The information content of the Financial Mail's "Top Companies" announcements

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Investors look beyond accounting and financial data and incorporate factors relating to morality, society, the environment and corporate governance (*inter alia*) in making their investment choices. This study examines the share price performance of South African companies which best comply with the financial and qualitative criteria as prescribed in the Financial Mail's "Top Companies" publication.

Using event-study methodology, the abnormal and cumulative abnormal returns of companies recommended by analysts as "Top Companies" were examined. Positive, significant excess cumulative returns were observed for new entrants to the "Top Companies" sample after the publication date. Thereafter, negative returns were observed for the long-term post-publication holding period of up to 200 trading days.

The results suggest that any new information related to the criteria in the FM "Top Companies" publication is of value, but only to short-term traders with low transaction costs. Long-term investors who buy these shares based on the recommendations of the FM analysts generally receive below market rates of return, suggesting that once companies have made it into the list, the value is overstated.

KEY WORDS
Social responsible investment; Information content; Event study

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INTRODUCTION

The market incorporates any perceived price-sensitive information into the estimation of share prices. This includes historical accounting and financial data, as well as qualitative criteria which may affect the future performance of share returns.

Included in the qualitative measures, are so-called Responsible Investment (RI)[1] criteria. These define an investment strategy that balances financial and social objectives, which Viviers, Bosch, Smit and Buijs (2008) show is gradually becoming a mainstream consideration in developed markets. According to Herringer, Firer and Viviers (2009) broader social investment objectives comprise three main considerations namely:

- Environmental;
- Social; and
- Corporate governance.

An additional consideration in South Africa would be the promotion of Broad Based Black Economic Empowerment (BBBEE) initiatives.

Many countries have adopted social and RI initiatives and developed their own indices that incorporate such principles, such as the FTSE4GOOD, the Dow Jones Sustainability indices and the South African FTSE/JSE Socially Responsible Investment (SRI) Index. In the same genre is the Financial Mail (FM) magazine's "Top Companies" list. The FM is a weekly financial publication aimed at business decision-makers and its primary function is to analyse the week's top business stories. However, once a year the FM publishes a ranked list of 20 companies which meet specific accounting, financial and qualitative criteria as their "Top Companies".

Financial criteria used by the FM in their ranking, which account for 40% of the total score, include the Return on Equity (ROE), internal rate of return (IRR) and compound growth in earnings per share (EPS). The remaining 60% of the score is based on a largely qualitative assessment of how "investable" a company is (Williams, 2009). These criteria include:

- how the company is managed;
- its corporate governance procedures and culture;
- its black empowerment status;
- the quality of communication with shareholders and stakeholders;
- the prospects for growth in the sector(s) in which the company operates;
- contextual issues such as regulatory uncertainties and tax regimes; and
- whether the share is reasonably liquid and offers value that the "herd" may have missed. (Williams, 2009).

The aim of this research is to test the significance of the information content in the FM's Top Company list. Since the historical financial information included in the FM's analysis is likely to be widely known and already compounded into share prices, our underlying assumption is that any new information from the FM ranking is likely to be derived from the inclusion of the qualitative data.

THEORY AND LITERATURE REVIEW

Fama's (1965 and 1969) "Efficient Market Hypothesis" (EMH) defined three levels of market efficiency: Strong form EMH; Semi-strong form EMH, and Weak form EMH.

[1] Also referred to as Socially Responsible Investment (SRI)

In a strong-form efficient market, prices will accurately reflect all private and public information, and investors are unable to create excess returns in the long-term. In a semi-strong form efficient market, prices adjust rapidly and without bias to new information that is made available to the public. In weak form efficient markets, prices do not reflect all public information, and astute investors can generate excess returns by identifying and exploiting un-priced information.

Thompson and Ward (1995), in a meta-study of accumulated empirical evidence on the efficiency of the Johannesburg Stock Exchange (JSE) based on studies between 1974 and 1993, concluded that the evidence was at best mixed, particularly regarding weak and semi-strong form efficiency. They did however, argue that the JSE is operationally efficient and that it would be reasonable to expect that as statistical techniques became more sophisticated and powerful, some systematic inefficiencies were likely to be uncovered, even in a relatively efficient market.

Bhana (1995, 1997, 1998, 1999a, 1999b, 2002, 2003, 2005) tested the share price reaction on JSE-listed companies to various types of announcements (earnings, special dividends, potential take-overs, equity financing, foreign listings, layoffs, key executive dismissals and management buy-outs). In all instances Bhana found evidence of market inefficiency, suggesting that investors could out-perform by following appropriate trading strategies, based on new information.

Henn and Smit (1997) found that news events resulted in a 0.006% to 4% movement in share prices on the JSE. Similarly, in a study conducted on the influence of political news events on share market activity, van der Merwe and Smit (1997) found South African political news events explained 1% to 23% of movement in share prices. These findings were consistent with the findings of Mlambo and Biekpe (2007), who tested the EMH and found inefficiencies using evidence from ten African stock markets.

With regard to the information content of RI, Herringer, Firer and Viviers (2009) note that there is a growing body of evidence suggesting that the risk adjusted performance of RI funds are on par with conventional funds.

Abdo and Fisher (2007) constructed a governance disclosure scorecard, denoted as a "G Score", to measure the level of corporate governance disclosure in JSE listed companies. Over the period 30 June 2003 to 30 June 2006 they found the G Score to be positively correlated with share price returns. An investment strategy that purchased shares in the highest G-Score companies for each JSE sector outperformed the index for the sector. Similarly an investment strategy that purchased shares in the lowest G-Score companies underperformed the index in terms of annual average return over the 3 year period.

In a similar study to ours, Mathur and Waheed (1995) tested the stock price reaction to securities recommended in Business Week's "Inside Wall Street". Although these recommendations were not specifically related to social or RI criteria, they found the excess returns on the days following the publication were sufficiently large enough to indicate that institutional traders would gain positive, excess returns (net of transaction costs) if they were to purchase the newly mentioned shares on the publication date and sell them 10 trading days later. Thereafter, the excess returns were negative for holding periods up to 200 days.

Following the literature review, the following null hypothesis was constructed for this study:

Shareholders earn no cumulative abnormal returns around the announcement dates of the FM's "Top Companies", implying that the information content of the new data is insignificant.

The alternative hypothesis states that the shareholders do earn significant positive cumulative abnormal returns around the announcement dates, implying that the information contained in the data has significant value for investors:

H_0: $ACAR_{AD} = 0$
H_a: $ACAR_{AD} > 0$

Here, $ACAR_{AD}$ represents the average cumulative abnormal returns around the publication date.

METHODOLOGY

The population of relevance consisted of all shares listed on the JSE over the period 1 January 2003 to 31 December 2009 that were considered by the FM for their "Top Companies" list.

Two main criteria are used for including companies in the FM evaluation (Williams, 2009). Their first criterion is that the company should have a market capitalisation of at least R1bn, so that the investors can be confident that an operation is sustainable and has critical mass. Their second criterion is a constant track record of internal rate of return and compound growth in earnings per share over the previous five years.

From this population, a score is derived where 40% of the score is based on historical financial performance and the remaining 60% is based on a qualitative assessment of how attractive a company is to invest in (Williams, 2009). The companies with the highest ranked scores constitute the top 20 companies. Williams (2009) indicates that corporate governance constitutes 9% and empowerment commitment 12% of the total score respectively. The attractiveness of a company to invest in constitutes 12%[2], and is explained by Theobald (2003) as "volumes traded and value buy at current prices". The rest of the categories of the qualitative components of the score relate to an assessment of future financial performance and the factors which influence that. It is not clear what actual weighting can be finally attributed to specifically social or RI criteria, but we assume that the FM's attempt to move away from purely financial criteria will focus investor's minds on the information content of the qualitative criteria.

Three samples were determined for the study.

[2]A comparison with Theobald (2003) indicates that the weightings have shifted from when first implemented in 2003 to the weightings in 2009. Investor communication (2003, 6%) is not listed as a criteria in 2009. Industry profit prospect was 15% in 2003 is now 9%. Empowerment commitment was not a criterion in 2003, but now constitutes 12%. It is not clear what impact these changes in weights have on the study.

1. The "full sample" refers to the complete list of the "Top 20 Companies" published in the FM between the period 2003 and 2009. This sample contains 140 observations.

2. The "new entries" sample comprises all companies that entered the list for the first time. This sample contained 83 observations.

3. The "repeated entries" sample comprises all companies that featured more than once in the list since 2003. This sample contained 57 observations.

For the analysis of the abnormal returns, daily share price data was collected for each of the companies mentioned in the list from the McGregor's BFA database over the period from 20 trading days prior to the announcement to 200 trading days following the announcement. Betas for each share were estimated against the all share (J203) index returns, using five years of prior share return data.

The share price reaction to inclusion in FM's "Top Companies" list was tested utilising the standard event study methodology developed by Fama, Fisher, Jensen and Roll (1969). McWilliams and Siegel (1997) suggest that event study methodology has become popular because it does not rely on analysing accounting-based measures of profit, which have been criticised as not reflecting the true performance of firms. They also assert that the event study framework provides a true measure of the financial impact of an event only if a set of assumptions are valid and the research design is properly executed. The assumptions are: firstly, that markets are efficient; secondly, that the event was unanticipated; and thirdly that there were no confounding effects during the event window.

McWilliams and Siegel (1997) further illustrate how an event study is implemented using 10 steps. Steps one to five focus on defining and isolating the event. Step six refers to the measurement of the price adjustment and steps seven to ten relate to the statistical testing of the price adjustment for significance.

Price adjustments are measured as abnormal returns. Abnormal returns can be measured in the short-term or long-term where the abnormal return or "residual" represents the share price return after subtracting the expected return of that share. While the exact definition of long-term is arbitrary, it generally applies to event windows of 1 year or more (Khotari and Warner, 2006).

The Capital Asset Pricing Model (CAPM) has most frequently been used to calculate expected returns. The CAPM has been criticised widely over the last two decades on the grounds that a single factor beta model provides little explanation of the cross-section of expected share returns.

Fama and French's (1996) three-factor model, which they claim explains expected returns more accurately than a single parameter CAPM, assumes share return sensitivity to three factors:

- the excess return on the broad market;
- the difference between the return on a portfolio of small capitalisation stocks and the return on a portfolio of large stocks, and

- the difference between the return on a portfolio of high-book-to-market stocks and the return on a portfolio of low-book-to-market stocks.

Ward and Muller (2010) also note the inadequacy of a market or single parameter CAPM as a benchmark against which abnormal returns are estimated. They indicate that this is due to the inability of the CAPM to account for expected returns related to: company size, growth versus value stocks and in the South African context, a further consideration of "resource" versus "non-resource" shares. Ward and Muller (2010) make use of a 12 parameter "style" model to estimate expected share returns. After allocating all JSE listed shares into one of twelve control portfolios, they calculate the alpha and beta coefficients of each share against each of the control portfolios in a multiple regression equation, updated quarterly. These parameters are then used to measure the expected return of each share, and hence the abnormal returns. The average abnormal return across the sample can then be used for the event analysis.

Following Ward and Muller (2010) both the control portfolio model and CAPM were used in this event study to estimate abnormal returns.

The event date for the purpose of this study is regarded as the day on which the "Top Companies" section of the FM is published. This date is denoted as "t_0".

The impact of the announcement was measured in daily returns on shares for each of the included companies, over a period of 221 days; from the published date t_0 backward for 20 days to t_{-20}, and forwards for 200 days to t_{200}.

The daily share price return for each share was calculated in terms of Equation 1.

$$R_{it} = \ln [P_{it} / P_{it-1}] \quad \ldots (1)$$

where:

R_{it} = the rate of return on share *i* on day *t*, and

P_{it} = the price of share *i* at the end of day *t*.

For the CAPM, the abnormal return for share *i* on day *t*, AR_{it}, was estimated as:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \quad \ldots (2)$$

where:

α_i and β_i = the (daily) return estimates for the market model parameters for share *i*,

and

R_{mt} = the return on the JSE all share index (ASI) for day *t*.

Using the control portfolio model the abnormal return for share *i* on day *t*, was estimated as:

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

where:

α_{it} = the (daily) alpha intercept term of share *i* on day *t*, and

$\beta_{i,1}.....\beta_{i,12}$ = the beta coefficients on each control portfolio return and

$SGN_t \ldots LVR_t$ are the log-function share price returns on each of the twelve control portfolios explained in Table 1 on day *t*.

Table 1: Control portfolios

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

To test the performance on a specific date the average abnormal return, AAR_t, is calculated as:

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

where:

AAR_t = the average abnormal return for all shares on day t, and

n = the number of companies.

To test the performance of a share for each event window, the abnormal returns were accumulated to obtain the cumulative abnormal return (CAR).

$$CAR_i = \sum_{t=-20}^{d} AR_{it} \quad \ldots (5)$$

where:

CAR_i = the cumulative abnormal returns for share *i* for the period from t = –d to t = d
d = the number of days before and after the event window period

Once all the cumulative abnormal returns (CARs) for the full sample were calculated, the average cumulative abnormal return (ACAR) is calculated as the simple average CAR of the shares in the sample.

$$ACAR = \frac{1}{n}\sum_{i=1}^{n} CAR_i \quad \ldots (6)$$

where:

ACAR = the average cumulative abnormal return for all shares in the sample for the period from t = -d to t = d,

and

n = the number of companies

A two tailed t-test was performed at the 5% confidence level to determine whether the ACAR was significantly different from zero around the publication date. In addition to the t-test, a boot-strapping process was used to test the significance of 10 day ACARs.

From the sample selection process, some data integrity issues arose:

- Companies that were de-listed during the event period were excluded from the analysis.
- Shares with a daily return in excess of |30%| in the event window were investigated for data errors (which were corrected), otherwise the share was retained.
- Companies with missing or insufficient share price data were excluded from the analysis.

RESULTS

A summary of the sample is presented in Table 2.

Table 2: Summary of the Top 20 companies list included in this study

Population size (companies (including repeats) which met the criterion of market cap>R1bn)	1056
Sample Size	140
Number of companies in list by year	140
2003	20
2004	20
2005	20
2006	20
2007	20
2008	20
2009	20
JSE Sectors	
Number of different sectors on the JSE	9
Number of different sub-sectors on the JSE	45
Frequency of number sectors	140
Basic Materials	38
Consumer Goods	7
Consumer Services	32
Financials	17
Health Care	7
Industrials	23
Oil and Gas	3
Technology	3
Telecommunications	10
Number of companies repeatedly in list	sum product = 57
7 times	1
6 times	1
5 times	0
4 times	3
3 times	9
2 times	19
New entries / Repeated entries / Total - in list	
2003	20 / 0 / 20
2004	13 / 7 / 20
2005	10 / 10 / 20
2006	12 / 8 / 20
2007	12 / 8 / 20
2008	4 / 16 / 20
2009	12 / 8 / 20
Totals	83 / 57 / 140

As mentioned above, both the CAPM and Control Portfolio Model (CP) were used to calculate ARs. The ACARs across the 220 day event window resulting from each of the two models are shown in Figure 1.

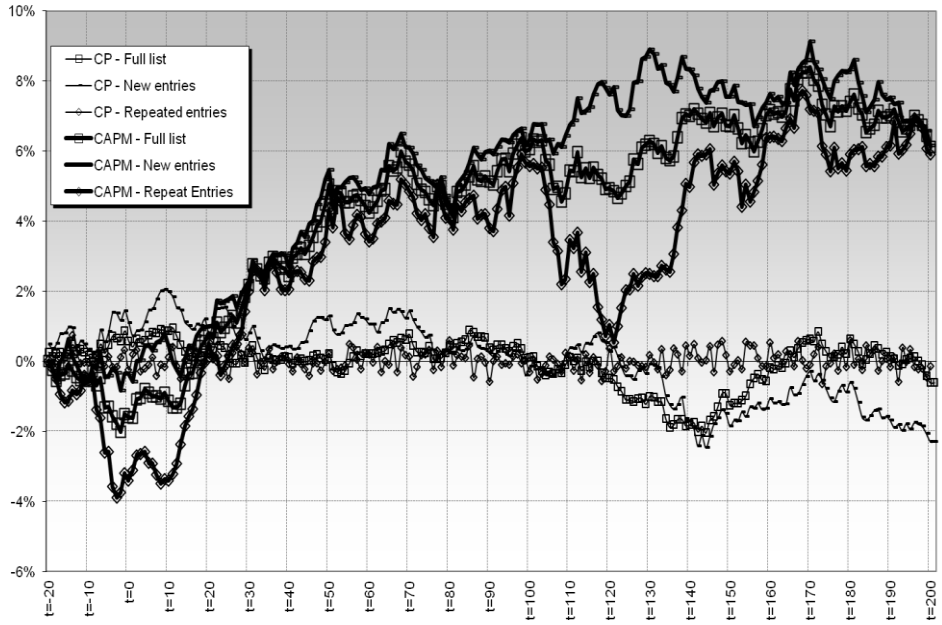

Figure 1: ACARs for the CAPM and control portfolio models

From figure one, a significant, positive trend in the data is observable post the event date in the ARs derived from the CAPM benchmark. Since this trend is not evident in the CP based data, it was concluded that the CAPM approach did not fully account for style related returns in the AR generating process. For this reason it was decided to use only the CP model's ARs for further analysis.

Over the duration of the 221-day event window, the "new entries" sample initially performs well. In the first nine days following the announcement, the ACARs reach 2.05%, before steadily declining to a low of -2.46% on day 144, and ending at -0.28% 200 trading days after the announcement. The "repeat entries" sample shows an erratic ACAR, which is never more than |0.74%| from the benchmark. The ACAR for "repeat entries" sample ends on -0.14% on day t_{200}.

Figure 2 presents a more detailed view of the 21-day ACARs over the event window for each of the three samples. The window commences on t_{-10}, (10 days before the announcement date), and ends on t_{+10}, (10 days after the announcement date).

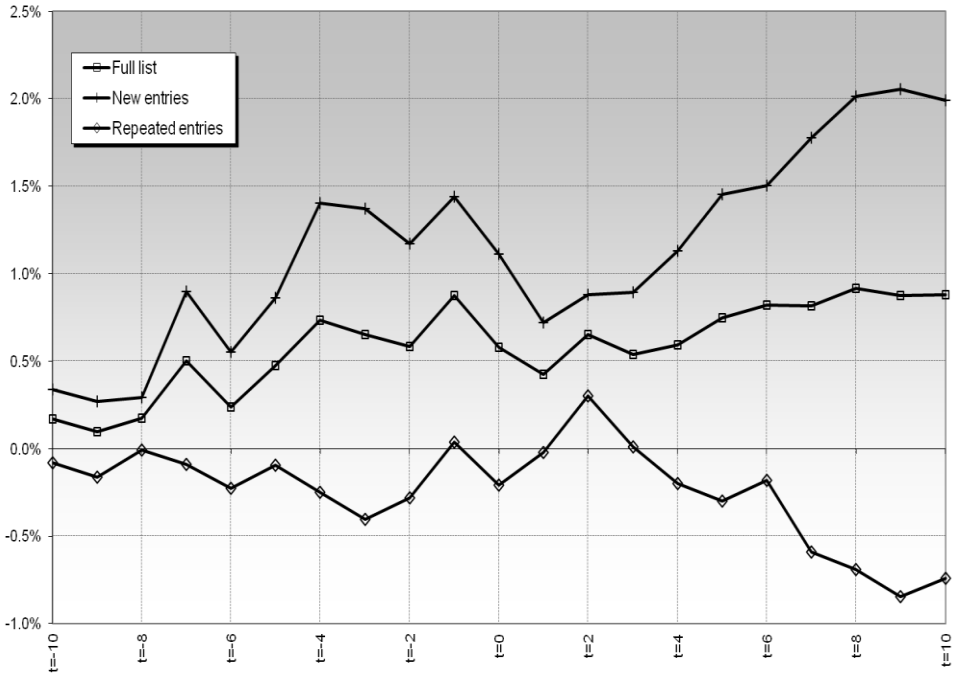

Figure 2: Average Cumulative Abnormal Returns [-10, +10]

Figure 2 shows that the ACARs are positive 10 days after the announcement for new entries into the FM Top Companies list. To test for significance, both the usual t-test and a boot-strap[3] based test were used. The results are presented in Table 3.

Table 3: Statistically significant CARs for the event window [-10, +10]

	Full list	**New entries**	**Repeated entries**
10 day CAR on t_{10}	0.30%	0.87%	-0.53%
T-test	0.648	1.559	-0.680
T-critical (5%)	1.980	1.994	-2.012
H_0: μ=0 (5%)	Fail to reject	Fail to reject	Fail to reject
Bootstrap upper bound	0.83%	0.83%	-1.06%
H_0: μ=0 (5%)	Fail to reject	**Reject**	Fail to reject

[3]The boot-strapping method of significance testing is superior to the t-test in that no assumption is made of normality. The Boot-strap distributions were constructed for 10 day ACARs, against which the 10 day ACAR in the event period was tested for significance (Ward and Muller, 2010).

For the 10 day ACARs evaluated in the 21 day event window, a significant positive ACAR of 0.87% was found for the "new entries" sample on day t_{10} using the bootstrap approach. Since the bootstrap distribution is the more appropriate distribution of 10 day ACARs, we find this result compelling, and further note that the t-test would also support this at a 10% level.
For the hypothesis test of the ACARs over the full event window, only the t-test value on the last day of the event window (t=200) was evaluated for each sample, and in all cases, the t-test results were insignificant.

For the 221 day event window, the study found a peak ACAR of 2.05% nine trading days after the publication date, in the "new entries" sample. This is higher than the peak of 0.96%, 11 days after the publication date, for the full sample and 0.60%, 80 days after the publication date, for the "repeated entries" sample. For the full 200 trading days following the publication date, the "new entries" sample performed the worst, with an ACAR of -2.28%, compared to the "repeated entries" sample's ACAR of -0.14%, although none of the results at t_{200} were significant.

Mathur and Waheed (1995) found surprisingly similar results when testing the stock price reaction to securities recommended by analyst's in Business Week's "Inside Wall Street". The excess returns on the 10 days following the publication were sufficiently large to indicate a successful short-term trading rule. They also noted that thereafter the long-term performance deteriorated, for holding periods of up to 200 trading days after the publication date.

In their study, on whether a great company can be a great investment, Anderson and Smith (2006) tested the "classic mistake" of confusing great companies with great investments. Their initial presumption, that a company's well-known virtues are already factored into the price of the company's shares, was proven incorrect, clearly contradicting the EMH. We report similar results, but only to the extent that the "new entries" sample outperformed the market by a statistically significant margin in the short term.

There is no compelling explanation why the "new entries" sample outperformed the "repeated entries" sample, other than the fact that inclusion into the FM list of "Top Companies" has information content for new entrants which is thereafter priced by investors. Once included in the list, no further value is noted for those companies remaining in the list.

CONCLUSION

The results of this study on the market reaction to the publication of the "Top Companies" issue of the FM indicate significant, positive excess (abnormal) returns on the first 10 trading days subsequent to the publication date, for companies entering the list for the first time.

Two methodologies were used in this study to estimate abnormal returns, namely the CAPM and the Control Portfolio model. A persistent upward trend in the ACARs indicated a bias in the CAPM approach, in that the effects of the market were not fully controlled for in the CAPM. The CP approach was preferred, this result confirming similar findings relating to the event-study methodology in Ward and Muller (2010).

A key assumption in this study was that any new information contained in the FM "Top Companies" announcement was primarily related to factors other than financial indicators. The premise (stated above) was that financial information would already be fully priced into share prices, and that any new price-sensitive information would therefore relate to the 60% weighting placed by the FM on the qualitative factors relating to investability, management, growth, communication and corporate governance (*inter alia*). The similarity between our results and those of Mathur and Waheed (1995) raises some questions as to the extent to which the financial data influences the analysis. Mathur and Waheed's (1995) findings were based on BusinessWeek analyst's recommendations, and made no claim to factor in qualitative issues. Since it is impossible to distinguish between the input factors (despite the weightings used), it is possible that our results are confounded by the financial data, and may not be a pure reflection of the value from the more qualitative criteria. The fact that our analysis only finds significant positive returns for companies entering the FM list for the first time, does however indicate that investors do value the assessment of the FM process.

Whilst extensive international research relating to social, RI and other qualitative criteria exists, this is a relatively new field of study for the Johannesburg Stock Exchange. Further studies in this field, which focus specifically on South African market related factors (environmental, social, corporate governance and Black Economic Empowerment) will add to the current body of knowledge.

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