2003) study of the association between work environment and the share return, where they used a buy and hold abnormal return strategy (BHAR), to obtain a return of 3.64% pa more than the industrial benchmark over a 13 year period (1997-1999).
- Edmans (2011) where they measure the long run stock return of best companies to work for and they found a return of 2.1% pa above industrial benchmark.
- In a study to clarify the direct relationship of job-satisfaction with firm performance Edmans (2012) found a return of 2.3% pa above industrial benchmark.

The implication of this finding is that HR best practices in South Africa does impact firm value in the long run. This implies that investing in HR practices that improve job satisfaction will lead to improved firm performance in the long run. As a result, ensuring job satisfaction by improving the level of motivation and increasing organization citizenship behaviour may result in excess return for firm shareholders.

Section 6.2.2 shows the JSE is inefficient when handling job satisfaction news. Therefore, South African companies need to encourage their managers to think in

the long run when implementing HR best practices. These practices generally cost time and money to implement, but will only start increasing firm value via share return when they become tangible assets such as earnings.

In addition, investors can also be encouraged to invest in SRI screens that include employee welfare, as in the long run, they will receive above industry benchmark returns on their investments. The result of this research should also assist in redressing the perception and alleviating some of the concerns stated in section 2.5, in particular concerns stated in Herringer et al. (2009) that investing in SRI funds leads to financial loss.

6.7 Implication for the JSE and South African companies

As stated in section 2.6, to the best of our knowledge a research that investigates the relationship between job satisfaction and share price set has not been performed before on the JSE. A research that verifies the result obtained in the first world adds to the existing stakeholder shareholder debate by confirming the HR practices implemented in emerging markets.

Our results show that companies investing in their employees do maximise the shareholders' best interest in the long run. A concerning outcome is the inability to establish the trend of the association between job satisfaction and JSE share return based on the results obtained in section 6.2 and 6.3. On further analysis, as stated in section 6.7.1, the trend shows a positive reaction to qualitative news within the first 100 days but, since most of the CAR values are insignificant, a concrete deduction cannot be reached. A bigger sample size might help verify this relationship, so a possibility for future work will be to repeat the research with a bigger sample size.

The research result helps confirm the prior research deduction that the JSE is inefficient when dealing with qualitative information. This was confirmed in section 6.6.1, as the result for the CARs, that were significant, do show that the JSE is inefficient in reacting to qualitative news.

As stated earlier, in section 2.4 Fu (2013) demonstrated in his study that professional service firm performance is influenced by HR practices through the creation and efficient usage of human, social and organizational capital resources. Thus, based on the results, South African companies that invest in employees gain competitive advantage due to the ability to innovate and provide quality solutions, which is improved via employee motivation in a comfortable employment environment.

7 Conclusion

This section provides a summary of the key findings in this research. The implications of these findings with respect to the stakeholders are also detailed. We then round up with a recommendation for future work.

7.1 Results and recommendation

In the last 20 years, there has been a lot of debate on the stakeholder and shareholder relationship. Many scholars outside of the field of finance do not agree that maximising the current share price in the shareholder's best interest maximises the long run firm value (Faleye & Trahan, 2011).

Arguments have been put forward regarding the disadvantages of investing in job satisfaction. The greatest concern is that the cost of investment in practices like job satisfaction can exceed the potential productivity gains. The investment might also create a sense of entitlement among employees, failing to motivate the employees (Faleye & Trahan, 2011). To address the concerns above, the research aims to establish the impact of job satisfaction on the share price of companies listed on the JSE. This is established by investigating the:

1. Association between job satisfaction news and the shareholder return for companies listed on the JSE.
2. Association between employee job satisfaction and the long term share returns for shareholders of companies listed on the JSE.

The findings in this research of a 4.1% per annum against an equal weighted index shows that HR best practices in South Africa does impact firm value in the long run. This implies that investing in HR practices that improve job satisfaction will lead to improved firm performance in the long run. As a result, ensuring job satisfaction by improving the level of employee motivation may result in excess returns for firm shareholders.

The research also found an association between job satisfaction news and share return. The research found positive significant CAR values over an 8 day period (t+55 to t+59) within a 200 day window. This indicates a reaction by the market to job satisfaction news, but the extent of this reaction outside of the significant period is unknown. The JSE, as a result, was also found to be inefficient in handling news about job satisfaction. This is due to the full list and the new entries samples at day t+58 having a significantly positive peak value of 2.25% and 3.23% respectively. This implied the JSE is inefficient when processing qualitative news as detailed in studies like Muller & Ward (2010), where the JSE only reacts to the BEE news 80 days after the event date.

The implication of this finding is that traders could gain in the medium term if they buy newly mentioned shares and hold for a period of 59 days. As there are no other significant periods in the full list and new entries sample we are unable to conclusively deduce the trend of the result. As a result, we are unable to say when the positive significant value started accumulating and how long it will last. One thing that is clear though, is that top employer companies on day t+58 has a positive return in investment that outperforms the market.

South African companies need to encourage their managers to think in the long run when implementing HR best practices. This is due to the JSE reacting inefficiently when handling job satisfaction news and the long term returns of 4.1% above benchmark. Implementing HR best practices generally cost time and money, but these practices will start increasing firm value, via share return, when they become tangible assets such as earnings.

As identified by Herringer et al. (2009) one of the key challenges affecting SRI in South Africa is investor concerns about the fund performance. Viviers et al. (2008) notes that the primary reasons for the concerns can be attributed to perceptions amongst assets owners that RI involves financial loss. Herringer et al. (2009), also highlighted that a key driver of SRI fund in South Africa is a stakeholder based corporate governance for the development of a more social and environmental responsible company.

From the SRI perspective the key challenge faced, as stated in Herringer et al. (2009) of fund performance, have being addressed with the research showing a returns of 4.1% per annum over the benchmark index. The result should also assist in changing the perception on SRI fund. Therefore investors are encouraged to invest in SRI screens that include employee welfare.

The CAPM and CPM methods where the two methodologies used in this research. This was done in an effort to ensure robustness of the results. The two methods occasionally did differ in results. In an effort to assure certainty, the two methods were compared in section 6.1 and the CPM method was found to be more accurate. We found that when the beta value obtained from the estimate window was changed to 1, the CAPM method expected returns were still similar to the original value i.e. the CAPM method was biased as it followed the market model. In addition, it was also observed that the mean and standard deviation of the CAPM method was significantly greater than the CPM method, which implied the CPM method was more accurate

7.2 Future work

The recommendations for future work are as given below:

- Top employers survey as indicated in the limitation section does not consider employee opinion. It is based on the view of the HR management team on the policies and practice, therefore the survey does not report on job satisfaction as reported by the employees but rather provides a measure of the work place quality. This was a limitation as noted in section 4.7, as the management and employee views are not always coherent. Therefore the level of employee satisfaction measured might not be accurate. A research that uses a measure of job satisfaction according to the employees opinion, balanced with the management opinion, like the “Fortune 100 best companies to work for” in the South African context, will assist in validating the results of this study.

- In addition the data sampling period was small from 2008 to 2014. As noted, in section 4.7, it does not account for all economic periods. In addition, better results might be obtained with a larger sample as noted in section 6.7. This might assist with explaining the relationship between job satisfaction and share returns, as more significant values outside of the significant period observed in this research might be found. It will also assist by discovering any Type I error that might have occurred, due to possible bias in the sample.
- Another area of further work, would be establishing the impact the dimension of HR practice like primary benefits, culture management and training and development, has on firm value. This will assist in understanding the main contributors to firm value. As a result, the weighing of the dimensions of HR practice for companies looking to optimise their returns, can be improved.
- Lastly, research on the efficiency of the JSE over the last 10 years has shown the JSE to be inefficient in handling qualitative information. This area requires more work in understanding the value and impact of qualitative information which forms the basis of SRI funds. As a result, the impact of more SRI fund attributes needs to be investigated.

Appendix B

A. ORGANISATIONAL STRATEGY

The questions in this section relate to the business and HR priorities of your organisation.

1. Please indicate the top five HR priorities for your organisation and rank them according to their order of importance:

(Please use numbers 1-5, 1 being the most important)

Recruitment and staffing	<input type="text"/>
Employee engagement	<input type="text"/>
Learning & Development	<input type="text"/>
Workforce flexibility	<input type="text"/>
Performance management	<input type="text"/>
Work productivity	<input type="text"/>
Leadership Development	<input type="text"/>
Ageing workforce and demographics	<input type="text"/>
Cultural & organisational change	<input type="text"/>
Diversity	<input type="text"/>
Succession planning	<input type="text"/>
Talent management	<input type="text"/>
Transforming HR into a strategic partner	<input type="text"/>
Work-life balance/flexible working arrangements	<input type="text"/>
Workforce planning (future organisational competency needs)	<input type="text"/>
Employee retention	<input type="text"/>
Other (please specify):	<input type="text"/>

A. ORGANISATIONAL STRATEGY

2. How do you expect the number of full-time employees (at a national level) to develop over the next three financial years?

- Increase by >5%
- Increase by 1-5%
- Stay the same
- Decrease by 1-5%
- Decrease by >5%
- No data available

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