

CHAPTER SIX

THE SELECTION OF THE CASE STUDY COMPANIES AND MATCHING CONTROL GROUPS

6.1 INTRODUCTION

This chapter also forms part of Phase Three of the Mitroff model as described in Chapter One and is the second step of the triangulation method as described in Chapter Four.

In order to create a list of characteristics and relationships that is displayed by companies with an increased risk for accounting irregularities, it is essential to analyse companies in which these problems have already been detected and correctly identified. Such an analysis will help to determine which characteristics and factors - even those not known to the general public - can perhaps act as indicators of accounting irregularities.

Due to the fact that knowledge about companies with a high risk for accounting irregularities is limited, the empirical study is performed by using five case studies. The use of a case study approach was explained and motivated in Chapter Four.

For purposes of the study, each case study is split into four distinct sections. The first leg of the analysis involves media searches to obtain background information about each company. The results from the media searches are described in this chapter.

The remaining three legs of the analysis are discussed in Chapter Seven, namely a qualitative analysis of the financial statements of each company, a qualitative analysis of each company's quantitative data as represented by the financial statements and financial ratios as well as a statistical analysis for each company.

6.2 THE SELECTION METHOD TO IDENTIFY FIRMS WITH KNOWN VIOLATIONS

The initial sample of companies consists of a selection of companies that have been identified in the media as facing general allegations of accounting irregularities. The following companies have been identified:

- Beige Holdings Limited;
- Johannesburg Consolidated Investments (JCI) Limited (formerly Consolidated African Mines Limited);
- Leisurenet Limited;
- Macmed Healthcare Limited;
- NRB Holdings Limited;
- Regal Treasury Bank Holdings Limited;
- Saambou Holdings Limited;
- Tigon Limited; and
- Unifer Holdings Limited.

More in-depth media searches performed for each of these companies establish which of the companies specifically had accounting irregularity allegations against them. Due to a lack of other available information about the particular allegations, the media searches make use of articles and reports that appeared in South African business- and general newspapers. More details regarding the media searches follow in paragraph 6.3.

The companies identified in the media as facing specifically accounting irregularity allegations in the past are (in alphabetical order):

- Beige Holdings Limited;
- Johannesburg Consolidated Investments (JCI) Limited;
- Macmed Healthcare Limited;
- Saambou Holdings Limited; and
- Tigon Limited.

The above companies are to be used as five individual case studies and will be referred to in the rest of the text as the case study companies. The control samples are referred to as control sample companies. Please note that it is not implied that the control sample companies had no risk for accounting irregularities and that there have never been any occurrences of accounting irregularities in those companies. It only indicates that no occurrences of accounting irregularities have ever been clearly detected and identified.

The financial sectors in which the case study companies operate(d) were the Health and Pharmaceutical sector, Mining and Financial Sectors. More detail about the specific sectors is available in Table B.5, Appendix B.

6.3 THE RESULTS FROM THE MEDIA SEARCHES PER CASE STUDY COMPANY

For the media searches, a general search on each company is carried out, covering several South African newspapers, business publications and journals. Only excerpts of articles that contained relevant facts and allegations are reproduced and discussed. The media searches made it possible to establish the specific cases that were brought against companies and over which period the alleged accounting irregularities occurred.

6.3.1 Beige Holdings Limited

A media search on Beige Ltd. reveals the media comments set out below (these are verbatim quotes, and they are indented and italicised for the convenience of the reader). Omissions of less relevant details are marked by square brackets and ellipses: [...]. The same procedure is followed in the remaining case studies.

In an article entitled “Beige asks BAC to help in fraud case” in the *Business Day* of 21 August 2002, Mathews (2002:15) wrote:

Beige embarked on an aggressive expansion drive in 1998 using cash and shares which depleted the group’s resources. In late 1999 three senior

executives...resigned amid allegations of irregularities. [...] Subsequent investigations discovered that the group's results were falsified...

According to Klein's (2004:2) article, "Beige fraud still unpunished after 5 years" in the *Sunday Times* of 8 August,

...[S]ome of the many irregularities [were] discovered...as early as August 1999. [...] Before its 1997 listing, shares were issued to a consortium including four Beige directors at below-par value. [...] ...has traced up to R56 million in profits from the sale of consortium shares. [...] Alleged fraud includes tax-free payments to directors, fictitious purchases, fictitious third-party invoice stationery, overstatement of stock, fraudulent management accounts, restatement of prior year results just before listing, fictitious cheque endorsements, incorrect classification of export sales invoices, abuse of company credit cards, fictitious export sales to a local company, sales to a created company (Gapp Trading) and VAT fraud. [...] Gapp Trading was registered at the address of a former joint MD...while former chief operating officer...signed as Gapp's financial director. [...] After the owner of the company Globe Pharmaceuticals died, Beige kept and used his invoices, and even signed them on his behalf. [There was] ...evidence of a resolution that was passed where Konar, director Peter Katz and Duke would be given cars for their efforts beyond those expected of directors. [...] A profit warning in September made no mention of any irregularities at Beige and instead pointed to tough trading conditions, new systems, Forex problems and debt. [...] ...found serious irregularities.

In an article titled "Beige fraud probe gets moving five years later" in the *Star* of 3 April 2006, Moodley (2006a:1) noted:

Three Beige executives were fired in 1999 after being implicated in financial fraud. [...] ...a whistle-blower at Beige claimed that directors had been fabricating invoices to overstate the company's sales and profits. The overstated sales and profit had caused the share price to rise. [...] ...the three directors then sold their

shares and used the proceeds to qualify the fabricated invoices. [...]...Beige's earnings for the 1998 financial year had been overstated by R5.3 million.

In another article in the *Star* of 3 April entitled "Two due in court over Beige fraud", later the same year, Moodley (2006b:11) wrote about an

...investigation in a massive fraud case at Beige Cosmetics more than five years ago [in which] ...Beige directors Sydney Rodgers and Dennis Heyman had been charged with five counts of fraud. [...] ...directors had been fabricating invoices to overstate the company's sales and profits, causing the share price to rise. The directors then sold their shares and used the proceeds to qualify the invoices.

From the media analysis, it can be observed that Beige Ltd.'s accounting irregularity problems occurred in 1998 and 1999, after it had expanded rapidly in 1998. The company claimed that tough trading conditions, new systems, debt, Forex problems, overstated sales and overstated profits had caused its problems. According to the media, inventory was the first account in which misrepresentations were visible.

6.3.2 Johannesburg Consolidated Investments (JCI)

In an article entitled "Kebble's rope in firm to probe 'dirty tricks'" in the *Business Day* of 27 November 2002, Benjamin (2002:3) noted the alleged involvement of

Kebble's father...[in] criminal charges relating to 38 counts of fraud amounting to R6.3m.

In an article entitled "Kebbles overstay welcome" in the *Finance Week* of 18 February 2004, Basson (2004a:32) reported that

...in this period (1999 – 2003), JCI lost R786m of value for shareholders. [...] However, looking at the market values, a different picture emerges. On 31 March 2003, JCI's shareholders' interest doubled in value [...] JCI has had difficulty sustaining a positive cash flow over the past five years. It looks very much like a company knocked together with debt or regular paper shuffling...

A week later, in his article “A bridge too far” in the *Finance Week* of 25 February 2004, Basson (2004b:8-10) stated:

For about three years JCI Gold's financial statements portrayed and overstated NAV.

The *Beeld* of 10 April 2006 (Anon. 2006:21), in an article called “Nie sy baba, sê JCI se direksie”, there is a reference to

...volgehoue en omvattende mislukkings en manipulasie van sy interne administratiewe, finansiële en bestuurstelsels [...] ...JCI [is] die slagoffer van bedrieglike aktiwiteite onder die vorige direksie...sedert April 2002.

Translated: ...consistent and all encompassing failures and manipulation of internal administrative, financial and management systems [...] ...JCI [is] the victim of fraudulent activities under the former directorship... since April 2002.

The most significant observations revealed by this media search are that the accounting irregularities at JCI took place over a number of years. The accounting irregularities consisted mainly of asset overstatement and manipulations of internal control systems. Accounting irregularities were specifically reported to have occurred from April 2002.

6.3.3 Macmed Healthcare Limited

In an article in the *Citizen* of 27 January 2004, headed “Macmed trial starts” (Anon. 2004:18), it was reported that

...liquidators [were]...suing 16 former Macmed employees for fraud... [after a]...two-year investigation by Macmed's liquidators, which resulted in fraud charges being brought against the directors.

On the same day, Benjamin (2004:10), in an article called “Macmed Empire ‘built on smoke and mirrors’” in the *Business Day* stated that he regarded

...former company secretary Alan Hiscock as the brain behind the fraud. [A] ...litany of frauds was committed in an effort to maintain the charade that the ailing Macmed was financially healthy so directors could cash in on share options, and banks would continue to lend it money. [Macmed issued] ...fraudulent financial statements while the company was in financial dire straits. [and it was] ...alleged [that] Macmed’s financial statements for 1998 and 1999 showed [a] nett income before taxation of R31,97m and R51,289m respectively, when it allegedly made losses of R14m (1998) and R95m (1999). [...] At the centre of the fraud is a trust fund...to which Tyfield belonged. [...] ...the trust fund was used as a secret banking account or slush fund ...to fund fraudulent transactions.

Three days later, on 30 January, Khuzwayo (2004:3) in an article entitled “Macmed accountant failed to check books” in the *Star* reported that

...false invoices were rendered to the total of R8,5 million by Macmed on behalf of one of its subsidiaries, International Latex Products (ILP). [...] ...the transaction was made through the trust account... [...] ...fictitious invoices were raised by Macmed in the name of ILP...in order to inflate profits for the year to March 31 1998. [...] ...resulted in the ILP division’s profit of R4.9 million being overstated by R8.5 million.

Shevel (2004:4) noted in her article “Auditors and banks will slog it out” in the *Sunday Times* of 15 February 2004 that

...the fraud affects suppliers, directors, banks, liquidators and auditors. [...] ... the stumbling block came when the company undertook a rights offer for R200 million in 1999.[...] ...premise that Macmed had R200 million in cash resources of its own to finance the acquisitions. Nobody mentioned that these resources were loans from various banks... [Macmed was] ...placed in liquidation in October

1999. [The company]...had three different sets of external auditors in as many years...

In the *Business Day* of 8 March 2004, in an article headed “Liability for failure may end up being personal”, Marks (2004:3) reported that

...the financial manager and company secretary were held jointly and severally liable for R647 036 700.07. [This] ...liability attracted in terms of section 424 extends to the entire debt of the company, including those debts that have no relation to the blameworthy conduct... [...] In relation to the company’s financial statements, directors cannot simply rely on the fact that they are audited. [...] A director is required to acquaint himself with a company’s financial statements and to take action if irregularities are discovered.

In a much later article, “3 health care directors up for R1billion fraud” in the *Pretoria News* of 21 November 2005 by Venter (2005:2), reflects on the case as follows:

[The] Scorpions regard this as one of the largest fraud and corruption cases in the country. [...] ...false transactions were allegedly included in their annual financial statements presented to the banks in their loan applications. [...] Macmed’s affairs were illegally and criminally manipulated by the accused.

In summary, the media search indicates that accounting irregularities were mainly perpetrated in order to make the company’s performance look better. This was done by means of false invoices to overstate profits. The accounting irregularities occurred during 1998 and 1999.

6.3.4 Saambou Holdings Limited

In their article “Saambou bosses face fraud charges” in the *Star* of 15 September 2005, Bridge and Morris (2005:1) comment on circumstances

...preventing information on the failing financial status of Saambou Bank and Saambou Holdings being disclosed to shareholders, depositors and investors. [...] ...all three‡ were shareholders and received annual bonuses linked to the performance of the share price. [...] They were also beneficiaries of Saambou bank’s loans to employees to fund the purchase of listed shares. [...] ...is the first case of its kind and signals that directors and senior-level executives could in future be held directly responsible for the failure of an organisation.

Rose (2005a:1), in an article called “Scorpions swoop on Saambou bosses” in the *Business Day* on the same day as the article cited above, reported as follows:

When Saambou went into curatorship in February 2002, it was the seventh-largest bank in SA with 350 000 clients and R16bn in assets. [Saambou] ...hid certain key information from the public and regulators, fiddling Saambou’s ‘financials’ to keep the share price buoyant and making the bank look healthier than it really was. [...] ...the three men are also accused of bending the rules to keep things looking rosy.[...] Myburgh, Edwards and De Clerq ‘unlawfully, falsely and with the intention to defraud’, misled shareholders, depositors, credit-rating agencies and the Reserve Bank’s banking supervision department. [...]...prosecutors claim the bank did not have capital adequacy of 10,74% of its total assets at the end of March 2001, did not have shareholders’ interests of R1,157bn as it said, and did not reveal the risk entailed in various loans it made. [...] The men are also accused of contravening section 38 of the Companies’ Act, by effectively lending money to third parties to buy their own shares. [...] ...effectively played down this liability by categorising the loans as ‘advances’ – not properly disclosing the risks of financial loss in Saambou’s financial

‡ Johan Myburgh – chief executive, Charles Edwards – director for Saambou personal banking and Gerhardus de Clerq – general manger of Saambou Holdings group finance

statements. [The company]...had a complex 'share hedge mechanism' designed to protect its capital and offset the financial effect of large bonus payments the bank had to make to its bosses under an incentive scheme. [...]...at the end Saambou had an obligation of R69,7m for the share hedge, which it did not disclose to shareholders.”

Two weeks later, Gedye (2005:1), in “Verneuk!” in the *Weekly Mail and Guardian* of 29 September 2005 explains that Saambou

...set up elaborate operations involving a string of companies that received payments and loans to buy shares and improve Saambou's capital position...initiated after Saambou was unable to secure funding in the marketplace to cover bad debts. [...] The charge sheet alleges that the Saambou officials conspired to misrepresent the financial position of the bank, recklessly fiddling with the company's financials to maintain investor confidence and to prevent the share price from falling. [...] ...case probably represents both a failure in fiduciary duties, or acting in the interest of the company, as well as failure to exercise due care and skill. [...]...charge sheet involves a number of special-purpose companies in the Saambou and Primevest groups that had money and shares transferred between them. [...] One of those companies was CMI...with the sole business interest of a performance swap agreement with Saambou. [...] Another key special-purpose company was Primevest Equities Trading No2 (PVET2). [...] The last key special-purpose company was Primevest Equity Investments (PEI). [...] ...(Saambou Holdings) knew PVET2 could not raise the funds for the transaction and had committed R255,7 million of its resources to the funding of PEI, CMI and PVET2 for the subscription to 14,6 million preference shares...at a value of R167,9 million.[...] ...effected the payments, which, instead of being written off in Saambou's books, were shown as assets.

Rose (2005c:15), in “Saambou accused to oppose delay in fraud trial” in the *Business Day* of 23 November 2005 reported as follows:

Prosecutors claim the three men lied repeatedly to the public about Saambou’s financial strength... [...] The charge sheet claims the Saambou bosses hid critical information and fiddled with Saambou’s financial statements to keep the share price buoyant. [...] As a result, Saambou’s financial results for 2000 and 2001 had misrepresented the bank’s strength.

Overall, the media search indicates that Saambou Ltd. manipulated its accounts in order to make its accounts and the final financial statements appear more favourable. It is established that the accounting irregularity problems occurred in 2000 and 2001.

6.3.5 Tigon Limited

Basson (2002a:28), in an article called “Tigon akin to WorldCom” in the *Finance Week* of 19 July 2002, commented:

With its dubious accounting, Tigon finds itself, on a smaller scale, in the company of the likes of WorldCom. [...] ...revealed that the transfer of expenditure to capital accounts was not done according to generally accepted accounting principles (GAAP). [...] ...expenditure was transformed into an asset through a few journal entries.

Just under a month later, Basson (2002b:15) in the article “Report lacks answers” in the *Finance Week* of 16 August 2002, lamented:

The annual report is a continuation of the historic pattern of poor disclosure and illogical accounting. It’s almost unthinkable that the auditor, Galahad, could see it fit to sign an unqualified report. [...] The repeatedly defective disclosure in accounting for a material deal should be reason enough for an audit qualification.

In an article with the witty title “Going, going, Tigon” in the *Finance Week* of 13 November 2002, Basson (2002c:8) referred back to earlier articles, commenting that

Tigon's strategy of transferring money from one company to another, using loans with vague repayment conditions, has been highlighted before...

Basson (2003:16) followed up his reports from the previous year in the article "Noose tightens" in the *Finance Week* of 19 March 2003:

The allegation that Shawcell (part of Tigon group) created tax allowances of R1.4bn in a fraudulent manner is already known. [...] ...used puppet companies to create the inflated values and tax losses. [...] ...Receiver of Revenue was deprived of a known amount of R120m but the potential loss is R1.4bn.

Basson (2004:8-10) continued to track the story in "Porritt defiant" in the *Finance Week* of 29 September 2004:

[some]...call Gary Porritt 'Mr Journal Entry'. If one of his company's books isn't the way he likes it, he (or one of his puppets) simply fabricates an entry to fit his needs. [...] ...creates loan accounts at an incredible pace and conveniently forgets the simple principle that all those parties affected by a bookkeeping entry are supposed to derive economic benefit from any transaction being recorded. [...] It's clear that investors...were the victims of fraudulent and extremely questionable accounting practices. [...] Several strange journal entries by Tigon also helped push the company's market capitalisation artificially up to almost R10bn. [...] Porritt's strategy with his journal entries is clear: to keep cash under his control and keep the liquidators guessing where to find it.

The next year, Basson (2005:14) wrote the article "Big Tigon breakthrough" in the *Finance Week* of 20 April 2005, commenting critically:

Geyser allowed Porritt and co-director Sue Bennett to control and direct the business affairs of Tigon...in a manner that did not accord with the companies Act. [...] ...made major business decisions without consulting the board of directors... [...] ...financial records of Tigon...not kept properly and that the information in the financial statements didn't give a fair reflection of the results... [...]...Porritt and Bennett operated the companies in a reckless and fraudulent

manner. [...]...Tigon's profits for the financial years 1997-1999 had been overstated...were not a reflection of the true financial position. [...] ...manipulation of Tigon's profits in 1997. [...] ...in the past the impression was often that this was not such a serious offence. It had become far too easy for SA companies to cook the books.

Later in 2005, in an article headed "Tigon duo face 3 160 charges of fraud", in the *Business Day* of 4 August, Rose (2005b:3) reported:

...Porrit and Bennett helped cook the books of two JSE-listed companies, Tigon and Shawcell, for eight successive financial periods between 1999 and 2002. [...] If proven true, the many acts of fraud outlined in the charge sheet would make the Tigon case easily SA's most extensive financial crime yet... [There was the] 1998 deal in which Tigon had paid R58m for a telecoms company called EuroPoint. Then...inflated the value of the intellectual property in EuroPoint to R2.1bn. [...] ...falsely inflated the profits and assets of Tigon.

At the end of the same month, Bonorchis (2005:2), commented on the situation with shock in an article entitled "Scale of fraud alleged in Porrit charges is astonishing" in the *Star* of 31 August. The duo had

...abused the trust of 3 000 investors, who have lost R160 million. [It] ...was a carefully planned scheme, designed from the very onset to defraud.

The media described the wrongful activities of Tigon Ltd. as being on a smaller scale only to those of WorldCom. Tigon Ltd. did not comply with GAAP; it stated expenditure as assets and overstated profits from 1997 to 1999. This was shown to have been made possible by manipulations of the statements by means of fabricated journal entries.

6.4 SELECTION OF A CONTROL SAMPLE OF FIRMS WITH NO KNOWN ACCOUNTING IRREGULARITIES

In order to determine whether there are significant differences between firms with a clear risk for accounting irregularities or possible occurrences of accounting irregularities and those without them, it is necessary to select comparable firms with no known accounting irregularity violations. Altman and Hotchkiss (2006:105) note that only rarely does a perfect comparable firm exist. However, a firm in the same industry or sector, with more or less the same size, age and business mix can be used for the purposes of comparison. By comparing factors such as bankruptcy status, profitability and leverage, differences can be established.

Even though it is best that a comparator is matched for size, a perfect comparison is rare. For that reason a decision was made to use percentages and ratios in all quantitative analyses to eliminate the problem of size from the analyses. Therefore, for the quantitative analysis of financial statement line items and ratios, the control samples are the weighted averages of the totalled amounts in the financial statements of all the companies in the relevant sector, excluding the so-called case study companies. This ensures that all significant changes that happened in any of the control sample companies and also the industry or sector are taken into consideration in the subjective analysis of the annual reports.

The four control samples are compiled from the populations listed in Table B.6 in Appendix B. It can unfortunately not be proven as fact that the control sample companies did not engage in any form of accounting irregularities. However, no formal or public allegations of accounting irregularities were made against those companies.

For the purposes of the qualitative analyses, a company in each sector that the case study companies operated in is randomly selected to be used as a comparison. This comparator, being a single control company, sets out to establish whether anything occurred in the industry that had a noticeable effect on both the case study company

and its control sample. Because the goal is only to see whether the control sample company observed the same trends in its narrative reports, no attempt is made to match the control sample company to the case study company on the basis of age, size, etc.

For Beige Holdings Limited and Macmed Healthcare Limited (both from the health sector), the same control sample is used, but the year-ranges of the control sample differs to match the time periods of the alleged case study companies. The companies chosen as comparators in the qualitative analyses are available in Table B.7 in Appendix B.

6.5 SUMMARY

Through a general media search, nine companies with allegations of accounting irregularities were identified. Through a more detailed analysis of information from the media, five of the initial nine were identified to have been involved in alleged accounting irregularities specifically. The five companies thus identified are the companies that are to be analysed in Chapter Seven, making use of qualitative, quantitative and statistical methods.

For the source of control samples to use in comparison, the same sectors as the alleged case study companies were used over the same time period as that in which the alleged case study companies perpetrated their alleged accounting irregularities.

In Chapter Seven the results of the empirical analyses of the five identified case studies are provided. This is done by means of quantitative, qualitative and statistical analyses of the annual reports of the companies.

CHAPTER SEVEN

ANALYSES OF FIVE SOUTH AFRICAN COMPANIES WITH ALLEGED ACCOUNTING IRREGULARITIES

7.1 INTRODUCTION

This chapter also forms part of Phase Three of the Mitroff model as described in Chapter One. In this chapter the aim is to find, through qualitative, quantitative and statistical analyses as explained in Chapter Four, those characteristics and/or so-called red flags that have the potential to indicate a higher risk of accounting irregularity occurrences in a company.

The results of the empirical analyses of the five case studies, as they were identified in Chapter Six, are individually presented in this chapter.

7.2 RESULTS FROM THE CASE STUDIES PRESENTED PER COMPANY

7.2.1 Beige Holdings Limited

7.2.1.1 *Qualitative analysis*

A qualitative analysis was done on the financial reports of Beige Ltd. and on the financial reports of Aspen Pharmacare Holdings Limited (previously Medhold Limited) as a control sample. The detailed analyses are available in Appendix C.

From the qualitative analysis it appears that Beige Ltd. envisioned increased future growth in 1998, in spite of challenging conditions. Such growth was aimed to be achieved through merger and acquisition activity. Aspen Ltd. did not foresee such growth but did mention some planned restructuring, disposals and acquisitions. Increases in receivables and inventory were explained by Beige Ltd.

In 1999, Beige Ltd. reported a difficult year as a result of the accounting irregularities that had been discovered in one of the subsidiaries. Beige Ltd. discussed plans to improve its situation, mentioning specifically improvements to its liquidity. Aspen Ltd., as a company in the same sector, was also adversely affected by the accounting irregularity allegations in both Beige Ltd. and Macmed Ltd. at that stage. However, Aspen Ltd. showed favourable financial results and continued with its planned transformation and growth process.

In 2000, Beige Ltd. decided to make changes in the group, such as disposing of subsidiaries and reducing top management, since it was found that the company was unable to manage the companies it had acquired properly. For Aspen Ltd., its planned mergers, integrations and disposals were successfully completed while the cost effectiveness of facilities improved and debt reductions were initiated. Aspen Ltd. expected future growth at that stage and anticipated a number of new opportunities which Beige Ltd. did not.

After no annual report was made available in 2001, 2002 saw Beige Ltd. reporting improved performance and increased growth. The company reported on its structure and acquisitions with future growth expected. The 2001 and 2002 financial years were good years for Aspen Ltd. and the sector as a whole.

7.2.1.2 Quantitative analysis

The complete horizontal and vertical analyses, as well as the ratios for all the companies and their control samples are available in Appendix D at the end of the document. The analyses of the complete horizontal, vertical and ratio analysis for Beige Ltd. and the sector as a control sample is presented in Tables E.1 and E.2 in Appendix E.

The quantitative study has shown that the company's results often showed changes that are the direct opposite of what was happening in the industry. Equity represented one area where changes were inconsistent with changes in the industry. Distributable

reserves were negative in 2000, which could have been the result of writing back previous misstatements.

Beige Ltd.'s long-term debt also displayed changes that differed from those in the industry. When the other companies in the sector lowered their debt levels, Beige Ltd. increased its debt levels. The long-term debt level also moved in an opposite direction relative to equity. At this stage it is not possible to do more than speculate, but it seems as if in some years, projects were financed by means of equity and in others by means of debt. The total liabilities (including short-term debt) decreased over the period under review, but they increased as a portion of capital employed. The sector as a whole managed to decrease its debt as a portion of capital employed.

The total assets of Beige Ltd. both increased and decreased over the period under review, while the total assets of the sector only increased. The total assets of Beige Ltd. represented a significantly larger portion of the capital employed than the total assets of the sector.

Both Beige Ltd. and the sector showed a growth in fixed assets, but the growth was more significant in the case of Beige Ltd. Inventory increased dramatically in 1999, the year in which accounting irregularities were discovered. It continued to represent a large portion of capital employed in later years, as it took time to dispose of the increased levels of inventory. The sector also increased its inventory levels in 1999, but inventory in the sector in general represented a smaller portion of capital for the sector overall.

Debtors increased significantly in the 1999 financial year for Beige Ltd. Debtors represented a much larger portion of capital employed for Beige Ltd. than for the comparable companies in the sector. Cash in the company decreased in the years when Beige Ltd. experienced accounting irregularity problems, while the sector managed to increase its cash levels in that period.

In 1999, creditors increased in both Beige Ltd. and the sector. Creditors were, overall, a more significant portion of capital employed for Beige Ltd. than for the sector. This may have been the result of increased inventory levels. Net current asset levels were low for both Beige Ltd. and the sector.

Turnover in Beige Ltd. increased most significantly in the years in which accounting irregularities occurred. It decreased thereafter, while the sector consistently increased its turnover.

The interest expense of both Beige Ltd. and the sector increased in line with increased debt levels. Profits decreased significantly in Beige Ltd. after the period in which the accounting irregularities occurred, perhaps due to adjustments to correct misstatements. Over the same period, the profits of the sector increased.

The depreciation expense of Beige Ltd. and the sector increased in line with increases in fixed assets. Both Beige Ltd. and the sector had significantly higher audit fees in 1999 and 2000. Changes in directors' emoluments in Beige Ltd. were different from changes in the sector in general and also represented a higher percentage of turnover in Beige Ltd. than in the sector at large.

With regards to the ratio analysis, various observations were made. The accounts receivable/turnover ratio of Beige Ltd. was not unacceptably low in 1998 and 1999, but the sudden increase in 2000 may indicate that previous misstatements were corrected. In comparison to the changes in the sector, the changes in Beige Ltd. over the period were not significant in any instance.

The book value per share of Beige Ltd. decreased as shareholder interest decreased from 1998 to 2001. In the same period, the book value per share of the sector increased. The NAV per share of both Beige Ltd. and the sector decreased. The total asset turnover of Beige Ltd. increased in 1998 and 1999, whereas the total asset turnover of the sector decreased. The average total asset turnover of Beige Ltd. for

those years was significantly higher than that of the sector.

The cash flow/interest rate cover ratio of Beige Ltd. changed differently to that of the sector in general, as it decreased for Beige Ltd. while it increased for the sector as a whole. The same trend applies to the interest cover ratio.

The current and quick ratios of Beige Ltd. decreased because of increases in inventory, and because increases in debtors were not in line with the increases in creditors. In the same period, the sector's current ratio increased, but the ratio remained on average below that of Beige Ltd.

The debt/assets ratio increased for both Beige Ltd. and the sector, but the overall performance of Beige Ltd. was below that of the sector. The debt/equity ratio of Beige Ltd. indicates that its debt increased more significantly than its equity; and the ratio was also noticeably higher than the ratio in the rest of the sector. The leverage factor of Beige Ltd. and the sector fluctuated, but, on average, the sector performed better than Beige Ltd. Long-term loans as a percentage of total debt decreased for Beige Ltd., while the ratio fluctuated in the sector. The financial distress measures of both Beige Ltd. and the sector were consistently below the acceptable level of 1.81 and tended to decrease.

The EPS of Beige Ltd. was significantly higher in 1999, but decreased overall. The sector's EPS increased over the same period. The net profit margin and operating profit margin of Beige Ltd. performed less well than those of the sector. Other profitability ratios followed much the same trend as the sector. The ROA of Beige Ltd. decreased as a result of increasing assets, while the ROE of Beige Ltd. increased as a result of decreasing equity. Both ROA and ROE increased for the sector in general.

All the share price ratios of Beige Ltd. displayed decreasing trends.

7.2.1.3 *Statistical analysis*

- *Event study*

An event study on the share prices of Beige Ltd. revealed a number of dates as being more significant than the rest, indicating that an event occurred that may have had an impact on the company in some way. Those dates established to be of importance for Beige Ltd. and the relevant news events are reproduced in Table G.1, Appendix G.

The days flagged as “true” in the event study were consistent with earlier findings about the period when accounting irregularities were detected in the company. The news that was published on those dates referred to increased profits, the release of financial statements, increased merger and acquisition activities and difficult financial conditions.

A few dates were flagged as “true,” but did not have any news releases. Two of them occurred just before and after the publication of the company’s annual report. It can be speculated that the company’s investors detected a change in the company at those dates and changed their shareholding.

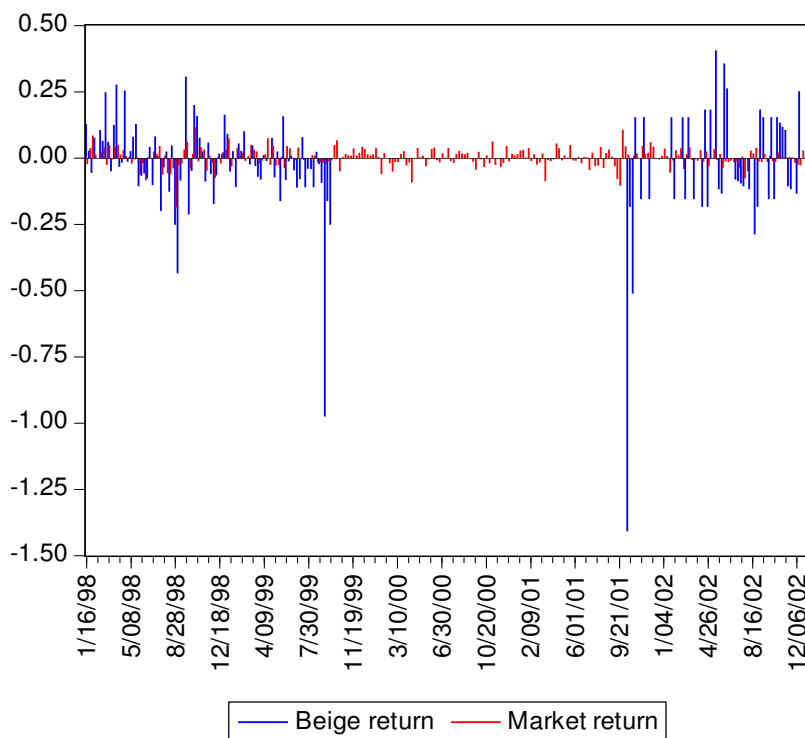
In the periods that were mentioned, the share price remained largely stable, but the volume of trade fluctuated significantly. The type of news releases available on some of the dates that were flagged as “true” also correlate with the findings in the quantitative and qualitative analyses regarding the usefulness of certain indicators of accounting irregularities. The presence of planned mergers, acquisitions and restructurings seem to indicate an increased risk for accounting irregularities.

- *Regression and structural break analysis*

From the graph in Figure 7.1 it can be seen that there was a period in which Beige Ltd. did not trade on the Johannesburg Stock Exchange South Africa. The period of ceased trading is excluded from the regression analysis and the Quandt-Andrews breakpoint

test, since it is not applicable for the analyses. However, for the periods that Beige Ltd. did trade on the exchange, it is clear that the share returns of Beige Ltd. were more volatile than the returns from the market. There was also a period from November 1999 to September 2001 when Beige Ltd. experienced difficulties and trading in Beige Ltd.'s shares was suspended.

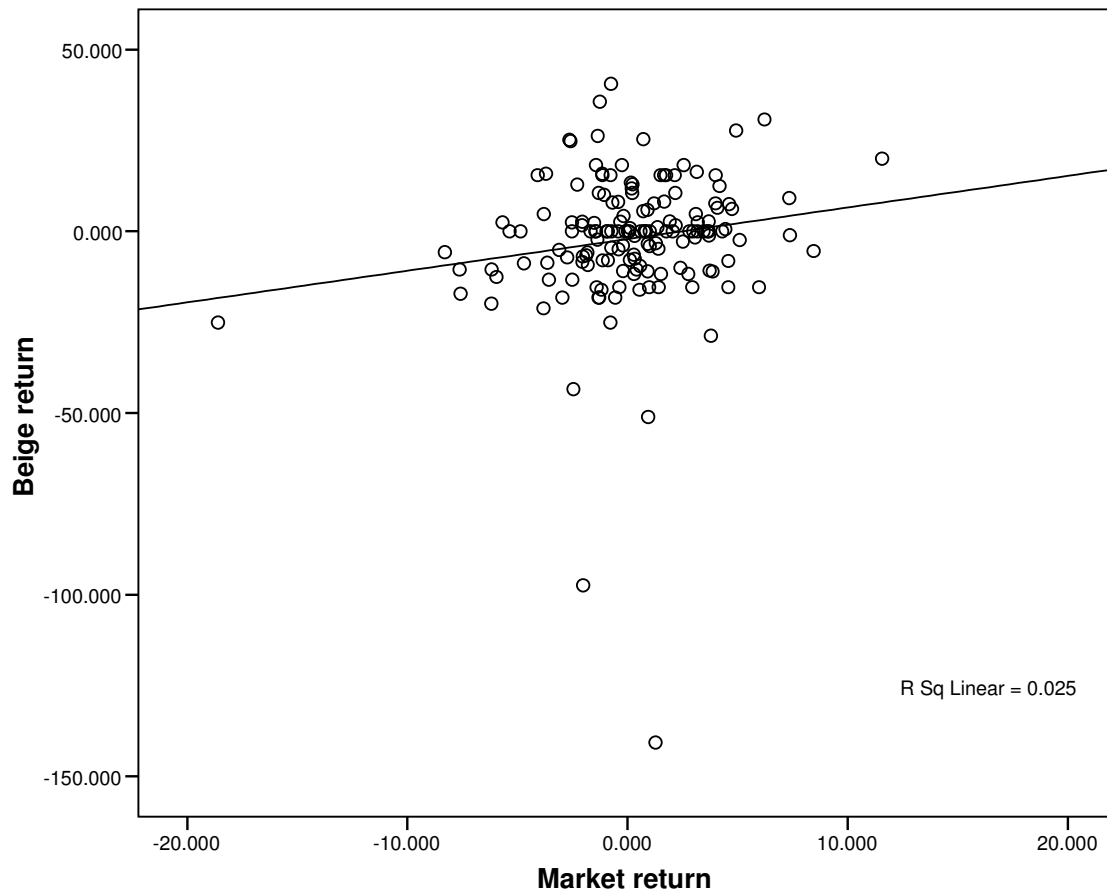
Figure 7.1: Graph illustrating the return from Beige Ltd. and the market over the period of the alleged accounting irregularities



Source: E-Views[©] output

For the regression and structural break analyses of Beige Ltd., data points for the period from 1 October 1999 until 5 October 2001 are excluded since trading in Beige Ltd. shares was suspended in that period.

Figure 7.2: Scatter plot of Beige Ltd. return against the market return over the same period



Source: E-Views[®] output

In the scatter plot and corresponding regression data for the return of Beige Ltd. against the market return, a weak positive linear trend between the two variables can be seen. The linear relationship explains 2.5% of the variation in the data (measured by a R^2 of 0.025). The scatter plot and regression results additionally indicate that there may be two outliers in the data set: (-2.05; -97.40) on 10 September 1999 and (-140.00; 1.27) on 12 October 2001. The date of 10 September 1999 does not correspond with any specific date flagged as “TRUE”[§] or any particular news event on that date. It occurred,

[§] Referring to dates flagged as “TRUE” as it was defined and used in Sections 8.3.1 and 8.4.1 describing the Event Study Analysis.

however, just after the company made an announcement on 7 September 1999 about the date of the publication of its financial statements and the fact that the company was experiencing financial difficulties at that time. The other outlier on 12 October 2001 cannot be explained through any available news data. It occurred on a date just after the company started trading again after a period of no trading. That may have resulted in some initial volatility.

The regression model (or straight line) that is fitted to the data can be represented by the equation: $\text{Beige Return} = [-2.176 + (0.870)(\text{Market Return})]$. The equation implies that if the market's return increases with one percentage point, the return of Beige Ltd. can be expected to increase by 0.870 percentage points.

The F-statistic (model of fit) of the analysis is statistically insignificant at the 1% level (0.049 being higher than the required 0.01), indicating that the model does not explain the variation in the data better than just using simple averages.

The results from the structural break analysis of Beige Ltd. are presented in Table 7.1 and the discussion that follows.

Table 7.1: Quandt-Andrews unknown breakpoint test results for Beige Ltd.

Null Hypothesis: No breakpoints within trimmed data		
Varying regressors: All equation variables		
Equation Sample: 1/16/1998 12/31/2002		
Test Sample: 3/13/1998 11/08/2002		
Number of breaks compared: 139		
Statistic	Value	Prob.
Maximum LR F-statistic (29/1/1999)	3.233763	0.9590
Maximum Wald F-statistic (29/1/1999)	3.233763	0.9590
Note: probabilities calculated using Hansen's (1997) method		
Warning: estimation sample is non-continuous (probabilities calculated assuming a continuous sample)		

Source: E-Views[®] output

According to the Quandt-Andrews unknown breakpoint test, the most likely date of a break in the share price return of Beige Ltd. occurred on 29 January 1999. The date of the structural breakpoint did not occur on a date identified as significant in the event study, but it was shortly before financial statements were released. The date also correlates with the time when Beige Ltd. had allegedly committed accounting irregularities in its financial statements. The date therefore serves as an additional indicator that there were irregularities in the financial results of the company at that date.

7.2.1.4 *Summary*

In the sections that follow, a summary is given of the extent to which Beige Ltd. displayed the characteristics most indicative of accounting irregularity risk and/or occurrences of accounting irregularities, as identified in Chapter Five.

With regards to the types of accounting transactions used in the company, no transactions that seem overly complex or questionable can be observed from the financial statements.

The company's relationship with its auditors is difficult to determine from the annual report, but there did not appear to be problems. There was one change of auditors in 2001. There were significant increases in audit fees, but those were still insignificant overall compared to other expenses. The increases may well have been the result of inflation and higher fees charged by auditors.

The company showed positive cash flows in all the years that were observed, except for 2001. A decreasing trend can, however, be observed in the company's cash flow pattern. This was not in line with the sector, where there were only increases.

The company listed in 1998; therefore it was still a young company at the time of the occurrences of accounting irregularities. As was previously noted in Chapter Five, being a young company was identified as an indicator of an increased risk for accounting

irregularities.

In the annual report, control systems and procedures were reported to be in place, but no mention was made of specific actions taken to ensure compliance to such control systems and procedures. It is also not a requirement for companies to report in detail on its control systems and procedures. It was therefore not possible to reach any final conclusion on the effectiveness of the company's control systems and procedures.

It appears that the company experienced failure in achieving the correct company culture in all its divisions. It was explicitly stated in the annual report that certain acquisitions were not properly integrated and managed.

Debt levels were high in 1999, but stabilised over the other years. The highest debt/equity ratio was calculated in 2001. Debt figures were poor overall compared to the sector's figures. This was a positive indicator that the company experienced increased risk for accounting irregularities, since the increased debt levels were observed at the time when accounting irregularities occurred.

It is difficult to evaluate the directors' behaviour and character from the annual report. In the case of Beige Ltd., the director's report creates the impression of a somewhat complacent attitude. However, this cannot be proven without a more in-depth analysis of the company's internal culture and reaction to change, information that is not published in the annual report.

Financial distress measures indicated possible financial problems that had the potential to develop into bankruptcy. However, financial distress was also present in the sector, but to a lesser extent than in Beige Ltd. This is a positive indicator of an increased risk for accounting irregularities.

No clear indication was provided regarding the remoteness of the company's operations geographically. It is clear, however, that the company had no foreign operations at that

stage.

With regards to the pharmaceutical and cosmetics industry in which Beige Ltd. operated, it was seen that the sector experienced some volatility in the period in which accounting irregularities were identified in Beige Ltd. The industry may therefore have been a contributing factor to the occurrences that happened in Beige Ltd. and can be seen as a positive indicator of a risk for accounting irregularities.

The company reported poorer liquidity in the period of alleged accounting irregularities. Liquidity decreased for the company, while it increased for the sector as a whole. This was therefore a positive indicator that the company had an increased risk of possible accounting irregularities.

Management's behaviour and character is not readily observed from the annual report. According to the company's reports, problems were experienced in the behaviour and character of the managers of companies that had been acquired and not properly managed by the controlling company. No untoward behaviour could be observed in the character and behaviour of personnel.

Very high levels of receivables and inventory were reported in 1999, compared to the receivables and inventory levels in other years. Levels of inventory and receivables were also not in line with those of the rest of the sector. This may have been an indicator of an increased risk for accounting irregularities.

The appointment of a remuneration committee was mentioned in the annual report. Amounts paid to directors and top management were supplied in the value-added statement, but no details were provided of whether remuneration was based on the company's financial performance. Remuneration represented a higher percentage of turnover than in the sector and also changed differently to the percentages in the rest of the sector. This may have been an indicator of increased risk for accounting irregularities.

There was a 40% shareholding by two managing directors in 1998. This decreased to 29% of shares in 1999, which was held by three managing directors. Therefore the shareholding structure seems to be of little concern in the case of Beige Ltd. and is therefore not an indicator of increased risk for accounting irregularities.

No detailed information was provided about the company's organisational structure; therefore no conclusion can be reached on the possibility of organisational structure increasing the risk for accounting irregularities.

Because Beige Ltd. was newly listed on the Johannesburg Securities Exchange South Africa when the alleged accounting irregularities occurred, it is difficult to determine how the financial statements changed from before the accounting irregularity occurrences to after the occurrences. There were, however, significant differences between the results of Beige Ltd. and those of the sector.

An annual report only provides limited information on the internal structure and other qualitative aspects of a company. In this case, the annual report creates the impression that the company may have been managed improperly, because in some years, short-term measures were implemented to overcome specific problems (for example, overly large working capital levels). Improper management of the company was also confirmed in later years after the accounting irregularities had been discovered.

7.2.2 Johannesburg Consolidated Investments (JCI)

7.2.2.1 Qualitative analysis

The qualitative study is based on the financial statements of JCI Ltd. with Alease Gold Limited (Alease) used as a control sample company. The detailed analyses are available in Appendix C.

JCI Ltd. reported on planned restructuring in all the years that were reviewed. The restructuring included mergers and acquisitions. Alease Ltd. did not plan similar restructurings, only some disposals in 2000.

In 2000 and 2001, JCI Ltd. reported adverse economic and sector conditions which Alease Ltd. did not mention.

The auditors of JCI Ltd. were anxious about the going concern status of the company in 2001 and 2002, but they did not qualify their audit report. Increased debt in 2003 was explained as being the result of a debt restructuring. Alease Ltd. had no qualified reports or other concerns from its auditors.

The reporting structure, format and completeness of the reports by JCI Ltd. were of a higher standard than the standard of those of the reports provided by Alease Ltd. when subjectively evaluated.

7.2.2.2 Quantitative analysis

The complete detailed horizontal, vertical and ratio analyses for JCI Ltd. are presented in Tables E.3 and Table E.4 in Appendix E.

In summary, the items mentioned below represent the most significant observations that emerged from the analysis of the financial statements of JCI Ltd. and the sector as a control sample.

Capital employed increased consistently for JCI Ltd. and the sector over the period under review. JCI Ltd.'s ordinary shareholders' interest and non-distributable reserves moved in opposite directions to the ordinary shareholders' interest and non-distributable reserves of the sector in general. For both JCI Ltd. and the sector, shareholders' interest and non-distributable reserves decreased as a portion of capital employed. The ordinary share capital and share premium increased for both JCI Ltd. and the sector, but it

represented a larger portion of capital employed for the sector than it did for JCI Ltd. Distributable reserves were consistently negative for JCI Ltd., while the distributable reserves of the sector increased. Total shareholder interest in JCI Ltd. changed in line with that of the sector and represented a decreasing portion of capital employed for both.

Long-term liabilities (almost all interest-bearing) increased for JCI Ltd. and the sector and they also increased as a portion of capital employed for both. The value of total liabilities in JCI Ltd. followed much the same trend as in the sector. For both JCI Ltd. and the sector, total liabilities' values fluctuated, but for JCI Ltd. this item decreased as a portion of capital employed, while it increased as a portion of capital employed in the sector.

Fixed assets increased for both JCI Ltd. and the sector. However, fixed assets represented a significantly larger portion of capital employed in the sector than in JCI Ltd. JCI Ltd. held an insignificant portion of mining assets compared to that held in the sector. Changes to the value of total assets were mostly the same in JCI Ltd. as in the sector and also represented mostly the same portion of capital employed for both. Intangible assets moved in the opposite direction in JCI Ltd. from the sector, but this item represented largely the same portion of capital employed.

Investments and loans followed the same trend in JCI Ltd. and in the sector, but this item represented a significantly larger portion of capital employed in the statements of JCI Ltd. Long-term loans given as investments of JCI Ltd. changed in the opposite direction from the trend in the sector, and increased as a portion of capital employed in JCI Ltd., while it remained stable in the sector.

Inventory in JCI Ltd. increased and also decreased over the period, while the inventory of the sector increased consistently. The inventory of JCI Ltd. represented a lower portion of capital employed than in the sector. Debtors moved in the opposite direction from the movement in the sector, but it did decrease as a portion of capital employed for

both JCI Ltd. and the sector. Cash fluctuations were mostly the same in JCI Ltd. and in the sector, but cash represented a lower portion of capital employed for JCI Ltd. than it did for the sector.

Both JCI Ltd. and the sector experienced mostly increases in creditors. Creditors also represented more or less the same portion of capital employed in both JCI Ltd. and the sector. The interest-bearing current liabilities of JCI Ltd. changed in the opposite direction from those of the sector. This item also represented a larger portion of capital employed for JCI Ltd. than for the sector in general.

Net current assets of JCI Ltd. were negative in all years, whereas decreasing positive values were reported in the sector.

Changes in turnover were much the same in JCI Ltd. as in the sector, except in 2003, when turnover decreased in the sector and increased in JCI Ltd. Operating profit and gross income decreased to a negative figure in 2000 in the statements of JCI Ltd., whereas there was an increase in the sector. It fluctuated thereafter for JCI Ltd., but decreased steadily in the sector at large.

Interest received fluctuated for JCI Ltd., but increased consistently for the sector. Interest charges in JCI Ltd. represented a high percentage of turnover compared to the percentage in the sector. Interest charges moved in opposite directions, as reflected in the statements of JCI Ltd. and the sector.

The net profit margin and profit to ordinary shareholders was mostly negative for JCI Ltd. and showed opposite changes from the figures reported in the sector. The minority interest and amounts to associate companies changed differently in JCI Ltd. from the changes in the sector. Both financial statement items also represented a higher average percentage of turnover than in the sector.

Depreciation increased and decreased in opposite directions from the sector figures, but

represented largely the same percentage of turnover for both the company and the sector. Audit fees generally decreased for JCI Ltd., while this item increased for the sector, but this item represented mostly the same average percentage of turnover for both the company and the sector. Directors' emoluments changed in similar ways to those in the sector, but represented a higher percentage of turnover for JCI Ltd. than for the sector.

The ratio analyses indicated that most of the liquidity, activity and debt ratios followed the same trends in JCI Ltd. and in the sector. The average current/quick ratios of JCI Ltd. were significantly lower than that of the sector. The average debt/equity ratio of JCI Ltd. was significantly higher than that of the sector.

The leverage factor of JCI Ltd. changed differently from that of the sector, with a significantly higher average ratio for JCI Ltd. The ratio of long-term loans as a percentage of debt of JCI Ltd. followed the same trend as the sector, but was on average much lower than the sector average.

The profitability ratios of JCI Ltd. changed differently from those of the sector; and the sector performed significantly better on average than JCI Ltd. did. Many of the profitability ratios were negative for JCI Ltd., as a result of losses reported in the income statement.

No share price ratios were available from the McGregor BFA for JCI Ltd. as a result of limited information.

7.2.2.3 *Statistical analysis*

- *Event study*

For JCI Ltd., those dates that were established to be of importance and the related news events are reproduced in Table G.2, Appendix G.

In the event study of JCI Ltd. a number of dates from 1 March 1999 to 28 September 1999 were flagged as “TRUE,” but no news was published about JCI Ltd. between those dates, except for a speculative article (23 September 1999) about JCI Ltd. considering an opportunity to list its shares in Canada. The dates flagged as “TRUE” over that period, for which news releases were in fact made, related to a planned consolidation and the resignation of the CEO.

For a period stretching from 26 January 2000 to 6 February 2002 there were again a number of dates flagged as “TRUE” without any news releases. Dates flagged as “TRUE” for which news releases were made relate to a report on dealings in securities by directors, the introduction of restructuring mechanisms and a scheme of arrangement.

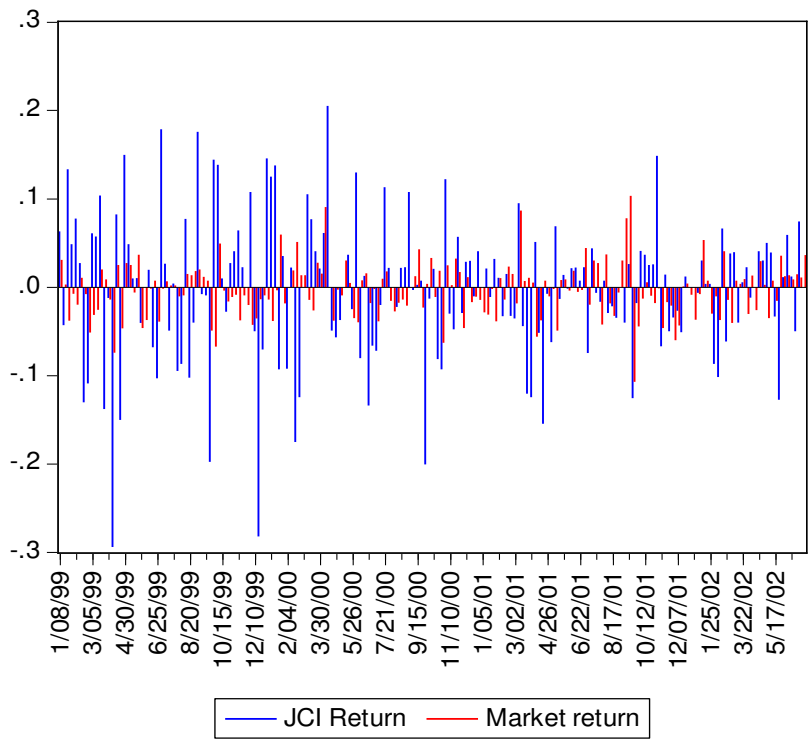
Another period with dates flagged as “TRUE” without corresponding news events occurred from 11 December 2002 to 5 May 2003. In this period, only the financial statements of the company were released. After that, there were dates flagged as “TRUE” with reports on planned acquisitions, the release of financial results and a scheme of arrangement whereby another company became part of JCI Ltd.

The dates on which significant events occurred that were not explained through news releases correlate with the dates when irregularities were first detected. Dates flagged as “TRUE” for which there were news reports related mostly with restructuring-type activities which were identified in Chapter Five as being a possible indicator of increased risk for accounting irregularities.

- *Regression and structural break analysis*

The share return graph in Figure 7.3 for JCI Ltd. and the market illustrates graphically that JCI Ltd. experienced more volatility in its share returns than the market as a whole. This phenomenon did, however, become more moderate in later years when the share price stabilised.

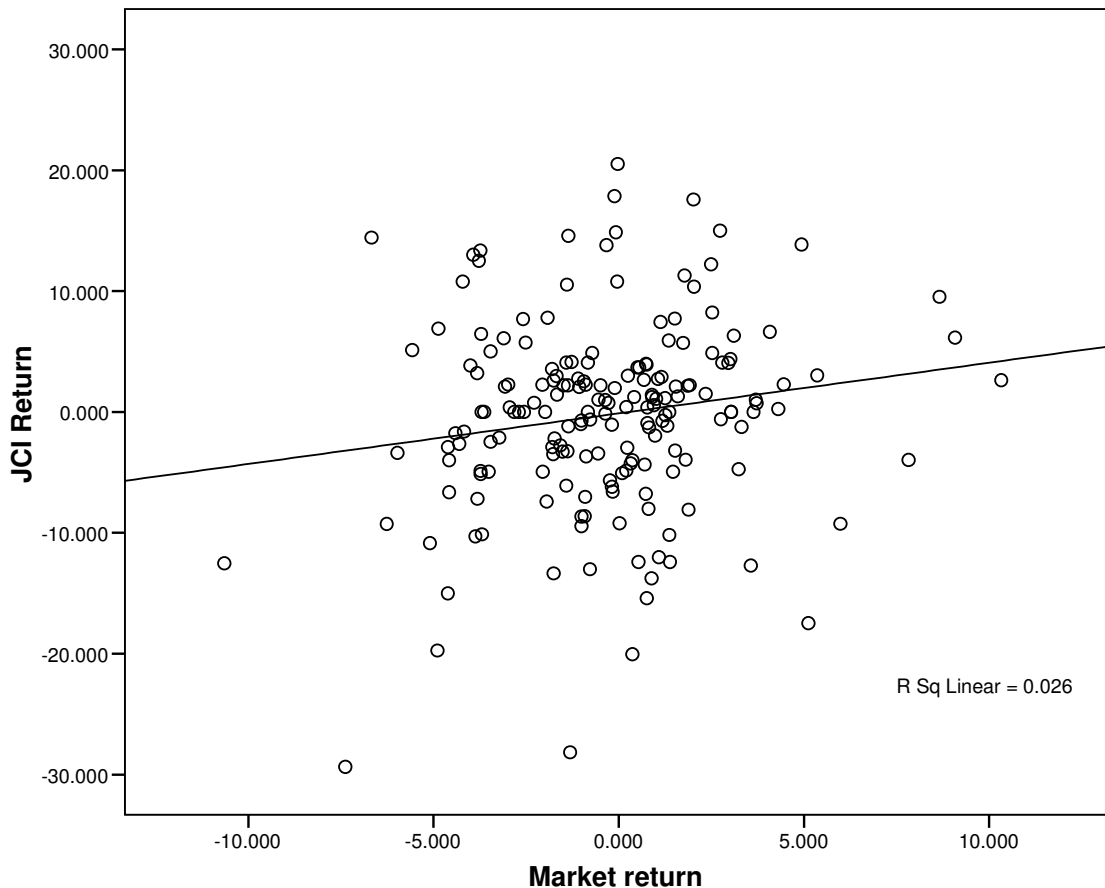
Figure 7.3: Graph illustrating the return from JCI Ltd. and the market over the period of the alleged accounting irregularities



Source: E-Views[®] output

For JCI Ltd., there was no suspension in share trade or other changes, therefore no data points were excluded from the analysis.

Figure 7.4: Scatter plot of JCI Ltd.'s return against the market return over the same period



Source: E-Views[®] output

For JCI Ltd. only a weak positive relationship exists between JCI Ltd.'s share return and the market return (measured by a R^2 of 0.028) with therefore only 2.8% of the variation in the data being explained by the linear model. Outliers that can be observed from the scatter plot include, with possible explanations in some instances:

- (-7.30; -29.355) on 9 April 1999 - No relevant news data;
- (-0.112; 17.862) on 2 July 1999 – One day after an announcement regarding the disposal of certain core assets;
- (2.018; 17.583) on 3 September 1999 – Follows shortly after an announcement about proposed restructurings;

- (-4.895; -19.736) on 23 September 1999 – The date when an announcement was made about a possible listing on the Canadian Stock Exchange;
- (-1.164; -28.164) on 17 December 1999 – On the day of an announcement about a scheme of arrangement with another company;
- (0.370; -20.044) on 29 September 2000 – Two days before the event study resulted in being flagged as “TRUE” without any corresponding explanation; and
- (5.122;-17.480) on 18 September 2000 – No relevant news data.

The outliers correspond with the previous findings from the event studies that dates are in some cases significant without specific reason being provided through published news events. It also holds true with the findings from the quantitative analysis that restructuring, acquisitions and relevant changes may, in some cases, lead to or be connected with accounting irregularities.

The regression model (or straight line) fitted to the data can be represented by the equation: $JCI\ Return = [-0.116 + (0.419)(Market\ Return)]$. The equation implies that if the market's return increases with one percentage point, the return of JCI Ltd. can be expected to increase by 0.419 percentage points.

The F-statistic of the analysis is statistically insignificant at the 1% level (0.029 being higher than the required 0.01), indicating that the model fits the data more poorly than when just using simple averages.

The results from the structural break analysis of JCI Ltd. and the discussion that follows are presented in Table 7.2.

Table 7.2: Quandt-Andrews unknown breakpoint test results for JCI Ltd.

Null Hypothesis: No breakpoints within trimmed data		
Varying regressors: All equation variables		
Equation Sample: 1/08/1999 7/05/2002		
Test Sample: 7/23/1999 12/28/2001		
Number of breaks compared: 128		
Statistic	Value	Prob.
Maximum LR F-statistic (01/10/1999)	7.192192	0.2750
Maximum Wald F-statistic (01/10/1999)	7.192192	0.2750
Note: probabilities calculated using Hansen's (1997) method		

Source: E-Views[®] output

According to the Quandt-Andrews unknown breakpoint test, the most likely date for a break in the share price return of JCI Ltd. occurred on 1 October 1999. This date is not identified in the event study as being significant, but it did occur close to a period when JCI Ltd. announced plans of restructuring through consolidation with another company, as well as an offshore listing. The actions leading to the alleged accounting irregularities started in 2002; therefore the date indicates an occurrence that happened at a previous stage. It was reported that the company started to lose shareholder value in 1999, which may also have been one of the reasons why accounting irregularities occurred.

7.2.2.4 *Summary*

The section that follows summarises JCI Ltd.'s behaviour in terms of the characteristics that were identified in Chapter Five.

Foreign exchange transactions are normally more complex in case study companies. In the case of JCI Ltd., three categories of transactions were reported and different methods were used to account for each. Due to the number and nature of activities the company was involved in, it was to be expected that the accounting for the company would be more complex than that for some other companies. This could have been an indicator of increased risk for accounting irregularities.

The same auditors were used in all five years considered. Audit fees also decreased over time in JCI Ltd., therefore the company's relationship with its auditors was sound and therefore not an indicator of increased risk for accounting irregularities.

The company's cash flows were unstable over the period that was observed, with negative figures reported in 2000 and 2003. The sector as a whole also showed decreases in cash flow, but its cash flow remained positive over the period. Since poor cash flow may be an indicator of an increased risk for accounting irregularities, the negative figures in 2000 and 2003 may have been an indication of an increased risk for accounting irregularities.

The company was only listed in 1997; therefore JCI Ltd. was five years old before accounting irregularities allegedly occurred. It is difficult to establish what exactly constitutes a young company, but in relative terms JCI Ltd. was still young when accounting irregularities allegedly occurred. Therefore the age of the company could have indicated a higher risk for accounting irregularities.

Control systems and procedures were stated to be in place, with specific measures mentioned to ensure that control is maintained. It is, however, difficult to determine from the annual report whether all parties in the company complied with control regulations.

JCI Ltd. seems to have been family-oriented, with two family members serving on the board. The company seemed dynamic and goal-driven, which can be observed from the activities the company engaged in. This is, however, a subjective observation from the limited information available in the annual report. The characteristics of being family-oriented and goal-driven may have increased the chances of accounting irregularities occurring.

Debt levels tended to fluctuate, both in year-to-year figures and as a portion of capital employed. Debt decreased in 2000 and 2003 and was also less than 100% of capital

employed in those years. Apart from 2002, when the auditors also made clear their reservations, the company was never overly indebted. Therefore debt levels did not indicate any increased risk for accounting irregularities.

With regards to the directors' behaviour and character, it appears as if the directors were goal-driven and performance-oriented. Various actions were reported to have been undertaken to ensure continued and better performance. This may in some circumstances lead to an increased chance of accounting irregularities occurring. However, no definite conclusion can be derived from this observation.

There was not enough information available to calculate financial distress figures for the company. Net current assets were, however, negative for all five years considered and debt levels were high enough in 2002 to be a matter of concern to the auditors and was duly noted by them. This may have increased the company's risk for accounting irregularities.

The company was geographically dispersed, with interests across South Africa and abroad. According to the characteristics identified in Chapter Five, this may have been an indicator of increased risk for accounting irregularities.

When considering the industry, it appeared that the sector showed strain in 1999, 2000 and 2001, when the gold markets did not perform well. Interestingly enough, the control sample company did not mention this as a problem while JCI Ltd. did. This may have indicated that JCI Ltd. was looking for a means to explain away some of its problems and may have been an indicator of increased risk for accounting irregularities.

The company experienced some liquidity problems over the period in which alleged accounting irregularities happened. Net current assets were negative in all five years considered and the current and quick ratios also did not perform well when compared with the sector. The sector as a whole also saw decreases, indicating an industry-wide problem, but the ratios from the control sample were not negative. This may have been

an indication that the company had an increased risk for accounting irregularities.

No specific behavioural aspects of the company's management could be observed from the annual report. According to the corporate governance report, it does not seem as if any problems were experienced. There were also no clear behavioural aspects of the personnel of the company mentioned in the annual reports. Therefore management and personnel behaviour are not accepted as indicators of accounting irregularity risk.

The company's receivables followed mostly a decreasing trend over the period, while inventories tended to increase. Receivables and inventories represented a lower portion of capital employed than was the case in the sector and continued to decrease as a portion of capital employed. The characteristics identified in Chapter Five indicated that unexplained and significant increases or decreases may be an indicator of increased risk for accounting irregularities. Apart from a large increase in inventory in 2002, the changes to receivables and inventory over the period observed are not significant and can therefore not act as an indicator of increased risk for accounting irregularities.

No specific mention of remuneration policies was made in the annual reports of 1999 to 2001. In 2002 a separate table set out directors' emoluments. Executive directors received in excess of R4 million. In 2003, emoluments were also set out separately. The totals were much lower. No detailed information was provided regarding the basis on which emoluments were paid. Remuneration represented a higher percentage of turnover in JCI Ltd. than in the sector. Only if it can be established that remuneration is based on financial performance may this be used as an indicator of accounting irregularity risk. This is not the case with JCI Ltd.

In years 1999 to 2001, directors held 6% of issued ordinary share capital and 45% of available options. In 2002 directors held 6% of issued ordinary share capital and there were no options available. In 2003 the directors held 1% of issued ordinary share capital. Therefore the shareholding structure does not give any indication of an increased risk for accounting irregularities.

No detailed information about the organisational structure was made available and can therefore not be used as an indicator of increased risk for accounting irregularities.

JCI Ltd. had much the same trends as the sector in the balance sheet. In the income statement, differences between JCI Ltd. and the sector were observed, as JCI Ltd. had overall poor performance and generally reported losses, compared to the levels of profits reported in the sector.

7.2.3 Macmed Healthcare Limited

7.2.3.1 Qualitative analysis

The qualitative study is based on the financial statements of Macmed Ltd. Aspen Pharmacare Ltd. is again used as the control sample company, but for different years as is used for Beige Ltd. The detailed analyses are available in Appendix C.

In summary, it can be observed that both companies made physical and financial structural changes in 1995. Working capital increased for both companies in 1995 and also in 1996, despite claims that it would be reduced. Better growth and higher turnover were claimed to be the reasons for working capital changes and increased debt. Macmed Ltd. did some financial restructuring in order to reduce gearing.

In all the available reports by Macmed Ltd., the company reported on acquisitions and other expansions through various agreements.

In 1997 there was no complete report for Macmed Ltd., while Aspen Ltd. reported that it had been a difficult year. In 1998, Macmed Ltd. reported positive results, while Aspen Ltd. did not mention its results.

In 1999 there was no full report available for Macmed Ltd. Aspen Ltd. mentioned being

adversely affected by the Macmed Ltd.'s accounting irregularity scandal.

7.2.3.2 *Quantitative analysis*

Complete horizontal, vertical and ratio analyses for Macmed Ltd. are presented in Tables E.5 and E.6 in Appendix E.

All equity movements and changes in Macmed Ltd. were completely in line with the sector and represented more or less the same portion of capital employed in the sector and in Macmed Ltd. The item "outside shareholders' interest" is the only equity item that increased in Macmed Ltd. while the sector's values decreased.

The long-term liabilities of Macmed Ltd. and the sector increased significantly in different years, but displayed the same overall trend. Long-term liabilities represented a much lower portion of capital employed in Macmed Ltd. than in the sector. The largest portion of long-term debt was interest-bearing for both Macmed Ltd. and the sector. Total liabilities had an increasing trend for Macmed Ltd. and the sector, with the most significant increases for both being in 1997. Total liabilities as a portion of capital employed decreased over the period under review for Macmed Ltd., while it increased for the sector.

Capital employed showed the same consistent increasing trend for both Macmed Ltd. and the sector.

Fixed assets increased for Macmed Ltd. and the sector, with significant increases happening in different years. Fixed assets represented a significantly higher portion of capital employed in the sector than in Macmed Ltd. Macmed Ltd. employed more intangible assets than the sector, but the amounts were still insignificant when compared to capital employed.

Investments showed opposite movements in the statements of Macmed Ltd. and the

sector, and represented a higher portion of capital employed in Macmed Ltd. than in the sector.

Inventory and debtors showed the same trends in terms of changes in both Macmed Ltd. and in the sector. Both items represented a significantly higher portion of capital employed in Macmed Ltd. than in the sector.

Cash moved in different directions in Macmed Ltd. than it did in the sector. Cash also increased to represent a higher portion of capital employed in Macmed Ltd. than in the sector.

Creditors and short-term interest bearing debt moved in the same directions in Macmed Ltd. and in the sector. The most significant changes to creditors occurred in 1997, whereas the most significant changes to short-term interest bearing debt occurred in 1999. In Macmed Ltd., creditors represented a larger portion of capital employed than in the sector, while the opposite applies to short-term interest bearing debt.

Net current assets increased consistently in Macmed Ltd., whereas they decreased to a negative value in the sector in 1998 and remained negative in 1999.

Total assets increased for both Macmed Ltd. and the sector, with the most significant changes for both recorded in 1997. This item decreased as a portion of capital employed for Macmed Ltd., but increased as a portion of capital employed in the sector.

Turnover, operating profit and gross income increased for both Macmed Ltd. and the sector in all years. Turnover increased most significantly in 1997. The operating profit and gross income represented a larger percentage of turnover for the sector than they did for Macmed Ltd.

Interest received increased consistently for Macmed Ltd., but fluctuated for the sector. It represented a higher percentage of turnover for Macmed Ltd. than for the sector. On the

other hand, the interest charge fluctuated for Macmed Ltd. and increased for the sector, but represented largely the same percentage of turnover for both. Interest charges increased significantly for both Macmed Ltd. and the sector in 1998.

Profits after interest and tax, as well as the minority interest, increased for both Macmed Ltd. and the sector, but most significantly for both in 1997. The items represented more or less the same percentage of turnover for Macmed Ltd. and the sector.

Profits to ordinary shareholders changed differently for Macmed Ltd. and the sector. Macmed Ltd.'s profits to ordinary shareholders decreased to a negative value in 1998, whereas the sector showed an increase. The sector figure also decreased to a negative value in 1999. The item represented largely the same percentage of turnover for Macmed Ltd. and the sector.

Depreciation increased for Macmed Ltd. and the sector, but most significantly for both in 1997. Depreciation represented a higher percentage of turnover for Macmed Ltd. than for the sector. Audit fees changed differently in the statements of Macmed Ltd. and the sector, but generally increased for both. Audit fees represented an insignificant percentage of turnover for Macmed Ltd. and the sector. Directors' emoluments also changed differently for Macmed Ltd. and the sector, but generally increased. Directors' emoluments represented a larger percentage of turnover for Macmed Ltd. than for the sector.

The ratio analysis indicated that the assets/capital employed ratio changed differently for Macmed Ltd. and the sector, but they had more or less the same average. The book value per share increased for Macmed Ltd., but remained stable for the sector.

The cash flow per share moved in opposite directions for Macmed Ltd. and the sector, but was negative for both in 1999. The cash flow interest cover fluctuated for Macmed Ltd., but was positive in all years and represented a higher percentage of

turnover for Macmed Ltd. than for the sector, which had a few negative ratio values.

The accounts receivable, liquidity, debt/assets and debt/equity ratios of Macmed Ltd. and the sector fluctuated up and down similarly over the period under review. However, except for the accounts receivable ratio, the averages of Macmed Ltd. were higher than the averages of the sector.

EPS displayed an increasing trend for both Macmed Ltd. and the sector, but was on average higher for Macmed Ltd. than for the sector. The operating profit margin and ROA fluctuated for Macmed Ltd. and the sector, but the average percentage was significantly higher for the sector. The net profit margin and ROE fluctuated for Macmed Ltd. and the sector, but was negative for both in 1999.

The turnover per employee for Macmed Ltd. and the sector increased and decreased at the same times over the period. The operating profit per employee fluctuated for both Macmed Ltd. and the sector, but decreased significantly for both in 1999. Directors' remuneration as a percentage of profit before tax decreased for both Macmed Ltd. and the sector, but this item was on average significantly higher for Macmed Ltd. than it was for the sector.

The sustainable growth percentage was mostly negative for Macmed Ltd., whereas it was positive for the sector. Financial distress figures of Macmed Ltd. were low enough to indicate problems. The rest of the sector did not display signs of financial distress.

The interest cover ratio, leverage factor and long-term loans as a percentage of total debt showed different movements for Macmed Ltd. and the sector, but were on average much the same. The leverage factor was negative for both Macmed Ltd. and the sector in 1999. Long-term loans as a percentage of total debt were significantly higher for the sector than for Macmed Ltd.

The NAV per share ratio showed an increasing trend for Macmed Ltd., but a decreasing

trend for the sector. The ratio was on average significantly higher for Macmed Ltd. than for the sector.

7.2.3.3 *Statistical analysis*

- *Event study*

For Macmed Ltd., those dates that were established to be of importance and the news events related to those dates are reproduced in Table G.3, Appendix G.

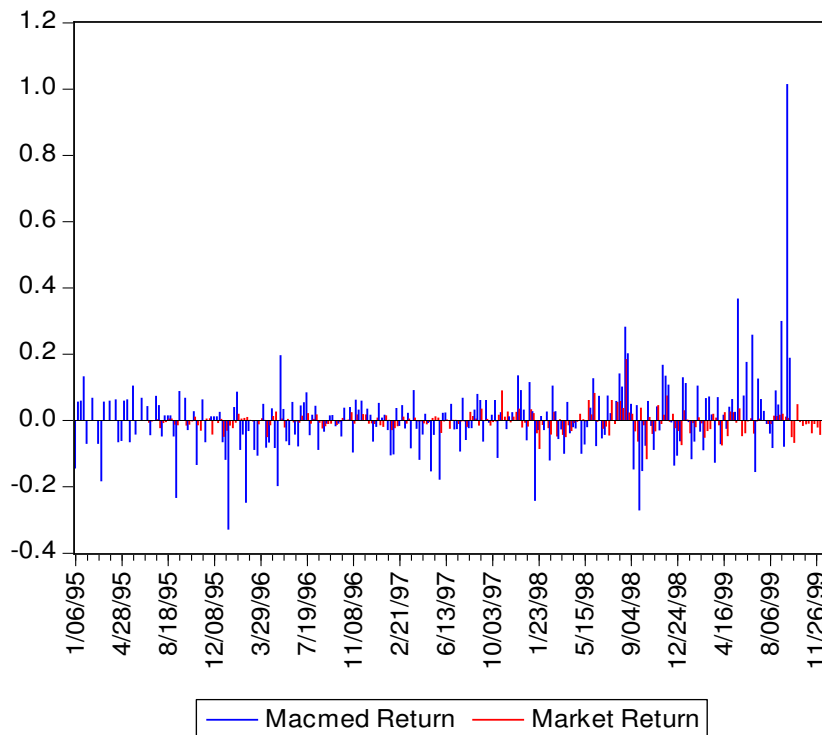
For a period from 11 September 1995 to 1 February 1999 there was a number of significant events (dates that were flagged as “TRUE”), but no news articles related to Macmed Ltd. were published on those dates. The significant events that were identified through dates flagged as “TRUE,” but that did not have related news releases, occurred before and during the period when accounting irregularities were detected and identified in the financial statements.

The news events on dates flagged as “TRUE” and for which news releases were available, mostly relate to the reorganisation of operations and warnings regarding financial difficulties. This correlates with the findings from the qualitative and quantitative analyses related to financial distress and planned merger and acquisition (reorganisation) activity.

- *Regression and structural break analysis*

The graph depicted in Figure 7.5 shows that the share returns for Macmed Ltd. experienced more volatility than the market. This was especially the case in later years.

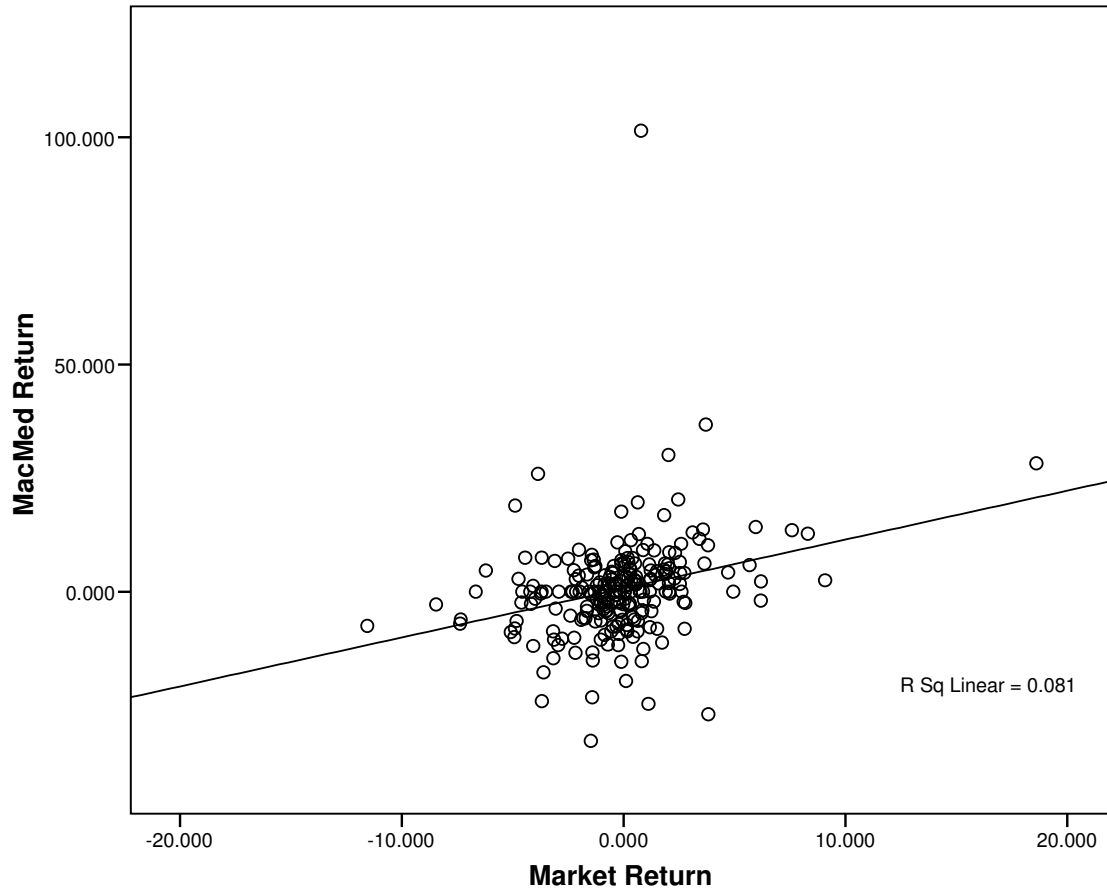
Figure 7.5: Graph illustrating the return from Macmed Ltd. and the market over the period of the alleged accounting irregularities



Source: E-Views[®] output

As part of the alleged period of accounting irregularities, there was a period of time at the end where trade in shares of Macmed Ltd. already ceased. Those zero-value returns were not included in the analysis.

Figure 7.6: Scatter plot of Macmed Ltd.’s return against the market return over the same period



Source: E-Views[®] output

For Macmed Ltd. a positive relationship exists between JCI Ltd.’s share return and the market return (measured by a R^2 of 0.081), implying that the model explains 8.1% of the variation in the data. Outliers that can be observed from the scatter plot include, with possible explanations in some instances:

- (-1.423; -23.233) on 8 September 1995 – Occurred one day before a date flagged as “TRUE” for which no news data were available;
- (-1.486;-32.85) on 12 January 1996 – Occurred on a day flagged as “TRUE,” but with no news data available;

- (1.109;-24.686) on 23 February 1996 – No information, but close to a date that was flagged as “TRUE”;
- (-3.696;-24.116) on 16 January 1998 - No information, but close to a date that was flagged as “TRUE”;
- (18.602; 28.257) on 21 August 1998 - No information, but close to a date that was flagged as “TRUE”;
- (3.815;-26.966) on 25 September 1998 - No information, but close to a date that was flagged as “TRUE”;
- (3.702; 36.772) on 21 May 1999 - No information;
- (2.018; 30.111) on 3 September 1999 – No information; and
- (0.775; 101.473) on 17 September 1999 – No information, but close to a date that was flagged as “TRUE.”

The findings from the outliers correspond with earlier findings of events of a character for accounting irregularities perhaps occurring on dates when no news announcements are made.

The regression model (or straight line) fitted to the data can be represented by the equation: $\text{Macmed Return} = [0.699 + (1.077)(\text{Market Return})]$. The equation implies that if the market's return increases with one percentage point, the return of Macmed Ltd. can be expected to increase by 1.077 percentage points.

The F-statistic of the analysis is statistically significant at the 1% level (with 0.000 being lower than the required 0.01), indicating that the model fits the data better than just using simple averages.

The results from the structural break analysis of Macmed Ltd. and the discussion that follows are presented in Table 7.3.

Table 7.3: Quandt-Andrews unknown breakpoint test results for Macmed Ltd.

Null Hypothesis: No breakpoints within trimmed data		
Varying regressors: All equation variables		
Equation Sample: 6/30/1995 12/24/1999		
Test Sample: 3/08/1996 4/16/1999		
Number of breaks compared: 164		
Statistic	Value	Prob.
Maximum LR F-statistic (4/01/1999)	10.00739	0.0944
Maximum Wald F-statistic (4/01/1999)	10.00739	0.0944
Note: probabilities calculated using Hansen's (1997) method		

Source: E-Views[®] output

According to the Quandt-Andrews unknown breakpoint test, the most likely date for a break in the share price return of Macmed Ltd. occurred on 1 April 1999. This date is not identified in the event study as being significant, but it is the day after the 1999 financial year-end of the company. This indicates that the break point may have been the result of a significant event in the financial statements of the company. This is significant in light of the fact that that accounting irregularities allegedly occurred in 1998 and 1999.

7.2.3.4 *Summary*

The section that follows discusses the extent of Macmed Ltd.'s behaviour in terms of the characteristics identified in Chapter Five.

From the annual reports, there appear to be no overly complex transactions. The large number of subsidiaries and foreign transactions of the company does, however, add to the overall level of complexity when preparing financial statements. However, there was not enough evidence of complex accounting transactions to act as an indication of a higher degree of risk for accounting irregularities for the company.

The company changed from a “big five” auditor to a relatively unknown auditing company in the 1998 financial year. This could not have been an attempt to save costs,

since audit fees increased over the period that was observed. However, more than mere speculation of any irregularity is not possible from this observation.

Cash on hand increased on average over the five-year period reviewed. However, negative cash flow ratios were calculated for both Macmed Ltd. and the sector in 1999. Since this was also the period in which accounting irregularity problems occurred, the negative cash flows may have been an indicator of an increased risk for accounting irregularities.

Macmed Ltd. was listed in 1989. It was thus relatively advanced in terms of its age before accounting irregularities occurred. According to the characteristics identified in Chapter Five, younger companies seem to be more prone to be affected by accounting irregularities. Therefore company age does not appear to be a reliable indicator of increased risk for accounting irregularities risk in the case of Macmed Ltd.

In most of the annual reports of the five-year period that was observed, very little was mentioned regarding control systems and control procedures. This improved in the 1998 annual report, where a detailed discussion was presented. However, it is difficult to establish from the annual report whether control systems and procedures were complied with.

The company's culture cannot be readily observed and evaluated from the annual reports. The general impression is, however, fairly traditional. The company had a constant drive for growth, which can be seen from the number of acquisitions and other relationships or agreements entered into. This is a positive indicator of an increased risk for accounting irregularities, but it is mere speculation and cannot be proven as a fact from the annual report.

Debt levels in both Macmed Ltd. and the sector increased over the period reviewed, even though the debt ratios were not unacceptably high overall. Since the sector as a whole also showed increased debt levels, it does not appear to be an indicator of

Macmed Ltd.'s risk for accounting irregularities.

The directors' behaviour cannot be easily determined from the available annual reports, but a drive for inorganic growth is evident. Even though this observation is subjective in origin, it may have been an indicator of an increased risk for accounting irregularities. The balance between executive and non-executive directors was acceptable.

In all the years that were considered in the analysis, the financial distress ratio was below the required minimum of 1.81. This indicates that the company experienced some financial distress problems. This was, however, not a sector-wide problem. The financial distress figures for Macmed Ltd. may therefore have been an indicator of increased risk for accounting irregularities.

The company had subsidiaries, relationships and agreements with entities across the globe. Remote geographic locations tend to increase a company's risk for accounting irregularities, since remote locations generally mean lesser control. Therefore the geographic location of the company's operations may have been an indicator of increased risk for accounting irregularities.

The sector as a whole experienced a degree of market, economic and political problems in the period under review. Other companies also experienced difficulties. As a result of an industry-wide slowdown, this may have indicated that Macmed Ltd. had an increased risk for accounting irregularities.

The liquidity of the company improved in most of the years under consideration, and was at an acceptable level in all years. The average ratios of the company were also above those of the sector. Liquidity did therefore not indicate an increase in the company's risk for accounting irregularities.

Managements' behaviour cannot be easily evaluated from the available annual reports, but it is clear that the managers shared the directors' view about increased growth

through acquisitions and other relationships or agreements. Even though speculative in nature, such observations may indicate an increased risk for accounting irregularities.

It was not possible to observe and get an impression of personnel behaviour from the available annual reports.

Receivables and inventory levels increased consistently throughout the five-year period, but in line with increases that occurred in the rest of the sector also. Receivables and inventory levels were therefore not a positive indicator of increased risk for accounting irregularities.

Of the wealth that was created in 1998, 55% (according to the value added statement) was distributed to employees as benefits and remuneration. Directors' emoluments increased with a concerning 200% in 1998. It is, however, not possible to establish whether employees and managers were remunerated on the basis of performance. For that reason remuneration may have been an indicator of a risk for accounting irregularities, but it would have been a speculative observation.

Information about the company's organisational structure was not available.

The most significant changes between the financial statements of Macmed Ltd. and the sector can be found in the income statement. In the balance sheet, the trends observed in Macmed Ltd. and in the sector were largely the same.

The signs of accounting irregularities reflected in the annual report of Macmed Ltd. were related to the company's working capital and turnover figures and related ratios.

7.2.4 Saambou Holdings Limited

7.2.4.1 *Qualitative analysis*

The qualitative study is based on the financial statements of Saambou Ltd. ABSA Group Limited is used as the control sample company. The detailed analyses are available in Appendix C.

In 1999, both Saambou Ltd. and ABSA Ltd. reported adverse local and international economic conditions, but claimed to have had acceptable results despite these conditions. A commitment to the prevention of the risk of accounting irregularities and accounting irregularities itself were mentioned in both companies' financial statements. Saambou Ltd. mentioned structural changes, planned partnerships and joint ventures.

In 2000, Saambou Ltd. reported good growth and overall favourable results, while ABSA Ltd. sounded more negative, focusing on negative external impacts. Saambou Ltd. mentioned its image and identity changes, together with its prospects for joint ventures and other strategic alliances.

In 2001, results were reported to be favourable for both Saambou Ltd. and ABSA Ltd. as a result of improved conditions. Both companies planned structural changes and acquisitions.

In 2002 and 2003, Saambou Ltd. received qualified audit reports due to its not being a going concern, but reported its financial information as if the company was a going concern. Saambou Ltd. also did not comply with GAAP and JSE requirements in the same period. Results were good for ABSA Ltd.

7.2.4.2 *Quantitative analysis*

Complete horizontal, vertical and ratio analyses are presented in Tables E.7 and E.8 in Appendix E.

On the basis of the quantitative analysis of the financial statements, a number of significant observations were made.

Most equity accounts had an overall increasing trend for both Saambou Ltd. and the sector, but the items represented a lower portion of capital employed in the sector in general than in the company. Saambou Ltd. employed a significantly larger portion of preference shares than the rest of the sector.

Distributable reserves increased consistently for the sector and Saambou Ltd. from 1999 to 2001. This item decreased to a negative figure for Saambou Ltd. thereafter. Distributable reserves represented a larger portion of capital employed in the company than in the sector.

The total liabilities of the sector increased consistently over the period. The total liabilities of Saambou Ltd. increased from 1999 to 2001, but decreased thereafter. In the sector, long-term liabilities increased as a portion of capital employed, while it decreased in Saambou Ltd. Most of the long-term liabilities of Saambou Ltd. and the sector were interest-bearing.

Capital employed increased consistently for the sector, while it increased for Saambou Ltd. only from 1999 to 2001 and decreased thereafter.

The fixed assets of Saambou Ltd. and the sector followed much the same trend, with increases from 1999 to 2001 and decreases thereafter. Fixed assets represented more or less the same portion of capital employed in Saambou Ltd. and the sector. Intangible assets were insignificant for both Saambou Ltd. and the sector. Saambou Ltd.'s total

assets increased from 1999 to 2001 and decreased as a portion of capital employed. In the sector, total assets increased, and also increased as a portion of capital employed.

Saambou Ltd.'s investments increased from 1999 to 2001, but decreased thereafter, representing a fluctuating portion of capital employed. Investments and loans increased consistently for the sector, and also increased as a portion of capital employed.

Inventory values were insignificant in both Saambou Ltd. and the sector. Saambou Ltd. and the sector both showed fluctuations in debtors, but Saambou Ltd.'s debtors represented a decreasing portion of capital employed, while debtors increased for the sector as a portion of capital employed. In terms of cash and cash equivalents, Saambou Ltd. showed increases from 1999 to 2001, with decreases thereafter, and this item represented a fluctuating portion of capital employed. In the sector cash and cash equivalents consistently increased and also increased as a portion of capital employed. "Other" current assets represented a significant portion of capital employed for Saambou Ltd., especially when compared with the sector.

Creditor values displayed mostly the same trends for Saambou Ltd. and the sector, with increases from 1999 to 2001 and decreases thereafter. Creditors represented a significantly higher portion of capital employed in Saambou Ltd. than in the sector as a whole. The interest-bearing and non-interest-bearing short-term debt of Saambou Ltd. increased from 1999 to 2001 and decreased thereafter, representing a decreasing portion of capital employed. Interest-bearing and non-interest-bearing short-term debt increased consistently in the sector and represented an increasing portion of capital employed.

Net current assets fluctuated for Saambou Ltd., but were positive for all years, whereas net current assets were negative for the sector in all years.

Operating profits were negative for Saambou Ltd. and the sector, only becoming positive for Saambou Ltd. in 2003. Interest received and gross income increased from 1999 to

2001 for Saambou Ltd., decreasing thereafter. For the sector, interest received and gross income increased consistently.

The interest charges of the company increased from 1999 to 2001 and represented a decreasing percentage of the gross income. The interest charges of the sector increased, and they represented a decreasing portion of the gross income.

The figures for profits after interest and tax, profits attributable to ordinary shareholders, as well as the retained earnings of Saambou Ltd., increased from 1999 to 2001, decreasing to negative in 2002 and increasing again in 2003. Except for profit to ordinary shareholders, which was insignificant, the figures increased as a percentage of Saambou Ltd.'s gross income. The profits after interest and tax and the retained earnings of the sector displayed a consistently increasing trend, and increased as a percentage of the gross income.

Depreciation increased for both Saambou Ltd. and the sector, except for a decrease in Saambou Ltd. in 2003. Depreciation represented much the same average percentage of gross income for Saambou Ltd. and the sector. Audit fees increased for Saambou Ltd. from 1999 to 2001 and decreased thereafter. For the sector, audit fees increased consistently. For both Saambou Ltd. and the sector, audit fees represented an insignificant percentage of the gross income. The directors' emoluments at Saambou Ltd. and in the sector moved in opposite directions, but this item represented an insignificant percentage of the gross income for both.

From the ratio analysis of Saambou Ltd. and the sector, a number of significant observations were made, as detailed in the following sections. The book value per share ratio followed a largely increasing trend for both Saambou Ltd. and the sector. For Saambou Ltd. the ratio decreased to negative in 2002. The NAV per share was positive for Saambou Ltd. in all years, but it was negative for the sector in general in 1999, 2001 and 2002.

The cash flow dividend cover ratio fluctuated for both Saambou Ltd. and the sector. The cash flow interest cover ratio increased for Saambou Ltd., but fluctuated for the sector. Both ratios were significantly larger for the sector than for Saambou Ltd.

The current and quick ratios of Saambou Ltd. increased while they decreased for the sector.

The debt/assets, debt/equity and assets/capital employed ratios decreased for Saambou Ltd. The debt/assets ratio remained stable for the sector, while the debt/equity and assets/capital employed ratios increased. The ratios had largely the same averages in the sector and Saambou Ltd.

The dividend per share ratio followed the same increasing trend for Saambou Ltd. and the sector. The dividend cover and interest cover ratios increased for Saambou Ltd., but decreased for the sector. The ratio average was higher for Saambou Ltd. than for the sector. The retention rates of Saambou Ltd. and the sector were largely the same. In 2003 the rate decreased for the sector, but it increased to 100% for Saambou Ltd.

Earnings per share of Saambou Ltd. and the sector increased from 1999 to 2001, and decreased thereafter.

Financial distress figures were poor for Saambou Ltd., except for 2003. No financial distress problems were evident in the sector figures. Leverage in Saambou Ltd. increased on the whole, while leverage remained consistent in the sector. Long-term loans as a percentage of total debt fluctuated for both Saambou Ltd. and the sector; however, the averages of the ratios were higher for Saambou Ltd. than for the sector.

The sustainable growth percentages fluctuated for both Saambou Ltd. and the sector, but this item moved into negative figures in Saambou Ltd., while it increased for the sector.

The ROA followed the same increasing and decreasing trends in Saambou Ltd. and the sector, but Saambou Ltd.'s ROE moved in the opposite direction from that of the sector. Both ratios were significantly higher for Saambou Ltd. than for the sector.

The total debt/cash flow ratio moved in the opposite direction for Saambou Ltd. than for the sector and this item was significantly higher for Saambou Ltd. than for the sector.

7.2.4.3 *Statistical analysis*

- *Event study*

For Saambou Ltd., those dates that were established to be important, together with the news events related to those dates, are reproduced in Table G.4, Appendix G.

In contrast with the other companies that were analysed, a large number of the dates from the Saambou Ltd. event study that were flagged as “TRUE” were also accompanied with a relevant and appropriate news release on that date or close to that date.

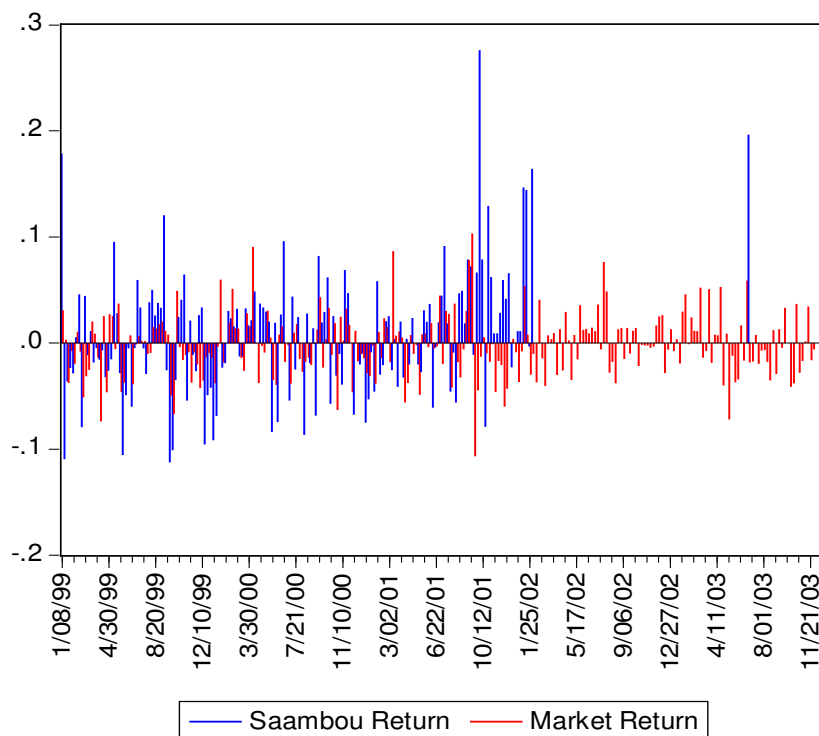
There was therefore fewer event dates for Saambou Ltd. without news data that give information about the event. News reported on significant event dates related to restructuring, acquisitions, capitalisation of shares, changes in operations, rumours of insider trading and rumours of financial trouble. All these events correlated with the findings of indicators as established in Chapter Five.

It appears as if the rumours about insider trading and financial trouble caused the most problems for Saambou Ltd. At the time of the study's conclusion, reports were made that the directors and managers of Saambou Ltd. were found not guilty on all charges of accounting irregularities.

- *Regression and structural break analysis*

The graph in Figure 7.7 gives a graphical illustration of the Return of Saambou Ltd. and the return from the market over time. The graph indicates that the share returns of Saambou Ltd. tended to be more volatile than that of the market. Trade ceased in 2002 and increased to some extent in 2003 before the end of the observation period.

Figure 7.7: Graph illustrating the return from Saambou Ltd. and the market over the period of the alleged accounting irregularities

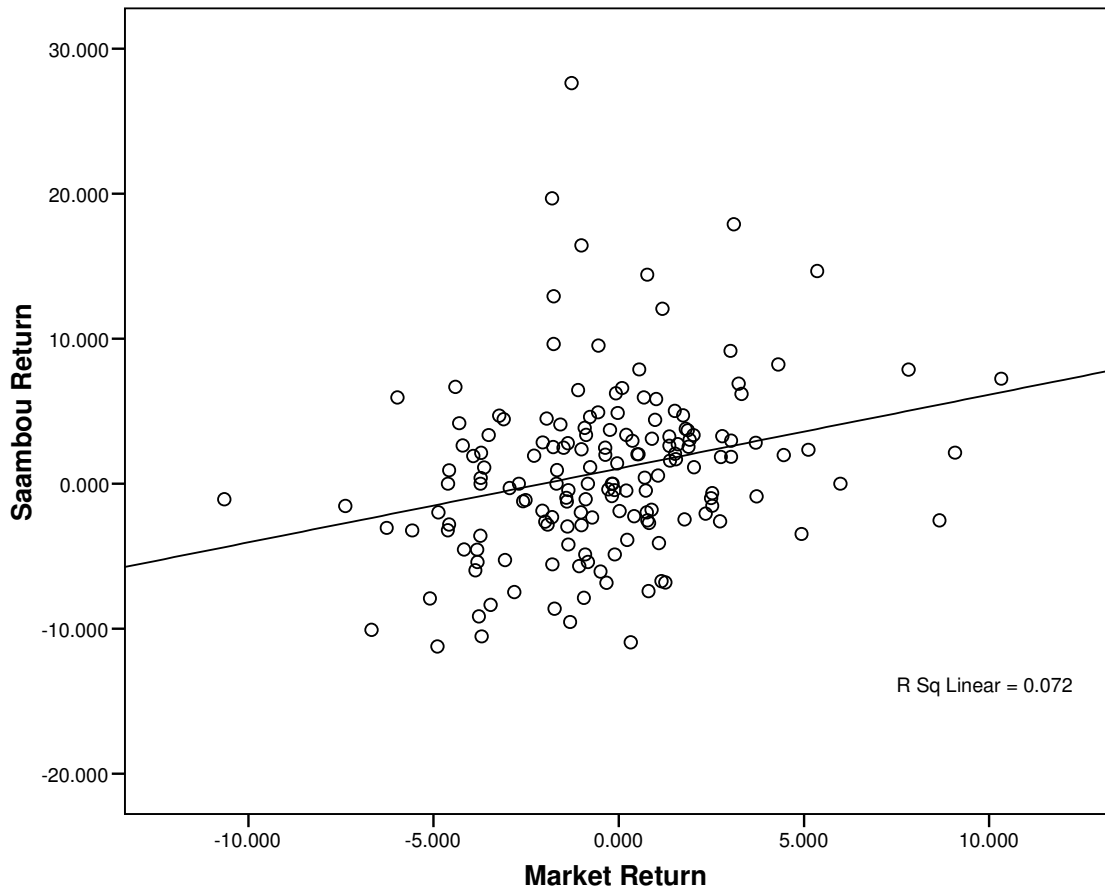


Source: E-Views[®] output

For the regression and structural break analyses of Saambou Ltd., the data points from 4 July 2003 until 24 December 2003 and from 8 February 2002 until 20 June 2003 are excluded since no trading in Saambou Ltd. shares took place between those dates. A

market return of 19.671% that represents an outlier is recorded for 27 June 2003. This outlier is included in the analysis and is discussed below.

Figure 7.8: Scatter plot of Saambou Ltd. return against the market return over the same period



Source: E-Views[®] output

In the scatter plot and corresponding regression data for the return of Saambou Ltd. against the market return, it appears that there is a weak positive linear trend between the two variables. This linear relationship explains 7.2% of the variation in the data (measured by the R^2 Linear that is 0.072). Furthermore the regression results and scatter plot indicates that there may be two outliers in the data set: (-1.00; 27.00) on 5 October 2001 and (-1.799; 19.671) on 27 June 2003. The date of 5 October 2001 is flagged as “TRUE” in the event study of Saambou Ltd. There is, however, no data on

any significant occurrences in the company or in the trading of its shares on that date. The other outlier on 27 June 2003 can also not be explained through any available news data, but it appears to have been a once-off instance of trading in a period when trading ceased, resulting in an increased share return.

The regression model (or straight line) fitted to the data can be represented by the equation: $\text{Saambou Return} = [1.042 + (0.509)(\text{Market Return})]$. The equation implies that if the market's return increases with one percentage point, the return of Saambou Ltd. can be expected to increase by 0.509 percentage points.

The F-statistic (model of fit) of the analysis is statistically significant at the 1% level (0.001 being lower than the required 0.01), indicating that the model fits the data better than just using simple averages. The low R Square however, implies that this is still not what can be termed a "good" fit.

The results from the structural break analysis of Saambou Ltd. are presented in Table 7.4 and the discussion below.

Table 7.4: Quandt-Andrews unknown breakpoint test results for Saambou Ltd.

Null Hypothesis: No breakpoints within trimmed data		
Varying regressors: All equation variables		
Equation Sample: 1/08/1999 12/24/2003		
Test Sample: 4/16/1999 9/19/2003		
Number of breaks compared: 234		
Statistic	Value	Prob.
Maximum LR F-statistic (21/9/2001)	9.484001	0.1762
Maximum Wald F-statistic (21/9/2001)	9.484001	0.1762
Note: probabilities calculated using Hansen's (1997) method		

Source: E-Views[®] output

According to the Quandt-Andrews unknown breakpoint test there were no specifically identified break points in the data set. However, at the lack of a specific breakpoint(s)

the test still generates a most likely date for a break in the trading of a company's shares. The most likely date for a break in the share price return of Saambou Ltd. occurred on 21 September 2001. This date does not appear in the event study of Saambou Ltd. as significant, but shortly after this date news reports indicated that Saambou Ltd. experienced financial difficulties. It was later established that the rumours were untrue and the directors and management were found to be not guilty on all charges of accounting irregularities. The result of the date identified in the structural break analysis was therefore due to the unfounded rumours that started to spread on that date.

7.2.4.4 *Summary*

The section that follows summarises Saambou Ltd.'s behaviour in terms of the characteristics as set out in Chapter Five.

In the annual reports it was seen that the company attempted to concentrate on "niche" services and was thus not overly complex in terms of its nature or transactions. The type of accounting transactions the company engaged in was therefore not a positive indicator of increased risk for accounting irregularities.

The same auditors were retained for the entire period under review. Audit fees increased initially, but decreased from 2002 onwards. The decreases happened outside the period in which the accounting irregularities occurred. For that reason, the company's relationship with its auditors does not indicate an increased risk for accounting irregularities.

Cash flows increased over the period in which accounting irregularities happened and decreased again thereafter. The same trends were visible in the cash flow ratios. The trend was different from that of the sector as a whole. According to the characteristics identified in Chapter Five, it is mostly a poor cash flow situation that indicates an increased risk for accounting irregularities. However, it is worthwhile to observe any

significant changes when evaluating accounting irregularity risk. The significant increases in cash over the period of the alleged accounting irregularities period may therefore have indicated some irregularities.

The company obtained a stock exchange listing in 1989. The company was therefore relatively advanced in age before accounting irregularities occurred. Therefore the age of the company did not indicate an increased risk for accounting irregularities.

Apart from 2002 and 2003, when detailed reports were not published, the annual reports indicated a broad variety of controls to counter and reduce the various risks the company faced. It is unfortunately not possible to establish from the annual report whether control systems and procedures were complied with. Therefore it is not reliable to evaluate the company's control system strength from the annual report.

It is difficult to determine company culture from the annual report. The culture did seem to be fairly traditional, as the directors and managers were mostly older white males. However, such an observation is pure speculation and ought not to be accepted as a reliable indicator of increased risk for accounting irregularities.

Debt levels fluctuated over the period under review, but there was an overall decrease in debt levels. The sector as a whole showed increases in debt levels over the period. The company's debt levels therefore did not indicate any increased risk for accounting irregularities.

With regards to directors' behaviour and character, the 2002 and 2003 annual reports gave the impression that the directors did not care about rules and regulations. This came as a result of the directors approving financial statements that did not completely comply with GAAP and JSE listing requirements. This indicated that the company had some increased risk for accounting irregularities.

Financial distress figures were below an acceptable level from 1999 to 2002. This

improved in 2003, but was still not above the minimum acceptable figure of 1.81. No financial distress problems occurred in the sector. The poor financial distress figures may have been an indication of increased risk for accounting irregularities.

The company's branches are dispersed over South Africa with the head office in Pretoria. However, activities are not located abroad. This makes proper control over all activities harder to accomplish and therefore indicates an increased risk for accounting irregularities.

The sector as a whole experienced some volatility at the start of the period under review, increasing the companies in the sector's accounting irregularity risk.

The company's liquidity position was strong overall and improved significantly in 2002 and 2003. Liquidity levels declined in the sector. Therefore liquidity was not an indicator of increased risk for accounting irregularities.

Managements' behaviour cannot be determined reliably from the available annual reports. It can perhaps be assumed that they shared the directors' views in that they also approved financial statements that did not comply with all the relevant rules and regulations.

It is not possible to observe and evaluate personnel behaviour accurately from the annual report.

The company's receivables decreased significantly in most years, except for a significant increase in 2001. Inventory levels remained mostly constant, with no inventory reported in 2002 and 2003. In the sector, both inventory and receivables increased consistently. The significant increase in receivables in 2001, which was also the year in which the alleged accounting irregularities occurred, indicated to an increased risk for accounting irregularities.

Directors' remuneration was only disclosed as a total in a note to the financial statements and it represented an insignificant portion of turnover. It was therefore not possible to use directors' remuneration as an indicator of an increased risk for accounting irregularities. Management and staff held a decreasing percentage of shares in the company, also giving no indication of an increased risk for accounting irregularities.

The company followed a hierarchical organisational structure. Since complex structures indicate increased accounting irregularity risk, the organisational structure did not show increased risk in the company.

Changes in the financial statement figures were in line with those of the sector at the time when the accounting irregularities were committed. It differed from the sector only afterwards. Some ratios did move differently from those in the sector as a whole.

7.2.5 Tigon Limited

7.2.5.1 Qualitative analysis

The qualitative study is based on the financial statements of Tigon Ltd. African Bank Investment Limited (ABI Ltd.) is used as the control sample company. The detailed analyses are available in Appendix C.

In 1997 Tigon Ltd. reported on good performance and the establishment of a new subsidiary. Tigon Ltd. received an unqualified audit report, but with a notice that it had not accounted correctly for its distributable reserves. ABI Ltd. mentioned changes that happened in the past year, as well as planned developments.

The 1998 reports of both Tigon Ltd. and ABI Ltd. were basic. Additional information included Tigon Ltd.'s report on stakes purchased in other companies and ABI Ltd.'s management of growth through disposals, investments and acquisitions.

In 1999, 2000 and 2001 Tigon Ltd. reported on exceptional growth, shareholder value that had been created and profitability. Actions by Tigon Ltd. to improve and maintain growth included investments (locally and abroad), structure changes and changes to the focus areas of the business. In the same years, ABI Ltd. reported on negative pressures in the South African economy and increased competition in the community. Despite these negative factors, ABI Ltd. still reported that it had maintained satisfactory performance.

7.2.5.2 *Quantitative analysis*

The complete horizontal, vertical and ratio analyses are presented in Tables E.9 and E.10 in Appendix E.

Some of the most significant observations from the analysis of the financial statements of Tigon Ltd. and the sector are set out below.

Ordinary shareholders' interest increased for both Tigon Ltd. and the industry, but represented a lower portion of capital employed in the sector than in Tigon Ltd. Ordinary share capital also increased for Tigon Ltd. and the sector, but represented an insignificant portion of capital employed in both.

The share premium of Tigon Ltd. and the sector followed the same trends and decreased as a portion of capital employed for both. The non-distributable reserves of Tigon Ltd. and the sector also followed the same trends, but represented an insignificant amount in the statements of Tigon Ltd. Distributable reserves increased for Tigon Ltd., whereas they decreased for the sector. This item also increased as a portion of capital employed for the company and decreased as a portion of capital employed for the sector.

Long-term liabilities (all interest-bearing for Tigon Ltd. and in all categories for the

sector) increased for both Tigon Ltd. and the sector, but represented a significantly higher portion of capital employed in the sector. With regard to total liabilities, the most significant change occurred in the same year for both Tigon Ltd. and the sector, namely in 2000. Total liabilities represented a significantly larger portion of capital employed in the sector than in Tigon Ltd.

Capital employed increased for Tigon Ltd. and the sector, but their most significant increases were recorded in different years.

Fixed assets decreased in most years for Tigon Ltd., while this item increased in most years for the sector. In both Tigon Ltd. and the sector, fixed assets represented largely the same portion of capital employed. Intangible assets (goodwill, patents and trademarks) increased for Tigon Ltd. and the sector. This item represented a larger portion of capital employed in Tigon Ltd. than in the sector.

Inventory increased for Tigon Ltd. and the sector for most of the period, but decreased as a portion of capital employed for both. Debtors fluctuated for Tigon Ltd. and the sector, but increases and decreases occurred in different years. Debtors represented a decreasing portion of capital employed for Tigon Ltd. and the sector. Cash and cash equivalents increased and decreased in the same years for Tigon Ltd. and the sector. Cash and cash equivalents decreased as a portion of capital employed, but these items were overall significantly higher as a portion of capital employed in the sector. Other current assets increased for Tigon Ltd. and the sector and also represented a higher portion of capital employed in the sector.

Creditors increased and decreased in different years for Tigon Ltd. and the sector, and represented a higher portion of capital employed in the sector. Short-term interest-bearing debt generally increased for both Tigon Ltd. and the sector, but represented a significantly larger portion of capital employed in the sector.

Net current assets increased for Tigon Ltd., whereas this item was negative and

declining in all years for the sector.

Total assets followed an increasing trend for both Tigon Ltd. and the sector. This item decreased as a portion of capital employed in the sector, but was still significantly higher as a portion of capital employed in the sector than in Tigon Ltd.

The turnover of Tigon Ltd. increased over the entire period, while it fluctuated for the sector. Operating profit increased and decreased in different years for Tigon Ltd. and the sector. Values were negative in the statements of the sector for 1998 and 1999. Gross income mostly increased for Tigon Ltd. and the sector, but represented a significantly larger percentage of turnover in the sector.

Interest received and interest charges increased for Tigon Ltd. and the sector in all years, except for a decrease for both in 2000. It represented a significantly larger portion of turnover in the sector.

Net profit after tax, net profit to ordinary shareholders and retained earnings mostly increased for Tigon Ltd. and the sector and represented largely the same percentage of turnover for both.

Depreciation, audit fees and directors' emoluments increased for Tigon Ltd. and the sector in all years. Depreciation represented a larger percentage of turnover in the sector than in Tigon Ltd. Audit fees and directors' emoluments represented insignificant amounts in the financial statements of Tigon Ltd. and the sector.

The most significant observations from the ratio analysis of Tigon Ltd. and the sector as a control sample are set out in the sections that follow. The accounts receivable/turnover ratio changed in opposite directions for Tigon Ltd. and the sector, while the average ratio for Tigon Ltd. was higher than the average ratio in the sector.

The assets/capital employed ratio showed a decreasing trend for Tigon Ltd. and the

sector, with the sector average being higher than the average of Tigon Ltd.

The book value per share ratio mostly moved in opposite directions (increasing for Tigon Ltd. and decreasing for the sector), but both increased in 2001. The cash flow per share ratio and the NAV per share ratio fluctuated for both Tigon Ltd. and the sector.

The cash flow interest cover ratio, the normal interest cover ratio and the leverage factor decreased and increased in the same years for Tigon Ltd. and the sector. The average cash flow interest cover and normal interest cover ratios of Tigon Ltd. were higher than those of the sector. The leverage factor average of Tigon Ltd. was lower than that of the sector, but not significantly lower.

Long-term loans as a percentage of total debt fluctuated for Tigon Ltd., but increased for the sector. The average percentage was higher for Tigon Ltd., but not significantly higher.

The current and quick ratios, as well as the debt/assets and debt/equity ratios of both Tigon Ltd. and the sector fluctuated. The average current and quick ratios of Tigon Ltd. were significantly higher than those of the sector, while the debt/assets and debt/equity ratios of Tigon Ltd. were significantly lower.

The directors' remuneration as a percentage of profit before tax decreased for Tigon Ltd., but both increased and decreased for the sector. The average for the sector was higher than for Tigon Ltd., but not significantly higher.

The EPS of Tigon Ltd. fluctuated over the period under review, but increased for the sector overall. The operating profit margin of Tigon was mostly consistent, but it fluctuated for the sector. The net profit margin of Tigon Ltd. and the sector changed in different directions, and the average of Tigon Ltd. was higher than that of the sector.

The ROA ratio fluctuated for Tigon Ltd. and the sector, with the highest values occurring

in 1999 for both. The ROE ratio also fluctuated for both, but remained mostly consistent for Tigon Ltd. The average ratios were significantly higher for Tigon Ltd. than for the sector.

The total asset turnover ratio fluctuated for Tigon Ltd., but decreased for the sector. The ratio average was higher for Tigon Ltd., but not significantly higher. The total debt/cash flow ratio fluctuated for Tigon Ltd. and the sector with the ratio average being significantly higher for the sector.

Financial distress figures fluctuated for Tigon Ltd., but were above the minimum of 1.81 for the entire period. Financial distress figures were negative in the sector for the whole period. The sustainable growth percentage mostly increased for both Tigon Ltd. and the sector. The sector average was significantly higher than that of Tigon Ltd.

7.2.5.3 *Statistical analysis*

- *Event study*

For Tigon Ltd., those dates that were established to be important, together with the news events related to those dates, are supplied in Table G.5, Appendix G.

For a period from 21 January 1997 to 8 November 2000, there were a number of dates flagged as “TRUE” in the event study of Tigon Ltd. There was, however, no news events related to Tigon Ltd. between those dates. The same scenario applied to a period stretching from 18 April 2001 to 23 November 2001. The dates that were flagged as “TRUE” in the event study correlated with the period when accounting irregularities allegedly occurred in the financial statements of the company.

The dates flagged as “TRUE” on which news data was published relate to an investment with high expected future returns and a court interdict against the EuroPoint vendors and their nominee, Bestyet, from selling 7,671 million Tigon Ltd. shares which have

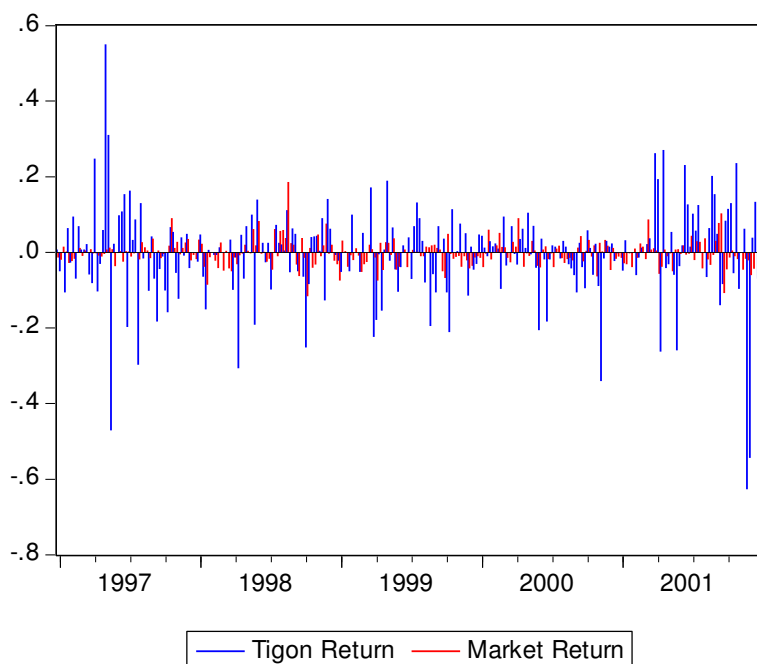
been the subject of a protracted legal battle between the parties. Tigon Ltd. claimed cancellation of its purchase of the EuroPoint businesses, following the discovery that EuroPoint's earnings had been overstated.

The findings from the event study of Tigon Ltd. did not correlate with any of the indicators as established in Chapter Five.

- *Regression and structural break analysis*

As can be observed from the graph in Figure 7.9, the share returns of Tigon Ltd. were overall more volatile than that of the market. There was some more volatility at the start and the end of the observed period.

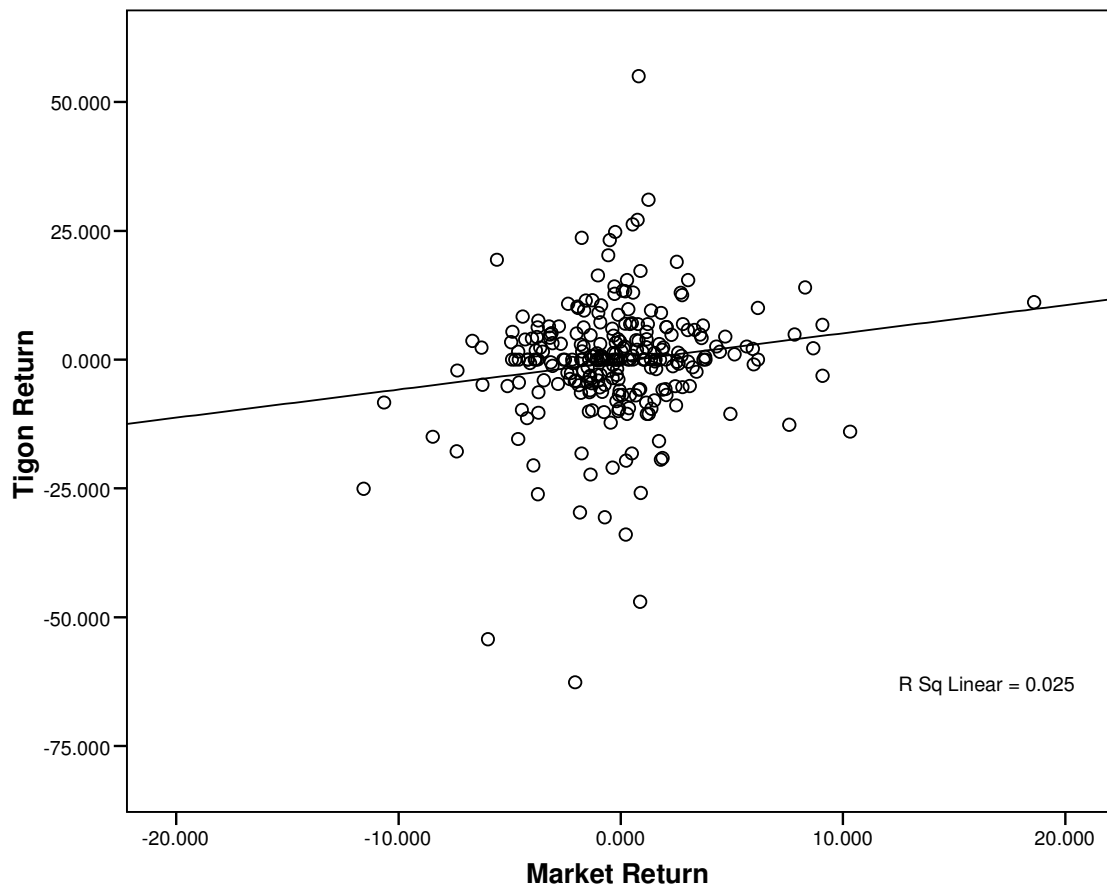
Figure 7.9: Graph illustrating the return from Tigon Ltd. and the market over the period of the alleged accounting irregularities



Source: E-Views[®] output

There was no suspension of trading or other events that were required to be taken out of the analysis of Tigon Ltd.'s share returns compared to the market.

Figure 7.10: Scatter plot of Tigon Ltd. return against the market return over the same period



Source: E-Views[®] output

In the scatter plot and corresponding regression data for the return of Tigon Ltd. against the market return, it appears that there is a weak positive linear trend between the two variables. This linear relationship explains 2.5% of the variation in the data (measured by the R^2 that is 0.025). Possible outliers that can be observed from the scatter plot are as follows:

- (0.811; 55.005) on 9 May 1997 – No information;

- (0.874; -47.00) on 23 May 1997 – Occurred on a date that was flagged as “TRUE,” but without any relating news;
- (-2.052; -62.646) on 23 November 2001 – Occurred on a date that was flagged as “TRUE,” but without any relating news; and
- (-5.977; -54.273) on 30 November 2001 - Occurred on a date that was flagged as “TRUE,” with a news announcement regarding accounting irregularities.

From the outliers that can be observed, it is clear that there has been misconduct against and by Tigon Ltd. The dates with no news events also hold true with the proposed theory that inappropriate action may result in changes in share returns without reasonable explanation.

The regression model (or straight line) fitted to the data can be represented by the equation: $\text{Tigon Return} = [-0.359 + (0.546)(\text{Market Return})]$. The equation implies that if the market's return increases with one percentage point, the return of Tigon Ltd. can be expected to increase by 0.546 percentage points.

The F-statistic (model of fit) of the analysis is statistically insignificant at the 1% level (0.011 being slightly higher than the required 0.01), indicating that the model does not fit the data better than when just using simple averages.

The results from the structural break analysis of Tigon Ltd. are presented in Table 7.5 with the discussion below.

Table 7.5: Quandt-Andrews unknown breakpoint test results for Tigon Ltd.

Quandt-Andrews unknown breakpoint test Null Hypothesis: No breakpoints within trimmed data Varying regressors: All equation variables Equation Sample: 12/30/1996 12/24/2001 Test Sample: 4/07/1997 9/17/2001 Number of breaks compared: 233		
Statistic	Value	Prob.
Maximum LR F-statistic (5/19/1997)	3.122709	0.9679
Maximum Wald F-statistic (5/19/1997)	3.122709	0.9679
Note: probabilities calculated using Hansen's (1997) method		

Source: E-Views[®] output

According to the Quandt-Andrews unknown breakpoint test, the most likely date for a break in the share price return of Tigon Ltd. occurred on 19 May 1997. This date correlates closely with the point in time when irregularities were first identified in the financial statements of Tigon Ltd., but does not appear as significant in the event study.

7.2.5.4 Summary

The section below summarises the characteristics displayed by Tigon Ltd., according to the characteristics identified in Chapter Five.

The type of accounting transactions the company engaged in is difficult to determine from the published financial statements. Due to its diversity of activities, transactions may however have been more complex than in other companies. As a result of the speculative nature of the observation, it cannot be used as a reliable indicator of accounting irregularity risk.

The same auditing company was used for the entire period under review. Audit fees increased, but represented an insignificant percentage of turnover. For these reasons, the company's relationship with its auditors did not indicate any increased risk for accounting irregularities.

The company's cash flow levels fluctuated, but showed mostly a declining trend in later years. The cash flow levels therefore did not give an indication of an increased risk for accounting irregularities.

The company listed in 1996, therefore the company may be considered relatively young when the accounting irregularities occurred. This may therefore have been a positive indicator of an increased risk for accounting irregularities.

The company's control systems and procedures were only briefly mentioned in the director's report and in its approval of the financial statements. It is difficult to determine whether proper systems were in place and whether procedures were followed. Control systems and procedures could therefore not give a reliable indication of an increased risk for accounting irregularities.

The impression is that the company culture was traditional, due to the large number of white Afrikaans and English-speaking males on the board of directors. The annual report gives the impression that the company was also highly competitive. Even though this observation is highly subjective in origin it may have been an indicator, albeit slightly unreliable, of an increased risk for accounting irregularities.

The company's debt levels increased over the period, but apart from 1998, debt levels remained relatively low and were also lower than that of the sector. Since the alleged accounting irregularities occurred over that period, the company's high 1998 debt level did give a positive indication of increased accounting irregularity risk.

The directors seemed to be very competitive, driving their workers hard. But, as was the case with the company's culture, this observation is highly subjective and cannot act as a reliable indicator of an increased risk for accounting irregularities.

Apart from 1998, the company did not experience problems with financial distress, while the sector did. Because the company experienced alleged accounting irregularities at

that stage, the high financial distress in 1998 did indicate a higher accounting irregularity risk.

The company operated mostly on home soil, but had some foreign activities and transactions with foreign companies. Remote geographic locations do give an indication of an increased risk for accounting irregularities.

Especially in later years, the competition levels became rather difficult in the particular sector. The 1998/1999 period was also a difficult year in the South African economy. Difficulties that are experienced in a sector may therefore give a positive indication of an increased risk for accounting irregularities.

Liquidity levels changed randomly for both the company and the sector. However, liquidity was significantly better in the company than in the sector. Liquidity therefore did not give an indication of increased accounting irregularity risk.

Management's behaviour and character is difficult to determine from the published annual report, but the impression is that the management of the company was highly competitive and demanding. However, such an observation is subjective in nature and can therefore not act as a reliable indicator of an increased risk for accounting irregularities.

The company's personnel behaviour and character cannot be evaluated accurately from the limited information in the annual report and can therefore not be used as an indicator of increased accounting irregularity risk.

The company's inventory decreased over the period, but not in any significant way. Receivables increased, and there was a significant increase in receivables in the alleged period of accounting irregularities. In the sector, inventory increased while receivables fluctuated. The increase in receivables may have been a positive indicator of increased accounting irregularity risk.

No specific disclosure on remuneration policies was presented. Director's emoluments increased, but represented a decreasing percentage of turnover. There was also insufficient information about the shareholding structure in the annual report. The largest portion of equity capital was held by corporate investors. Therefore remuneration policies and shareholding structure could not be used as positive indicators of increased accounting irregularity risk.

No exact details of organisational structure were provided in the annual report, making it impossible to evaluate the organisational structure for increased accounting irregularity risk.

In terms of the financial statements of Tigon Ltd. and the sector, both displayed the same trends. Where ratios are concerned, some differences can be observed. There were fluctuations in some of the ratios of Tigon Ltd., while the sector displayed consistent upward or downward trends.

7.3 SUMMARY

This section contains a summary of the empirical findings from the various case studies. It sets out the extent to which the case study companies displayed the characteristics previously identified in Chapter Five as characteristics that are generally displayed by companies that engage in accounting irregularities. This is followed by some additional observations of characteristics that were identified from the analyses of the case studies, but that were not identified in Chapter Five.

A company does not need to display all the characteristics in order to be identified as being at an increased risk of accounting irregularities. The aim is to include as useful only those characteristics that proved to be positive indicators of accounting irregularity risk. All the characteristics that are identified as useful were not observed in all the companies, but did tend to be present in most cases.

It is found that a number of characteristics are of limited use because information about the characteristic is not readily obtainable by parties outside an organisation. Therefore, even if a characteristic can positively identify accounting irregularity risk but information about the characteristic is unobtainable, it has to be disregarded and not deemed as a useful characteristic.

In Chapter Eight the results of a questionnaire survey distributed to compilers and users of financial statements are discussed.