Integrity issues of information created by book entries

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Abstract

Book entries are vehicles used in accounting to accommodate non-cash transactions, timing differences and provisions. The use of book entries is a normal activity in accounting and may have their origin in accrual accounting. The management of a company may apply creative accounting techniques in the form of earnings management, in particular, adopting the practices of income smoothing and taking the so-called 'big bath'. These practices may result in the financial manager or accountant misusing book entries. This could then lead to information of a different integrity to that which would have resulted had these creative accounting practices not been performed in the company.

The question addressed in this dissertation and for which an answer is sought, is whether there is any notable difference in the integrity issues of information supplied through the accounting process and created by real transactions (real events) as opposed to information created by book entries (artificial events). The hypothesis underlying this dissertation is:

The integrity of information created by book entries is based on subjective opinions because it is based on future events therefore it is not the same as integrity of information created by real transactions that is based on historical events.

The new science is concerned with new guidelines, amongst other things, regarding reality, observation, objectivity, predictions and relationships among events. These new guidelines could be seen as explaining certain aspects which is relevant to the field of accounting. The attributes of a book entry are not based on reality, but are based on subjective predictions of future transactions etc. Another similarity is that a book entry is often not objective but is based on subjective observation.

Notable differences were observed in the integrity of the information emerging from a real, historical event and a future event. These differences were established through the

application of two research methods, namely, the use of a questionnaire and the analysis of the financial statements of 30 companies listed on The JSE Securities Exchange South Africa (JSE). The influence of book entries on certain ratios was considered, and the ratios influenced by two major book entries, namely, depreciation provision and deferred taxation, differ substantially in interpretation when the two book entries are reclassified. The results of the questionnaire also indicate that a large proportion of the financial managers in practice believe that book entries substantially influence the integrity of information.

Keywords Book entry
Earnings management
Events
Integrity of information
Occurrences
Transactions

Opsomming

'n Boekinskrywing is 'n meganisme wat in rekeningkunde gebruik word om nie-kontanttransaksies, tydsverskille en voorsienings te akkommodeer. Die gebruik van boekinskrywings is 'n normale aktiwiteit in rekeningkunde en mag selfs hul oorsprong hê in toevallingsrekeningkunde. Die bestuur van 'n maatskappy mag kreatiewe rekeningkundige tegnieke toepas in die vorm van verdienstebestuur, deur spesifiek gebruik te maak van inkomste-effening en die neem van 'n "*big bath".* Hierdie gebruike kan daartoe lei dat boekinskrywings misbruik word deur die finansiële bestuurder of die rekenmeester. Dit mag lei tot inligting wat verskil in integriteit van dié inligting waar geen kreatiewe rekeningkundige beginsels toegepas was nie.

Die vraag wat in hierdie verhandeling aangespreek word, en waarvoor 'n antwoord gesoek word, is om vas te stel of daar enige merkbare verskil is tussen die integriteitskwessies van wat deur die rekeningkundige proses voorsien word, en deur middel van egte transaksies (egte gebeurtenisse) geskep is, teenoor inligting deur boekinskrywings (kunsmatige gebeurtenisse) geskep. Dit lei tot die volgende hipotese:

Die integriteit van inligting wat deur boekinskrywings geskep word is gebaseer op subjektiewe menings omdat dit op toekomstige gebeurtenisse gebaseer word, daarom is daar 'n verskil met die integriteit van inligting wat deur egte transaksies geskep word wat op historiese gebeurtenisse gebaseer is.

Die nuwe wetenskap is gemoeid (onder andere) met nuwe riglyne ten opsigte van realiteit, waarneming, objektiwiteit, voorspellings en verhoudings tussen gebeurtenisse. Hierdie nuwe riglyne kan sommige aspekte wat relevant is vir die veld van rekeningkunde, verduidelik. Die eienskappe van 'n boekinskrywing is nie op realiteit gebaseer nie, maar gebaseer op subjektiewe voorspellings van toekomstige transaksies. 'n Verdere ooreenkoms is dat boekinskrywings meestal nie objektief is nie weens die feit dat dit gebaseer is op 'n subjektiewe waarneming.

Merkbare verskille in die integriteit van inligting is verkry deur die waarneming van egte, historiese gebeurtenisse en toekomstige gebeurtenisse. Die verskille is basies vasgestel deur die toepassing van twee navorsingsmetodes naamlik, die gebruik van 'n vraelys en die ontleding van die finansiële state van 30 maatskappye wat op die JSE Sekuriteite Beurs Suid-Afrika genoteer is. Die invloed van boekinskrywings op sekere verhoudings word in oënskou geneem en die verhoudings wat beïnvloed word deur die twee wesenlike boekinskrywings, naamlik, die waardeverminderingsvoorsiening en uitgestelde belasting, se interpretering verskil wesenlik in gevalle waar die twee boekinskrywings herklassifiseer word. Die resultate verkry uit die vraelys dui aan dat 'n groot aantal finansiële bestuurders glo dat boekinskrywings die integriteit van inligting wesenlik beïnvloed.

Sleutelwoorde Boekinskrywings
Gebeurtenisse
Inkomste-bestuur
Integriteit van inligting
Transaksies
Voorkomste

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1 Background and the research problem

1.1 Introduction

This dissertation is about the integrity issues surrounding certain accounting information which is created by book entries. A book entry is the main mechanism whereby a *future event* is created. In particular, differences between the integrity of information created by *real* (*historic*) *events* and the integrity of information created by *artificial* (*future*) *events*, are considered.

Financial reports prepared by an accountant in the information business should provide adequate information that is useful in making economic decisions. It is essential that all the relevant users of financial statements are able to rely on the information supplied in financial statements. Accountants have to provide the users of financial statements with *reliable* and useful information that is *relevant* to the decision that has to be made. *Reliability* and *relevance* are two qualitative characteristics of financial statements found in the accounting framework AC000 (Hemus, Wingard and Becker 2000). This framework introduces four qualitative characteristics, namely, understandability, relevance, reliability and comparability, all of which make accounting information useful to the users. All these characteristics enhance the integrity of information.

The source of information may be divided into two categories, namely, *events* and *future 'events'*. This source is regulated by some assumptions, namely, *matching, accruals, prudence* and *going concern*. Assumptions are good guesses, something "taken for granted" and "supposed but not proved" according to Hornby (1981:47). With accruals information is created irrespectively of time or cash, while with prudence, certainty or the best estimate is used to create information. When information is based on an estimate rather than reality, there may be a difference in the integrity of the information.

Events concern what has happened and may therefore be considered reality. Since a transaction involving cash is certainly considered to be 'reality' (hence the phrase "hard cash"), a cash transaction is seen as the 'purest event': "While it is relatively easy for companies to adjust profits to suit their own purposes by enhancing profits at the expense of the balance sheet, creating cash is virtually impossible" (Ellis and Williams 1993:168). The accountant observes changes in occurrences and events which are eventually recorded and converted into financial statements. A future event has not taken place yet and because of the uncertainty about what is going to happen, in contrast to an event that is based on history and reality, the integrity of information may differ. The tool created to handle these uncertainties is the so-called 'book entry'. Future 'events' may be seen as artificial because they are made up, based on assumptions and personal judgements.

In the accounting world there are primarily two types of transactions: objective transactions, based on real events, and subjective transactions, based on future happenings and expectations. According to Goldberg (2001), information available about any given set of circumstances is always about the past, something that has happened, whether it was recently or long ago. Prediction of future happenings and expectations is based either on speculation or, possibly, on deduction from logically recognised assumptions, but none the less speculation about what might happen in the future. The information is limited because of the absence of omniscience, not only about the existing state of affairs in total or in general, but also about the composition of the relationships between the numerous elements which make it recognisable. If a provision is seen as speculation about what might happen, it is clear that the integrity of information created by book entries might not be the same as the integrity of information created by transactions that are based on facts.

Companies use book entries as mechanisms to smooth their income or to be part of

creative accounting (Mulford and Comiskey 2002). Income smoothing is described by Wild, Bernstein and Subramanyam (2001) as a common form of earnings management, that is, managers may decrease or increase reported earnings to reduce volatility. The method used to smooth income involves not reporting part of earnings in profitable years through “creative reserves” or “earnings banks”, whereafter these earnings are reported in less profitable years. Smoothing of income occurred as early as 1944 (Hepworth 1953). Creative accounting has a somewhat similar description: “Every company in the country is fiddling its profits. Every set of accounts is based on books which have been gently cooked or completely roasted” (Griffiths 1995:vii). When income smoothing or creative accounting is put into practise by a company, it follows that the integrity of the information may differ from the integrity of the information created by real transactions.

The opposite of income smoothing is taking a ‘big bath’. This practise is described by Fridson and Alvarez (2002) and may be summarised as follows: If a company suspects that it is going to suffer a decrease in its quarterly profit too large to erase through discretionary items, the company may opt to “take a big bath” by maximising the reported loss. According to market sentiment investors will not be much more disturbed by a 30% drop in earnings than by a 20% drop. The method used, is usually to accelerate certain future expenses into the current quarter, resulting in more positive earnings in the following quarter. Applying a big bath may also affect the integrity of the resultant information.

Creative accounting practices may be used by the management of a company to change impressions about the company’s performance (Mulford and Comiskey 2002). Assessments of corporate earning power may be rendered inaccurate, leading to inappropriate prices for debt and equity securities. When the markets realise that misstatements were given, they may be unforgiving and a decline in debt and equity

prices may follow. If the company uses book entries to show a different picture of their company to stakeholders, the integrity of the information created in this way may not be the same as the integrity of information resulting from real transactions.

According to Mulford and Comiskey (2002) creative accounting practices are classified into five categories:

(1) Recognising premature or fictitious revenue
(2) Aggressive capitalisation and extended amortisation policies
(3) Misreported assets and liabilities
(4) Getting creative with the Income Statement
(5) Problems with Cash-Flow reporting

The above five categories are all brought about by book entries. When premature or fictitious revenue is recognised, a book entry is used because no real transaction exists. Aggressive capitalisation and extended amortisation policies as well as the revaluation (misreported assets and liabilities) of assets and liabilities, are brought about by book entries. When items in the income statement as well as the cash flow statement are reclassified (category 4 and 5), book entries are also used.

When smoothing of income takes place, the message in the financial statements conveyed to the owner over time is correct, but such financial statements signal the wrong message to the decision maker. The greatest motivating factor behind income smoothing and creative accounting is the fact that the statements are generated for reporting (stewardship) and not for decision-making. Stakeholders have to be reassured that the company's earnings are stable. Hepworth (1953:53) shares this point of view:

> A less tangible, but perhaps more fundamentally important type of advantage of a relatively stable level of periodic income lies in the area of management relations with

> investors and workers. Certainly the owners and creditors of an enterprise will feel more confident toward a corporate management which is able to report stable earnings than if considerable fluctuation of reported earnings exists.

It may seem to outside stakeholders and even to some of the inside stakeholders of a company that stable earnings represented in the financial statements is an indication of good stewardship, but the integrity of the information may be influenced and may compromise decision-making.

The following are accounting techniques, often used to smooth periodic income through the use of book entries (Hepworth 1953):

Manipulation:

(1) Gross revenue manipulation: A rather direct approach to the objective of income smoothing may be made through the process of inter-period shifting of gross revenue.

Classification:

(2) Deferred charge and intangible asset accounting: The accounting for so-called deferred charges and intangible assets represent an area in which 'generally accepted accounting principles' seem to provide substantial latitude in the matter of original recognition of such items as assets (as opposed to liabilities) as well as subsequent amortisation thereof.

(3) Original acquisition of plant assets: The absence of a specific and consistently applied distinction between asset and expense charges may provide substantial opportunities for income smoothing.

(4) Alternative methods of calculating periodic depreciation: Undoubtedly the most extreme situation in this classification exists in connection with proposals to calculate depreciation as a function of gross revenue or of income, instead of considering depreciation as a cost.

(5) Treatment of non-recurring charges or credits: The possibility of alternative treatment of unusual or non-recurring charges or credits as between inclusion in the computation of net income or direct addition to or deduction from retained earnings, may well present an opportunity for the smoothing of periodic income.

Revaluation:

(6) Inventory accounting: Alternative techniques of inventory valuation may provide a very significant method of income smoothing.

(7) Reserve accounting: Historically, there have been extreme examples of the use of reserves as profit equalisation devices, involving additions to or deductions from such reserves, offset by income statement accounts having the professed intention of income smoothing.

Change in accounting policy:

(8) Property accounting: The existence of long-lived depreciable or depletable assets presents one of the most potent (and in many cases most essential) opportunities for income smoothing.

(9) Determination of the base to which depreciation rates are applied: Substantial alteration in the depreciation base may produce significant changes in net income during periods of rapid change in business activity or price level.

Manipulation, classification, revaluation and changes in accounting policy are all brought about by the use of book entries. Book entries may be used in different circumstances to change the integrity of information in the financial statements.

1.2 Problem statement

The problem for which an answer will be sought is whether there are any notable differences between the integrity of information created by real transactions (real events) and information created by book entries (artificial events). Integrity of the information is determined by the accounting process.

The above problem may be approached from the angle of contrasting real (historical) events with artificial (future) events – an area in which the new science (Wheatley 1999) has made much progress over the last couple of decades. Research studies in the new science indicate that there are new realities to consider in cases where things are observed. “The science encouraged me to believe that there are new ways of comprehending the issues that trouble organizations most: chaos, control, freedom, communication, participation, planning, and prediction” (Wheatley 1999:xiii). An accountant is an observer of transactions. The word transaction means “piece of business” (Hornby 1981:918) and therefore an accountant is an observer of a piece of business. Accountants may only reflect observations and as such cannot create information.

The manner in which information is described by this new science is crucial and the accountant, being in the information business, must take note of the new realities concerning information. “We worry more about the accuracy of the small bits of information we have and how best to analyze them than about the huge amounts of information we lose” (Wheatley 1999:66). Therefore, when a company decides to use book entries to reach certain strategic goals, some of the integrity of the information

may be lost.

A statement made from the arena of quantum physics that also touches on forces interacting with each other in the accounting world is: “We live in a universe where relationships are primary. Nothing happens in the quantum world without something encountering something else” (Wheatley 1999:69). In essence, every business transaction is a reflection of a relationship and is the result of cause and effect.

It seems that book entries are being used to achieve a company’s goals. Ellis and Williams, (1993:169) state that “profits are not necessarily a reliable measure of a company’s performance [as] companies can adjust profits to suit their own purposes by using provisions”. A book entry (provision) may therefore result in information that is not reliable since the book entry (provision) was created to ‘smooth’ income as well as for other purposes. According to Wheatley (1999) people simply make information up when information is not available. Information is described by the new science as something that cannot be controlled. The accountant being in the information business must therefore take note of the new realities which affect information. A book entry is neither a transaction nor a reality and may represent intentional smoothing, aimed at presenting the business as stable as possible for reporting purposes. However, being stable in the new science is not considered a virtue.

1.2.1 Book entries are necessary for accrual accounting

Accrual accounting is described as an accounting process of recognising non-cash events and circumstances as they occur (Most 1982). Accrual accounting is concerned mainly with future cash receipts and payments, instead of prepayments and deferrals, which are concerned with past cash receipts and payments. Book entries are seen as non-cash events and are concerned with future happenings. To defer is in essence a process of postponing an expense or income item to a later stage. When a cash inflow

item is deferred, it becomes a liability and when a cash outflow item is deferred, it becomes an asset. Non-cash events are based on the future whereas cash events are based on the past and present. Since the future holds uncertainty, accountants may create information with a different integrity than the information based on past reality.

Hicks defines a man's income as the “maximum value which he can consume during a week and still *expect to be* as well off at the end of the week as he was at the beginning. (Part omitted). However, Hicks did not believe that income (or depreciation, or investment) were suitable tools for analysis because ‘there is too much equivocation in their meaning, equivocation which cannot be removed by the most painstaking effort’” (Most 1982:213). If income, depreciation and investment are seen as full of ambiguity, misrepresentation and untruthfulness, it is certainly not a measure to use for decision-making, either by inside or outside stakeholders. This means that book entries may seriously affect the integrity of information contained in financial statements.

There are two schools of thought concerning accrual accounting. Advocates of accrual accounting strongly support the idea because they believe it to be superior to cash accounting on the grounds of measuring performance and financial condition. Critics of this idea claim that the main reason for the existence of financial analysis is to unveil accrual accounting and to find the real cash flows. In this regard Wild *et al*. (2001:101) argue that “They are troubled by the intricacy of accruals and their susceptibility to manipulation by managers”. Book entries are used in accrual accounting and may pave the way for income smoothing or manipulation of earnings. Critics also view accrual accounting as a combination of “complex and imperfect rules that obscure the purpose of financial statements – that of providing information about cash flows and cash generating capacity” (Wild *et al*. 2001:101). The rules of accrual accounting are very flexible and complex and may therefore provide the analyst and other users of financial statements with information, for decision-making purposes, of a lesser integrity than

cash accounting.

1.3 Motivation

1.3.1 Importance of the study

Following on the problem statement in section 1.2, this research aims to:

(1) differentiate between artificial and real information by showing the effect of creative accounting on a company's figures and thereby minimise the effect of creative accounting and income smoothing;
(2) make information useful to all stakeholders;
(3) show which ratios are more user-friendly;
(4) make financial statements more user-friendly in compliance with corporate governance;
(5) show companies what book entries, internal funds and/or provisions are all about, and
(6) illustrate to companies that they often do not adhere to certain disclosure principles.

Because the use of book entries is so controversial, and yet appears to be so under-researched, researchers from the discipline of economics are entering the field of accounting as is clear from a Spanish article by Martinez Bobillo, De Andres Alonso and Gaite (2002). Martínez Bobillo *et al.* (2002) used fixed assets to demonstrate the company's ability to generate internal funds. The aim of their paper was to find a balanced interpretation of the possible relationships between investment decisions, the financing policy and the company's system of governance, all tied to its ownership structure.

1.3.2 Beneficiaries of the study

The following stakeholders are expected to benefit from this research:

(1) The accounting profession as a whole – all parties of the accounting profession are made aware of the impact of book entries on the integrity of information.
(2) Managers of all companies – make managers aware of the benefits of internal funding vs. external funding.
(3) All decision makers – if they are aware of the impact of book entries on the financial statements, decision makers may be able to make use of more reliable and transparent information with a higher integrity level.

1.4 Hypothesis

The hypothesis to be tested, given the problem statement in section 1.2, is:

The integrity of information created by book entries is based on subjective opinions because it is based on future events therefore it is not the same as integrity of information created by real transactions that is based on historical events.

1.5 Research objectives

The research objectives of this study are to:

(1) investigate integrity issues of information created by book entries;
(2) make internal funding visible and practical;
(3) enhance the quality of financial information; and
(4) show how, by means of 'creative accounting', artificial information can manipulate figures. (When companies revalue their assets, there is an opportunity for creative accounting (Griffiths 1995). Revaluation affects the depreciation charge to the income statement, which in turn affects the profit/loss, which then affects the

earnings per share as well as the accumulated profit/loss in the balance sheet).

1.6 The research methodology

The research conducted in this dissertation was three-tiered (Refer to Chapter 6 for a more comprehensive discussion):

(1) Literature survey

(a) A comprehensive literature survey was conducted using books on the subject, articles in journals and the Internet.
(b) Part of the literature survey was interdisciplinary. The field of the new science was referred to in order to reveal new guidelines explaining certain aspects that are relevant to the field of accounting.

(2) Analytical

An analysis of 30 companies from the sectors listed on the JSE was performed. The analysis covered a five-year period and was based on the McGregor BFA database (http://library.mcgbfa.com) which stores all the financial statements of all the listed companies.

(3) Questionnaire

A questionnaire was sent to all the financial managers of the companies listed on the JSE as well as financial analysts to determine the importance of, and their own attitudes towards book entries.

1.7 Layout of the dissertation

In Chapter 2, the history of book entries as well as an account of the early treatment of depreciation are presented, followed by the history of the cash flow statement. A number of definitions related to this research, together with an analysis of these definitions, are presented.

In Chapter 3 book entries and a new information perspective, from the new science are discussed. This relationship and the new perspective on information and accounting are explained. The influence of the phenomena of time on accounting is discussed. The new science reveals a new way of thinking about observation, reality, objectivity, prediction and relationships.

Chapter 4 introduces the role of transactions and book entries in accrual accounting, followed by definitions and discussions of the accounting assumption matching, contingencies, classification, provisions and conservatism, and their relationship to book entries. The use of ratios is discussed, and two specific book entries, namely, depreciation provision and deferred taxation are presented.

The role of book entries in income smoothing and big baths is the topic of Chapter 5. This chapter addresses issues such as why companies make use of income smoothing and big baths, how these companies make use of income smoothing, as well as examining the distinction between income smoothing and big baths.

In Chapter 6 a discussion is presented on the research methodology listed in section 1.6.

Chapter 7 presents the results of the literature survey, analytical research as well as a discussion of the questionnaire.

Chapter 8 concludes this dissertation and presents some pointers for future work that could be undertaken.

2 Perspectives surrounding book entries

2.1 Introduction

The integrity of information presented in the financial statements has to be of a high level and it is the purpose of this research to show that this goal is often compromised by the application of certain accounting practices (e.g. creative accounting). One way in which these practices precipitate in financial statements is through the use of the so-called book entry, to be defined in section 2.3.3 below. However, such practices are not recent developments, but have a legacy in the history of accounting. Furthermore, in order to discuss these historical milestones, some definitions are needed. Hence this chapter has a twofold purpose, namely, to present a historical account of the use of book entries to alter the information portrayed in the financial statements and to introduce a number of critical definitions. In particular, the history of the book entry, as well as an account of the early treatment of depreciation are presented. This is followed by the history of the cash flow statement and some definitions of concepts related to this research, together with an analysis of these definitions. A summary concludes the chapter.

2.2 The history of book entries

A book entry may be looked upon as a tool used by an accountant or financial manager to induce non-events (non-cash transactions) into financial statements. General accounting roots may be traced back as far as 4500 BC in Mesopotamia, what is today Iraq, with small parts in Iran and Syria (Keister 1978). The double book entry is the main theme addressed in the majority of material concerned with the history of accounting (Yamey 1978; Murray 1978). Unfortunately, references to the history of book entries are rather limited. A particular book entry that comes under the spotlight is depreciation, addressed in the article entitled “Illustrations of the early treatment of depreciation” by Mason (1978). As far as the author is aware, this is the only book entry that is treated

so comprehensively in the literature and to which a whole article is dedicated.

Although the book entry is a very important tool in the accountant's toolbox, the author could not find any *formal definition* of a 'book entry' in the literature. Examples of book entries are, however, abundant in the literature (Cushing 1989). Deferred taxation, depreciation as well as research and development costs, are all examples of book entries to name a few. These concepts are all based on timing differences. In addition, book entries are often not based on transactions and events, but are instead seen as based on proposed happenings (Goldberg 2001). Hence, other than events and transactions that are based on the past and the present, book entries are based on certain proposed future happenings. Researching the history of book entries is a rather challenging task, because of the lack of a proper definition.

2.2.1 Early treatment of depreciation

Depreciation is one of the book entries on which the analytical part of this research is based, hence a historical account of depreciation is in order. A chronological discussion of the history of depreciation, distilled from a historical presentation given by Mason (1978), appears below. In each case the year is followed by a description of the event:

(1) 1744. An entry to write down the value of household furniture, was formulated.

(2) 1757. A book called '*Book-keeping Methodiz'd*' (5th edition) was published by John Mair. There was no illustration of depreciation in Mair's book, but the method described for handling fixed asset accounts appeared in most of published texts at that time and for more than 100 years thereafter. This lent itself to the recording of depreciation by what might be called the inventory or revaluation method.

(3) 1801. A book called '*Book-keeping in the true Italian form*', by Wm. Jackson was published. In this book a credit is shown in a "ship" account "By Profit and Loss, for

Wearing, Age, etc.". and the balance forward was called a "present value".

(4) 1838. In August 1835, a ship called the "Lord William Bentinck", despite it having been in the water for sixteen months, was hauled up into a dry dock and no signs of corrosion were visible. Following this discovery, 20 years were confidently assumed for the duration of an iron vessel. The annual depreciation, on both a vessel and the engine was therefore fixed at 5 percent (using what is nowadays called the straight-line method), with 20 percent on the boilers.

(5) 1839. In some analysis of costs in the *American Railroad Journal*, the computation of depreciation as a percentage of the cost was indicated.

(6) 1841. One of the earliest hints at the creation of a fund somewhat related to the idea of an internal fund to replace fixed assets was made in the 10th annual report of a company called "The Boston & Worcester Railroad". In this report a "reserved fund for decay and wear beyond repairs" was not deducted from the total construction cost as had been the practice, but was simply shown as a special item in the report. For example, in a group of "expenditures (text omitted) exclusive of the amount charged to construction", the following item appeared:

For repairs of engines and cars, of which, taken from reserved fund for new cars, $9,900, ...$25,286.46

(7) 1843. A plea for the creation of an internal fund to replace fixed assets was also made at this time by Charles Ellet Jr. in the *American Railroad Journal*. He wrote the following:

To those companies whose works are now new, and who seem to be making money, I would suggest the timely formation of a contingent fund, to prepare them for a

> contingency which will as surely reach them as the next new year. It is bad policy to divide the annual expenses as if they were real profits; the money that is earned at the expense of the rails, cars and machinery, should be hoarded to replace those things, and not distributed, as if they were to last for ever. It can be shown that every company should annually store away, in times of prosperity, while their work is new, at least 6 cents for every mile travelled by their engines, 1 cent for every ton conveyed one mile, and 200 dollars for every mile of road, to replace decayed materials, and injured iron and machinery. (Mason 1978)

The case presented above was a further call for putting in place a mechanism for the painless replacement of fixed assets.

(8) 1844 – 1846. By this time a definite policy seems to have been worked out for handling depreciation. It was the early practice of directors to make an annual allowance for the deterioration of a fixed asset when the expenditures for repairs were not deemed the same as the waste incurred by normal wear and tear of such assets. A fund was created to meet expenditures of succeeding years whenever these expenses should exceed the average cost of the necessary repairs in a given year.

(9) 1848. A further account of a call to create an internal fund is reported on in the *American Railroad Journal*. A speech was made by a certain Mr. Glyn at a general meeting of the London & North Western shareholders. In this speech Glyn stated that replacements had been charged against revenue. He proposed that new capital was required because of the capitalisation of the cost of the increased weight of rails, and made a request for the creation of a replacement fund viz.: "... your directors have thought fit, not only to take the usual course in regard to the relaying of the rails (part omitted) but conceiving that, in the course of some fifteen or twenty years, the existing rails will, from the working upon them, require necessarily, to be replaced by others, [and] they have thought it their duty to call

upon you to sanction the annual appropriation of £15,000 for the purpose of forming a fund to meet that contingency from time to time".

(10) 1849 – 1867. During this period companies experimented extensively with ways in which to present depreciation data. For example, although there was no evidence of a change in depreciation policy, figures were seldom presented in exactly the same way for more than two or three years in succession.

Currently, it is the practice when compiling a balance sheet, to deduct accumulated depreciation from the cost of a fixed asset. The net or book value is then shown as a combined figure in the balance sheet. Sprague (1920:51) regards depreciation not as a liability, but rather as an offset to an asset: "It is sometimes desirable for some special reason to separate the account of an asset, of a liability or of a proprietor into two accounts, usually in order to present two different valuations". For example, machinery was bought a year ago for R100 000 and it is estimated that this machinery will be worthless in five years' time. The depreciation rate is estimated at 20 percent per year or R20 000. If, for some reason, it is necessary to keep a record of the original cost, R100 000, and at the same time of the book value, R80 000, this may be done by using two accounts on opposite sides of the ledger:

Machinery at cost	R100 000	Depreciation	R20 000

It is argued that it is often less expensive to replace a fixed asset from an internal fund rather than an external fund, hence depreciation is also investigated from a viewpoint of being a source of internal funds for the replacement of assets in the future, rather than a liability or an offset to an asset. Maintaining an internal fund for the replacement of fixed assets forces an accountant to keep track of such replacement costs from year to year, other than the alternative of losing track of such replacement costs over the years, only to be surprised by unbudgeted, escalating costs when the asset has to be

replaced eventually.

In the accounting literature of 1976, an internal fund created from the depreciation provision, was described as a “Depreciation fund investments at cost” and “Leasehold depreciation fund” (Wimble and Cairns 1976). The reason that this practice was stopped is not entirely clear. One could speculate that making use of a company’s own internal funds suggested that they did not have confidence in the management of their own liquidity because their internal rate of return was lower than the outside market. The use of a provision for internal funds had certain benefits since lost by modern accounting practices, for example, as suggested above, the replacement of a fixed asset might be funded more economically from an internal fund than an external fund.

Historical evidence suggests that the provision for depreciation was not accepted without problems. According to Most (1982) the American railroads opposed this depreciation and delayed the imposition of mandatory depreciation from 1923 to 1932. They called the provision for depreciation “unnecessary”, “deceptive” and “impossible” to calculate accurately. When the depression started, the mandatory provision for depreciation was suspended immediately. Hence, depreciation has been an item of great controversy through the years and only came into force in 1943. A book entry that was so heavily criticised may indicate that the integrity of the information created by this book entry is not the same as the integrity of information created by real transactions. In Chapter 7 of this dissertation it is shown that depreciation affects the integrity of information.

2.2.2 History of other book entries

As stated earlier, although many examples of book entries are discussed in the literature no formal definition could be found. A book entry is the vehicle used to allocate costs and revenue, to classify accounts, to valuate intangible assets, to provide for depreciation, depletion, amortisation and bad debts. Yamey (1982:133) gives an

example from the 1920's of the allocation of fixed costs that nearly cost someone by the name of Thomas J. Kreps his job: Too many costs over which Kreps had no control were allocated to his division. As a result his division was no longer cost effective and he was in real danger of being retrenched. Fortunately, a superior who spotted Kreps' talents, changed the basis of this cost allocation where after his division became economically more viable, not through a change in operational efficiency, but simply by representing the information about his division differently. Subsequently Kreps' job was thereby secured. As Yamey (1982:133) argues that:

> We need to know how common or uncommon such or similar cases of unintentional misinformation have been before we can answer important questions, and assess, for example, the significance, since the rise of large scale enterprise, of financial accounting and cost accounting in matters such as the quality of entrepreneurial decisions, the determination of the volume and allocation of investable funds, and the course of business cycles – to take three evidently important subjects of wide economic interest.

The allocation of common fixed costs mentioned above brought about through the use of book entries. Yamey called the allocation of fixed costs based on the wrong criteria, misinformation. When allocating fixed costs, an accountant needs to be very careful to use the correct allocation criteria. Using the wrong criteria may lead to information of a lesser integrity. An expense cannot be allocated to revenue that has little or no bearing on the expense when adhering to the matching principle. It is the experience of the author that in many companies expenses are allocated to various cost centres which did not benefit from the income which is matched with the expenses.

The provision for doubtful debtors is another book entry described in the history of accounting. A list of debtors' individual amounts appears at the end of the opening inventory in *Peele's Pathe waye*. There are no total and the amount of the list of debtors is not included in the calculation of the owner's capital (Yamey 1982). Therefore, if an

accountant is uncertain about whether a debt is going to realise or not, it might be a good idea to omit it from the calculation of the owners capital – rather understate the capital and include the debt later, only after certainty regarding the realisation of the debt has been achieved.

Intangible assets, for instance goodwill and patents, are items that are brought about by book entries. Capital may be impaired by the use of book entries and therefore influence the integrity of the information. Sprague (1920:53) has the following to say about impaired capital: “Almost universally the assets are hoisted to meet the exigency, or the deficiency is represented as an asset. This receives some euphemistic title such as Good Will, Franchises, Patents. This may not be with any fraudulent intent, but from a feeling that the latent personal assets, spoken of in Articles 84 and 101 as ‘non-ledger’ assets, make the concern worth at least par as a revenue producer. There is a natural reluctance to admit the fact of overcapitalization or ‘watering’”.

2.2.3 History of the cash flow statement

Depreciation, one of the book entries examined in this research, has no cash consequences. For this reason, as early as 1902, the US Steel company and their subsidiaries added back depreciation after beginning with the net profit in a funds statement (Donleavy 1994:61). Following this principle, it can be said that depreciation should not be seen as an item with cash consequences and should therefore be added back in the cash flow statement so as to show the real cash events or transactions. It becomes evident that in order to generate information based on real transactions, depreciation, a non-event is added back. The effect is to remove a non-event from the net profit, resulting in real transactions which may enhance the integrity of the information.

Donleavy (1994:62–63) reports that the funds statement was historically often viewed as an excellent vehicle to test a student’s knowledge on the accrual basis of accounting.

"Specifically, the working capital format was a better testing device than the 'changes in all balance sheet accounts' at this time, because the former eliminated the effects of many 'intra-entity' bookkeeping entries, and its definition of funds approximated accrual accounting concepts". These so-called 'intra-entity bookkeeping entries' are synonymous to *book entries*. Cash represents a real transaction and since a book entry does not represent cash, a book entry ought to be excluded from the funds statement, leading to the observation that information created by book entries may be of a different integrity than that of real transactions (e.g. cash).

The information from which a cashflow statement is drawn up, is based on different types of transactions. This was emphasised by Hooper and Page in 1979 when they proposed to adjust the cash flow at three levels (Donleavy 1974).

Table 2.1: A three-level cash flow adjustment

Level	Adjustment	Distinguished as
1	Receipts and payments on capital account, broadly the same as financing and investing activities	Real transaction's
2	Accruals and prepayments including sales not yet paid	Judgmental transactions
3	Includes depreciation, profit or loss on asset disposals, undistributed subsidiary earnings and deferred tax	Accounting allocations

(Donleavy - adapted)

The accounting allocations in Table 2.1 are book entries in today's terms, that is, accounting allocations (book entries at level 3) were regarded as artificial transactions in contrast to the real transactions at level one.

2.3 Critical analysis of definitions

Definitions are an essential part of any research and in this section definitions are presented for a number of concepts presented below. These concepts are all related to the area of this research in the sense that concepts (2) to (6) all fall under the umbrella of item (1), namely accounting, while items (2) and (3) may be used in an argument for introducing (4) in a company. Also, concepts (2) and (3) may affect the integrity (i.e. item (6)) of information which is item (5).

(1) Accounting
(2) transactions, events and occurrences
(3) book entries
(4) internal funds
(5) information
(6) integrity.

2.3.1 Accounting

Accounting may be defined as the art of "recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character, and interpreting the results thereof" (Kam 1990:33). Goldberg (2001) claims that the word accounting signifies a set of activities which are carried out by people. These activities reflect relationships between people and are presumed to be intended to be of benefit to stakeholders. The term accounting is a further conceptualisation of the word account, in the sense that it "stores information, which are human artifacts and not natural phenomena" (Goldberg 2001). The accountant may get some 'pictures' of what is happening in a social unit and then communicate these pictures to the relevant stakeholders, helping them to make decisions.

Another definition of accounting is also provided by Plank and Blensly (1989) in that

they define accounting as a service activity which function is to provide qualitative information that is largely of a financial nature and about economic entities, intended to facilitate the making of economic decisions. Such information furthermore allows a decision maker to make reasoned choices among alternatives.

2.3.2 Transactions, events and occurrences

The above definition of accounting makes use of two concepts, namely, *transactions* and *events*, hence definitions of these concepts are called for.

A *transaction* usually refers to an activity that arises between two interrelated parties. This activity is subsequently recorded in the financial statements (Goldberg 2001). A business transaction can be described as a "piece of business" (Hornby 1981:918). A transaction or event is based on economic circumstances and quite naturally, therefore, the accounting definition for a transaction is "an event of a financial nature that must be recorded in the organisations' *accounts*" (Thompson 2003). An event has to be of a financial nature to form part of accounting.

Another accounting definition of a transaction is "an identifiable operation carried out by or through an organization that transforms or converts an asset" (Accounting dictionary 2003). A book entry does not have the ability to transform an asset; such transformation is achieved only through a real transaction. "A transaction makes a stranger part of the value chain and as such a stakeholder. However, a book entry does not make a stranger part of the value chain and represents internal fund movements. A stakeholder can only be created by a transaction but not by a book entry" (Gouws 2003a). Therefore it may be difficult for an outside party to verify a book entry, thereby influencing the integrity of the information displayed in the financial statements.

Whenever a normal transaction takes place, an exchange of money, goods or services takes place. When a debtor pays a creditor, the transaction is complete. According to

Most (1982) for a transaction to occur, the earning process must be complete, and an exchange must take place. When a book entry takes place, there is no exchange.

Owing to the inherent ambiguity of natural languages (Meyer 1985) the word *event* can be interpreted in different ways and therefore some problems or questions may arise (Kam 1990). For example, when a contract is signed, does an event take place at signing or not? Both parties have rights to future performance, but these must meet the definition of an asset before the event is recorded. A business event may be seen as a happening and, in particular, an economic happening. A business event is any activity that can be controlled, planned or evaluated by management and provides value to an organisation (BYU Junior Core Faculty 2003). In this description of an event, a book entry rather than a transaction is portrayed. A book entry may also be controlled, planned and evaluated by management and therefore book entries may influence the integrity of information.

In order for an event to have an economic nature, a value must be allocated to the event. Sorter and Ijiri are two researchers who aimed to overcome a number of 'valuation problems' in conventional accounting which resulted in limited information for users. Cushing (1989) did similar research but restricted his attention to events having direct financial implications. He pointed out that there are certain non-events (non-financial in nature) included in corporate accounting that may be viewed as relevant (Goldberg 2001). Non-events are seen as book entries because they are based on future happenings and they do not have direct financial implications.

Occurrence is derived from the word 'occur', and if something occurs then it means it takes place or happens (Hornby 1981:579). An occurrence is further defined as a happening or an event, a fact or a process of occurring (Hornby 1981). Goldberg (2001) sees what accountants deal with as occurrences expressive of, or representing purposive activities. If an occurrence can be expressed in financial terms, the

occurrence can be used in financial statements, and if a suitable method of expression can be found, one can account for intention as well as for the actual activity of such occurrence. As soon as intentions are used, information becomes subjective and the integrity of information gets affected or even influenced. Some non-events may be seen as purposive occurrences that express or represent a change in circumstances. These non-events include depreciation, accruals and cost and revenue allocations (Goldberg 2001). If non-events are seen as purposive occurrences, and non-events are seen as book entries, it follows that the integrity of the information must be different to the integrity of the information generated by real transactions.

2.3.3 Book entries

Examples of book entries are described by Most (1982) as phenomena that do not represent real transactions because no exchange of goods or services has taken place. If a book entry does not represent a real transaction then a book entry may represent an artificial transaction. Book entries are based on quasi- or semi- information, meaning that such entries are based on “make believe” information. Quasi also means partly, almost, it appears to be something but it is not really so (Hornby 1998).

One of the research questions in the questionnaire requires a definition of a book entry and one of the respondents answered as follows: “An entry that does not have a real (eventual) cash effect on assets or liabilities of the entity and is subject to reversal in certain instances. Examples are provisions (depreciation, bad debts, future costs, warranty, and write-offs on inventories), revenue recognition, amortisation, etc.” – courtesy of Mr. E.E. Strauss from Grintek Telecom. This is a good attempt at a definition of a book entry since the most important characteristic of a book entry is that a book entry does not have cash consequences.

Until the Industrial Revolution, cash recording was used to portray a company’s net financial result. Accrual accounting was developed to solve inadequacies in cash

accounting and is responsible for the origin of some book entries, such as depreciation and amortisation (Goldberg 2001). These occurrences had financial implications but did not have cash flow consequences and so may be seen as subjective entries, which influence the integrity of information on which managers have to base their decisions. The book entries or occurrences are not based on real transactions (cash transactions) but rather on the perception of an observer of a proposed happening. The effect is that these book entries are often based on a subjective observation made by the observer, possibly leading to subjective information on which further subjective decisions may be made by stakeholders. A further discussion on observation (amongst other topics) is presented in Chapter 3.

2.3.3.1 Examples of book entries

Accounting is often divided into events and certain non-events. Book entries are based on non-events which include (Cushing 1989):

- accruals
- cost or revenue allocations
- depreciation, depletion and amortisation
- account classifications
- valuations of intangible assets
- financial statement consolidations
- judgements regarding future values of bad debts, natural resource reserves, liabilities under warranties and other contingencies
- changes in value, such as those associated with the lower-of-cost-or-market method.

It is the experience of the author that the majority of the above book entries are normally recorded at a financial year-end which is an artificial cut-off point in the life cycle of a company. A discussion of some of the above non-events follows below.

Intangible assets, as the word suggests, are assets that cannot be touched. These represent abstract nouns and cannot be measured, for instance, a good reputation (Hornby 1981). Plank and Blensly (1989:84) define intangible assets as "a group of long-term assets that do not have physical existence or tangible form, but are considered to have a value to the entity". Furthermore, goodwill and asset write-offs are considered bookkeeping adjustments that typically do not coincide with any changes in tangible assets or cashflows (Hirschey and Richardson 2002). Book entries may be seen as bookkeeping adjustments. A book entry does not have any cash flow consequences, hence goodwill write-offs may be seen as book entries. If an asset cannot be touched and cannot be measured, it follows that the integrity of information created with the use of book entries may not be the same as information based on measurable and touchable assets. Again information content flowing from such book entries may influence managers to make incorrect (long-term) decisions.

Most companies are faced with contingencies at some stage of their operating life. A contingency is defined as "an existing condition, situation, or set of circumstances involving uncertainty as to possible gain or loss to an enterprise that will ultimately be resolved when one or more events occur or fail to occur" (Plank and Blensly 1989:105). When a transaction takes place there is little uncertainty owing to its character, but with a future happening like a contingency there may be a substantial amount of uncertainty. Furthermore, because a contingency is a future happening, the provision for a contingency is created through the use of a book entry and may therefore influence the integrity of the company's financial information and subsequently any decisions based on such information.

Manufacturing companies make use of research and development provisions to provide for the development of new products. Research and development provisions are based on predictions and artificial information. As Plank and Blensly (1989:85) put it:

> *Research* is planned search or critical investigation aimed at the discovery of new knowledge with the hope that such knowledge will be useful in developing a new product or service or a new process or technique or in bringing about a significant improvement to an existing product or process. *Development* is the translation of research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process whether intended for sale or use.

Research and development provisions are based on what is going to happen in the future and are therefore classified under book entries. Since the outcome of a research effort is often based on hope and prediction, it follows that the information created on hope and prediction may not have the same integrity as information based on reality, again influencing any future decision based on the character of such information.

Additional definitions regarding book entries, derived from the questionnaire, are discussed in Chapter 7.

2.3.4 Internal funds

When a company wants to acquire assets, they may use either internal or external funds available to the company. Internal funds are funds that are raised within a company. For example, income after taxes and non-cash expenses such as depreciation adds to the funds of a company to obtain or acquire investments and fixed assets. Other funds that are available are loans from banks and the sale of additional shares (Xrefer 2002). Donleavy (1994) makes the point that, although for most people the term funds means cash, in accounting the term funds has a restricted meaning and is used to refer to net working capital.

Internal funds are hidden in the working capital and instead of being earmarked for the purpose these were intended for, they are often used to fund the normal operating activities of a company. In the income statement depreciation is deducted as an

expense even though depreciation does not represent an outflow of cash (unlike other kinds of expenses which do decrease the amount in the bank). The current assets are overstated in the working capital with the amount of accumulated depreciation since the amount reflected by the bank includes the amount earmarked for the future replacement of the asset. Since this "extra amount" is not reflected in a separate internal fund, managers may often tend to forget about the surplus amount and they simply spend the surplus amount on the normal operating activities of a company.

The spirit of this dissertation is to provide justification for the argument that an internal fund should be classified separately from the working capital and that such funds should be used for the replacement of fixed assets (Refer to section 4.4.1). According to Wilson (1974:248) "... the sum of depreciation and retained earnings (i.e. the *cash flow*) is an important source of finance. (Part omitted). If depreciation allowances exceed the current level of capital expenditure, they may add to working capital, and eliminate the need for short-term borrowing. On the other hand, if depreciation allowances are exceeded by capital outlays, it may have the effect of depleting working capital, or requiring the company to borrow". The creation of internal funds through the depreciation provision, therefore, appears to be one of the best ways to fund the replacement of fixed assets.

The earmarking of funds for the replacement of fixed assets through the provision for depreciation, is seen as one way of creating internal funds within a company. This view is shared by Correia, Flynn, Uliana and Wormald (2003:7-15): "EPS is calculated from the accounting income after such items as depreciation and deferred taxation have been deducted. These expenses do not, however, constitute a flow of funds out of the company. What happens to actual funds represented by such items as depreciation? The assumption is that they are used to replace existing assets". The reality of depreciation may have the effect of generating an internal fund for the replacement of fixed assets at the end of their lifespan. However, Glautier and Underdown (1997:122)

claim that “depreciation accounting itself does not provide funds for the replacement of depreciable assets, but the charging of depreciation ensures the maintenance intact of the original money capital of the entity. Indeed, a provision for depreciation is not identified with cash or any specific asset or assets”. The above claim certainly holds, because currently the cause of the relevant book entry (the depreciation provision) is brought into account but not its effect, namely the creation of the internal fund reserve.

The depreciation provision decreases the profit for the year under reporting and the company actually saves on taxes. Depreciation does not have cash consequences for the company, that is the bank balance is not affected by the book entry as is the case with other expenses in the income statement. “Depreciation, therefore, is effectively a cash refund from the current earnings off part of the original investment in the business” (Ezybusiness 2001). When a company provides for depreciation, an internal fund reserve should be created. For example, when depreciation is written off over a ten-year period (10% per year), the company enjoys the benefit of a lower profit and thereby less taxation. The retained earnings are decreased as well as the shareholders’ interest. After 10 years the company has to replace the asset using the funds in the reserve. However, if no reserve for replacement (i.e. no internal fund reserve) has been maintained during this period, the company is faced with the reality of making use of external funding which may turn out to be an expensive venture. But if an internal fund is in place, and it is cheaper to replace the asset from this fund, rather than the external fund, the company would benefit.

2.3.5 Accounting and accounting information

Accounting information may be divided into two categories, namely, financial accounting and managerial accounting. According to Plank and Blensly (1989) the information created by financial accounting is for users of financial statements including creditors, stockholders, financial analysts, etc., while the information created by managerial accounting is primarily for internal control purposes for example to ensure efficiency,

productivity, proper pricing decisions and so forth. It follows that the integrity of information in both instances must be of a high level in order to make the correct decisions.

Information is portrayed in the financial statements of a company and is used to make long-, medium- and short-term economic decisions. According to Hemus *et al.* (2000), the four qualitative characteristics of financial statements (prescribed by AC000) that make accounting information useful to the users of that information are:

- understandability

  The information should be comprehensible to those users of the financial statements who have a reasonable understanding of business and economic activities and are willing to study the information with reasonable diligence. Users must, however, be willing to learn how to use the information properly.

- relevance

  The information portrayed in the financial statements must be relevant to the decision-making needs of the users. When a user can use the information to formulate predictions and assess past predictions, the relevance quality of the information is good.

- reliability

  Useful information has to be reliable. Information is reliable when the information is free from material error and bias, that is, when users can depend on the information.

- comparability

  The information is useful if the information can be compared with previous periods and with similar information from other companies.

If any of the above characteristics are not being met in the information supplied in the financial statements of a company, then stakeholders may make important decisions based on information of which the integrity has been influenced either positively or negatively.

Information is described as “news or knowledge given” (Hornby 1981:437). It is the responsibility of the accountant to give “news” about a company to the relevant users. Clearly, information has different definitions and understanding in different disciplines. According to the new science, “information is unique as a resource because it can generate itself” (Wheatley 1999:97). Accountants cannot create information but of course they may observe information. “Information in itself is neutral, neither relevant nor irrelevant” (Goldberg 2001:174). Observers attach their own (subjective) semantics and perceptions to the information. The relevance of information can only be judged if the purpose is known and taken into consideration (Goldberg 2001). It is difficult to judge the relevance of the subjective information created by book entries because the purposes of these entries are unknown to the users of the financial statements. Book entries are used as a strategic tool by management; only management knows their purpose and this may influence the integrity of the information portrayed in the financial statements and subsequently any decisions based on such information.

2.3.6 Integrity

The word ‘integrity’ has two meanings. According to Hornby (1981:444) the first definition is the “quality of being honest and upright in character” and the second definition, which is also the meaning attached to integrity in this research, is a “state or condition of being complete”. Under corporate governance, transparency and accountability are not enough to build public trust, all depends on people of integrity. According to DiPiazza and Eccles (2002), users can only trust reported information if the information is firmly embedded in a foundation of personal integrity. Book entries may be used or even misused by management depending on their personal integrity

which, in turn, may influence the integrity of the information being reported and hence any future decisions based on such information.

Users and other stakeholders make decisions using the financial information contained in the financial statements. As emphasised by DiPiazza and Eccles (2002), users are ultimately accountable for their own decisions, but ethically users may be held accountable for such decisions only if the information they use to make decisions is prepared, approved and audited by people of integrity, in a spirit of transparency. DiPiazza and Eccles (2002) furthermore state that companies without integrity destroy shareholder value and undermine public trust. When book entries are used to reach certain strategic goals, based on the personal integrity of management, it may be possible that the integrity of the information created by book entries, is influenced.

2.4 Summary and conclusion

This chapter presented a brief history of book entries and gave definitions of a number of important accounting concepts to be used.

An important point that emerges from this chapter is that there is a difference between the integrity of information created by *real transactions* and the integrity of information created by *book entries*. Reliance on the integrity of information supplied in the financial statements of a company is one aspect about which stakeholders cannot afford to be uncertain.

In Chapter 3, a new information perspective from the new science, will be discussed.

3 Book entries and a new information perspective

3.1 Introduction

The previous chapter presented an introduction to book entries as a means whereby the often subjective observations made by an accountant may be entered into financial statements, resulting in a possible change in the information content portrayed in such statements. These personal observations are not unique to the accounting science, since according to the guidelines from the new science, the interpretations attached to a scenario by an observer may affect the outcome of a happening. Of particular importance in the arena of the quantum mechanics, which is part of the new science, is the issue of whether an observation that is made is real (objective) or not (subjective). These observations may also be dependent on the relationships among objects, for example if there are two objects (say two trains) of which one is stationary and the other moving. The observer in one of these trains, in the absence of an external reference point, will find it very hard to determine which train is the one that is moving (Hartzell, 1978). In a subject like physics it is possible for a scientist to predict the outcome of an experiment under controlled circumstances, however, in accounting the picture changes somewhat since such analogous experiments cannot be easily controlled owing to the fact that an accountant has to consider the effect of time, that is whether an expense is accrued in this quarter or the next, on the portrayed information over a number of quarters, thereby complicating predictions in the accounting world.

Following on the above, this chapter discusses a number of principles inherent to the new science. In particular issues regarding relationships, observation, reality, objectivity, prediction and time are addressed. These concepts are applied to the analysis of information contained in financial statements.

Over the years the rules governing the mechanisms (i.e. earnings management) aimed

at improving the bottom line of a company have changed. The important stakeholders have also changed. Previously companies focussed on fixed prices based on cost budgets as well as on market changes, while nowadays the emphasis is on innovation, speed, high quality service and the rate at which knowledge is improved and applied. In the new world reliable information and full commitment from a highly motivated work force are of extreme importance. This is the reality which modern companies have to deal with in order to remain competitive, and any delinquent behaviour in this regard from management may prove to be fatal. It is of paramount importance that information on which decisions from management are based is correct, reliable and free of bias.

Until now the work force has never been seen as an important part of the information value chain, and neither has the worth of information as a valuable asset of a company been acknowledged. This viewpoint is in line with the arguments presented by Hope and Hope (1996) who claim that, if managers continuously fail to recognise information as a valuable asset and a tool to improve the business rather than a means whereby control is exercised, they may well fail to see the benefits of developing better systems.

Two very important building blocks in accounting are information and communication. One of the aims of accounting is in fact to communicate (measured and validated) information intended to increase the knowledge of recipients of this information (Lee 1984). Such well communicated information may help to reduce the company's uncertainty about the future since the information may help management to make sensible decisions based on correct information.

3.2 Relationships

Relationships in accounting may be based on observations on the one hand and interactions on the other. Goldberg (2001) claims that a relationship 'exists' when the presence of a phenomenon or the activity of an occurrence is perceived or conceived by a unit of experience. When accountants carry out procedures in accounting, they

observe and attempt to measure relationships between these units of experience. Owing to its nature, accounting is rich in relationships, but whether this relationship is an accounting relationship or not is (according to the above Goldberg claim) determined by whether the relationship is measurable in an acceptable and recognisable unit.

One of the oldest relationships in accounting is the relationship between debtors and creditors. Humans have always traded, whether they traded corn for meat or, at a later stage money for a commodity, a transaction took place and therefore a relationship came into being (Goldberg 2001). As a rule there is a time lapse between the transaction and the actual payment, leading to a relationship of trust between the two parties. Another example of a relationship in accounting is one of ownership. There is a relationship between the owner and the asset and it is usually the case that the owner may do with the asset what he or she likes.

Relationships may also exist between variables. A variable represents an entity whose value may change over time and in accounting variables represent attributes of events or phenomena associated with particular objects, for example the earnings of a company (Ryan, Scapens and Theobald 2002). Another example of a relationship between two variables might be a ratio, for instance the relationship between long term debt and equity. Generally, empirical research has to do with the establishment of relationships between variables.

According to corporate governance or corporate finance, all stakeholders must be able to benefit from financial reporting. There are numerous relationships in this regard. A schematic presentation of some of the relationships within the accounting world appears in Figure 3.1.

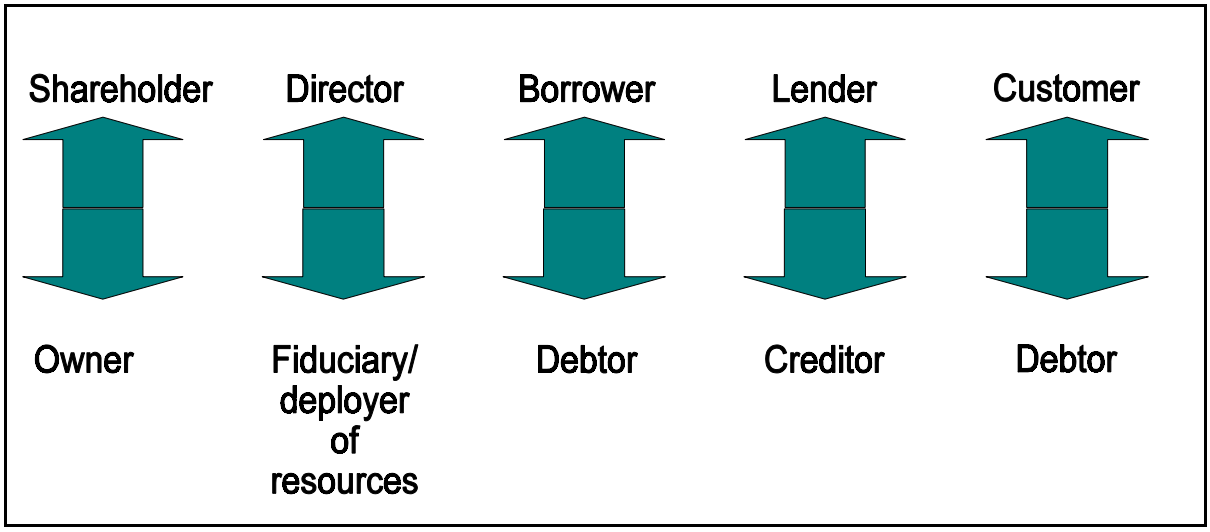


Figure 3.1 Relationships in accounting (Goldberg – adapted)

One of the aims of an accountant is to establish records and reports which reflect relationships between entities and, if possible, to measure these relationships. These relationships are the 'accounting glue' that facilitate the viewpoints from which various accounting processes are carried out (Goldberg 2001). For example, one of the challenges facing an accountant is to provide mechanisms whereby accounting procedures and products may express other relationships which have some social significance.

Very often the financial numbers in financial statements are concerned with and represent real people (customers) who determine the quality of products, services and client satisfaction. For example, the value of a large unit trust at the end of a quarter represents people since its value represents the total investment of a large number of investors. There is a close relationship between the different building blocks of companies. It is very important for companies to recognise, identify and nurse these relationships. If cash is the only measure of a company's financial health, it is important to see the relationship between cash and satisfied customers (Hope and Hope 1996). Naturally, when a company experiences problems, it is important to look at the

relationships between poor quality, lack of commitment, indifferent service and the company's results. If a company reveals the necessary information to the workforce, the before mentioned problems may be overcome. A happy workforce, that knows the goals of the company, may turn a company around. If there is a stronger emphasis on the person doing the work and less emphasis on the cost, the relationship between the quality of the product or service rendered and the cost will be much more favourable (Hope and Hope 1996). Managing people rather than objects may have a very positive effect on a company's bottom line. Sharing information in a company is crucial in today's marketplace and is one way of improving the different relationships in a company. However, if such shared information is influenced by book entries then the information may have a negative effect on the relationships within a company.

Accounting is rich in relationships and most of these relationships involve people. Also, the means of recording these is often the only available or the only acceptable evidence of a particular relationship (Goldberg 2001). If relationships are viewed in this way then the data recorded about such relationships are instruments of social records. Goldberg goes further by stating that the modern day accountant is faced with the challenge to express other relationships which have social significance as well. To reach this goal, appropriate means of measurement have to be invented, whether financial or non-financial, not usually available in the current accounting practices. Relationships that have social significance and are non-financial in nature may be based on subjective observations by an accountant, when measured. Therefore, the integrity of social relationships may differ from the integrity of accounting relationships.

Relationships in accounting are about a coherence between events. Furthermore, such coherence is a "man-made relationship" and it is derived from "the intention to enter into a venture that constitutes the basis for the relationship" (Goldberg 1974). It follows, therefore, that since these events are concerned with human activities, the resultant accounting records may display a relationship between these activities.

3.3 Observation

The Oxford dictionary defines the word 'observe' as the action "to see, to notice and to watch carefully" (Hornby 1981:578). The accountant is seen as an observer. As an observer, it is normally inappropriate for an accountant to express any form of judgement since it is not the function of an observer to judge. This viewpoint is further developed by (Goldberg 2001:17): "If and when an accountant does express any views about the goodness or badness, virtue or vice, integrity or peccability, it is as a moralist – perhaps a standard-bearer for a cause – and such views, as suggested, are more than observations of fact: they are based on a personal scheme of values". If an accountant's job description is augmented in this way then it adds an additional set of responsibilities for the accountant. Events in accounting are concerned with human activities. These events do not occur in nature and are therefore not natural phenomena (Goldberg 1974). Therefore, such events cannot be used in the same kinds of experiments or even observed in the same way as the phenomena observed by a natural scientist.

To be an observer one needs to be conscious, be awake and aware, as well as having a basic level of knowledge since the bodily senses and mental powers are being used (Hornby 1981:180). This can also be related to the conscience which helps one to make a decision between what is right and what is wrong. Often an observer has in mind a particular outcome of, for example, a forecast, and then actively embarks on a sequence of actions aimed at establishing that outcome. This phenomenon is also described by Polkinghorne (2002:91) when he claims that "... only the consciousness interpretation assigns a unique role to the acts of the conscious observer. (Part omitted). Even in the consciousness interpretation, the role of the observer is confined to making a conscious choice of what is to be measured and then unconsciously bringing about what the outcome actually turns out to be". Therefore, the outcome of a decision, strategic goal, etc. is often determined by the frame of reference and the mind set of the observer which may be very subjective and in turn may influence the integrity of

information.

Related to the act of "unconsciously bringing about an outcome" (Polkinghorne 2002:91) is the phenomenon of influencing an outcome rather than actually creating an outcome, also evident in studies of the new science. Quantum theory works towards an "observer-influenced reality" rather than an "observer-created reality" in the sense that what was not already in some sense potentially present could never be brought into being (Polkinghorne 2002). This means that the observer actually influences reality and that the observer cannot create reality. An observer interprets what he or she sees and thereafter assigns some meaning to the observation. The law of the conservation of energy, namely that the total amount of energy in an isolated system stays constant (Halliday, Resnick and Walker 1997) is another, even more fundamental, justification of the viewpoint that "reality cannot be created". When an observer attaches personal interpretation to information, the integrity of information may be influenced.

According to the quantum theory one observes changes that take place in jumps, beyond the observer's powers of precise prediction (Wheatley 1999). (Prediction is discussed in section 3.6 below). A further relationship between the integrity of accounting information and the new science is captured through an analogy with Heisenberg's *Uncertainty Principle,* which states that an observer can measure and therefore get a fix on the *position* of a particle (e.g. an electron in the electron cloud surrounding the nucleus of an atom), or can get a measure of the momentum and thereby observe the *wave* of the same particle, but both these attributes cannot be measured simultaneously (Wheatley 1999).

Applying the above uncertainty principle to accounting reveals the following challenge: To measure the financial position of a company is rather difficult owing to the large number of parameters that may affect such a measurement. However, both the above attributes of the company cannot be measured simultaneously; also, no form of

measurement is ever neutral (Wheatley 1999) since any such measurement is influenced by the mind set and reference frame of the observer. Furthermore, as soon as one takes a measurement, information is somehow lost or loses its relevance. For example, suppose an accountant compiles a balance sheet for year-end purposes before all the relevant aspects of a certain transaction are known. The information in the balance sheet will then be timely, but reliability might be impaired and therefore the integrity of the information may be impaired. On the other hand, if the accountant delays the compilation of the balance sheet until such time as all relevant aspects of the transaction are known, then the information is highly reliable, but of little relevance to stakeholders since it might be too late to make an important decision.

The above state of affairs raises an important question also mentioned by Wheatley (1999), namely, if some information is inevitably lost through a measurement, then to what extent can a stakeholder trust such information to make intelligent decisions? Hence, either reliability or relevance is compromised when taking a measurement regarding, for example, the financial well-being of a company and this may also influence the integrity of the information. Since these two characteristics are essential to make accounting information useful to stakeholders (see section 2.3.5), any compromise of the validity of these two attributes may influence the integrity of the resulting information. At most, the accountant may be an observer of either the wave of fluctuations, or the financial position of the company, but not both at the same point in time.

3.4 Reality

Reality has a number of definitions, depending on which source is consulted. A *scientific* definition is given by David Heirtzler (2003) under the heading “What is reality?” The definition states that “anything made up of matter or energy is real”. A more *objective* definition from the same source states that “anything that is not subjective is real”. Another definition of reality given by Hornby (1981:699) is “the quality of being real; real

existence; that which underlies appearance".

Reality plays an important role in the quantum world and such reality is only revealed to an observer through an active construction in which such an observer participates (Wheatley 1999). A person only feels part of reality if he or she has the opportunity to interact with it personally. Information and ideas are but half of what is required to arouse reality. Wheatley (1999) furthermore claims that there is no objective reality and that the only reality that exists is what observers create through their contact and involvement with other people and events. It follows that reality is an awareness left to the individual's imagination. Reality and observation go hand-in-hand since reality is something that is observed by someone and then acted upon.

An accountant attaches personal interpretation to the information created in a company, hence such information is "measured" by the accountant and therefore part of the information is lost, that is, the information loses some of its potential. In fact, these personal interpretations are often confused with reality, as claimed by Wheatley (1999:67): "Reality is co-created by our process of observation, from decisions we the observers make about what we choose to notice. It does not exist independent of those activities". Hence, what is real for one person because of what he or she experienced may not be real for someone else, simply because they have never experienced it. Therefore, one cannot *talk* people into reality if they have not experienced anything of that kind.

When collecting information and interpreting the information to make decisions, accountants (and other stakeholders of companies) select certain information, relevant in terms of their observations, interpretation and the Wheatley 'awareness of reality', and ignore other information that might have been relevant to the specific decision. Since this selection process is often based on a misplaced reality, it may lead to incorrect decisions being made. Inevitably, therefore, every observer will make different

selections based on their interpretations and perceptions of reality.

Reality plays a role in a number of aspects or concepts (Ryan *et al*. 1992):

- Reality as a concrete structure: reality characterised by objective 'facts', for example *real transactions*.
- Reality as a concrete process: reality is assumed to subsist within *relationships* and general laws which describe how things change.
- Reality as a contextual field of information: *human beings* (i.e. users of financial statements) are continually processing information, learning and adapting to their environment.
- Reality as a projection of *human imagination*: this is the extreme subjectivist position in which reality exists only in the individual consciousness that is, in human imagination.
- Reality as a symbolic discourse: we now see the world as comprising *human actors* who make sense of their reality through a process of social interaction and negotiation.
- Reality as a social construction: here the social world is re-created by the actors (i.e. *humans*) with every encounter, and reality is the accomplishment of individual sense-making.

The above concepts may be categorised into three groups, namely, the reality of *real transactions*, the reality of *relationships* between objects and variables, and the reality experienced by *humans* in their interaction with the world around them. All three these aspects may affect the information content in a company as follows: A real transaction differs from an artificial transaction which may affect the integrity of information. Relationships in a company may be affected by the information established in a company (e.g. a ratio is directly affected by the information contained in two variables – the numerator and the denominator) and the way an accountant (i.e. a human)

perceives reality, has a direct effect on whether such an accountant may resort to the use or misuse of book entries, thereby affecting the integrity of information in a company.

3.5 Objectivity

Objectivity can be described as “a state of being; impartial judgement; ability to free oneself from personal prejudice” (Hornby 1981:577). Given this definition of objectivity, the accountant has a very challenging task when preparing financial statements. Lee (1984) claims that when management’s intentions or expectations regarding the entity’s assets are conveyed in its financial statements, it is in conflict with the objectivity of the accounting process and the factual quality of the information being reported. Kam (1990) also stresses the importance of verifiable and objective evidence in supplying dependable information. Of course, objectivity is of the utmost importance when working with numbers which can influence decisions since both the outside and inside stakeholders of a company would certainly appreciate it if they knew that the accountant was objective in preparing the financial statements.

Following on the above claims about objectivity, Kam (1990) agrees that objectivity remains an illusive absolute since it alone does not lead to useful information. Objectivity is often contrasted with subjectivity, and while objective truth is something that is external to the human mind, it is hard to see how the concept of truth (i.e. being objective) can be discerned without using the human mind.

It is inevitable that the integrity issues surrounding book entries will come under the spotlight when objectivity is addressed. Determining values not derived from actual transactions (i.e. book entries) in which a company is a player, involves a great deal of objectivity. Confirmation from outside stakeholders is absent in these cases and therefore the values might be open to bias and manipulation. However, Kam (1990) points out that, if procedures for ascertaining values are made public and are generally

accepted by the profession, other competent, external stakeholders can verify these procedures, and hence the relevant values might be considered to be objective.

3.6 Prediction

To predict means to "say or tell in advance" (Hornby 1981:655). A question that naturally arises from this interpretation is: With an ever-changing world to contend with, how can one tell what is going to happen in advance? Information is ever changing – information difficult to control or manage.

In a scientist's world prediction is part of empirical activity since a prediction can, in most cases, safely be made. An experiment is then conducted at a *certain point* to test the prediction (i.e. the hypothesis). If the outcome of the experiment supports the hypothesis, then the prediction is considered reliable in the light of the circumstances under which such prediction is made (Goldberg 2001). The accountant's environment is, however, quite different. Unlike a scientist, it is usually not possible for an accountant to conduct an "experiment" at a particular time, mainly because an accountant has to work over a number of periods. For example, in figure 5.2 the accountant cannot conduct an experiment for five years (i.e. from 1997 to 2001), observe the outcome at the end of the fifth year, and then go back to alter the profits and losses accordingly – such values have already been published and decisions taken based on those values. Therefore, in accounting, prediction cannot be derived from the result of an experiment in a controlled environment, as for example in chemistry. However, there is an area where an accountant can conduct an experiment at a particular time, namely, altering spreadsheet values and immediately observing the result (e.g. budget spreadsheets).

To make a prediction one needs to have a certain amount of knowledge of what the outcome will be and what information has to be the input to the process. Making a prediction in accounting is a difficult task which carries certain responsibilities. For example, if an accountant makes a forecast, he or she already knows that some

important decisions based on such a forecast alone will be taken by management in the future. Hence, such predictions have to be accurate. Rate of exchange differences, inflation and even customer preferences might change quickly, leaving the accountant with little information to work with. Wheatley (1999) makes the point that in the quantum world, however, prediction and replication are not possible. Scientists substantiate these through the relationship between a system and an individual. The relationship will always be different and will always evoke different potentialities. When making a prediction (forecast), an accountant makes primarily use of book entries, however, as stated above, the quantum mechanics reveals that correct predictions are not possible. It follows that the integrity of information based on prediction may be impaired.

3.7 Time

When studying the financial statements of a company to measure the financial *position* of the company at a certain point, the accountant needs to focus on the actual happenings at that time, thereby stopping time artificially at a year-end to measure the company's position. At these year-ends book entries are used to portray non-events and may therefore influence the integrity of information. In accounting the introduction of these artificial time frames creates a problem since the balance sheet is a mixture of what has happened (real transactions) and what is going to happen (non-events captured by book entries). In effect the balance sheet has a forward-looking as well as a backward-looking aspect to it (Goldberg 2001). The income statement is also not an accurate barometer because the income statement contains book entries that represent transactions that occurred in other financial periods and may also represent transactions that may still occur for instance a contingent liability. The effect is therefore, once again, that book entries may influence the integrity of the information.

3.7.1 Accounting's time paradigm

Time plays an important role in accounting. From the above discussion on time, the definitions supplied in section 2.3 and the new information perspective, the following

figure resulted (Gouws 2003b):

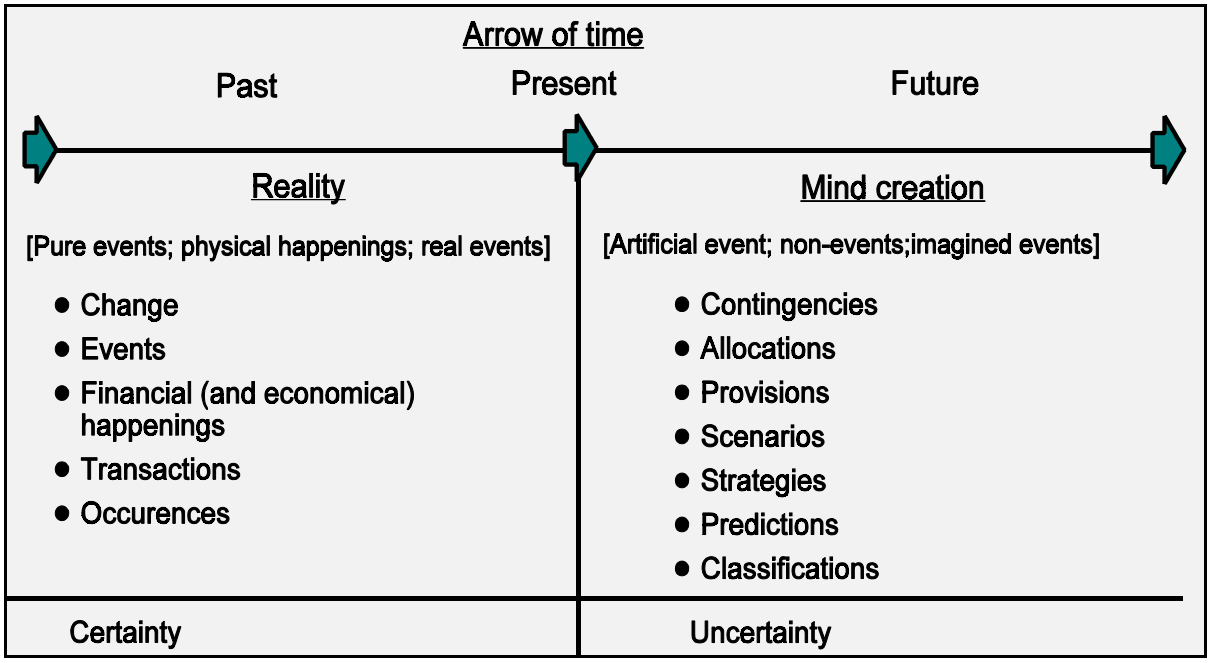


Figure 3.2 Accounting's time paradigm

The past is based on reality (i.e. transactions, events and occurrences that already took place) whereas the future is based on mind creation. The integrity of information based on reality and the integrity of information based on a creation of the mind may therefore differ in quality.

3.8 Conclusion

This chapter established a relationship between the new quantum physics and some phenomena known to accounting. Relationships among observations, reality, objectivity and prediction were discussed and pointed out to be all rather elusive concepts to define and work with, thereby complicating an accountant's task when having to give character to these concepts in financial statements.

Observations of a perceived reality indicated that such observations may be either objective or subjective, matching the idea of real and subjective transactions in

accounting. In particular, the dilemma of an accountant in attempting to calculate both fluctuations in financial statements and the financial position of a company can be traced back to the problem experienced by theoretical nuclear physicists when trying to measure both the momentum and position of a particle at the same time.

This chapter also pointed out that the process of determining accounting values, not derived from actual transactions in which a company is a player, has a subjective side to it, for example the artificial stopping of time at a year-end to measure the company's position.

Another challenge for accountants is the need to make forecasts since important decisions will be taken by management in the future on the basis of such forecasts. These forecasts are necessarily based on observations made from a perceived reality and have to be objective and as accurate as possible.

In the next chapter the relationship between book entries and accrual accounting, some accounting assumptions, and the two major book entries, namely, depreciation provision and deferred taxation, are discussed.

4 Book entries and their relationship to accrual accounting and accounting assumptions

4.1 Introduction

Cash accounting has the disadvantage that deferred and expected revenues as well as deferred and expected expenses are not taken into account in a company's financial information, thereby affecting the relevance of the information because information which may affect future financial statements is recorded in the current financial statements. When information is not relevant for the current decisions, the integrity of the information may be influenced. Accrual accounting overcame this problem through the use of the matching assumption. The matching assumption is used to match revenues and expenses in the same period, the balance, being either an expense or a revenue, is then reflected in the balance sheet as a deferred or expected expense or revenue. Companies may also have to make provision for an uncertain future happening called a contingency, in the financial statements. An asbestos mining company may face a lawsuit because of miners who fell ill and the company may somehow have to budget for these. These uncertain future happenings may have an influence on the integrity of information. The classification of items in the balance sheet may have different effects on the information portrayed in the financial statements of a company, for example when deferred taxation is classified as debt versus being classified as part of equity. A company may also need to make provisions for normal future costs, for instance the depreciation provision and deferred taxation provision in order to adhere to the matching assumption. In times of uncertainty a company may decide to make use of the assumption of conservatism by understating its assets, once again influencing the integrity of the information of the company.

This chapter considers the role of transactions in accrual accounting, definitions and

discussions of each of the accounting assumptions of matching, contingencies, classification, provisions and conservatism. Ratios are also discussed since these are used to portray the financial health of a company. Towards the end of a brief discussion is presented on accumulated depreciation and deferred taxation as examples of book entries which may affect the integrity of information. A summary concludes this chapter.

4.2 The role of transactions in accrual accounting

Accrual accounting probably originated from the Industrial Revolution which revealed inadequacies in purely cash recording, given the complexities of trade, commerce and industry. Cash recording failed to accurately measure the "net financial result" of periodical business activities. Accrual accounting provided a remedy by bringing into account deferred or expected elements of revenue or cash outlays. These elements could be viewed as appropriate to the period under review even though the cash impact would only be seen at a later period. When a period of volatility is experienced in the financial unit of measurement (e.g. R, $, £, ¥, etc.) it follows that the assets of a company must be revalued. There is currently no system proposed by any of government, tax legislatures or academics that can be used as a guideline in this revaluation process (Goldberg 2001). However, when a company decides to revalue its assets, the bottom line of that company may be affected considerably. Book entries are used to revalue assets and increase or decrease the depreciation provision, which in turn decreases or increases the profit or loss, the dividend payout and the distributable reserve.

The difference between cash accounting and accrual accounting is one of timing and matching (Wild *et al.* 2001). Accrual accounting has a number of benefits as well as some drawbacks. One of the benefits is that accrual accounting reduces timing and matching problems. The credit economy necessitates accrual accounting where a transaction is recorded when the goods are delivered, although there is no immediate

transfer of cash involved. An important benefit of accrual accounting over cash accounting coincides with a main goal of accrual accounting as described by Wild *et al.* (2001:115) "... to make adjustments for transactions that have future cash flow implications, even when no cash inflows or cash outflows occur contemporaneously – an example is a credit sale". A well-known problem with a credit sale is that the debtor might never pay in which case the transaction has to be 'reversed' when a provision for the doubtful debt is made. (It may even be said that no transaction occurred.) According to Glautier and Underdown (1997) the accountant must make sure at a financial year-end that all the income the company is legally entitled to, is recorded. This happens even if no cash was received and no economic event took place. Referring back to the credit sale, book entries are used to make provision for doubtful debts, which in turn may influence the integrity of the information portrayed in the financial statements.

A number of problems arise when cash accounting (ordinary accounting) is used. Table 4.1 below lists some of the problems encountered in (ordinary) accounting but solved by accrual accounting.

Table 4.1: Problems solved by accrual accounting

Transaction	**Accrual accounting**	**Problem solved**
Cash purchase of inventory	Increase in inventory	Matching
Credit sale	Revenue when goods are delivered	Timing
Cash purchase of machine	Increase in assets Depreciation of assets	Matching

(Adapted from Wild *et al.* (2001).

Table 4.1 effectively shows the mechanisms used by accrual accounting in solving

either the matching or timing problems.

When dealing with accrual accounting, it is important to note that accrual accounting is based on a number of assumptions (Wild *et al.* 2001):

- Going-concern: the entity will continue its business activities into the foreseeable future. This assumption allows accrual accounting to recognise business activity before cash inflow or outflow.
- Enforceability of contracts: most accrual entries are based on source documents, usually a contract.
- Stable monetary unit: assumes stable prices.
- Time value of money: assumes present value concepts.

Assumptions, estimates and judgements are used in accrual accounting to introduce softness or uncertainty into accounting numbers. Whenever uncertainty, estimates or judgements are involved, it follows that the integrity of information is influenced by these and may be different to information based on reality. However, despite numerous criticisms, accrual accounting is useful for financial analysis but an accountant has to be aware of its shortcomings.

4.3 The relationship of book entries with certain accounting assumptions and the use of ratios

4.3.1 The matching assumption

The matching principle was introduced in 1940 (Most 1982). Matching is one of the accounting principles that directly influences book entries and is based on an assumption made by accountants that there is a cause and effect relationship between expenses and revenue over time (Kam 1990). Items in accounting that are based on the

matching principle include deferred taxation, research and development costs, contingencies, and provision for depreciation and pensions. These are all created by book entries and may influence the integrity of information.

Matching may be described as a way to tie expense recognition to revenue recognition at a time when it is practicable to do so (Mulford and Comiskey 2002). The matching of revenues with expenses may be difficult, since some costs have a benefit for the future. As Kam (1990:283) puts it: “Proper matching is difficult. It implies not only that the actual using up of assets and services is for the period identified, but also that the value of the used assets and services is computed correctly”. When time is taken into account, matching becomes difficult because it is often hard to determine the time span of an entry. Furthermore, the allocation of a value to a particular period is also a non-trivial task. Matching is based on a person’s (subjective) perception and may therefore, influence the integrity of information supplied in the financial statements.

Kam (1990) lists three basic issues an accountant considers when matching revenues with expenses:

- association of cause and effect;
- systematic and rational allocation; and
- immediate recognition.

Ideally, for every expense (cause) that takes place, a revenue (effect) must be created. However, not all expenses can be matched this way. In some cases time plays a crucial role and this calls for the allocation of costs, either immediately or over a period. Immediate recognition takes place if an expense is not covered by either of the first two bulleted items above. This method of allocating costs is well known in the accounting world, but once again allocation is also based upon the perception of management, and

may therefore give rise to information of a different integrity than the information created by real transactions.

The application of the matching principle often has the unfortunate effect of using the balance sheet as a sink for unexpired costs (i.e. costs incurred in the past that may be matched with future revenues) as they await their time of expiry on some future income statement. However, a balance sheet ought to play a more important role than just being a repository for these costs. Although accountants agree that the balance sheet is a source of information about the financial position of the company, the procedures they follow often violate the intended use of a balance sheet (Kam 1990). Deciding which costs should be spread over a period and which not, has a very important effect on the information supplied in the balance sheet because it is based on the personal judgements of management. Since the balance sheet is a mix of what happened and what is going to happen, these personal judgements also influence the integrity of the information supplied.

Matching and timing together are vehicles for distinguishing between accrual accounting and cash accounting. In this way accrual accounting overcomes both the timing and matching problems (refer table 4.1) that are inherent to cash accounting (Wild *et al.* 2001). Expenses related to the revenue created are matched with cash received over the same period and an amount for outstanding debtors is created. The expenses incurred for the sales to outstanding debtors are then only debited to the income statement when the debtors eventually pay. The allocation of costs is done via a book entry.

There are specific guidelines when matching occurs with regard to direct-response advertising, research and development costs, software development and interest during extended construction periods. Despite these specific guidelines, a great deal of

flexibility exists during matching (Mulford and Comiskey 2002). The observer's interpretation of these guidelines results in this flexibility, and personal interpretation may influence the integrity of information – either positively or negatively.

Matching furthermore solves the problem of the distortion of the bottom line of a company when all expenses and revenues (economic events) are recorded in the relevant period, according to Sprague (1920). When all the relevant economic events are not recorded in a period, the information may prove to be valueless and the period which has been influenced may appear prosperous at the expense of one which is actually more successful. Suppose a company buys cellulose from a supplier in January and only pays for the cellulose in February the same year. The company subsequently uses the cellulose over a period of three months, starting in January. Now, if the whole expense is taken into account when paid, February would seem to be a 'bad' month. If, however, the expense is spread over the period of use, each month would appear to be a better month and the quality of the information supplied may be of a better integrity.

Matching does, however, have a down side. The matching concept was heavily criticised by Robert T. Sprouse (1973:167-168): matching creates "unique accounting products" like deferred charges that are not assets and deferred credits that are not liabilities. "The matching concept necessarily relies on ad hoc decisions rather than on accounting theory – on independent value judgements rather than on consistent analysis". When looking at the matching concept in this way, it becomes clear that matching takes place rather subjectively. Book entries are usually based on the matching concept, hence these may also be viewed as subjective in nature. Thomas (1975) calls matching the accountants' only allocation theory and views matching as the only way accountants can defend GAAP allocation rules. All this means that the profit or loss calculated in the income statement is little more than a book entry, because so many book entries are allocated to the income statement based on the matching

assumption.

The diversity in activity in business does not lend itself towards accurate matching in the valuation of an asset. The valuations carried forward in the balance sheet have no particular relationship to specific current benefits; therefore, the remaining values have no particular relationship to future benefits. The usefulness of the matching concept in providing relevant information to investors and other stakeholders, is questionable when valuation is based on the use of the deferred charge classification and the allocation of the cost of intangibles (Burns and Hendrickson 1986). When depreciation is provided on the basis of a calculation of the revaluation of assets, the profit or loss before tax as well as after tax is influenced, together with retained earnings and dividends. This argument illustrates how many items in the financial statements may be influenced by book entries.

4.3.2 Contingencies

Contingencies are divided into assets and liabilities and are possible gains and losses whose declaration depends on one or more future events (Wild *et al.* 2001). A contingent liability results from a loss, for instance, when a company worked with hazardous materials which affected the health of their employees and the employees filed a law suit after one of their colleagues died. The company thereafter faces a big loss of income based on the evidence and therefore needs some provision in their financial statements brought about by a book entry. When a book entry is based on some future event and uncertainty, it follows that the integrity of the information created by a book entry may not be the same as that created by a real transaction. Contingent assets are only disclosed in the notes to the financial statements when their occurrence is very likely. Rights or claims in court cases, donations and bonuses are classified under contingent assets (Wild *et al.* 2001). A right or a claim is based on a future happening and therefore contingent assets may be brought about by book entries. The

value of the contingency may also be based on the subjective opinion of management and therefore the integrity of such information may be influenced.

Other forms of contingent liabilities may arise from a threat of expropriation, collectibility of receivables, claims arising from product warranties or defects, guarantees of performance, tax assessments, self-insured risks, and catastrophic losses of property (Wild *et al.* 2001). Again the contingent liabilities are based on future happenings and are brought about by book entries. To add a value to these contingent liabilities may be a very challenging task which is left to the judgement of management, which in turn may influence the integrity of the information supplied in the financial statements.

To be classified as a contingent liability, firstly, it must be probable that an asset will be impaired or a liability will be incurred and secondly, it must be reasonably estimable. When it is not possible to reasonably estimate the obligation, footnote disclosure is appropriate. Contingent liabilities are dependent on the occurrence or non-occurrence of one or more future events (Mulford and Comiskey 2002). This means that contingent liabilities are definitely created by book entries that are based on future happenings. If it is not possible to estimate the obligation, it may influence the integrity of information accordingly.

Loss contingencies are based upon the forfeiting of some future economic benefits. Fortune (1986:461) defines a loss contingency as “a probable future sacrifice of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events where the settlement depends on one or more future events that have some probability of occurrence”. Given the above definition it is clear why analysts often do not find the information content of financial statements very useful – events are based on the past, yet refer to the future and are therefore very uncertain. The information

created by this book entry will certainly affect the integrity of information.

4.3.3 Classification

Classification in accounting is of the utmost importance in the financial statements. Classification is based on the identification of one or more characteristics which a number of occurrences or events have in common, and the subsequent arrangement of these occurrences or events is according to these characteristics. Classification is a subjective activity according to Goldberg (2001) and something that may be done automatically. Goldberg goes further and suggests that classification places constraints on the interpretation of the characteristics being recorded about an occurrence. Whenever there are constraints on interpretation, it follows that the integrity of the underlying information may be impaired.

Time is one of the building blocks where book entries are concerned. Book entries are also used to classify items for year-end statements and may be viewed as reversible (i.e. reversible book entries). Classification exists only for a moment. Many records in the ledger of a company are provisions and are therefore subject to adjustments later. At month end or year-end, work must continue without interruption and this leads to some degree of roughness which can be corrected in the next balance sheet and which, until that time, does no harm. Sprague (1920) argues that in order to make the balance sheet close to perfect, adjustments must be made. “The question now arises, should these adjustments be affected by supplementary entries in the current accounts or should they be ignored in the regular books and only appear [through] their influence on the balance sheet? I should decidedly prefer the former course as making the results of valuation and derivation coincide; at least for a balance sheet which is intended for the information of the proprietors. Where a balance sheet or report is required by some outside authority, it may be that the point of view required is so alien to that assumed in the accounts themselves that no adjustment is practicable; they are constructed on

a different basis" (Sprague 1920). In the experience of the author the practice described by Sprague still prevails today. Financial statements may not be very user-friendly for decision-making purposes since these are drawn up mainly for the inside stakeholders and not the outside stakeholders (Refer to section 2.3.5 Plank and Blensly).

4.3.4 Provisions

According to the Companies Act no. 61 of 1973, Schedule 4 (South Africa 1973), provision means: "any amount written off or retained by way of providing for depreciation or diminution in value of assets or retained by way of providing for any known liability, the amount of which cannot be determined with substantial accuracy". If an amount cannot be determined with substantial accuracy, it may follow that the integrity of information created by a provision may not be the same as the integrity of information created by a real transaction.

In assigning semantics to the word 'provision', one can say that it is the action of earmarking something. To 'earmark' means "to keep in mind for a special purpose" or to set aside for a special purpose (Hornby 1981:273). A definition of provisions as supplied by Kirk (1999) as well as the AC130 accounting statement (Hemus *et al.* 2000) implies that a 'provision' is a liability of uncertain amount or timing. A provision represents a probable future cash outflow from the reporting company although the company does not know when or how much will be paid. A provision (book entry) based on uncertainty may not reflect the same integrity as information based on real transactions.

An aspect related to provision, namely a *future happening*, is described by Goldberg (2001:56): "The information available about any given set of circumstances is always about something which has happened, whether recently or long ago. (Part omitted). Any prognostication of future happenings is a matter of speculation, based, perhaps, on

deduction from logically recognized premises but none the less speculation about what might happen; its limitations are those of the absence of omniscience, not only about the status quo in total or in general, but also about the nature of the relationships between the numerous elements which constitute it and make it recognizable". If a provision is seen as speculation about what might happen, it is clear that the integrity of information created by book entries might not be the same as the integrity of information created by transactions that are based on facts.

4.3.5 Conservatism

Conservatism is an approach whereby a company makes an understatement of its net assets, rather than an overstatement, that is, the company paints a gloomier picture than is probably the case. This approach is normally followed when a company is confronted with some kind of uncertainty. Wild *et al.* (2001:98) view conservatism as outlined next: "Conservatism reduces both the reliability and relevance of accounting information in at least two ways. Firstly, conservatism understates both net assets and net income. (Part omitted). A second point is that conservatism results in selectively delayed recognition of good news in financial statements, while immediately recognizing bad news". When good news is delayed because of conservatism, it follows that information created in this manner would not have the same integrity as it would have had, had the good news been portrayed immediately.

When the principle of conservatism is applied, the accountant should be watchful that it is not just a way to smooth income, that is, to simply buffer the company against negative sentiment from the market. Hence, the changing of a company's depreciation policy or revaluation of their assets may be seen as a conservative move or as a way to smooth their income (Getschow, 1986). It is important to note in this regard that conservatism is realised by a book entry.

The fear factor often goes hand in hand with uncertainty. “Conservatism does not focus on evidence, but on the fear of overstatement of net assets and profits. It is an attitude that has become a convention in accounting. Misleading information can be the result” (Kam 1990:289). If conservatism is based on fear and not on reality, conservatism can lead to misleading information and thereby impair the integrity of information.

4.3.6 The use of ratios

Ratios are used as a popular tool to analyse financial statements. It is well known that a ratio is an expression of a mathematical relation between two quantities (Wild *et al.* 2001), and it is important that some sensible relationship exists between the two quantities under consideration. Computing a ratio is a simple arithmetic operation, but the interpretation of the answer is more complex. When the results are interpreted, the process requires “a mastery of a technical application of the analysis of the data and a number of relationships (or ‘ratios’) between commonly found components in many accounting reports (Part omitted). But the validity of applying such ratios should be addressed by relating them to the actual use of the report by the recipient(s)” (Goldberg 2001:54). For example, a company lending money uses certain ratios; investors in turn need a different set of ratios while the management of companies may need a third set of ratios. Ratios are made up of real information as well as artificial information. Real information is represented by real transactions and artificial information is based on book entries that may be concerned with the subjective opinion of management of some future happening. The combination of real and artificial transactions may have a big impact on the integrity of the information created by the outcome of a ratio. As with all information on which important decisions are based, users of ratios need to know that the value of any such ratio is beyond suspicion.

Table 4.2 below shows which ratios may be used as indicators of failure in companies. The information in the first three rows was researched and synthesised by the

researchers as indicated (Wild *et al.* 2001). Beaver in Foster (1986), conducted a similar survey of companies that failed and identified the set of ratios set out in the fourth row in Table 4.2.

Table 4.2: Ratios predicting failure (Author created)

Researcher	**Ratio as best predictor**
Winakor & Smith	1. Net working capital to total assets
Fitzpatrick	1. Return on net worth 2. Net worth to total debt
Merwin	1. Current ratio 2. Net working capital to total assets 3. Net worth to total debt
Beaver	1. Cashflow to total debt 2. Net income to total assets 3. Total debt to total assets 4. Net working capital to total assets 5. Current ratio

Beaver ranked the ratios used in his research from the most to the least indicative predictors of possible failure of a company:

- First: cash flow to total debt
- Second: capital structured ratios
- Third: turnover ratios.

Beaver found that the above ranking results for companies measured over a short period of time were the same as corresponding measurements taken over a much longer period of time (Wild *et al.* 2001). When analysing a company's financial reports,

it is very useful to know which ratios are indicators of failure and how to rank them. This will guide the decision maker in his or her approach to making the necessary decision. Some of the above listed ratios will be used in the analytical research of this dissertation to show the effect of book entries on information for decision-making purposes. Book entries, amongst other entities, are used in the calculation of these ratios. In using ratios that contain book entries or artificial information, one should take into account the possible effects of these entries. If a ratio is influenced by information of a lesser integrity, the result may lead to wrong decisions (Gouws 2003a).

Ratios may be classified according to either the company's trading (operating) record or their financial structure. The classification of these ratios and their subcategories, is stated by Ellis and Williams (1993) and is presented in more detail in Table 4.3 below:

Table 4.3: Ratio categories

Operating or activity ratios		**Financial ratios**	
A company's trading history		A company's financial structure	
Overall performance	Working capital ratios	Debt ratios	Liquidity ratios
Overall performance is measured	Control	Extent to which a company is financed by loan capital and its ability to service debt	Company's ability to meet any short-term cash requirements

(Ellis and Williams – adapted)

Table 4.3 effectively shows how ratios are classified into two categories and two subcategories each.

4.4 Depreciation and deferred taxation as examples of book entries

Depreciation and deferred taxation are offsprings of accrual accounting. Both depreciation and deferred taxation have matching and timing consequences (Wild *et al.* 2001). They are book entries that have observable effects on the financial statements of a company. Since these particular book entries are used for the financial analysis in this dissertation, a more detailed discussion is required.

4.4.1 Depreciation

Depreciation may be defined as a measure of consumption of a fixed asset. Depreciation is charged against the income statement but does not involve a movement in cash. "It is simply an artificial means of accounting for the degree to which a fixed asset is consumed in the accounting period. Hence, the notional funds set aside for depreciation are available to meet cash outgoings" (Ellis and Williams 1993:17). Depreciation has the effect of decreasing reported profits, while leaving cash flow unaffected. The allocation of a depreciation cost to the income statement has its origin in accrual accounting. The notional funds mentioned by Ellis and Williams (1993) are seen as internal funds for the replacement of a fixed asset. These internal funds are not available for other cash outgoings. Depreciation is often seen as a means of decreasing profit upon which the company will be liable for less income tax. It follows that the integrity of information is affected when a company makes use of a book entry to decrease their tax liability.

Depreciation is furthermore viewed as a recovery mechanism employed by the company of the investment in fixed assets out of selling prices even before a profit is realised (Wild *et al.* 2001). As mentioned above, depreciation recovers cash which should be utilised for the replacement of fixed assets. Profit or loss on the sale of a fixed asset is not a real profit or loss but rather an under- or over provision of depreciation. According to Lee (1984), the economic reality underlying the profit or loss on the sale

of an asset that came about when provision for depreciation was made, is in doubt, because there is a fall in either the selling price of the asset or in the cash flow generated from this sale. The profit or loss on the sale of a fixed asset is based on a calculation influenced by book entries and may affect the integrity of the information supplied on this event.

The definition of depreciation as previously stated by Ellis and Williams (1993) coincides with the definition Most provided. Most (1982:371) defines depreciation as “a measure of the planned (or expected) sacrifice of value of a fixed (capacity) asset necessarily resulting from [a] planned (or [an] expected) sequence of production operations. Depreciation expense, then, is the analysis of depreciation by periods of time, and depreciation cost, the analysis of depreciation by process or product”. According to Most (1982), any explanation of depreciation based on something that happened is false. It follows that depreciation cost may not be a retrospective calculation of the effect of something that has happened. To evaluate financial structure and analyse profitability, accumulated depreciation is not deducted from cost in order to calculate written-down value directly. The purpose may be to disclose data for calculating the following ratios: accumulated depreciation/gross cost of fixed assets and net income/total investment at cost.

If a company makes provision for the depreciation of fixed assets, it necessarily reduces the amount of profit available for distribution and thereby retains cash in the business; hence in theory the cash that is left in the business can be used for other purposes, for example, providing cash for future investment in fixed assets (Williamson 2003). The problem that managers of companies are faced within this regard is that this internal fund is hidden in the working capital. Hence, the spirit of this dissertation is to provide justification for the argument that an internal fund should be classified separately from the working capital and that such funds should be used for the replacement of fixed

assets. According to Wilson (1974:248) "... the sum of depreciation and retained earnings (i.e. the *cash flow*) is an important source of finance. (Part omitted). If depreciation allowances exceed the current level of capital expenditure, they may add to working capital, and eliminate the need for short-term borrowing. On the other hand, if depreciation allowances are exceeded by capital outlays, it may have the effect of depleting working capital, or requiring the company to borrow" (Refer to section 2.3.4). The creation of internal funds through the depreciation provision, therefore, appears to be one of the best ways to fund the replacement of fixed assets. The internal fund must, however, grow with inflation so as to prevent the problem of the fund being unable to meet future replacement of assets. In other words, if stakeholders are under the incorrect impression that such funds are sufficient for any future replacement of fixed assets, then decisions based on such compromised information may have severe effects on the future of the company.

4.4.2 Deferred taxation

Deferred taxation is based on timing differences. This viewpoint is shared by Mulford and Comiskey (2002) and Wild e*t al.* (2001). Mulford and Comiskey (2002) report that the deferred income tax expense has its origin mainly because of temporary differences between the book income (pretax earnings reported on the income statement) and taxable income, on which the current income tax is calculated and reported on the tax return, all for the same period. Book entries are mainly concerned with temporary or timing differences, hence deferred taxation is positively classified as a book entry. According to Wild *et al.* (2001), deferred tax liabilities will only become payable when a company starts to report losses. Since this future reversal is only a remote possibility, for instance, with timing differences due to accelerated depreciation, the deferred credit that exists may be viewed as a source of funds and therefore be classified as equity. Conversely, if the possibility exists that the reversal will take place in the foreseeable future, then the deferred tax may be classified as a long-term liability. Whether deferred

taxation is viewed as an asset or as a liability, a book entry is used to portray this provision in the financial statements of a company. Because deferred taxation is based on some future conditions and realities, deferred taxation may influence the integrity of the information.

Deferred taxation represents the cumulative difference between taxes calculated at the statutory rate and taxes actually paid. The difference reflects the tax outcomes, for future years, of the differences between the tax bases of assets and liabilities and their carrying values for financial reporting purposes. A further viewpoint from Wild *et al.* (2001) is that deferred income taxes (e.g. a deferred liability) are large and important entities. Deferred income taxes are not liabilities in the usual sense because the national receiver of revenue has no definite claim against a company, neither in the short-term nor in the long-term. Fridson and Alvarez (2002:300) asked the following question: “Are deferred taxes part of capital? Near the equity account on many companies' balance sheets appears an account labelled *Deferred Income Taxes*”. Many analysts argue that a company's net worth is understated by the value of the deferred tax liability, since it will in all likelihood never become payable and is therefore not a liability at all. According to Fridson and Alvarez (2002), proponents of this view adjust the company’s net worth by adding deferred taxes to the denominator in the total-debt-to-total-equity ratio, for the alleged understatement. The above statement highlights another instance where the integrity of information created by book entries is not the same as the integrity of information created by real transactions.

4.5 Summary and conclusion

In this chapter it was observed that the practice of accrual accounting overcomes both the timing and matching problems inherent to cash accounting. An important aspect that emerged in Chapter 2 was reinforced above, namely that there is a difference between the integrity of information created by *real transactions* and the integrity of information

created by *book entries*. Reliance on the integrity of information supplied in the financial statements of a company is an important concern for any stakeholder. Ratios that are influenced by book entries do not supply information with the same integrity as ratios that are not influenced by book entries. This claim will be substantiated in Chapter 7 which contains the results of the analytical research.

In Chapter 5, the smoothing of income, big baths and earnings management are discussed and it is shown how conservatism and matching may lead to these practices. All these effects are brought about by book entry accounting. Book entries may therefore be very powerful tools in the hands of an accountant.

5 The role of book entries in income smoothing and big baths

5.1 Introduction

When companies come under increasing pressure during economic turbulence, managers usually turn to the accounting department to improve the bottom line and thereby change the information content of the company. Accounting, though very flexible, does not seem to be able to supply management with useful information under these circumstances (Hope and Hope 1996). Information for decision-making is rather complex because there are different kinds of decision makers, such as investors (since they need to know how profitable and stable a company is before investing), managers (they need to know the financial position of a company), banks and lenders (they need to know that the company will be able to repay any loan).

In this chapter the techniques of income smoothing and big baths (which originated from book entries), for changing the information portrayed in financial statements, are discussed. In particular, the differences between these two concepts are considered and examples of each are presented; the reasons why these techniques are employed in practice are discussed and applications of income smoothing through the use of book entries are considered. A summary concludes this chapter.

An important technique sometimes applied in a company is *earnings management,* which may be defined as “a purposeful intervention by management in the earnings determination process, usually to satisfy selfish objectives” (Wild *et al.* 2001:120). Earnings management is used by managers to manipulate information, for example, to smooth the bottom line and thereby build investors’ confidence. However, such actions may affect the information provided in the financial statements quite considerably. There are numerous ways in which book entries can be utilised to manage earnings. In

extreme cases book entries may be used to commit fraud while in other cases book entries may be used as a strategic tool in earnings management. In applying earnings management, company managers know the goals they are pursuing – usually to the benefit of the company, but not always to the benefit of other stakeholders.

The practice of earnings management is facilitated in the flexibility of GAAP as well as the many possible interpretations of some of the principles put forward in GAAP. It is mainly this flexibility that gives rise to book entry accounting's diversity. When interpretation of a principle is very flexible, the integrity of the information reported on in the financial statements becomes rather vulnerable. Matching and conservatism (discussed in Chapter 4) may also lead to earnings management. According to Getschow (1986), the Union Carbide Corporation increased their first quarter profit without adding cash by applying more liberal accounting methods for depreciation, investment tax credits and interest cost incurred during construction. They insisted these were done to present more realistic financial statements and to make their accounts more compatible with that of other chemical producers. Analysts and auditors called this "accounting magic", yet all this was done within the rules of GAAP. Studies have revealed that company managers willfully manipulate reported profits to fit their own intentions by selecting certain accounting policies, changing accounting estimates, and manipulating accruals (Yoon and Miller 2002). Of course, as soon as profits are manipulated, their integrity is in the balance, especially if the manipulation is based on personal intentions, incentive schemes or both.

Analysts expect companies to meet forecasts and not to deviate from these, not even by one cent, particularly if it is a reliable company. Stock market analysts and investors seem to assume the worst when such a forecast is missed — even by as small an amount as one cent (Collingwood 2001). These surprises may be negative or positive, although it appears that negative surprises have much less influence on the markets because "investors will not be much more disturbed by a 30% drop in earnings than by

a 20% drop" (Fridson and Alvarez 2002:11). Hence, negative surprises seem to be tolerated by the market more than positive surprises. Of course, listed companies want to impress the stock markets and attempt to follow the stock market sentiment of having no "surprises" in store when reporting their results.

It appears that two sentiments prevail when it comes to earnings management. In the first case stakeholders seem to regard earnings management as fraud, whereas in the second case stakeholders judge such action to be company management using their discretion. "In contrast to interpreting smoothing as an abuse of flexibility in reporting, we argue that rational managers, who try to maximize the value of their firms, may be using their reporting discretion, within the confines of acceptable accounting and legal requirements, to maximize the value of the companies they manage" (Kirschenheiter and Melumad 2002). Therefore, it all depends on the company's management. If management wants to reach certain strategic goals to the detriment of the outside stakeholders, it would possibly be seen as fraud and certainly as self beneficial. If information portrayed in the financial statements is changed to the detriment of outside stakeholders, the integrity of the information may be impaired.

Hunt, Moyer and Shevlin (1997) examined whether management discretion reflected in income smoothing is associated with equity value or not. The results from their study indicated that lower earnings volatility arising from both accrual accounting practices and accrual management is associated with higher market value of equity. When management's personal discretion results in the lowering of earnings volatility, the integrity of the information portrayed in the financial statements may be influenced.

Playing the 'financial numbers game', as earnings management is sometimes called, may have a definite negative effect when discovered. "Using creative accounting practices, management can alter impressions about their firm's business performance. Assessments of corporate earning power can be rendered inaccurate, leading to

inappropriate prices for debt and equity securities. When resulting misstatements are discovered, the markets can be unforgiving, causing precipitous declines in debt and equity prices" (Mulford and Comiskey 2002:8). Thus, markets may be very unforgiving when a company is caught red-handed, and future trust is likely to be influenced by this. When future trust is influenced because of book entries, the integrity of the information in the financial statements may be compromised.

5.2 Big baths and income smoothing

A *big bath* is defined as a process undertaken by a company when the latter suffers a quarterly profit decline too large to wipe out through discretionary items. Under such circumstances the company may decide to 'take a big bath' in an attempt to maximise the reported setback. The idea is to portray a larger loss in the current quarter followed by a larger profit during the next quarter. This is achieved by incorporating future expenses into the current quarter instead of the next quarter. The effect is that management is able to report larger (positive) earnings in the following period (Fridson and Alvarez 2002). The 'big bath' phenomenon is really a means of getting rid of old baggage, for instance, goodwill.

Smoothing of income is a way of removing volatility in earnings by levelling off the earnings peaks over a number of years and raising the valleys over the same period. Steps are therefore taken to reduce and 'store' profits during good years for use during slower years (Mulford and Comiskey 2002). Income smoothing may be successfully applied, without questions from the stakeholders, either when investors are 'naive' and ignore management's ability to manipulate earnings, or 'sophisticated' and correctly infer management's disclosure strategy (Kirschenheiter and Melumad 2002). Investors may be harmed by income smoothing if it is used as a strategic tool by management. Some investors do not ignore management's ability to smooth, they are simply uninformed or ignorant. Both the application of a big bath and the smoothing of income is generically referred to as *earnings management* or creative accounting. Information

based on earnings management and creative accounting may result in information with a different integrity than information resulting from real transactions.

5.3 Big baths versus income smoothing

Income smoothing is a practice that is rather common and can stretch over a period of several years whereas the 'big baths' phenomenon is more of a once off practice since it is based on the unusual or nonrecurring nature of a transaction. In a way, income smoothing and big baths are, therefore, two opposite techniques – at least as far as the frequency of application is concerned.

Berton (2000) reports that a SEC chairman, Arthur Levitt, at some stage warned auditors and their clients to avoid abuses of earnings management. The areas he focussed on were: 1. the big bath; 2. merger magic; 3. cookie jar reserves; 4. materiality abuse; and 5. revenue recognition. Earnings management takes on various forms but occurs, without fail, via book entries. A book entry is therefore a powerful tool with which a company may stretch accounting principles to their utmost limit and thereby compromise the integrity of any information based on such entries.

The following section gives an example of the application of a 'big bath':

Example 5.1: A big bath scenario

Suppose company A knows that it is going to miss the stock markets forecast for the current quarter. Subsequently, management decides to increase their loss from R20 000 to R50 000 as follows:

(1) They write off an amount of R10 000 for goodwill that is still on their balance sheet after an unsuccessful acquisition.
(2) They accelerate their depreciation resulting in an additional loss of R15 000.
(3) They write off an R5 000 outmoded asset.

Steps (1) - (3) above enable the company to show an additional R30 000 profit in the next reporting period, helping investors to believe that the company bounced back. Note that company A cleverly managed to embark on a win-win situation as follows:

(1) Although the loss of the current period has increased from R20 000 to R50 000, chances are that this may not have much effect on investors' sentiment, since stakeholders seem to tolerate negative market surprises better than positive surprises (see section 5.1 above).

(2) The profit for the next period is increased.

The big bath technique described above may be captured in the form of a graph:

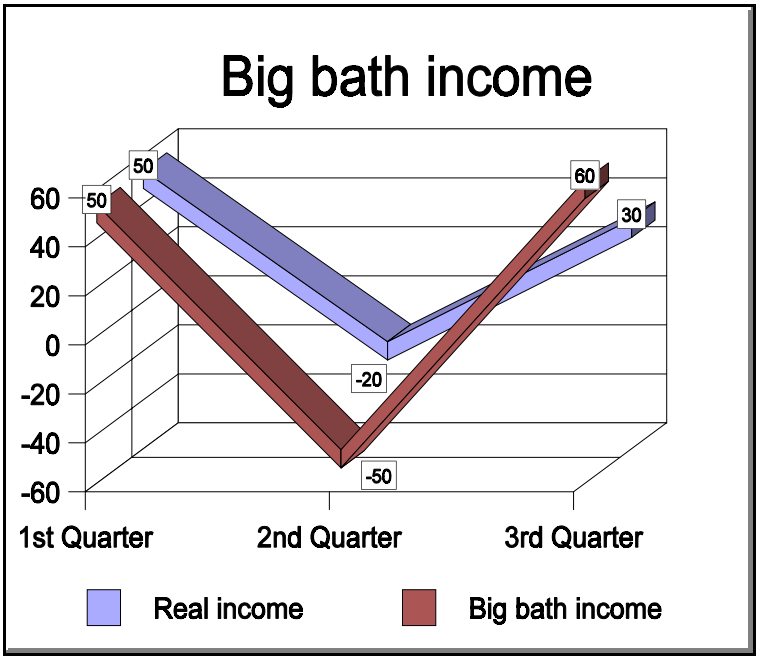


Figure 5.1 An illustration of a big bath

Example 5.2: An income smoothing scenario

Suppose management of company B decide that they should smooth out all volatility

from their reported profits to show a more consistent picture for the period 1997 to 2002:

(1) In 1997 they decrease their profit from R80 000 to R30 000 and hide the reserve (expecting a loss in 1998) to help the company show a profit of R10 000 instead of a loss of R40 000 in 1998.

(2) In 1999 (R100 000 profit decreased to R50 000) they carry on with this trend because they expect a loss in 2000 (a loss of R30 000 decreased to show a profit of R20 000).

(3) In 2001 they project a loss of R50 000 in 2002. Hence they accelerate their depreciation charge which results in an additional R25 000 expense and they write off R35 000 purchased in-process research and development. The result is to drop the R90 000 profit in the current year (i.e. 2001) to R30 000 and the expected loss of R50 000 in 2002 turns into an R10 000 profit. Although there is still a decline in the profit, it is not to the detriment of the company.

The scenario outlined in Example 5.2 is represented below in graph from:

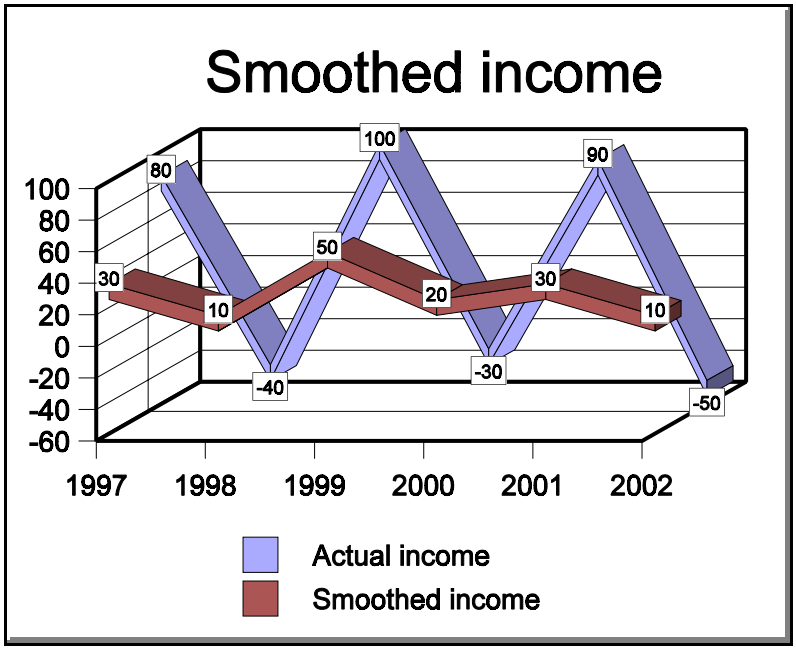


Figure 5.2 An illustration of smoothed income

5.4 Why do companies make use of earnings management?

A statement from the Financial Times of 26 September 1991 clearly illustrates that book entries are being used to juggle profits: “Profits are not necessarily a reliable measure of a company’s performance. Companies can adjust profits to suit their own purposes by using provisions” (Ellis and Williams 1993:169). There are numerous reasons for managers to manage earnings; most of these have to do with the stock market and the increase of a company’s value. Hence, earnings management may also be used as a strategic tool by managers of companies. Specific reasons for applying earnings management in the form of the smoothing of income or taking a big bath is presented in sections 5.4.1 and 5.4.2 below.

A reliable way to detect earnings management is to compare a company’s reported operating profit with the cash flow. If the operating profit is healthy but there is a net cash outflow, the company is making use of creative accounting (Ellis and Williams 1993). If a company has an ever increasing operating profit, there cannot be a net cash outflow all the time, hence the company is certainly manipulating their profits through the use of book entries. A book entry is one way of differentiating between cash and profit. Companies cannot create cash but they can enhance their profits. Enhancing of profits takes place through the use of book entries.

A concept closely related to earnings management, called *gaming*, is the withholding of new investments to a company. The Du Pont company (Johnson and Kaplan 1991) started to calculate their return on investment on gross earnings and investments (i.e. before depreciation is taken into account) and not on net earnings (i.e. after depreciation has been subtracted). Du Pont started to follow this practice after they decentralised their multi-divisional structure in 1920. Managers who are the *owners* of a company will most certainly not partake in gaming behaviour, that is withholding new investment, but managers who are also *employees* and have less self-interest in the company may decide to partake in gaming behaviour. When withholding new investment and return

on investment figures are calculated on the net of earnings and investment, the rate of return on investment will rise. The only way to reduce the likelihood of gaming behaviour is to measure earnings and investments without taking any deductions for depreciation into account (Johnson and Kaplan 1991). Nowadays such gaming behaviour may be viewed as earnings management. If it is taken one step further and companies accelerate their depreciation rate then such action might be viewed as conservatism, or as a way whereby earnings could be manipulated. In fact, the dividing line between conservatism and the manipulation of earnings appears to be rather thin. Both conservatism and the manipulation of earnings take place through the use of book entries and may therefore influence the integrity of the information provided in the financial statements.

5.4.1 Reasons for income smoothing

There are various reasons for income smoothing, some of which facilitate decision-making, while others are less useful in this regard. Smoothing may be associated with the size of the company, the existence of bonus incentive schemes, and a deviation of actual earnings from forecasted expectations (Yoon and Miller 2002). Management may be more inclined to manipulate income if these incentives are based on a company's profits.

Below are some of the reasons for applying income smoothing:

(1) Reported income is decreased or increased appropriately so as to reduce its overall *volatility* (Wild *et al.* 2001).
(2) Income smoothing may "convince potential debt holders that earnings have lower *volatility*, and hence represent a reduced risk. Since debt can be raised at lower cost, smoothing increases the expected cashflow to shareholders" (Kirschenheiter and Melumad 2002).
(3) Smoothing may help to meet the analyst's expectations of a *steady* rise in earnings,

even at the cost of not delivering the highest possible return to shareholders (Collingwood 2001).

(4) Owners feel more confident towards a company that reports *stable* earnings (Hepworth 1953).

(5) A relatively *stable* level of periodic income may improve management's relations with investors and employees alike (Hepworth 1953).

(6) Income smoothing may maximise the *value of a company* (Kirschenheiter and Melumad 2002).

(7) External demand to increase the *company's stock price* may be achieved by smoothing (Kirschenheiter and Melumad 2002).

(8) Smoother income levels permit higher *dividend rates* (Gordon 1964).

(9) Smoothing may increase a *manager's compensation* if tied to reported earnings (Wild *et al.* 2001).

(10) The allocation of *government subsidies* may depend on the successful application of income smoothing (Wild *et al.* 2001).

(11) Companies smooth their profit levels to lower their *tax burden* (Getschow 1986).

The above items may be classified into categories concerned with lowering the volatility of a company's earnings (or stabilising earnings), increasing the value, dividends and stock price of a company and aspects directly related to money (i.e. increase manager's compensation, increase subsidies and decrease company tax). It follows that the actions underlying all these items aim to change the information content of the financial statements, thereby influencing the integrity of the information.

5.4.2 Reasons for applying a big bath

Next, some reasons for applying a big bath are given below:

(1) A big bath may be applied when a company believes that the *market sentiment* would not be influenced when earnings drop by for instance, 10% more than

expected — it becomes easy to get rid of old baggage. This sentiment is shared by Fridson and Alvarez (2002:11): "... investors will not be much more disturbed by a 30% drop in earnings than by a 20% drop. (Part omitted). It may also be a convenient time to recognize long-run losses in the value of assets such as outmoded production facilities and goodwill created in unsuccessful acquisitions of the past".

(2) Because of *Wall Street's response*, some companies believe that if they were going to miss the Wall Street forecast, they might as well fall short of expectations (Collingwood 2001). Companies falling short of expectations take the opportunity to write off failed investments or bad debts, or sell unwanted assets at a loss.

(3) Companies make use of big baths to *clear their balance sheet* by removing large expenses from the balance sheet during a particular financial year. The company then miraculously 'revives' the following financial year when estimates of charges are lower and higher earnings emerge in future (Berton 2000; Collingwood 2001). Investors might incorrectly believe that the company had a big turnaround if they do not have access to the correct information.

(4) A lower basis of *comparative figures* from subsequent quarters is established by introducing a big bath (Collingwood 2001).

The actions implied by each of the four items above may aim to yet again change the information in the company's financial statements, influencing the integrity of such information.

5.5 Applying income smoothing through book entries

A book entry is the main tool whereby income smoothing is achieved. Many different kinds of book entries may be used:

(1) *The depreciation and amortisation book entry*: Mulford and Comiskey (2002) claim that depreciation is one of the most popular areas where smoothing is applied. With

depreciation the company can change the method of depreciation and/or change the useful lives of fixed assets. In the case of goodwill a company may change the period of amortisation as well. If the method of depreciation or amortisation is changed, it may be seen as conservatism, the directors might have decided to look at other companies in the same market segment and then adjusted their policy accordingly.

(2) *The allowance book entry*: Mulford and Comiskey (2002) report that allowances are also popular mechanisms to employ. These include the allowance for uncollectible accounts, loans receivable, warranty obligations and deferred taxation. Most of these allowances are subjective in nature and do not enjoy the same integrity as real transactions.

(3) *The under or over provision book entry*: Kirschenheiter and Melumad (2002) present the following viewpoint "If the news is 'good', the manager smooths earnings, with the amount of smoothing depending on the level of cashflows observed. He either over-reports or partially under-reports for slightly good news, and gradually increases his under-reporting as the news gets better, until he is under-reporting the maximum amount for sufficiently good news. This result holds both when investors are 'naive' and ignore management's ability to manipulate earnings, or 'sophisticated' and correctly infer management's disclosure strategy". Under- or over-reporting of profits may influence the integrity of information quite considerably. The information the investor will be using is influenced by book entries and is furthermore based on the subjective view of a manager.

(4) *The reserve book entry*: As reported above, income smoothing involves hiding through creative reserves or "earnings banks" a portion of earnings during profitable years, and then reporting these earnings in less profitable years (Wild *et al.* 2001). Hence, the volatility of earnings may be removed with the use of book entries whereby investor confidence is boosted.

(5) *The classification book entry*: This takes place when expenses are being reported together with extraordinary and nonrecurring items that are usually given less

importance by analysts (Wild *et al.* 2001). If an expense that is usually reported above the line, suddenly gets reported below the line, analysts will not be influenced unless they realise what has happened.

(6) *The allocation book entry*: This category groups together the assignment of costs of depreciable assets to manufactured inventories, period expenses, and amounts reported on year-end balance sheets. Costs of inventories and supplies are assigned to period expenses and closing inventories (Thomas 1975).

(7) *The amortisation book entry*: Amortisation of prepaid insurance, pensions, leases and goodwill fall under this category (Thomas 1975).

(8) *The write-down book entry*: This book entry covers the writing down of inventories, standby equipment and marketable securities to market value, thereby charging portions of their cost against current income (Thomas 1975).

(9) *The deferred book entry*: Tax and other deferrals are covered by this book entry (Thomas 1975).

(10) *The channel stuffing book entry*: Channel stuffing is performed when goods are sold to customers who did not order them or do not need them, in which case special discounts are granted (Collingwood 2001).

(11) *The matching book entry*: This book entry has to do with the timing of transactions, that is, whether a transaction should be recorded during the current period or the next. This is a managerial decision rather than an accounting choice. This particular book entry is the most direct and influential method for applying income smoothing (Wolk, Francis and Tearney 1992).

(12) *The classification book entry*: The question that needs to be asked in this case is whether a transaction should be classified as operating income or nonoperating income (Wolk *et al*. 1992).

5.6 Book entry accounting and its effect on information

From the above discussion it follows that book entries are used to manipulate earnings in various ways. The information portrayed in the financial statements of companies

must be fair and reliable. According to the Trueblood Committee the most basic objective of financial statements is to provide information on the basis of which economic decisions will be made (Wolk *et al*. 1992). The information provided in the financial statements should be transparent and relevant to the specific decision maker. Brimson (2002:36–40) wrote an article entitled "Accounting charlatanism of information fog?" in which an analysis of the downfall of Enron is presented. This case study highlights the current deficiency of accounting to provide financial transparency. Stakeholders inside as well outside Enron were caught by surprise – the available financial information did not supply any warning signals in advance.

An important primary focus of financial reporting is presenting information about a company's performance provided by measures of earnings and their components (Kirschenheiter and Melumad 2002). When a company smooths its earnings, the information about a company's performance is influenced. Earnings quality should be measured in terms of its usefulness to the readers of financial statements in their decision-making. Earnings that do not portray the real picture may not be useful to stakeholders who need to make decisions on the basis of the information provided. Managers use their discretion in income smoothing, hence communicating their private information in the process. The result is subjective information, leading to equally subjective decision-making.

Two more properties of information provided in the financial statements are reliability and relevance. *Reliability* is defined by Kirschenheiter and Melumad (1997:50) as "the *quality* of information that assures that information is reasonably free from error and bias and faithfully represents what it purports to present". Reliability implies something about the usefulness of the information but not about the decision-making effectiveness. When tampering (smoothing) occurs, the information may not be free from bias and might not be reliable. *Relevance* poses another problem when income smoothing exists. *Relevance* is defined by Kirschenheiter and Melumad (1997:50) as the: "*capacity* of

information to make a difference in a decision by helping users to form predictions about the outcomes of past, present, and future events or to confirm or correct prior expectations". However, since information is often influenced by book entries, information may lose some of the "quality" and "capacity" outlined by Kirschenheiter and Melumad.

Fortune (1980:155) argues that companies are reporting useless numbers, for if a company is supposed to report relevant information to decision makers but they use "arcane rules", dating back to the "fifteenth century", they provide investors with very little information that is of practical value for decision-making. Information obtained through income smoothing does convey relevant information for the prediction of future earnings, provided that management has some knowledge about the company's future earnings (Barnea, Ronen and Sadan 1976). This is achieved through the application of classificatory smoothing of income with extraordinary items.

In a survey conducted by Mulford and Comiskey (2002), 121 of the respondents indicated that income smoothing may harm investors and 66 indicated that income smoothing may actually help investors. One respondent indicated that accounting should be results neutral, that is, it should simply report what has happened without affecting the actual results.

5.7 Conclusion

This chapter explored the techniques of earnings management in the form of income smoothing and big baths. Reasons why these two techniques prevail in practice were presented.

However, not all income smoothing is undesirable. Some "window dressing" may be harmless, as long as it does not become addictive and results in management resorting to desperate measures if dearly hoped-for earnings cannot be realised during a certain

period (Getschow 1986). When a company uses income smoothing as a strategic tool, they should however be careful that income smoothing does not harm any of the stakeholders. It is important that the company keeps on building trust. In order to do so they must make proper use of sound and trustworthy accounting techniques whereby the integrity of the information that is reported to the stakeholders is beyond any reasonable level of suspicion.

The next chapter covers the research methodologies that were followed in this dissertation.

6 Research methodology

6.1 Introduction

This chapter presents an overview of the research methods that were used in this work. Three recognised methods were used, namely, a literature survey, an analytical study and a questionnaire (Ryan *et al.* 2002). A comprehensive literature survey was undertaken, an analysis of no less than 30 companies listed on the JSE was conducted and a questionnaire was prepared and sent to a large number of listed companies and analysts. The author also has a number of years experience related to these issues in the industry.

6.2 Literature survey

Probably one of the best modern ways to conduct a comprehensive literature survey is to make use of the Internet and the world-wide-web (www). These powerful software tools contain a number of search engines to facilitate a search for a topic over and above the conventional way of browsing through hard copies (i.e. books, journals, microfiche, etc.) in a library. These search engines are linked to various web sites around the world which can be searched using suitable keywords.

Searches on the Internet do, however, present a number of challenges. A specific keyword or phrase must be used. It is of little use to search for a word out of context because the Internet can come up with thousands of irrelevant references. According to Du Toit (2002) there are five rules that must be followed when conducting research on the Internet:

(1) Be specific with search words (e.g. spelling, synonyms, singular).
(2) Try several search engines.
(3) Test the trustworthiness of web sites.

(4) Stay current and informed.
(5) Occasionally use traditional sources.

The Internet searches were mostly done through the University of South Africa's (UNISA) electronic library (called Oasis). Another useful search engine used, was Google (www.google.com). Some journals are available electronically in Portable Document Format (PDF) which facilitates the tasks of downloading and printing.

A number of articles and books were read in full, while for others the indexes containing the keywords relevant to this study were consulted. Of course, when working through the references listed in books and articles, a gold mine of additional articles and books was usually revealed.

6.3 Analytical research

The analytical research component entailed the analysis of the financial statements of 30 listed companies. A worksheet was created in Microsoft Excel® for each company making use of the financial statements published on the McGregor BFA database. Information from the five-year summary of the financial statements was imported electronically while information needed from the notes to the financial statements was added manually.

The companies selected were chosen either because they are relatively well known or because their provisions are reported in compliance with GAAP. The following 30 companies were selected for this research:

Table 6.1: List of companies selected for research purposes

Nr.	Company name	Period	Nr.	Company name	Period
1	Amlac Limited	1996-2000	16	Murray & Roberts Limited	1998-2002
2	Avis Limited	1998-2002	17	Mustek Limited	1998-2002
3	Canadian Overseas Packaging Industries Limited	1998-2002	18	Pick 'n Pay Stores Limited	1998-2002
4	City Lodge Hotels Limited	1998-2002	19	Pretoria Portland Cement Company Limited	1997-2001
5	Comair Limited	1998-2002	20	Putco Limited	1998-2002
6	Concor Limited	1998-2002	21	Rainbow Chicken Limited	1998-2002
7	Edcon Limited	1998-2002	22	Richemont Limited	1998-2002
8	Energy Africa Limited	1998-2002	23	South African Breweries Limited	1998-2002
9	Foschini Limited	1998-2002	24	Sappi Limited	1997-2001
10	Grintek Limited	1998-2002	25	Sasol Limited	1998-2002
11	Highveld Steel & Vanadium Corporation Limited	1997-2001	26	Shoprite Holdings Limited	1998-2002
12	Iscor Limited	1998-2002	27	Siltek Limited	1996-2000
13	IST Group Limited	1999-2002	28	Sun International (South Africa) Limited	1997-2001
14	Italtile Limited	1998-2002	29	Tiger Wheels Limited	1998-2002
15	Mr Price Group Limited	1998-2002	30	Woolworths Limited	1998-2002

Ratios that contain the deferred taxation and accumulated depreciation provisions were used to show the differences in decisions that are crucial to a company and its outside stakeholders. The choice of ratios was based on ratios identified by various researchers (refer to Chapter 4) as predictors of failure as well as other ratios that are of importance in decision-making. Ratios were adjusted by reclassifying accumulated depreciation and/or deferred taxation.

6.3.1 Ratios adjusted by reclassifying accumulated depreciation and deferred taxation

(1) Return on investment ratio

This ratio measures how well all assets in a company are managed (Kinserdal 1995).

$$\text{Return on investment} = \frac{Net\ income + interest\ expense * (1 - tax\%)}{Average\ total\ assets}$$

(a) Firstly, the ratio is used as in the traditional way.

(b) Secondly, the depreciation provision for the period is added to the net income (nominator) and accumulated depreciation is added to the denominator (which appears below the line), to eliminate the effect of depreciation in the ratio.

(2) Return on equity ratio

The return on ownership capital is measured when this ratio is used (Kinserdal 1995).

$$\text{Return on equity} = R + (R - i) * \frac{Liabilities}{Equity}$$

R represents the return on investment.

(a) Firstly, the ratio is used as in the traditional way.

(b) Secondly, for this research the ratio is adjusted by reclassifying accumulated depreciation and deferred taxation. The accumulated depreciation and deferred taxation are added to equity and deferred taxation is deducted from the long term liabilities.

(3) Fixed assets: Equity capital

This ratio is applied to measure the relation between long-term assets and equity (Wild *et al.* 2001).

$$\text{Fixed assets: equity capital} = \frac{Fixed\ assets}{Equity}$$

(a) Firstly, the ratio is used in the traditional way.
(b) Secondly, accumulated depreciation is added to the book value of fixed assets and to the equity.

(4) Cost of capital

The weighed average cost of capital (WACC) was used to calculate the cost of capital.

(a) Firstly, the ratio is used in the traditional way.
(b) Secondly, the accumulated depreciation and deferred taxation are added to the equity.

(5) Long-term-debt-to-total-equity ratio

This ratio measures the relation of long-term debt (all noncurrent liabilities) to equity capital (Wild *et al.* 2001).

$$\text{Long-term-debt-total-equity} = \frac{Long\ term\ liabilities}{Equity}$$

(a) Firstly, the ratio is used in the traditional way.
(b) Secondly, the ratio is adjusted for the deferred taxation by adding it to equity and deducting it from debt, thereby reclassifying deferred taxation as equity rather than debt.

(6) Gearing ratio

This ratio relates a company's total borrowings to capital employed.

$$\text{Gearing ratio} = \frac{Total\ noncurrent\ liabilities}{Equity}$$

(a) Firstly, the ratio is used in the traditional way.

(b) Secondly, the deferred taxation is classified as equity and not debt. In other words, deferred taxation is deducted from noncurrent liabilities and added to equity.

(c) Thirdly, as in the second instance, but accumulated depreciation is now also classified as equity.

(7) Book entries as a percentage of crucial elements in the financial statements

(a) The two major book entries namely, accumulated depreciation and deferred taxation were added together and expressed as percentages of:

- equity
- turnover
- cash from operations and operating activities
- profit attributable to shareholders.

This was done to show the substantial effect of book entries on the financial statements.

(8) A few ratios that may be useful to a company to see if they are able to generate internal funds were also tested and compared to a study done in Spain (Martínez Bobillo *et al.* 2002).

(a) INVEFF = Increase in fixed assets/Book value of fixed assets at beginning of period.
(b) SIFA = Sales increase/Book value of fixed assets at end of period.
(c) CFFA = Cash-flow/Book value of fixed assets at end of period, where cash-flow represents turnover plus depreciation provision for the period.

(9) Working capital ratio

This ratio was adjusted for the internal fund that may be created by the provision for deprecation. It was done as follows:

(a) Working capital was calculated in the traditional manner, deducting current liabilities from the current assets.
(b) Secondly this ratio was adjusted by deducting the accumulated depreciation (internal fund) from the current assets and adding back the acquisitions of fixed assets to replace fixed assets.

6.4 Questionnaire

A questionnaire can be a very important tool during research. To compile a proper and comprehensive questionnaire is potentially a very time consuming exercise. Once it has been compiled, methods of disseminating a questionnaire include:

(1) hard copies using the postal services;
(2) facsimile; and

(3) electronic mail (i.e. e-mail).

Each of these methods has its own advantages and disadvantages. The advantage of sending a hard copy using the postal services is that it arrives in the same style and font as intended by the sender. Obvious disadvantages of ordinary mail are that it is slow and mail may be misplaced, destroyed or lost. An advantage of a facsimile is that it is faster than ordinary mail, but some disadvantages are that it may be unreadable for the receiver because of a break in the transmission or a paper jam that has arisen at the receiver's side, or the print quality may simply be poor. The sender would not be able to establish this. Sending a facsimile may also be a time-consuming process — the number dialled may be engaged or out of order and every number must be dialled separately. E-mail appears to be the best of the three options. When an e-mail is sent, the potential respondent receives it almost immediately, making it easier to respond, and thereby making this method one of the fastest available. The disadvantages of e-mail are: the server could be down, the e-mail address may be invalid, or (the primary disadvantage) a company might have a general e-mail address that works like the Bermuda triangle. Unless you have the name or specific e-mail address of the potential respondent, the mail may be misplaced or even ignored.

A questionnaire was compiled in both MS Word 2000® and Corel Word Perfect® 8 formats to test the use of book entries and their effect on the integrity of information. A personal definition of a book entry was also requested as no formal definition could be found in the literature.

The following sequence of events was used to prepare, send and then analyse the responses from the questionnaire:

Step1: Setting up the questionnaire

Taking into account, the sensitivity of the matter, statements were compiled on the basis of the literature survey and results from the analysis of the financial statements. It is difficult to convey the real meaning of a statement without offending one or more potential respondents when dealing with a sensitive issue. Having compiled the questions, staff members of UNISA's Department of Statistics were consulted with regard to validity of questions and potential problems. The questionnaire is presented in Appendix B and a discussion of the questionnaire is given in Chapter 7.

Step 2: Preparing an electronic mailing list

In order to send the questionnaire to all the listed companies, a database was exported from the McGregor BFA database to Microsoft Excel®. It contained the names, addresses, telephone numbers, fax numbers and e-mail addresses of 456 listed companies. Despite the electronic age, only 382 companies had e-mail addresses listed on the database, hence these companies were targeted as respondents. Some of the listed companies are analyst companies. Only the opinions of financial managers and analysts of financial statements were requested.

Getting hold of analysts was somewhat more of a challenge. PSG-Online was firstly contacted for responses. Mr Chris Wehmeyer was most helpful and referred the author of this dissertation to the JSE.co.za web site for the names of analyst companies. In addition, Ms Ann-Marie Wood of the Investment Analyst society referred one analyst, who completed the questionnaire.

Step 3: Sending out the questionnaire

A total of 384 (350 companies, 32 analyst companies and 2 individual analysts)

electronic questionnaires were sent out. A generic message was compiled to direct the mail to the financial manager. Each e-mail address was copied in Microsoft Excel® and thereafter transferred to the Novell GroupWise® e-mail facility. For the purposes of anonymity and confidentiality the e-mails were sent as blind copies to the different companies, meaning the companies could not see each other's names. Two copies of the questionnaire (one in MS Word and one in WordPerfect) were attached to the generic message before being sent to the recipients.

Step 4: Receiving the responses

The first completed questionnaire was received less than 24 hours later. A number of questionnaires were not delivered. Thirty-nine (39) e-mails bounced back because the e-mail addresses did not exist, another three were blocked by a firewall and two were quarantined. This left 340 responses that could be expected.

Step 5: Recording of the responses

A record of all responses was kept on the MS Excel address list. Some companies replied to the e-mail which made it easy to match the reply with the original mail but some companies replied by fax which complicated the matching process. On some faxes no company name or fax number was indicated. The reason why a record had to be kept was that a follow-up e-mail was sent to all companies who did not respond to the first e-mail. To remind a company that had already responded would be unprofessional. Unfortunately this happened in three cases because the financial manager was also the financial manager of another company on the list.

Step 6: Follow up

Two weeks after the first e-mails were sent out, a reminder was sent to all outstanding

responses. At this stage a total of 21 completed questionnaires had been received. The cut-off date was set at exactly eight weeks after the first questionnaire was sent out.

Step 7: Processing of results

A summary of responses was made on Microsoft Excel® to help with the initial conclusions. While conclusions were drawn from this summary, the Department of Statistics at the University of Pretoria performed the bulk of the processing. The results are presented in Chapter 7 of this dissertation.

7 Results of the literature study, the analytical research and the questionnaire

7.1 Introduction

This chapter describes the results that were obtained from the literature survey, the analytical survey of various companies and the questionnaire. Firstly the outcomes of the adjusted ratios are discussed, whereupon the responses to the various questions stated in the questionnaire are analysed. The chapter closes with some general comments provided by respondents to the questionnaire.

7.2 Literature study

Most of the literature that was consulted in the research to this dissertation, support the statement that the information generated from book entries seriously affects the integrity of financial statements. Many authors (Ellis and Williams 1993; Griffiths 1995; Mulford and Comiskey 2002), and researchers have different names for the use and misuse of book entries. It is called “the financial numbers game”, “creative accounting” and “smoothing of income”.

The truth of the matter is that book entries may be used to manipulate financial statements in order to reach a certain result. In this way companies have a powerful strategic tool with which they may influence decisions taken by internal as well as external stakeholders.

The following statements and quotes from the literature study emphasise the hypothesis that was stated in Chapter 1. The statements and quotes may be classified into three broad categories:

1. Users of financial statements and their information needs

According to Lee (1984) more attention is devoted to the challenges of financial reporters and auditors than to the needs of the users of financial reports. The use of profit in distribution is one of the decision-making areas that is based on a man- made construct with no tangible form. Lee also claims that formal accounting practices do not provide sufficient information regarding the liquidity position of the company.

The Brigham Young University has started to implement a business events approach to the accounting curriculum and their views on information supplied to users boil down to claims that the information views of financial statements are not uniform or stable. When focussing on the event, information portrayed in the financial statements, may be much more uniform and stable. In accounting the biggest problem that is faced information wise, is the number of different users that are concerned, each with a specific set of decision-making responsibilities. Accounting professionals may be seen as chief business information providers and as business problem solvers (BYU Junior Core Faculty 2003).

One of the principles of accounting is the communication of information. The purpose is to provide measured and reliable information to decision makers to increase their knowledge and reduce their uncertainty about the future (Lee 1984). The information that is provided must furthermore be relevant to be useful. When information is relevant, it ought to be able to influence the behaviour and actions of the recipient, thereby influencing the recipient's decision.

2. Manipulation of information portrayed in the financial statements

"The potential for companies to transfer profits between years by the use of provisions [book entires] means that the use of this accounting procedure should be examined with care" (Ellis and Williams 1993).

"Cookie jar reserves: An overly aggressive accrual of operating expenses and the creation of liability accounts done in an effort to reduce future-year operating expenses" (Mulford and Comiskey 2002).

"Also bear in mind that the measurements of accounting events are not always objective. In this connection we must be aware of the possibility of manipulation of accounting data, and that great creativity can be involved" (Kinserdal 1995).

"Knowing that astute analysts will compare their depreciation policies with competitors' practices, companies commonly represent accounting changes in this area as efforts to get into line with industry norms. They do not ordinarily stress another plausible motive, a desire to pump up earnings" (Fridson and Alvarez 2002).

"Unfortunately for analysts, companies do not always spell out in the Notes to Financial Statements the means by which they have artificially inflated their revenues" (Fridson and Alvarez 2002).

"If management wishes to impart a smoother appearance to the reported stream of "ordinary income before extraordinary items", it can use whatever discretion it has in the classification of nonrecurring items to achieve its objective" (Barnea *et al.* 1976).

"Funny money is alive and well on Wall Street. Companies that rely on non-cash barter deals for revenue growth are getting taken to task" (Business 2.0 2003).

3. The use of allocations and provisions in the financial statements

"Most amounts reported on income statements and disclosed for non-monetary assets are the results of allocations" (Thomas 1975).

"The use of provisions has become commonplace and the big problem this causes for users of accounts is that they weaken the already tenuous relationship between the

profit and loss account and cash flow" (Griffiths 1995).

All the above statements emphasise that book entries are used to change the integrity of information portrayed in the financial statements. The techniques employed to bring about such changes include classification, earnings management, allocation, income smoothing, cookie jar reserves, conservatism and change in policy. The usefulness of information for outside stakeholders is subsequently influenced because the above practices are all implemented through book entries.

7.3 Analytical research

The analytical research was based on the 30 companies listed in Chapter 6 and the analysis of the financial statements of these companies is presented in Appendix C. The results presented in this chapter were compiled from this research.

7.3.1 Ratios affected by reclassifying depreciation and deferred taxation

(1) & (2) Return on investment and return on equity

Return on investment as well as return on equity is a measure of the profitability of a company. With both the return on investment and the return on equity the profitability of the companies decreases when the adjustment is made. The deviation between the two ratios (traditional and adjusted) is substantial even though no company's adjustment is above 66%. An analysis of the deviations is given below.

Table 7.1: Analysis of deviations in return on investment and return on equity ratios

Analysis of deviation in ratio (%)	**0 - 33**	**34 - 66**	**67 - 100**
Number of companies: return on investment	28	2	0
Number of companies: return on equity	20	10	0
	-100 to -67	**-66 to -34**	**-33 to > 0**
Number of companies: fixed assets to equity capital	2	7	21

(3) Fixed assets: equity capital

When the fixed assets to equity capital ratio is more than 1:1 it means that a portion of fixed assets are financed with debt. In 20 of the 30 cases, the ratio showed that the companies had financed more of their fixed assets out of debt than before the adjustment. This indicates that these ratios are influenced by book entries that may influence the integrity of the information and in turn future decisions to be taken by the company.

(4) Cost of capital

In all instances the total debt of the 30 companies used in this research was not a substantial amount when compared to equity capital. The reclassification of deferred taxation and accumulated depreciation therefore had little or no influence.

(5) Long-term-debt-to-total-equity ratio

The long-term-debt-to-total-equity ratio measures the relation of debt to capital resources, in other words, it measures the credit financing to equity financing. This ratio was first applied in the traditional way to the information given by the 30 companies. In the second instance, deferred taxation was deducted from debt and classified together with accumulated depreciation as part of equity. In all instances, the companies' credit financing is now less than the equity financing. The traditional ratio emphasises that

owners contribute a larger share of the financing of the companies than outside creditors. When the ratio is adjusted, the shareholders are now contributing even more to the financing of the company than was previously the case. Table 7.2 summarises the deviations between the traditional and adjusted ratios.

Table 7.2: Analysis of deviation in the long-term-debt-to-equity ratio

Analysis of deviation in ratio	0 - 33	34 - 66	67 - 100
Number of companies	13	17	0

Fairly large deviations are recorded over a five-year period. In the case of 17 companies the ratio deviates between 34% and 66%, which is quite substantial. A company may definitely make different decisions when using the adjusted ratios and banks may be more prepared to consider companies requesting a loan.

(6) Gearing ratio

A company makes use of the gearing ratio when they want to measure the extent to which they make use of borrowed funds to finance their capital base. If the gearing ratio is high, it can be said that the company is predominantly financing its assets by debt. When the gearing ratio is low, it suggests that the company is primarily financing its assets from shareholders' funds. It is important to remember that the balance sheet figures used in the denominator of the gearing ratio and the debt-equity ratio are open to considerable manipulation (Ellis and Williams 1993). Firstly, the ratio was used in the traditional way. Secondly, the ratio was adjusted to accommodate deferred taxation in the equity figure. All of the 30 companies used in this research showed better results for the gearing ratio after the adjustment. In the third instance the ratio was adjusted to accommodate deferred taxation as well as accumulated depreciation in the equity figure, resulting in an even more favourable ratio. These results are given in Table 7.3.

Table 7.3: Analysis of deviation in the gearing ratio

Analysis of deviation in ratio	0 - 33	34 - 66	67 - 100
Number of companies: 1st adjustment	19	10	1
Number of companies: 2nd adjustment	10	14	6

The ratio deviation shows two-thirds of the companies with a better gearing ratio, with a deviation between 0% and 33%, and one-third between 34% and 100%. In the second case, the decrease in the ratio is divided into roughly equal parts.

(7) Book entries as a percentage of crucial elements in the financial statements

A good accountant makes use of a small number of book entries. This was true of the past and still prevails today (Kocks 2003). In 16 of the 30 cases, the percentage of book entries is more than 42% of equity. This may be an indication that much of the information that companies "create" by using book entries, has a different integrity than information created by real transactions. The percentage rises above 100% for three companies and even as much as 205% for one company (see Appendix C). If book entries, based on artificial transactions, are just more than twice the value of a company's equity it is evident that the integrity of the information based on book entries may be severely influenced. Table 7.4 depicts these results.

Table 7.4: Average deviation analysis - book entries as a percentage of equity

Average deviation analysis	Below average	Average	Above average
Book entries as a percentage of equity	<	38 - 42	>
Number of companies	9	5	16

The percentage of book entries to cash from operating activities and the percentage of book entries to profit attributable to shareholders, are related. These two percentages become very high for some companies, hence it follows that the integrity of information is impaired. In the case of nine of these companies the percentage rises above 100%,

and even turns out to be more than 1000% in the case of one company when book entries are compared to the profit attributable to shareholders. If managers rely on information created by book entries then it follows that the decisions may be influenced in such a way that it is likely to be harmful to other stakeholders. Table 7.5 presents this information.

Table 7.5: Average deviation analysis - book entries as a percentage of turnover, cash from operating activities and profit attributable to shareholders

Average deviation analysis	Below average	Average	Above average
Book entries as a percentage of turnover	<	3 - 6	>
Number of companies	11	10	9
Percentage of cash from operating activities	<	20 - 24	>
Number of companies	8	2	20
Percentage of profit attributable to shareholders	<	20 - 24	>
Number of companies	5	3	22

Book entries make out a substantial amount of the majority of the crucial elements (e.g. equity) of financial statements. If information is based on so much subjectivity (book entries), its integrity may be influenced quite substantially. The influence of the reclassifying of book entries also has a substantial effect on the outcome of the adjusted ratios. Book entries must therefore be handled with great care.

7.3.2 Ratios used with reference to internal funds

One of the objectives of this research is to show that the depreciation provision does generate internal funds.

Ratios developed by Martínez Bobillo *et al. (2002):* These ratios measure the ability of a company to generate internal funds (Refer section 6.3.1, point 8). The mean of the 30 South African companies is measured against the mean of European companies.

Table 7.6: Results of internal fund ratios (Martinez Bobillo 2002)

	Mean	Standard Deviation	Min	Max
Investment effort for the period (INVEFF) - Europe	0.07701	0.17113	-0.74021	3.35540
Investment effort for the period (INVEFF) - South Africa	0.41168			
Sales Accelerator (SIFA) - Europe	0.16557	0.54460	-2.45723	2.48744
Sales Accelerator (SIFA) - South Africa	0.99332			
Capacity to generate funds (CFFA) - Europe	0.13629	0.10222	-0.23159	0.49321
Capacity to generate funds (CFFA) - South Africa	11.54836			

INVEFF = The mean of the South African companies is 0.41168 compared to the European mean of 0.07701. The South African companies' investment effort appears to be better than that of the European companies.

SIFA = The mean for Europe is 0.16557 and for South Africa is 0.99332. This suggests that South African companies' sales are accelerating more than those of the European companies.

CFFA = The mean for Europe is 0.13629 and for South Africa is 11.54836. South African companies therefore have the capacity to generate internal funds to a greater extent than European companies.

South African companies are performing better than the European companies in the sense that they are more able to generate internal funds, more able to accelerate their sales and their effort to invest seems to be higher. It therefore follows that the majority of South African companies may be able to make use of internal funding rather than external funding.

Working capital: When deducting the accumulated depreciation from the current assets in the working capital ratio and adding back the fixed asset replacement costs, most companies are unable to cover their current liabilities. The main reason for this is the

fact that the internal fund is hidden in the working capital and therefore companies use the internal fund for operating activities. When the company has to finance the replacement of their fixed assets, they have to make use of external funding that is probably more expensive than internal funding.

When referring to the results of the ratios from Martinez Bobillo (2002) presented above, it is clear that the companies have the ability to generate internal funds. But, when the adjustment of the working capital takes place, it seems if though the companies are not aware of this capacity to generate internal funds, or because the internal funds are hidden in the working capital, they are applying the internal funds for normal operating activities.

7.4 Questionnaire

The questionnaire and the covering letter that were sent to the financial managers of the listed companies are reproduced in Appendix A and Appendix B respectively.

7.4.1 General

A total of 64 completed questionnaires was received at the cut-off date. Some of the respondents had obviously made a big effort to contribute to this research. Despite some differences in opinion among the respondents, by far the majority of responses seemed to underline the validity of this dissertation, namely, that book entries affect the integrity of information.

The other responses received may be classified as follows:

Table 7.7: List of responses

Response	No of responses
De-listed company	1
Deregistered companies	3
Forwarded to someone else	11
Incomplete questionnaire	2
Policy of non-participation	10
Out of office	5
Refraining	4
Financial manager retired	1
Financial manager of two listed companies	3
Busy with year-end or too busy to partake	6

Given this feedback, a response rate of 40.36% was achieved of the 384 possibilities. If the e-mails that had failed, had been blocked or quarantined are not taken into account, a response rate of 31.86% was achieved.

7.4.2 The definition of a book entry

Of the 64 responses received, 50 respondents attempted to define a book entry. One of the useful definitions of a book entry was “An entry that does not have a real (eventual) cash effect on assets or liabilities of the entity and is subject to reversal in certain instances”. An example of a less useful definition of a book entry was “A journal debit with a corresponding credit”. Some respondents could cite examples of book entries but did not supply a definition.

The following is a list of the definitions received from the respondents in the order of the most useful to the least, according to the author’s frame of reference:

A. Most useful definitions:

(1) "An entry that does not have a real (eventual) cash effect on assets or liabilities of the entity and is subject to reversal in certain instances. Examples are provisions (depreciation, bad debts, future costs, warranty, and write-offs on inventories), revenue recognition, amortisation, etc".

(2) "Book entries happen because accounting realities need to be recorded and cannot be processed through debtors and creditors ledgers or (initially) the cash book. Some eventually do make it through the cashbook, e.g. when the outside shareholder eventually pays back his loan to the company or gets paid his share of profits and some never make it to the cash book directly, e.g. deferred taxation timing differences transactions or writing off goodwill. GAAP insists that they all get recorded".

(3) "A book entry is [a] journal entry adjusting the carrying value of assets either up or down or providing for an expense where a quantifiable and highly probable exposure for loss exists. Thus book entries should make a set of accounts more relevant and reliable to a user".

(4) "One that does not have a cash impact, due to timing or other accounting conventions".

(5) "An accounting journal entry passed to create an accounting effect different to the effect of pure cash flows. It is normally an attempt to recognise timing of events in different periods to make the cash flows happen".

(6) "Transactions/Journals that do not involve an outside party [for example] creating provisions, accruals etc.".

(7) "Journal entries to either (i) provide non-cash transactions or (ii) reclassify".

(8) "A journal entry used to create or adjust the carrying value of an asset or liability or to change its classification".

(9) "A journal entry that is not supported by a cash transaction - may be a reclassification/disclosure entry for example, or recording of an unrecognised foreign exchange gain/loss etc.".

(10) "A book entry is a non cashflow adjustment to financial statements. The adjustments could be for [example] depreciation, provision for bad debts, adjustments to debtors and creditors etc.".

(11) "Any entry not reflective of an immediate cash flow transfer of asset or liability".

(12) "An entry not reflecting a cash flow or legal obligation".

(13) "A book entry is a journal entry which adjusts profits either up or down in accordance with the wishes of management. It is usually reversed immediately after a report has been finalised and has no underlying basis for the transaction. It is usually a transaction which has no impact on the cash flow statement".

(14) "Entry processed by way of journal to account for transactions which did not initiate through the cashbooks, sales or purchase documents. Does not mean that it is an artificial transaction".

(15) "Any non-cash entry - i.e. not made through the cash book".

(16) "Journal entry that does not directly impact on cash flow. (And is susceptible to manipulation)".

(17) "A book entry "journal" should only be done to affect corrections or accruals and/or provisions. The accruals must comply with GAAP".

(18) "This is a high-level adjustment put through".

(19) "Adjustments taken into account not based on physical cash or account transactions".

B. Moderately useful definitions

(20) "Adjustment to reflect financial transactions which involve judgement and are based on managements preferences".

(21) "An entry (within GAAP allowances) that is made to get a certain result".

(22) "Book entry is a journal which is put through to correct information, or to disclose a balance sheet item correctly, [for example] depreciation, restating export debtors, provisions etc.".

(23) "A journal entry, to bring into account at a month or year end, an increase or decrease in Income, Expenditure, Asset or Liability. Eg. Creating provisions for bad debts is not an exact. There is always room for manipulation".

(24) "An entry made to correct or establish information that is known but un-entered or provided for".

(25) "Recording of historic transaction, on an accrual basis".

C. Examples of book entries rather than definitions

(26) "Journal entry [for example] depreciation, provision, correction of mistakes and note descriptions".

(27) "Provisions, accruals, restructuring charges, etc.".

(28) "Provision, reserve, reclassifying entries which affect earnings and/or disclosure".

D. Least useful definitions

(29) "An accounting entry not necessarily arising from business operations (i.e. being processed through the operating systems of the business), but being manually recorded in the general ledger".

(30) "Non-regular adjustment in the accounting records of the entity, done through a journal entry (ie a transaction that does not flow from a normal transaction stream)".

(31) "Adjusting the accounts with an entry that was not generated in the normal course of business".

(32) "An entry put through the books to create a desired result for a certain party".

(33) "An entry created to reflect what management wants the information to reflect".

(34) "A journal entry required to reflect the corrected position of non-routine items in the

trial balance and ultimately the [annual financial statements]".

(35) "In this context, any entry not reflecting a historical fact".

(36) "A transaction outside of normal transaction streams of a company".

(37) "Journal entry done to comply with GAAP for transactions not having for example invoices, receipts, cheques, etc. as source documentation".

(38) "Any record of any transaction".

(39) "Recording of a transaction or event".

(40) "A journal entry that corrects errors or is not the subject of a sales/purchases/cash transaction".

(41) "[A] book entry is [an] entry that has no supporting documentation and [does] not comply [with] GAAP".

(42) "[An] entry that satisfies the definition criteria as set out in the accounting framework AC000 and conforms with GAAP".

(43) "Journal entry".

(44) "Necessary entry to give effect to economic reality".

(45) "Any entry into the financial accounting system".

(46) "The automatic recording source for transactions - sales, purchases, bank movement etc into the general ledger - these arise automatically linked to the business process and are allocated to general ledger accounts automatically. Journal entries by contrast, are not source material transactions, but are used to correct/adjust automatic entries flowing direct[ly] to general ledger designated accounts".

(47) "Any alteration to the account balances in the general ledger, or any of [the] subsidiary ledgers".

(48) "An entry that is not electronically generated through a sub-system".

(49) "Journal entry supported by evidence".

(50) "A journal debit with a corresponding credit".

It became clear from this survey that very few of the respondents are familiar with the concept of a book entry. It is quite alarming to observe the lack of knowledge of book entries that exist among the respondents given that it is used in accounting on a daily basis. The first 25 definitions are more or less useful. Definition 26, 27 and 28 are actually just examples of book entries. A book entry is an important tool for the accountant and therefore an urgent need for a definition and a description of a book entry is justified.

7.4.3 Responses to each statement

A discussion of the responses received to each statement in the questionnaire is presented below, using the following legend:

SA - Strongly agree	**A - Agree**	**U - Uncertain**
D - Disagree	**SD - Strongly disagree**	

Question 1: Book entries precipitated as journal entries may be used to manipulate financial information.

Response 1:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
41	39	2	10	8	56	44	-	-	-	38	38	4	11	9

To *manipulate* means to operate on or handle with skill, manage or control skilfully by using one's influence or unfair methods (Hornby 1981).

The following issues arise from the above responses:

(1) Book entries are not normal transactions and may influence the financial statements positively or negatively.

(2) Book entries are based on perceptions and perceptions may influence the information contained in the financial statements.

(3) Book entries are powerful tools at the disposal of an accountant. Therefore, these must be handled with the greatest caution.

(4) From the above it follows that book entries influence the integrity of information.

Question 2: Classifying items in the balance sheet may be used to manipulate financial information.

Response 2:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
28	41	8	17	6	44	45	-	11	-	26	40	9	18	7

(1) A total of 69% of respondents agreed that classifying items in the balance sheet may be used to manipulate financial information.

(2) It also follows that the classification of items within the income statement may manipulate information. According to Mulford and Comiskey (2002), classificatory creativity within the income statement mainly involves the changing of the classification of individual income statement items within the income statement. This is done to change certain key subtotals within the income statement, thereby altering the reader's perception of financial statements. The following methods can be followed:

- Moving items to or from operating income.
- Moving expenses from cost of sales to, for example, administrative expenses, thereby increasing gross profit.
- Moving operations in and out of discontinued operations based on gains and losses of discontinued operations.

(3) Information cannot be created by an accountant (cf. energy cannot be created – see section 3.3 in Chapter3). Classification is used for ratios and must be used with great caution.

(4) It follows from this response that the integrity of information is influenced by classification. Classification may also be viewed as a book entry.

Question 3: Classifying items for year-end statements can be viewed as reversible book entries.

Response 3:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
15	36	11	27	11	22	22	12	44	-	14	38	11	24	13

(1) A total of 51% of the respondents agreed that classifying items for year-end statements may be viewed as reversible book entries.

(2) Items classified in the balance sheet for a year end is only for a moment. For example, stock is classified as a current asset for year end purposes and afterwards again seen as stock.

(3) Classifying items may be viewed as a book entry. Reclassifying an item may also influence the integrity of information.

Question 4: Providing for depreciation is one way of generating internal funds.

Response 4:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
6	28	10	31	25	12	33	11	33	11	6	27	9	31	27

(1) A total of 34% of the respondents agreed that providing for depreciation is one way of generating internal funds.

(2) Such a large variation in the response to this question may be due to respondents' uncertainty about this issue. The question then is whether the respondents understand the concept of depreciation.

(3) There is a difference between accounting and financial management where depreciation is concerned. According to financial accounting text books, providing for depreciation is a way of creating an internal fund: "...the sum of depreciation and retained earnings (i.e., the *cash flow*) is an important source of finance" (Wilson, 1974:248). Accumulated depreciation provides a company with an internal fund to replace their fixed assets.

Question 5: Earnings management may have a negative effect on the integrity of information.

Response 5:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
24	42	17	14	3	22	34	11	33	-	24	44	18	10	4

(1) A total of 66% of the respondents agreed that earnings management may have a negative effect on the integrity of information.

(2) Earnings management may be defined as "the active manipulation of earnings toward a predetermined target" (Mulford and Comiskey 2002:87). The parties responsible for setting this target usually include management acting on the grounds of a forecast made by analysts or the reasoning that a smoother income will be welcomed by investors.

(3) The negative manipulation of information may be done through classification or book entries. Tools that may be used are income smoothing or big baths.

(4) Some of the rewards of earnings management are defined by Mulford and Comiskey (2002) and may include:

(a) upward move in share prices
(b) improvement of debt rating
(c) boosting a profit-based bonus
(d) lower political costs, for example, avoiding high taxes.

(5) It is clear that, if the motivation for earning management is based on the above, the integrity of the information may be influenced.

Question 6: Earnings quality should be measured in terms of its usefulness to the users.

Response 6:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
24	45	14	14	3	11	67	11	11	-	25	42	15	14	4

(1) A total of 69% of the respondents agreed that earnings quality should be measured in terms of its usefulness to the users.

(2) Earnings quality is dependent upon integrity as determined by the use of book entries, classification and earnings management.

(3) Analysts agree more on this aspect than financial managers, as their positive response was 78%.

(4) If users rather than the compilers of financial statements determine the quality of the earnings this would be to the detriment of higher incentive bonuses for managers.

(5) The integrity of the information related to earnings quality may be influenced when book entries are used to the benefit of management.

Question 7: For decision-making purposes, the cause and effect of a book entry must be considered.

Response 7:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
19	64	6	8	3	33	67	-	-	-	16	64	7	9	4

(1) A total of 83% of the respondents agreed that for decision-making purposes, the cause and effect of a book entry must be considered.

(2) Given the response to question 4 where 34% of the respondents agreed, and the positive response to this question (83%), it is clear that the effect of a book entry is not understood by all the respondents.

(3) The analysts agree completely on this question (100%) whereas they only agreed to some extent in question 4 (44%).

(4) Cause is defined by Hornby (1981:133) as: “that which produces an effect”, whereas effect is defined as change produced by an action or a cause.

(5) The effect of depreciation is cancelled in the cash flow statement in order to calculate cash flow (recall that cash “represents reality” in this dissertation).

Question 8: The quality of earnings depends on the time between revenue recognition and cash collection.

Response 8:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
15	47	6	32	-	22	34	-	44	-	13	49	7	31	-

(1) A total of 62% of the respondents agreed that the quality of earnings depends on the time between revenue recognition and cash collection.

(2) Revenue recognition is when a transaction is not complete. The outcome is uncertain and has to be predicted.

(3) Revenue recognition is a case of predicting the future, which negatively affects the integrity of information.

(4) It is significant that there is such a big range of opinions between the parties who agree (62%) and those who disagree (32%).

(5) The positive response indicates that the shorter the time between revenue recognition and cash collection, the better the quality of earnings.

(6) The analyst gap is smaller: 56% vs. 44%. There seems to be uncertainty between the analysts.

(7) Time is a phenomenon that influences the integrity of information. Matching brought time and future prediction into consideration.

(8) A book entry underlying a time-oriented entry also simulates reality whereas cash represents reality.

Question 9: Book entries affect future reality.

Response 9:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
9	36	20	27	8	11	22	11	56	-	9	38	22	22	9

(1) A total of 45% of the respondents agreed that book entries affect future realities.

(2) A world renowned analyst who gave evidence at the Enron trial, Baruch Lev, argued that “good financial reports should tell something about the future” (Lev, 2003). This can only be created through a book entry.

(3) Respondents do not seem to realise the effect of book entries and they are not future oriented.

(4) According to the respondents, book entries have little or even no effect on the integrity of information.

(5) It is clear from the fact that 37% agree while 35% disagree, that many respondents have rather outdated viewpoints.

Question 10: Earnings management is being used to increase investor confidence.

Response 10:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
6	58	11	20	5	-	56	11	33	-	7	58	11	18	6

(1) A total of 64% of the respondents agreed that earnings management is being used to increase investor confidence.
(2) Both the analysts and the financial managers felt very strongly that earnings management may increase investor confidence.
(3) Earnings management is being used as well as misused to influence investors.
(4) Earnings management is brought about through the use of book entries.

Question 11: Book entries may be used to present 'big baths' in earnings management.

Response 11:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
6	41	27	14	12	-	56	22	22	-	7	38	27	13	15

(1) A total of 47% of the respondents agreed that book entries may be used to present big baths in earnings management.
(2) Because 27% of respondents were not clear on this issue, it is apparent that 'big baths' is not a well-known term among the respondents.
(3) The responses to this question clearly illustrate that book entries influence the integrity of information.
(4) According to Lev (2003) companies only start playing with numbers when they get into economic trouble. When playing with the numbers, book entries are used. They usually do not manage their earnings.
(5) Whether managers apply big baths or not, seems to be based to some extent on their perception of right and wrong.

Question 12: Book entries may be used to smooth income over the long term.

Response 12:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
17	50	2	17	14	22	67	-	11	-	17	47	2	18	16

(1) A total of 67% of the respondents agreed while 31% disagreed that book entries may be used to smooth income over the long term.

(2) From the response it is clear that respondents are more familiar with the term income smoothing than big baths.

(3) There is certainly agreement that book entries are used to smooth income over the long term, implying that such actions are future based. This is a deviation from question 9 where the respondents did not agree quite so strongly.

(4) Income smoothing is a tool that may be used by management to influence the future as well as the integrity of the information content of the financial statements.

Question 13: Investors are more confident when a company's earnings rise gradually.

Response 13:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
22	59	8	9	2	11	44	11	33	-	24	62	7	5	2

(1) A total of 81% of the respondents agreed that investors are more confident when a company's earnings rise gradually.

(2) Compilers of financial statements believe that investors are more confident with earnings rising gradually – 86% agreed.

(3) It appears that analysts do not really believe that investors are more confident when a company's earnings rise gradually, since only 55% agreed with the claim put forward in the question. This might be because analysts view statements from the investors' point of view.

(4) This statement pressurises compilers to conform to income smoothing rules and thereby using book entries to influence the integrity of the information.

(5) Analysts and compilers do not share the same perception on this issue. According to the analysts' response it seems as though investors are not more confident when a company's earnings rise gradually, this may be because they know the company is playing with the numbers.

(6) The high percentage of financial managers agreeing to this question reveals that companies will quite easily use income smoothing and thereby influence the integrity of the information.

Question 14: Income smoothing can be used as a strategic tool.

Response 14:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
13	50	5	21	11	11	56	-	33	-	13	49	5	20	13

(1) A total of 63% of the respondents agreed while 32% disagreed that income smoothing can be used as a strategic tool.

(2) Income smoothing is one method used to reach a company's strategic goals.
(3) Income smoothing is used to manipulate the future results of a company.
(4) The strategy of a company may influence the integrity of information by making use of book entries.

Question 15: Income smoothing may be viewed as mixing good and bad news to the detriment of outside stakeholders.

Response 15:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
17	43	14	20	6	22	34	11	33	-	16	44	15	18	7

(1) A total of 60% of the respondents agreed that income smoothing may be viewed as mixing good and bad news to the detriment of outside stakeholders.
(2) Income smoothing is used to manipulate good (profits) and bad (losses) realities. When income smoothing is applied, the profit of one year is used to lower the loss of the previous year.
(3) Time is a primary concern when the previous year's bad news can be reduced by a company restating its figures. Book entries are used to restate the figures of a company and also influence the integrity of the information presented in the financial statements.

Question 16: Book entries are based on artificial transactions.

Response 16:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
3	8	16	47	26	11	12	-	33	44	2	7	18	49	24

(1) A total of 11% of the respondents agreed that book entries are based on artificial transactions.

(2) Most respondents do not share the same view regarding artificial transactions. In essence a book entry can at best only simulate reality.

(3) There is a relationship with question 9 because of future uncertainty. Future uncertainty is also seen as part of artificial transactions.

(4) Book entries are the result of a decision to allocate to the future. Allocation is not a real event whereas cash represents reality. All future based “transactions” involve uncertainty.

(5) It is evident from the responses received that accountants view entries as a result of transactions, while entries as book entries are viewed as the same thing as real transactions.

Question 17: Information created through income smoothing has less integrity than that created by real events.

Response 17:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
26	56	6	9	3	22	67	-	11	-	25	55	7	9	4

(1) A total of 82% of the respondents agreed that information created through income smoothing has lesser integrity than that created by real events.

(2) Real events create information of higher integrity than book entries because book entries are based on subjective opinions of management.

(3) The quality of integrity is based on information created by real events.

Question 18: Information created through book entries is based on artificial transactions.

Response 18:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
2	13	16	45	24	-	22	-	33	44	2	11	19	47	21

(1) A total of 15% of the respondents agreed that information created through book entries is based on artificial transactions.

(2) This response is in line with the response to question 16, where 11% agreed. It

seems that the respondents are not familiar with the term artificial transactions.

(3) Book entries are not based on real events but rather on the subjective opinion of management.

(4) Respondents do not believe that book entries are based on artificial transactions; they believe they are based on real transactions. This viewpoint may be the result of many respondents not being clear about what a book entry is.

Question 19: Book entries may seriously affect the integrity of information.

Response 19:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
11	45	6	28	10	-	67	-	22	11	13	42	7	29	9

(1) A total of 56% of the respondents agreed that book entries may seriously affect the integrity of information.

(2) A total of 38% of the respondents disagreed on this question. This may be because the respondents do not know the term book entry as well as they should.

(3) Integrity of the information is influenced primarily by book entries.

(4) Analysts agree more strongly on this point as 67% agreed.

(5) Book entries are used to manipulate information. When earnings management or creative accounting takes place in a company, the integrity of the information may be impaired. Book entries are the main tool used to manipulate information.

Question 20: Only for real transactions and events is cash the main deliverable.

Response 20:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
5	47	17	25	6	-	57	-	33	11	5	45	20	24	5

(1) A total of 52% of the respondents agreed that only for real transactions and events is cash the main deliverable. Only 31% disagreed.

(2) An exception to the rule is credit sales where there is a strong degree of uncertainty on the realisation of cash. “While accounts receivable are recorded precisely, their collectibility is not known with precision, but with experience we can get a basis for an acceptable approximation” (Goldberg 1974).

(3) Cash is a very strong determinant of the integrity of the information.

Question 21: Subjective book entries are based on opinions, not facts.

Response 21:

All					Analyst					Financial manager				
SA	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**	**SA**	**A**	**U**	**D**	**SD**
8	45	17	25	5	-	22	11	56	11	9	49	18	20	4

(1) A total of 53% of the respondents agreed that subjective book entries are based on

opinions and not facts.

(2) An opinion is perception driven. Book entries are based on the (subjective) opinions of management which may influence the integrity of the information portrayed in the financial statements.

(3) Analysts disagreed very strongly on this question, since 67% gave a negative response. It seems if analysts belief that book entries are based on facts. This may be because of a lack of understanding of the term book entry.

(4) It is evident that respondents find it difficult to distinguish between real transactions (reality) and opinions.

(5) Respondents do not take the future into consideration.

7.4.4 General comments received from the questionnaire

Some respondents took the time to give general responses to the questionnaire. The following responses were received and classified into five broad categories:

A. Respondents defending book entries:

(1) “Book entries can be valid journal entries and not just processed for a manipulation of earnings. Such entries may not influence the integrity of the financial information nor be based on artificial transactions”.

(2) “Your questionnaire seems to have an undercurrent of mistrust when it comes to processing a “book entry”. I certainly don't think there is anything sinister about the ones I process”.

(3) “In general manipulation of financial statements through creative accounting is only detrimental to investor decision-making when not disclosed and when the objective is to deceive the reader. Current accounting practices are trying to cover all events for all companies in all industries. This is not possible - note loan stock structures,

particularly in the property sector".

(4) "This questionnaire is too simplistic and does not reflect what actually takes place when entries are passed in a company. The general tone of the questionnaire seems to ask whether the use of book entries are in the main for purposes of manipulation. This is certainly not the case. In companies who practise good corporate governance all entries, book or otherwise have checks and balances in place to determine their validating including instances where subjective elements are present. Do not forget that checks and balances also include external audit of all entries".

(5) "Book entries may be necessary to account for timing differences in revenue or expense recognition and cash movements or to comply with accounting conventions [for example] depreciation. Although they can be used to manipulate results they are obviously not there for that purpose. [That is] "garbage in garbage out". At the end of the day we must rely on the integrity of the management concerned and on the auditors to pick up the misuse of book entries".

(6) "There are many "real" cashless transactions. To fail to show these would distort the picture the financial statement user receives. Subjective entries are based on non-definitive facts and judgement, not opinions (Refer question 21). The reliability of financial information relies on the integrity of the preparer or the persons instructing the preparer. Even so-called "hard" entries like cash book entries can be manipulated by the unscrupulous".

(7) "All adjustments to the [annual financial statements] must strictly adhere to GAAP and book entries is not there to "adjust or smooth" results".

(8) "Book entries are not based on artificial transactions as there must be factual

information and circumstances to back up the entries and values".

B. Comments regarding internal funds

(1) "I agree with the concept of depreciation. Book entries are purely historical. Earnings should reflect the cash position except for depreciation, which relates to long-term capex".

(2) "Providing for depreciation is allocating costs across the use of the assets, it does not provide funds for replacement. I see it as working backwards to what was spent, rather than forwards to what may need to be spent in future. If management continued to raise a provision for depreciation beyond the period of write off of book value, then internal funds would be generated".

(3) "Depreciation is an allocation of a money resource and therefore must assist in generating funds which are not distributed".

C. Manipulation of information and corporate governance

(1) "Whilst it is possible to manipulate income by means of book entries, this should be expressly prohibited. Income smoothing, in my opinion, is a breach of ethics and good corporate governance and will definitely, if investors know about it, reflect poorly on an enterprise. Entries should be based on real information and real transactions and should not, under any circumstances, be manipulated in order to provide a different picture to analysts and investors. One of the principles of King II is that of transparency and this should be adhered to at all times".

(2) "There is no question that book entires are utilised to manipulate information to the detriment of users".

(3) "Profits can be manipulated which might not be a true reflection of its performance. Book entries could be a very dangerous tool if not managed and controlled".

(4) "Book entries are always within a "range" which creates some measure of flexibility, ethical rules govern rules therefor".

(5) "Earnings are susceptible to manipulation by unscrupulous management as "earnings"is a key factor in evaluating financial performance and a key determinant of share valuation models and executive incentive schemes".

(6) "If management want to manipulate results, book entries can be based on partially true information".

(7) "JE's may be used to hide all sorts of information and so manipulate information".

(8) "Earning management is being abused. Small business is more flexible but public shareholders want to see consistent increases. Some industries want big increases [that is] IT".

D. Comments regarding investors and the effect of income smoothing

(1) "Investors seem to prefer steady growth in earnings, rather than ups and downs. There is no alternative to an opinion, which is better than nothing (Refer question 21)".

(2) "Investors prefer to invest in companies with steadily growing and predictable earnings. There must surely be some substance to journals passed and there are a lot of instances where judgement is required unless users are prepared to wait for months for exact information (eg medical aids, Travel industry, Life & short-term

insurances)".

(3) "The practice of using book entries as a "strategic tool" to manipulate earnings and investor behaviour is wrong. There are many ways to manipulate financial statements. Passing journals/book entries is one of the easiest. However, it is impossible to ban all book entries as they are essential to drawing up accurate and useful financial statements. It is also impossible to eliminate judgement and a measure of subjectivity in drawing up financial statements (Refer question 21)".

(4) "Unexpected peaks in earnings makes investors wonder whether it is sustainable. Investors like a smooth, unexpected rise in income".

(5) "Earnings may be "massaged" to avoid shocks to the market, but this does not necessarily reflect the underlying nature or reality of the transactions. In the long term however I believe that book entries cannot be used to consistently manipulate earnings. They can be used to manipulate short term reality but not long term reality, since in the long term earnings are cash. Quality of earnings depends on how closely cash and earnings match each other, whether the underlying transaction is recurring or non-recurring in nature, the degree of subjectivity/estimation/estimates in calculations of amount, consistency with accounting policies, transparency of note disclosures, degree in which amounts are subject to change etc".

(6) "In general I feel strong that results should not be manipulated or smoothed as the history and trend information gets lost when trying to analyse future years' results. Obviously journal entries can be used to manipulate and manage results, but these should be subject to stringent audit interrogation, both at year end and in the new financial year. This is particularly the case this year, where the rand has moved so

significantly - income smoothing should not be possible and the results should reflect actual position".

(7) "Earnings management and earnings smoothing may misrepresent the true volatility of earnings generated by the business. This may make investors more comfortable with the business than they should be".

E. Additional comments

(1) "It is the job of the financial director to keep the CEO in line".

(2) Telephone conversation from Durban: "I am a financial manager of a listed company and do not like the idea of receiving a questionnaire addressed to nobody. I am not happy with the tone of this questionnaire. I would answer strongly disagree to all the questions. As a listed company we do not distort information. We follow GAAP strictly to the rule. Your questions are vague and I do not understand the meaning of artificial and subjective".

(3) "Answers to questions are subjective totally dependant upon interpretation of what is being asked".

(4) "Please note questions 1,2,3,5,11,12,14,15 19. The use of words 'may' and 'can' is confusing. It could mean either that it is allowed and approved or; as it is possible and could be done. I interpreted the latter".

From the general comments supplied, the respondents do not seem to agree on the use of book entries and their influence. The majority of the respondents do, however, support the hypothesis of this research, namely, that the integrity issues of information created by real transactions is different to the integrity issues of information created by

book entries. It also became evident that because some respondents are unfamiliar with some of the terminology used in accounting, their comments did not support the hypothesis.

The overall response to the questionnaire is positive and supports the hypothesis.

7.5 Conclusion

This chapter reported on the literature survey that was conducted, the analytical analysis that was undertaken of the 30 listed companies and the questionnaire that was sent to a large number of listed companies.

The results of the literature survey clearly support the hypothesis stated in Chapter 1, namely that the integrity issues of information created by book entries based on future events is different from the integrity issues created by real transactions.

Both the results of the analytical analysis and the responses from the questionnaire support the hypothesis. For example, calculations of book entries as a percentage of crucial elements in financial statements indicate that such entries make out a substantial amount of the majority of the crucial elements of financial statements. Therefore, such impaired information may lead managers into making incorrect, long-ranging decisions.

In the final chapter, the results obtained in this work is analysed in more detail and some conclusions for further research in this area is proposed.

8 Conclusion and recommendations

8.1 Introduction

The study involved an investigation into the integrity of information created by book entries based on future events. An investigation was launched in earlier chapters to discover whether such integrity are the same (or not) as the corresponding integrity created by historical events, i.e. real transactions realised over time. The most important findings of this research, addressing the above question, were presented in Chapter 7. In the current, final chapter of this dissertation these findings and conclusions are summarised and the contribution of this work is stated in the context of the hypothesis given in Chapter 1. The chapter concludes with some recommendations for the accounting profession.

8.2 Contributions of this work

After the analysis of the 30 companies was conducted and the responses to the questionnaire were available, it became evident that there is a need for much more transparency in the financial statements of a company.

Recall that the following hypothesis was stated in Chapter 1:

> *The integrity of information created by book entries is based on subjective opinions because it is based on future events therefore it is not the same as integrity of information created by real transactions that is based on historical events.*

The validity of this hypothesis was tested and the following presents conclusions from the research which emphasise the validity of the hypothesis:

A. Information and its characteristics

- The accounting framework introduces four qualitative characteristics, namely, understandability, relevance, reliability and comparability, all of which make accounting information useful to the users. All these characteristics enhance the integrity of information.

B. Future events, uncertainty and their influence on the integrity of information

- Other than events and transactions that are based on the past and the present, book entries are based on certain proposed future happenings.

- A future event has not taken place yet and because of the uncertainty about what is going to happen, in contrast to an event that is based on history and reality, the integrity of information may differ. The tool created to handle these uncertainties is the so-called 'book entry'. Future 'events' may be seen as artificial because they are made up, based on assumptions and personal judgements.

- Whether deferred taxation is viewed as an asset or as a liability, a book entry is used to portray this provision in the financial statements of a company. Because deferred taxation is based on some future conditions and realities, deferred taxation may influence the integrity of the information.

- A right or a claim is based on a future happening and therefore contingent assets may be brought about by book entries. The value of the contingency may also be based on the subjective opinion of management and therefore the integrity of such information may be influenced.

- Contingent liabilities are definitely created by book entries that are based on future happenings. If it is not possible to estimate the obligation, it may influence the integrity of information accordingly.

- A provision represents a probable future cash outflow from the reporting company although the company does not know when or how much will be paid. A provision (book entry) based on uncertainty may not reflect the same integrity as information based on real transactions.

- Furthermore, because a contingency is a future happening, the provision for a contingency is created through the use of a book entry and may therefore influence the integrity of the company's financial information and subsequently any decisions based on such information.
- Assumptions, estimates and judgements are used in accrual accounting to introduce softness or uncertainty into accounting numbers. Whenever uncertainty, estimates or judgements are involved, it follows that the integrity of information is influenced by these and may be different to information based on reality. However, despite numerous criticisms, accrual accounting is useful for financial analysis but an accountant has to be aware of its shortcomings.

C. Earnings management and its effect on the integrity of information

- Thus, markets may be very unforgiving when a company is caught red-handed, and future trust is likely to be influenced by this. When future trust is influenced because of book entries, the integrity of the information in the financial statements is compromised.

- When income smoothing or creative accounting is put into practise by a company, it follows that the integrity of the information may differ from the integrity of the information created by real transactions.

- Earnings management takes on various forms but occurs, without fail, via book entries. A book entry is therefore a powerful tool with which a company may stretch accounting principles to their utmost limit and thereby compromise the integrity of any information based on such entries.

- The dividing line between conservatism and manipulation of earnings appears to be rather thin. Both conservatism and the manipulation of earnings take place through the use of book entries and may therefore influence the integrity of the information provided in the financial statements.
- Under- or over-reporting of profits may influence the integrity of the information quite considerably. The information the investor will be using is influenced by book entries and is furthermore based on the subjective view of a manager.

- Managers use their discretion in income smoothing, hence communicating their private information in the process. The result is subjective information, leading to equally subjective decision-making.

- Applying a big bath may also affect the integrity of the resultant information.

- If the company uses book entries to show a different picture of their company to stakeholders, the integrity of the information created in this way may not be the same as the integrity of information resulting from real transactions.

- When a company decides to use book entries to reach certain strategic goals, some of the integrity of the information may be lost.

- When a company decides to revalue its assets, the bottom line of that company may be affected considerably. Book entries are used to revalue assets and increase or decrease the depreciation provision, which in turn decreases or increases the profit or loss, the dividend payout and the distributable reserve.

D. A new information perspective and book entries:

- The accountant being in the information business must therefore take note of the new realities which affect information. Since a book entry is neither a transaction nor a reality and represents intentional smoothing, aimed at presenting the business as stable as possible for reporting purposes. However, being stable in the new science is not

considered a virtue.

- A real transaction differs from an artificial transaction which may affect the integrity of information. Relationships in a company may be affected by the information established in a company (e.g. a ratio is directly affected by the information contained in two variables – the numerator and the denominator) and the way an accountant (i.e. a human) perceives reality, has a direct effect on whether such an accountant may resort to the use or misuse of book entries, thereby affecting the integrity of information in a company.

- When making a prediction (forecast), an accountant makes primarily use of book entries, however, the quantum mechanics reveals that correct predictions are not possible. It follows that the integrity of information based on prediction may be impaired.

D. Internal funds

- Maintaining an internal fund for the replacement of fixed assets forces an accountant to keep track of such replacement costs from year to year, other than the alternative of losing track of such replacement costs over the years, only to be surprised by unbudgeted, escalating costs when the asset has to be replaced eventually.

- The use of a provision for internal funds had certain benefits since lost by modern accounting practices, for example, the replacement of a fixed asset might be funded more economically from an internal fund than an external fund.

- South African companies are performing better than the European companies in the sense that they are more able to generate internal funds, more able to accelerate their sales and their effort to invest seems to be higher. It therefore follows that the majority of South African companies may be able to make use of internal funding rather than external funding. (Refer to Chapter 7).

F. Depreciation and its effect on the integrity of information

- Depreciation has been an item of great controversy through the years and only came into

force in 1943. A book entry that was so heavily criticised may indicate that the integrity of the information created by this book entry is not the same as the integrity of information created by real transactions.

G. Allocation and its influence on the integrity of information

- The allocation of common fixed costs mentioned above are viewed as book entries. Yamey called the allocation of fixed costs based on the wrong criteria, misinformation. When allocating fixed costs, an accountant needs to be very careful to use the correct allocation criteria. Using the wrong criteria may lead to information of a lesser integrity. An expense cannot be allocated to revenue that has little or no bearing on the expense when adhering to the matching principle. It is the experience of the author that in many companies expenses are allocated to various cost centres which did not benefit from the income which is matched with the expenses.

H. Book entries and their effect on capital

- Instead of watering the capital, items like goodwill writeoffs, depreciation and deferred taxation, all included in the accumulated profit or loss of a company, should not be part of the capital account.

- Therefore, if an accountant is uncertain about whether a debt is going to realise or not, it might be a good idea to omit it from the calculation of the owners capital – rather understate the capital and include the debt later, only after certainty regarding the realisation of the debt has been achieved.

I. Book entries and the funds statement

- Cash represents a real transaction and since a book entry does not represent cash, a book entry ought to be excluded from the funds statement, leading to the observation that information created by book entries may be of a different integrity than that of real

transactions (e.g. cash).

J. Book entries and their character

- If non-events are seen as purposive occurrences, and non-events are seen as book entries, it follows that the integrity of the information must be different to the integrity of the information generated by real transactions.

- The book entries or occurrences are not based on real transactions (cash transactions) but rather on the perception of an observer of a proposed happening. The effect is that these book entries are often based on a subjective observation made by the observer, possibly leading to subjective information on which further subjective decisions may be made by stakeholders.

- A book entry does not have any cash flow consequences, hence goodwill write-offs may be seen as book entries. If an asset cannot be touched and cannot be measured, it follows that the integrity of information created with the use of book entries may not be the same as information based on measurable and touchable assets. Again information content flowing from such book entries may influence managers to make incorrect (long-term) decisions.

K. Management and the use of book entries

- It is difficult to judge the relevance of the subjective information created by book entries because the purposes of these entries are unknown to the users of the financial statements. Book entries are used as a strategic tool by management; only management knows their purpose and this may influence the integrity of the information portrayed in the financial statements and subsequently any decisions based on such information.

- As soon as profits are manipulated, their integrity is in the balance, especially if the manipulation is based on personal intentions, incentive schemes or both.

- When management's personal discretion results in the lowering of earnings volatility, the integrity of the information portrayed in the financial statements may be influenced.

- Book entries may be used or even misused by management depending on their personal integrity which, in turn, may influence the integrity of the information being reported and hence any future decisions based on such information.
- Managing people rather than objects can have a very positive effect on a company's bottom line. Sharing information in a company is crucial in today's marketplace and is one way of improving the different relationships in a company. However, if such shared information is influenced by book entries then the information may have a negative effect on the relationships within a company.

- Therefore, the outcome of a decision, strategic goal, etc. is often determined by the frame of reference and the mind set of the observer which may be very subjective and in turn may influence the integrity of information.

L. Personal judgements, perceptions and information integrity

- Referring back to the credit sale, book entries are used to make provision for doubtful debts, which in turn may influence the integrity of the information portrayed in the financial statements.
- Matching is based on a person's (subjective) perception and may therefore, influence the integrity of information supplied in the financial statements.

- Deciding which costs should be spread over a period and which not, has a very important effect on the information supplied in the balance sheet because it is based on the personal judgements of management. Since the balance sheet is a mix of what happened and what is going to happen, these personal judgements also influence the integrity of the information supplied.

- Whenever there are constraints on interpretation, it follows that the integrity of the underlying information may be impaired.

- If a provision is seen as speculation about what might happen, it is clear that the integrity of information created by book entries might not be the same as the integrity of information created by transactions that are based on facts.

M. Book entries and their influence on the financial statements

- The profit or loss calculated in the income statement is little more than a book entry, because so many book entries are allocated to the income statement based on the matching assumption.

- Book entries make out a substantial amount of the majority of the crucial elements (e.g. equity) of financial statements. If information is based on so much subjectivity (book entries), its integrity may be influenced quite substantially. The influence of the reclassifying of book entries also has a substantial effect on the outcome of the adjusted ratios. Book entries must therefore be handled with great care.

- When depreciation is provided on the basis of a calculation of the revaluation of assets, the profit or loss before tax as well as after tax is influenced, together with retained earnings and dividends. This illustrates how many items in the financial statements may be influenced by book entries.

N. Real transactions, artificial transactions and integrity of information

- The combination of real and artificial transactions may have a big impact on the integrity of the information created by the outcome of a ratio. As with all information on which important decisions are based, users of ratios need to know that the value of any such ratio is beyond suspicion.

- If book entries, based on artificial transactions, are just more than twice the value of a company's equity it is evident that the integrity of the information based on book entries may be severely influenced.

O. Lack of knowledge where book entries are concerned

- It became clear from this survey that very few of the respondents are familiar with the concept of a book entry. It is quite alarming to observe the lack of knowledge of book entries that exist among the respondents given that it is used in accounting on a daily basis. A book entry is an important tool for the accountant and therefore an urgent need for a definition and a description of a book entry is justified.

- It also became evident that because some respondents are unfamiliar with some of the terminology used in accounting, their comments did not support the hypothesis.

P. Book entries and ratios

- When the long-term-debt-to-total-equity ratio was adjusted to compensate for the effect of book entries, more than 50% of the 30 companies had a deviation of between 34% and 66% in the ratio results.

- The adjustment to the gearing ratio resulted in a deviation of between 0% and 66% in 24 of the 30 companies. These results do indicate a change in the integrity of the information.

Q. Integrity of information according to the respondents to the questionnaire

- The responses to the questionnaire also indicated that the integrity of information is affected by book entries. For example, some respondent emphasised the hypothesis: “There is no question that book entries are utilised to manipulate information to the detriment of users”.

- Also, “Investors seem to prefer steady growth in earnings, rather than ups and downs”.

- Lastly “Profits can be manipulated which might not be a true reflection of its performance. Book entries could be a very dangerous tool if not managed and controlled”.

- There are some respondents that emphasise the hypothesis of this research, namely, that the integrity of information created by real transactions is different to the integrity of information created by book entries.

From the above summary of the main findings it, therefore, follows that the hypothesis is strongly supported by both the responses to the questionnaire and the analytical research.

8.5 Recommendation

In the light of the results obtained in this work, it is recommended that a new classification system for book entries be developed. Book entries influence the integrity of financial information to such an extent that their effect may need to be indicated much clearer in the financial statements of a company to enable decision makers to make the correct decisions based on high-integrity information.

The audit profession need to take note of the substantial effect that book entries have on the financial statements and they will need to adjust their auditing techniques and principles.

References

Accounting dictionary. University of Canterbury: Christchurch. http://www.afis.canterbury.ac.nz/afiswww/resource/ACCDICT.HTM, 2003, downloaded 07/02/2003.

Barnea, A., Ronen, J. and Sadan, S., 1976. Classificatory Smoothing of Income with Extraordinary items. *The Accounting Review*. 51(1):291-298.

Berton, L. 2000. The Profession had better clean up. *Accounting Today*. 14(17):6,55.

Brimson, J. 2002. Accounting Charlatanism or Information Fog?, *Journal of Cost Management*. 16(4):36-40.

Burns, T.J. and Hendrickson, H.S. 1986. *The Accounting Sampler*. 4th ed. New York: McGraw-Hill.

Business 2.0. 2003. Http://www.business2.com/articles/web/0,1653,39358,00.html. Downloaded 02/06/2003.

BYU Junior Core Faculty, Brigham Young University, http://accounting.rutgers.edu/raw/sources/byu/ac_cpt4a.htm, 2003, downloaded 09/04/2003.

Collingwood, H. 2001. The Earnings Game: Everyone Plays, Nobody Wins. *Harvard Business Review*. 79(6):65-74.

Correia, C., Flynn, D. Uliana, E. and Wormald, M. 2003. *Financial Management*. 5th ed. Lansdowne: Juta.

Cushing, B. E. 1989. On the Feasibility and Consequences of a Database Approach to Corporate Accounting. *Journal of Information Systems*. 3(2):29-52.

DiPiazza, S.A. (Jr) and Eccles, R.G. 2002. *Building Public Trust*. New York: John Wiley & Sons Inc.

Donleavy, G.D. 1994. *Cash Flow Accounting - International Uses and Abuses*. Kent: Routledge.

Du Toit, A. 2002. *Internet Searches for Accounting Research*. Proceedings of the SAAA Conference. School of Accounting Sciences: Potchefstroom University for Christian Higher Education. pp. 752 - 763.

Ellis, J. and Williams, D. 1993. *Corporate Strategy and Financial Analysis*. London: Pitman Publishing.

Ezybusiness. 2001. *How to raise business funds*. http://www.ezybusiness.com. Downloaded 12/11/2001.

Fortune. 1986. Companies are reporting useless numbers. In: *The Accounting Sampler*. 4th ed. New York: McGraw Hill

Foster, G. 1986. *Financial Statement Analysis*. 2nd ed. Prentice Hall.

Fridson, M. and Alvarez, F. 2002 *Financial Statement Analysis - A Practitioner's Guide*. 3rd ed. University Edition. New York: John Wiley & Sons.

Getschow, G. 1986 Paper Profits. In: *The Accounting Sampler*. 4th ed. New York: McGraw Hill.

Glautier, M.W.E. and Underdown, B. 1997. *Accounting Theory and practice*. 6th ed. London: Pitman Publications.

Goldberg, L. 2001. *A Journey into Accounting Thought*. Edited by Leech, S.L. London: Routledge.

Goldberg, L. 1974. Patterns of Accounting Activities. *The Saxe Lectures in Accounting*. Http://newman.baruch.cuny.edu/digital/saxe/saxe_1974/goldberg_74.htm. Downloaded 2/6/2003.

Gordon, M.J. 1964. Postulates, Principles and Research in Accounting. *The Accounting Review*. 39(2):251-264.

Gouws, D.G. 2003a. Personal conversation. University of Pretoria.

Gouws, D.G. 2003b. Accountings Time Paradigm. Unpublished working paper.

Griffiths, I. 1995. *New Creative Accounting - How to make your profits what you want them to be*. London: MacMillan Press Ltd.

Halliday, D. Resnick, R. and Walker, J. 1997. *Fundamentals of Physics Extended*. 5th ed. John Wiley & Sons.

Hartzel, E. 1978. The Background of Accounting. In: *Readings on Accounting Development*. Reprint Edition. New York: Arno Press.

Heirtzler, D. 2003. *What is reality?*. University of New Hampshire. http://www-ssg.sr.unh.edu/perceptorial/Summaries_95/sum10.htm. Downloaded 07/02/2003.

Hemus, C., Wingard, C. and Becker, H. 2000. *GAAP Handbook 2000*. Pretoria: Accessio Publishers.

Hepworth, S.R. 1953. Smoothing Periodic Income. In: *Financial Accounting Theory 1: Issues and Controversies* 2nd ed. New York: McGraw-Hill.

Hirschey, M. and Richardson V.J. 2002. Information content of accounting goodwill numbers. *Journal of Accounting and Public Policy*. 21(3):173-191.

Hope, T. and Hope, J. 1996. *Transforming the Bottom Line*. 2nd ed. Boston: Harvard Business School Press.

Hornby, A.S. 1981. *Oxford Advanced Learner's Dictionary of Current English*. 3rd ed. Oxford: Oxford University Press.

Hornby, A.S. 1998. *Oxford Advanced Learner's Dictionary of Current English*. Special Price ed. Oxford: Oxford University Press.

Hunt, A., Moyer, S.E. and Shevlin, T. 1997. Earnings Volatility, Earnings Management, and Equity Value. *Working paper*. January 1997, Discontinued.

Johnson, H.T. and Kaplan, R.S. 1991. *Relevance Lost - The Rise and Fall of Management Accounting*. 2nd ed. Boston: Harvard Business School Press.

Kam, V. 1990. *Accounting Theory*. 2nd Ed. New York: John Wiley & Sons.

Keister, O.R. 1978. Commercial Record-Keeping in Ancient Mesopotamia. In: *Readings on Accounting Development*. Reprint Edition. New York: Arno Press.

Kinserdal, A. 1995. *Financial Accounting - An International Perspective*. London: Pitman Publishing.

Kirk, R. 1999. Has the 'Big Bath' finally sprung a leak?. *Management Accounting*. London, May 1999. Vol. 77(5): 60-62.

Kirschenheiter, M. and Melumad, N.D. 2002. Can "big bath" and earnings smoothing co-exist as equilibrium financial reporting strategies?. *Journal of Accounting Research*. 40(3):761-797.

Kirschenheiter, M. and Melumad, N.D. 2002. Earnings Quality and Smoothing. Working paper. Draft: June 2002.

Kocks, C. 2003. Personal remark.

Lee, T. 1984. *Cash flow accounting*. Berkshire: Van Nostrand Reinhold.

Lev, B. http://www.facsnet.org/tools/biz_econ/covering_biz/lev.php3, Downloaded 20/05/2003.

Martinez Bobillo, A., De Andres Alonso, P. and Gaite F.T. 2002. Internal Funds, Corporate Investment and Corporate Governance: International Evidence. *Multinational Business Review*. 10(2):151-162.

Mason, P. 1978. Illustrations of the early treatment of depreciation. In: *Readings on Accounting Development*. New York: Arno Press.

Meyer, B. 1985. On Formalism in Specifications. *IEEE Software*. 2(1):6-26.

Most, K. S. 1982. *Accounting Theory*. 2st ed. Columbus: Grid Inc..

Mulford, C.W. and Comiskey, E.E., 2002. *The Financial Numbers Game - Detecting Creative Accounting Practices*. New York: John Wiley & Sons.

Murray, D. 1978. *Chapters in the History of Bookkeeping Accountancy & Commercial Arithmetic*. New York: Arno Press.

Plank, T.M. and Blensly, D.L. 1989. *Accounting Desk Book*. 9th Ed. Englewood Cliffs: Prentice Hall.

Polkinghorne, J. 2002. *Quantum Theory - A very short introduction*. New York: Oxford University Press.

Ryan, B. Scapens, R.W. and Theobald, M. 2002. *Research Methodology in Finance and Accounting*. 2nd ed. Cornwall: Thomson.

South Africa. 1973. Companies Act, no. 61, 1973. Pretoria: Government Printers.

Sprague, C.E. 1920. *The Philosophy of accounts*. 4th ed. New York: The Ronald Press Company.

Sprouse, R.T. 1973. Interrelation between Asset Valuation and Income Determination. In: *Financial Accounting Theory I: Issues and Controversies*. 2nd ed. New York: McGraw-Hill.

Thomas, A.L. The Allocation Fallacy and Financial Analysis. *Financial Analyst Journal*. Vol. 1(5): 37-41.

Thompson, F. *The simplest, most elementary case for the utility of transaction cost analysis*. University of Willamette. Salem, Oregan. http://www.willamette.edu/~fthompso/MgmtCon/Transcost.html. Downloaded 15/04/2003.

Wheatley, M. 1999. *Leadership and the new science - Discovering order in a chaotic world*. 2nd ed. San Francisco: Berrett-Koehler Publishers.

Wild, J.J., Bernstein, L.A. and Subramanyam, K.R. 2001. *Financial Statement Analysis*. 7th ed. New York: McGraw-Hill Higher Education.

Williamson, D. *Ploughing Back the Profits*. 2003. http://www.duncanwil.co.uk/plough.html. Down loaded 07/02/2003.

Wilson, R.M.S. 1974. *Financial Control*. London: McGraw Hill.

Wimble, B.J.S. and Cairns, T. 1976. *Selected Questions in Accounting*. 4th ed. Cape Town: Juta & Co.

Wolk, H.I., Francis, J.R. and Tearney, M.G. 1992. *Accounting Theory - A Conceptual and Institutional Approach*. 3rd ed. Cincinatti, Ohio: South-Western Publishing.

Xrefer. 2002. http://www.xrefer.com/entry/588800. Down loaded 08/11/2002.

Yamey, B.S. 1982. Some reflections on the writing of a general history of accounting - Accounting & Business research. In: Yamey, B.S. (Ed) *Further essays on the history of accounting*. New York: Garland Publishing.

Yoon, S.S. and Miller, G.A. 2002. Cash from operations and earnings management in Korea. *The international Journal of Accounting*. 37(4):395-412.

Appendix A - Covering letter

The following covering letter was e-mailed to the companies and analysts to explain the reason for the research and questionnaire.

ATTENTION: The financial manager/Analyst

Date: 8 March 2003

Dear Sir/Madam

I am currently conducting research for a MCom degree at the University of Pretoria. The research problem focuses on whether the use of book entries, as a means to achieve certain objectives, creates information, which may be of lesser integrity than information which results from real events or transactions. The aim of this questionnaire is to establish your understanding and attitude towards book entries. The questionnaire forms part of the overall research.

Accompanying this letter please find a questionnaire that is calculated to take about 5 minutes of your time to complete. You will notice that a brief summary of the results of the opinion survey will be available to all interested parties. If you want to keep your answers separate from the request for the results, please detach the last section of the questionnaire and kindly return separately by facsimile or e-mail. Should you require information regarding the completion of the questionnaire, please do not hesitate to contact me at 012-429-4721 (08h00 – 13h00) or at 084-510-3933 (all hours).

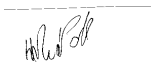
All answers will be treated as strictly confidential and will be used for statistical and research purposes only.

Kindly **return** the completed questionnaire by **fax** 012-345-3779 or return via e-mail, vdpolhm@unisa.ac.za.

Indien u die begeleidende brief en die vraelys in Afrikaans verkies, skakel 012-429-4721 of 084-510-3933 of stuur 'n e-pos aan: vdpolhm@unisa.ac.za

Your kind cooperation is appreciated.

Yours sincerely



Breggie van der Poll

Approved by

Professor Daan Gouws (Supervisor)

Appendix B - The questionnaire used in the survey of opinions:

QUESTIONNAIRE TO FINANCIAL MANAGERS AND OTHER STAKEHOLDERS

For office use only

☐ ☐ ☐
1 2 3

All answers will be treated as strictly confidential and will be used for statistical purposes only.

QUESTIONNAIRE ON THE USE OF BOOK ENTRIES AND THEIR EFFECT ON THE INTEGRITY OF INFORMATION

Please **return** as soon as possible to fax number **012-345-3779** or e-mail address: vdpolhm@unisa.ac.za

If you are replying electronically, please indicate your answer with a ✓ in the space provided.

1. Please indicate:

Inside stakeholder _____ ☐ 4

Outside stakeholder _____

Male _____ ☐ 5

Female _____

2. Opinions:

To what extent do you personally agree or disagree with the following statements?

SA - Strongly agree		**A - Agree**
	U - Uncertain	
D - Disagree		**SD - Strongly**

Appendix B

		1	2	3	4	5	
		SA	**A**	**U**	**D**	**SD**	
1	Book entries precipitated as journal entries may be used to manipulate financial information.						☐ 6
2	Classifying items in the balance sheet may be used to manipulate financial information.						☐ 7
3	Classifying items for year-end statements can be viewed as reversible book entries.						☐ 8
4	Providing for depreciation is one way of generating internal funds.						☐ 9
5	Earnings management may have a negative effect on the integrity of information.						☐ 10
6	Earnings quality should be measured in terms of its usefulness to the users.						☐11
7	For decision-making purposes, the cause and effect of a book entry must be considered.						☐12
8	The quality of earnings depends on the time between revenue recognition and cash collection.						☐13
9	Book entries affect future reality.						☐14
10	Earnings management is being used to increase investor confidence.						☐15
11	Book entries may be used to present “Big Baths” in earnings management.						☐16
12	Book entries may be used to smooth income over the long term.						☐17
13	Investors are more confident when a company’s earnings rise gradually.						☐18
14	Income smoothing can be used as a strategic tool.						☐19
15	Income smoothing may be viewed as mixing good and bad news to the detriment of outside stakeholders.						☐20
16	Book entries are based on artificial transactions.						☐21

17	Information created through income smoothing has lesser integrity than those created by real events.						□22
18	Information created through book entries is based on artificial transactions.						□23
19	Book entries may seriously affect the integrity of information.						□24
20	Only for real transactions and events is cash the main deliverable.						□25
21	Subjective book entries are based on opinions not facts.						□26

3. Comments: (especially on SA and SD responses)

Statement no.

.....

Statement no.

.....

In general

.....

4. Your definition of a book entry

.....

.....

.....

Please return this questionnaire to facsimile number 012-345-3779 or via e-mail to: vdpolhm@unisa.ac.za

✂ .....

Address, fax no or e-mail address if you are interested in a brief summary of the results of the survey. (Return separately if you wish)

.....

.....

.....

.....

Appendix C

Appendix C - Analysis of 30 companies

Return on investment, return on equity and fixed assets to equity capital

Amlac		1996	1997	1998	1999	2000	Average
Return on investment							
Traditional ratio		21%	15%	-5%	-8%	28%	
Adjusted ratio		20%	15%	-4%	-7%	25%	
	% deviation	3%	5%	7%	9%	11%	7%
Return on equity							
Traditional ratio		40%	25%	-22%	-109%	44%	
Adjusted ratio		37%	23%	-19%	-68%	36%	
	% deviation	7%	8%	12%	38%	16%	16%
Fixed assets: Equity capital							
Traditional ratio		82%	88%	114%	243%	185%	
Adjusted ratio		83%	89%	110%	176%	161%	
	% deviation	-2%	-2%	3%	28%	13%	8%
Avis		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		15%	14%	14%	27%	10%	
Adjusted ratio		13%	12%	12%	24%	9%	
	% deviation	14%	14%	13%	12%	10%	13%
Return on equity							
Traditional ratio		18%	24%	25%	48%	15%	
Adjusted ratio		14%	18%	18%	37%	11%	
	% deviation	25%	27%	29%	23%	21%	25%
Fixed assets: Equity capital							
Traditional ratio		80%	106%	94%	66%	58%	
Adjusted ratio		85%	104%	96%	74%	67%	
	% deviation	-6%	2%	-2%	-11%	-15%	-6%

Appendix C

City Lodge		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		13%	13%	12%	14%	15%	
Adjusted ratio		11%	11%	10%	11%	12%	
	% deviation	8%	10%	15%	20%	21%	15%
Return on equity							
Traditional ratio		14%	14%	14%	16%	17%	
Adjusted ratio		12%	12%	10%	11%	13%	
	% deviation						0%
Fixed assets: Equity capital							
Traditional ratio		122%	129%	161%	166%	115%	
Adjusted ratio		119%	124%	140%	144%	111%	
	% deviation	2%	4%	13%	13%	4%	7%
Comair		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		27%	24%	24%	16%	5%	
Adjusted ratio		22%	20%	20%	15%	4%	
	% deviation	20%	15%	14%	10%	8%	13%
Return on equity							
Traditional ratio		51%	45%	36%	23%	3%	
Adjusted ratio		35%	34%	28%	19%	3%	
	% deviation	31%	24%	23%	17%	5%	20%
Fixed assets: Equity capital							
Traditional ratio		54%	75%	48%	84%	87%	
Adjusted ratio		68%	82%	62%	86%	89%	
	% deviation	-26%	-9%	-29%	-2%	-2%	-14%

Appendix C

Concor		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		9%	3%	-6%	4%	4%	
Adjusted ratio		8%	2%	-5%	3%	3%	
	% deviation	15%	17%	19%	21%	20%	18%
Return on equity							
Traditional ratio		18%	3%	-33%	4%	10%	
Adjusted ratio		13%	2%	-17%	2%	5%	
	% deviation	31%	36%	47%	49%	51%	43%
Fixed assets: Equity capital							
Traditional ratio		35%	36%	42%	53%	74%	
Adjusted ratio		56%	60%	71%	77%	88%	
	% deviation	-63%	-67%	-69%	-46%	-19%	-53%
COPI		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		11%	5%	0%	-2%	3%	
Adjusted ratio		10%	5%	0%	-1%	3%	
	% deviation	9%	9%	9%	9%	9%	9%
Return on equity							
Traditional ratio		12%	5%	-1%	-2%	3%	
Adjusted ratio		11%	5%	-1%	-2%	3%	
	% deviation	11%	10%	15%	12%	10%	12%
Fixed assets: Equity capital							
Traditional ratio		10%	11%	9%	7%	8%	
Adjusted ratio		20%	21%	18%	16%	17%	
	% deviation	-90%	-83%	-105%	-120%	-125%	-104%

Appendix C

Edgars		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		8%	4%	8%	5%	5%	
Adjusted ratio		7%	3%	6%	4%	4%	
	% deviation	16%	17%	20%	21%	22%	19%
Return on equity							
Traditional ratio		11%	2%	10%	6%	6%	
Adjusted ratio		8%	2%	7%	4%	4%	
	% deviation	24%	15%	31%	32%	33%	27%
Fixed assets: Equity capital							
Traditional ratio		40%	41%	38%	31%	36%	
Adjusted ratio		55%	58%	58%	54%	59%	
	% deviation	-39%	-42%	-52%	-75%	-64%	-54%
Energy Africa		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		-13%	-24%	10%	14%	11%	
Adjusted ratio		-10%	-13%	4%	7%	5%	
	% deviation	27%	45%	54%	53%	51%	46%
Return on equity							
Traditional ratio		-19%	-33%	12%	18%	14%	
Adjusted ratio		-12%	-15%	5%	7%	6%	
	% deviation	35%	54%	61%	59%	59%	53%
Fixed assets: Equity capital							
Traditional ratio		90%	91%	74%	98%	120%	
Adjusted ratio		94%	96%	90%	99%	108%	
	% deviation	-4%	-7%	-21%	-1%	10%	-5%

Appendix C

Foschini		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		13%	12%	11%	5%	9%	
Adjusted ratio		11%	10%	9%	4%	8%	
	% deviation	16%	18%	18%	18%	19%	18%
Return on equity							
Traditional ratio		15%	13%	14%	6%	10%	
Adjusted ratio		12%	10%	10%	4%	8%	
	% deviation	21%	22%	29%	25%	25%	25%
Fixed assets: Equity capital							
Traditional ratio		19%	20%	18%	18%	15%	
Adjusted ratio		37%	39%	38%	40%	38%	
	% deviation	-91%	-95%	-111%	-124%	-155%	-115%
Grintek		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		10%	11%	13%	14%	11%	
Adjusted ratio		9%	10%	12%	13%	11%	
	% deviation	8%	11%	9%	7%	7%	9%
Return on equity							
Traditional ratio		17%	28%	33%	36%	28%	
Adjusted ratio		14%	20%	27%	30%	24%	
	% deviation	22%	26%	20%	16%	15%	20%
Fixed assets: Equity capital							
Traditional ratio		48%	32%	35%	26%	32%	
Adjusted ratio		66%	51%	49%	38%	43%	
	% deviation	-38%	-59%	-42%	-44%	-33%	-43%

Appendix C

Highveld		1997	1998	1999	2000	2001	Average
Return on investment							
Traditional ratio		5%	7%	4%	4%	-9%	
Adjusted ratio		4%	6%	3%	3%	-7%	
	% deviation	17%	17%	19%	21%	24%	20%
Return on equity							
Traditional ratio		5%	9%	2%	3%	-25%	
Adjusted ratio		4%	6%	2%	2%	-14%	
	% deviation	22%	30%	12%	28%	43%	27%
Fixed assets: Equity capital							
Traditional ratio		149%	141%	139%	133%	119%	
Adjusted ratio		133%	127%	125%	120%	110%	
	% deviation	11%	10%	10%	10%	8%	10%
Iscor		**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Return on investment							
Traditional ratio		6%	4%	7%	-2%	12%	
Adjusted ratio		4%	3%	5%	-1%	9%	
	% deviation	25%	25%	26%	27%	28%	26%
Return on equity							
Traditional ratio		7%	2%	7%	-8%	15%	
Adjusted ratio		5%	1%	4%	-5%	9%	
	% deviation	35%	17%	32%	45%	37%	33%
Fixed assets: Equity capital							
Traditional ratio		102%	102%	100%	125%	108%	
Adjusted ratio		101%	101%	100%	114%	105%	
	% deviation	1%	1%	0%	9%	3%	3%

Appendix C

IST		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		0%	21%	3%	8%	15%	
Adjusted ratio		0%	20%	3%	8%	14%	
	% deviation	0%	5%	6%	8%	9%	6%
Return on equity							
Traditional ratio		n/a	37%	3%	11%	22%	
Adjusted ratio		n/a	33%	2%	9%	19%	
	% deviation	n/a	9%	8%	13%	15%	9%
Fixed assets: Equity capital							
Traditional ratio		92%	31%	34%	34%	31%	
Adjusted ratio		93%	36%	41%	42%	41%	
	% deviation	-1%	-18%	-21%	-25%	-31%	-19%
Italtile		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		14%	16%	20%	17%	21%	
Adjusted ratio		13%	15%	19%	16%	20%	
	% deviation	6%	5%	6%	5%	4%	5%
Return on equity							
Traditional ratio		22%	24%	32%	29%	34%	
Adjusted ratio		20%	23%	29%	26%	32%	
	% deviation	8%	8%	9%	7%	7%	8%
Fixed assets: Equity capital							
Traditional ratio		56%	73%	83%	81%	69%	
Adjusted ratio		59%	76%	84%	83%	71%	
	% deviation	-6%	-3%	-2%	-1%	-3%	-3%

Appendix C

Murray & Roberts	1998	1999	2000	2001	2002	Average
Return on investment						
Traditional ratio	10%	1%	-7%	4%	8%	
Adjusted ratio	8%	1%	-6%	4%	7%	
% deviation	18%	17%	16%	14%	15%	16%
Return on equity						
Traditional ratio	17%	-1%	-21%	6%	14%	
Adjusted ratio	11%	-1%	-15%	5%	10%	
% deviation	32%	34%	29%	27%	28%	30%
Fixed assets: Equity capital						
Traditional ratio	62%	73%	62%	51%	47%	
Adjusted ratio	73%	81%	74%	65%	63%	
% deviation	-18%	-11%	-19%	-30%	-34%	-22%
Mr Price	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment						
Traditional ratio	11%	11%	12%	9%	11%	
Adjusted ratio	9%	10%	10%	8%	10%	
% deviation	12%	13%	14%	14%	15%	14%
Return on equity						
Traditional ratio	18%	19%	22%	14%	19%	
Adjusted ratio	15%	14%	14%	10%	12%	
% deviation	19%	23%	35%	31%	33%	28%
Fixed assets: Equity capital						
Traditional ratio	26%	39%	36%	34%	28%	
Adjusted ratio	38%	54%	52%	51%	48%	
% deviation	-47%	-38%	-46%	-53%	-70%	-51%

Appendix C

Mustek		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		24%	20%	9%	10%	12%	
Adjusted ratio		23%	19%	9%	9%	12%	
	% deviation	1%	1%	2%	3%	3%	2%
Return on equity							
Traditional ratio		39%	29%	15%	14%	21%	
Adjusted ratio		39%	28%	14%	13%	20%	
	% deviation	2%	2%	5%	9%	7%	5%
Fixed assets: Equity capital							
Traditional ratio		4%	3%	8%	11%	10%	
Adjusted ratio		6%	5%	13%	19%	17%	
	% deviation	-37%	-55%	-60%	-81%	-78%	-62%
Pick 'n Pay		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		9%	9%	9%	10%	11%	
Adjusted ratio		8%	8%	8%	8%	8%	
	% deviation	11%	12%	16%	21%	22%	16%
Return on equity							
Traditional ratio		13%	10%	24%	24%	26%	
Adjusted ratio		9%	7%	13%	13%	14%	
	% deviation	29%	33%	46%	48%	45%	40%
Fixed assets: Equity capital							
Traditional ratio		85%	130%	120%	93%	80%	
Adjusted ratio		90%	118%	110%	97%	90%	
	% deviation	-6%	9%	9%	-4%	-13%	-1%

Appendix C

PPC		1997	1998	1999	2000	2001	Average
Return on investment							
Traditional ratio		14%	13%	10%	11%	16%	
Adjusted ratio		10%	9%	7%	8%	12%	
	% deviation	27%	26%	25%	26%	26%	26%
Return on equity							
Traditional ratio		17%	15%	12%	14%	21%	
Adjusted ratio		11%	10%	8%	9%	13%	
	% deviation	37%	34%	35%	35%	35%	35%
Fixed assets: Equity capital							
Traditional ratio		107%	113%	99%	84%	66%	
Adjusted ratio		105%	108%	99%	89%	77%	
	% deviation	2%	4%	0%	-6%	-17%	-3%
Putco		**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Return on investment							
Traditional ratio		8%	8%	7%	10%	9%	
Adjusted ratio		5%	5%	4%	6%	5%	
	% deviation	41%	42%	40%	39%	37%	40%
Return on equity							
Traditional ratio		9%	8%	13%	20%	17%	
Adjusted ratio		4%	3%	4%	8%	7%	
	% deviation	59%	61%	66%	60%	58%	61%
Fixed assets: Equity capital							
Traditional ratio		147%	151%	181%	164%	275%	
Adjusted ratio		117%	117%	128%	124%	153%	
	% deviation	21%	22%	29%	25%	44%	28%

Appendix C

Rainbow		1997	1998	1999	2000	2001	Average
Return on investment							
Traditional ratio		-17%	1%	3%	9%	13%	
Adjusted ratio		-13%	1%	2%	6%	9%	
	% deviation	22%	25%	26%	29%	30%	27%
Return on equity							
Traditional ratio		-32%	-2%	3%	11%	17%	
Adjusted ratio		-22%	-1%	2%	7%	11%	
	% deviation	32%	32%	35%	36%	38%	35%
Fixed assets: Equity capital							
Traditional ratio		91%	90%	94%	80%	62%	
Adjusted ratio		96%	90%	93%	87%	123%	
	% deviation	-6%	0%	2%	-9%	-101%	-23%
Richemont		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		17%	18%	70%	31%	8%	
Adjusted ratio		15%	16%	64%	28%	7%	
	% deviation	9%	8%	9%	11%	12%	10%
Return on equity							
Traditional ratio		n/a	26%	90%	39%	10%	
Adjusted ratio		n/a	22%	80%	34%	8%	
	% deviation	n/a	13%	10%	13%	15%	13%
Fixed assets: Equity capital							
Traditional ratio		23%	23%	7%	9%	11%	
Adjusted ratio		32%	30%	13%	15%	18%	
	% deviation	-40%	-35%	-82%	-70%	-62%	-58%

Appendix C

SAB		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		13%	11%	14%	15%	15%	
Adjusted ratio		11%	8%	11%	11%	11%	
	% deviation	19%	21%	22%	24%	25%	22%
Return on equity							
Traditional ratio		20%	13%	21%	24%	24%	
Adjusted ratio		12%	9%	13%	14%	15%	
	% deviation	38%	33%	39%	39%	40%	38%
Fixed assets: Equity capital							
Traditional ratio		90%	102%	72%	74%	60%	
Adjusted ratio		93%	101%	81%	83%	72%	
	% deviation	-4%	1%	-12%	-11%	-20%	-9%
Sappi		**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Return on investment							
Traditional ratio		5%	6%	5%	9%	6%	
Adjusted ratio		4%	5%	3%	6%	4%	
	% deviation	15%	23%	30%	33%	36%	28%
Return on equity							
Traditional ratio		3%	5%	6%	15%	8%	
Adjusted ratio		2%	3%	3%	8%	4%	
	% deviation	27%	38%	46%	50%	53%	43%
Fixed assets: Equity capital							
Traditional ratio		168%	191%	237%	206%	213%	
Adjusted ratio		148%	145%	154%	142%	140%	
	% deviation	12%	24%	35%	31%	34%	27%

Appendix C

Sasol		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		10%	12%	18%	19%	18%	
Adjusted ratio		7%	8%	12%	13%	12%	
	% deviation	29%	30%	33%	33%	33%	32%
Return on equity							
Traditional ratio		12%	14%	26%	32%	28%	
Adjusted ratio		7%	8%	14%	17%	15%	
	% deviation	39%	39%	46%	48%	48%	44%
Fixed assets: Equity capital							
Traditional ratio		92%	87%	86%	114%	113%	
Adjusted ratio		95%	93%	93%	107%	106%	
	% deviation	-4%	-6%	-7%	7%	6%	-1%
Shoprite		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		8%	4%	7%	3%	6%	
Adjusted ratio		7%	3%	5%	3%	4%	
	% deviation	17%	19%	19%	19%	19%	19%
Return on equity							
Traditional ratio		11%	-10%	15%	5%	14%	
Adjusted ratio		6%	-5%	8%	3%	7%	
	% deviation	46%	51%	44%	45%	48%	47%
Fixed assets: Equity capital							
Traditional ratio		89%	101%	97%	98%	109%	
Adjusted ratio		94%	101%	99%	99%	104%	
	% deviation	-6%	1%	-1%	-1%	5%	-1%

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Siltek	1996	1997	1998	1999	2000	Average
Return on investment						
Traditional ratio	30%	11%	9%	7%	9%	
Adjusted ratio	28%	11%	9%	7%	9%	
% deviation	5%	4%	4%	4%	3%	4%
Return on equity						
Traditional ratio	39%	13%	14%	15%	23%	
Adjusted ratio	37%	13%	13%	14%	22%	
% deviation	6%	6%	8%	11%	8%	8%
Fixed assets: Equity capital						
Traditional ratio	2%	11%	16%	19%	18%	
Adjusted ratio	6%	17%	23%	28%	26%	
% deviation	-128%	-51%	-43%	-46%	-44%	-62%
Sun International	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Return on investment						
Traditional ratio	14%	15%	5%	4%	7%	
Adjusted ratio	12%	13%	4%	3%	5%	
% deviation	15%	16%	20%	23%	24%	19%
Return on equity						
Traditional ratio	18%	18%	7%	5%	9%	
Adjusted ratio	14%	15%	5%	3%	6%	
% deviation	20%	21%	32%	33%	35%	28%
Fixed assets: Equity capital						
Traditional ratio	140%	135%	203%	176%	122%	
Adjusted ratio	131%	127%	162%	148%	114%	
% deviation	6%	6%	20%	16%	6%	11%

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Tiger Wheel		1998	1999	2000	2001	2002	Average
Return on investment							
Traditional ratio		10%	9%	7%	7%	8%	
Adjusted ratio		10%	9%	6%	6%	7%	
	% deviation	7%	7%	10%	12%	11%	9%
Return on equity							
Traditional ratio		14%	11%	10%	13%	14%	
Adjusted ratio		12%	9%	8%	10%	12%	
	% deviation	14%	14%	20%	23%	20%	18%
Fixed assets: Equity capital							
Traditional ratio		65%	98%	104%	102%	94%	
Adjusted ratio		69%	98%	103%	101%	95%	
	% deviation	-8%	0%	1%	0%	-1%	-2%
Woolworths		**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Return on investment							
Traditional ratio		14%	11%	8%	9%	11%	
Adjusted ratio		12%	9%	7%	7%	9%	
	% deviation	15%	17%	18%	18%	18%	17%
Return on equity							
Traditional ratio		18%	12%	11%	12%	17%	
Adjusted ratio		14%	9%	8%	8%	12%	
	% deviation	23%	24%	29%	29%	29%	27%
Fixed assets: Equity capital							
Traditional ratio		60%	54%	49%	43%	39%	
Adjusted ratio		69%	66%	62%	58%	55%	
	% deviation	-16%	-22%	-27%	-34%	-42%	-28%

Appendix C

WACC

	Amlac 2000			Avis 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	13,225	10.73		379,894	5.85	
				5,130	8.52	
Where marginal tax rate = 35%	13,225			385,024		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		18%			19%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditionally						
Equity	13,498	0.51		1,012,875	0.72	
Preference shares	-	-		-	-	
Debt 1	13,225	0.49		379,894	0.27	
Debt 2				5,130	0.01	
	26,723	1.00		1,397,899	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	14,494	0.52		1,410,542	0.79	
Preference shares	-	-		-	-	
Debt 1	13,225	0.48		379,894	0.21	
Debt 2				5,130	-	
	27,719	1.00		1,795,566	1.00	
WACC (Traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	18%	0.51	9%	19%	0.72	13%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	11%	0.49	5%	6%	0.27	2%
Debt 2				9%	0.01	0%
	28%	1.00	14%	33%	1.00	15%
WACC (Adjusted)						
Equity	18%	0.52	9%	19%	0.79	15%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	11%	0.48	5%	6%	0.21	1%
Debt 2				9%	-	0%
	28%	1.00	14%	33%	1.00	16%

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	City Lodge 2002			Comair 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	33,500	6.5		135,490	12.35	
	8,500	6.34		35,970	8.45	
	16,500	6.5				
Where marginal tax rate = 35%	58,500			171,460		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		23%			20%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditionally						
Equity	306,086	0.84		383,933	0.70	
Preference shares	-	-		-	-	
Debt 1	33,500	0.09		135,490	0.24	
Debt 2	8,500	0.02		35,970	0.06	
Debt 3	16,500	0.05				
	364,586	1.00		555,393	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	456,130	0.88		486,547	0.74	
Preference shares	-	-		-	-	
Debt 1	33,500	0.07		135,490	0.21	
Debt 2	8,500	0.02		35,970	0.05	
Debt 3	16,500	0.03				
	514,630	1.00		658,007	1.00	
WACC (Traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	23%	0.84	19%	20%	0.70	14%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	7%	0.09	1%	12%	0.24	3%
Debt 2	6%	0.02	0%	8%	0.06	1%
Debt 3	7%	0.05	0%			
	42%	1.00	20%	41%	1.00	18%
WACC (Adjusted)						
Equity	23%	0.88	20%	20%	0.74	15%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	7%	0.07	0%	12%	0.21	3%
Debt 2	6%	0.02	0%	8%	0.05	0%
Debt 3	7%	0.03	0%			
	42%	1.00	20%	41%	1.00	18%

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	Concor 2002			COPI 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	25,607	10.4		-	-	
Where marginal tax rate = 35%	25,607			-		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		21%			23%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditionally						
Equity	164,322	0.87		445,544	1.00	
Preference shares	-	-	-		-	
Debt 1	25,607	0.13		-	-	
	189,929	1.00		445,544	1.00	
Equity containing deferred taxation and accumulated depreciation						
Equity	346,931	0.93		501,301	1.00	
Preference shares	-	-		-	-	
Debt 1	25,607	0.07		-	-	
	372,538	1.00		501,301	1.00	
WACC (traditional)						
	Cost	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	21%	0.87	18%	23%	1.00	23%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.13	1%	0%	-	0%
	31%	1.00	19%	23%	1.00	23%
WACC (adjusted)						
Equity	21%	0.93	19%	23%	1.00	23%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.07	1%	0%	-	0%
	31%	1.00	20%	23%	1.00	23%

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	Edgars 2002			Energy Africa 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	99,240	4.91		100,000	10.40	
	50,000	8.05				
	33,486	8.45				
Where marginal tax rate = 35%	182,726			100,000		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		21%			18%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditionally						
Equity	2,296,800	0.93		1,666,180	0.94	
Preference shares	300	-		-	-	
Debt 1	99,240	0.04		100,000	0.06	
Debt 2	50,000	0.02				
Debt 3	33,486	0.01				
	2,479,826	1.00		1,766,180	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	3,755,300	0.95		4,223,300	0.98	
Preference shares	300	-		-	-	
Debt 1	99,240	0.03		100,000	0.02	
Debt 2	50,000	0.01				
Debt 3	33,486	0.01				
	3,938,326	1.00		4,323,300	1.00	
WACC (traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	21%	0.93	20%	18%	0.94	16%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	5%	0.04	0%	10%	0.06	1%
	8%	0.02	0%			
	8%	0.01	0%			
	43%	1.00	20%	28%	1.00	17%
WACC (adjusted)						
Equity	21%	0.95	20%	18%	0.98	17%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	5%	0.03	0%	10%	0.02	0%
Debt 2	8%	0.01	0%			
Debt 3	8%	0.01	0%			
	43%	1.00	20%	28%	1.00	17%

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	Foschini 2002			Grintek 2002		
Cost of new debt	**Debt**	**%**		**Debt**	**%**	
Kd = I(1-t)	500	7.05		24,952	10.65	
	43,300	10.40		36	9.10	
	388,000	10.40		820	10.40	
				17,115	9.75	
Where marginal tax rate = 35%	431,800			42,923		
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		21%			21%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditionally						
Equity	1,829,700	0.81		372,940	0.90	
Preference shares	400	-		-	-	
Debt 1	500	-		24,952	0.06	
Debt 2	43,300	0.02		36	-	
Debt 3	388,000	0.17		820	-	
Debt 4				17,115	0.04	
	2,261,900	1.00		415,863	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	2,701,100	0.87		459,436	0.92	
Preference shares	400	-		-	-	
Debt 1	500	-		24,952	0.05	
Debt 2	43,300	0.01		36	-	
Debt 3	388,000	0.12		820	-	
Debt 4				17,115	0.03	
	3,133,300	1.00		502,359	1.00	
WACC (traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	21%	0.81	17%	21%	0.90	19%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	7%	-	0%	11%	0.06	1%
Debt 2	10%	0.02	0%	9%	-	0%
Debt 3	10%	0.17	2%	10%	-	0%
Debt 4				10%	0.04	0%
	49%	1.00	19%	60%	1.00	20%
WACC (adjusted)						
Equity	21%	0.87	18%	21%	0.92	19%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	7%	-	0%	11%	0.05	1%
Debt 2	10%	0.01	0%	9%	-	0%
Debt 3	10%	0.12	1%	10%	-	0%
Debt 4				10%	0.03	0%
	49%	1.00	19%	60%	1.00	20%

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	Highveld 2001			Iscor 2001		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	497,591	10.40		726,000	8.55	
Where marginal tax rate = 35%	497,591			726,000		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		28%			27%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as normal						
Equity	1,421,993	0.74		11,104,000	0.94	
Preference shares	-	-		-	-	
Debt 1	497,591	0.26		726,000	0.06	
	1,919,584	1.00		11,830,000	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	3,021,925	0.86		19,036,000	0.96	
Preference shares	-	-		-	-	
Debt 1	497,591	0.14		726,000	0.04	
	3,519,516	1.00		19,762,000	1.00	
WACC (traditional)						
	Cost	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	28%	0.74	20%	27%	0.94	25%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.26	3%	9%	0.06	1%
	38%	1.00	23%	35%	1.00	26%
WACC (adjusted)						
Equity	28%	0.86	24%	27%	0.96	26%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.14	1%	9%	0.04	0%
	38%	1.00	25%	35%	1.00	26%

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	IST 2002			Italtile 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	3,394	10.40		7,195	4.03	
Where marginal tax rate = 35%	3,394			7,195		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		25%			19%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as normal						
Equity	108,395	0.97		325,953	0.98	
Preference shares	-	-		-	-	
Debt 1	3,394	0.03		7,195	0.02	
	111,789	1.00		333,148	1.00	
Equity containing deferred taxation and accumulated depreciation						
Equity	129,242	0.97		351,791	0.99	
Preference shares	-	-		-	-	
Debt 1	3,394	0.03		7,195	0.01	
	132,636	1.00		358,986	1.00	
WACC (traditional)						
	Cost	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	25%	0.97	24%	19%	0.98	19%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.03	0%	4%	0.02	0%
	35%	1.00	24%	23%	1.00	19%
WACC (adjusted)						
Equity	25%	0.97	24%	19%	0.99	19%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.03	0%	4%	0.01	0%
	35%	1.00	24%	23%	1.00	19%

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	Murray & Roberts 2002			Mr Price 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	263,100	10.73		86,484	10.40	
Where marginal tax rate = 35%	263,100			86,484		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		22%			22%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditionally						
Equity	2,847,800	0.92		673,010	0.89	
Preference shares	-	-		-	-	
Debt 1	263,100	0.08		86,484	0.11	
	3,110,900	1.00		759,494	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	4,129,900	0.94		923,946	0.91	
Preference shares	-	-		-	-	
Debt 1	263,100	0.06		86,484	0.09	
	4,393,000	1.00		1,010,430	1.00	
WACC (traditional)						
	Cost	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	22%	0.92	20%	22%	0.89	19%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	11%	0.08	1%	10%	0.11	1%
	33%	1.00	21%	32%	1.00	20%
WACC (adjusted)						
Equity	22%	0.94	21%	22%	0.91	20%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	11%	0.06	1%	10%	0.09	1%
	33%	1.00	22%	32%	1.00	21%

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	Mustek 2002			Pick 'n Pay 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	6,685	11.05		46,600	6.94	
	160,342	7.72		150,000	8.22	
				61,900	8.61	
Where marginal tax rate = 35%	167,027			258,500		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		24%			23%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditionally						
Equity	363,260	0.69		1,266,300	0.83	
Preference shares	-	-		-	-	
Debt 1	6,685	0.01		46,600	0.03	
Debt 2	160,342	0.30		150,000	0.10	
Debt 3				61,900	0.04	
	530,287	1.00		1,524,800	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	400,622	0.71		2,634,100	0.91	
Preference shares	-	-		-	-	
Debt 1	6,685	0.01		46,600	0.02	
Debt 2	160,342	0.28		150,000	0.05	
Debt 3				61,900	0.02	
	567,649	1.00		2,892,600	1.00	
WACC (traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	24%	0.69	16%	23%	0.83	19%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	11%	0.01	0%	7%	0.03	0%
Debt 2	8%	0.30	2%	8%	0.10	1%
Debt 3				9%	0.04	0%
	43%	1.00	18%	46%	1.00	20%
WACC (adjusted)						
Equity	24%	0.71	17%	23%	0.91	21%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	11%	0.01	0%	7%	0.02	0%
Debt 2	8%	0.28	2%	8%	0.05	0%
Debt 3				9%	0.02	0%
	43%	1.00	19%	46%	1.00	21%

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	PPC 2001			Putco 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	287,600	10.40		35,664	10.40	
Where marginal tax rate = 35%	287,600			35,664		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		24%			29%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as normal						
Equity	2,100,700	0.88		94,449	0.73	
Preference shares	-	-		-	-	
Debt 1	287,600	0.12		35,664	0.27	
	2,388,300	1.00		130,113	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	3,329,300	0.92		313,425	0.90	
Preference shares	-	-		-	-	
Debt 1	287,600	0.08		35,664	0.10	
	3,616,900	1.00		349,089	1.00	
WACC (traditional)						
	Cost	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	24%	0.88	21%	29%	0.73	21%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.12	1%	10%	0.27	3%
	34%	1.00	22%	39%	1.00	24%
WACC (adjusted)						
Equity	24%	0.92	22%	29%	0.90	26%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.08	1%	10%	0.10	1%
	34%	1.00	23%	39%	1.00	27%

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	Rainbow 2001			Richemont 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	4,848	10.40		316,000	10.40	
Where marginal tax rate = 35%	4,848			316,000		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		23%			20%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as normal						
Equity	857,300	0.99		7,983,000	0.96	
Preference shares	500	-		-	-	
Debt 1	4,848	0.01		316,000	0.04	
	862,648	1.00		8,299,000	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	1,394,300	1.00		8,723,000	0.97	
Preference shares	500	-		-	-	
Debt 1	4,848	-		316,000	0.03	
	1,399,648	1.00		9,039,000	1.00	
WACC (traditional)						
	Cost	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	23%	0.99	22%	20%	0.96	20%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	0.01	0%	10%	0.04	0%
	33%	1.00	22%	31%	1.00	20%
WACC (adjusted)						
Equity	23%	1.00	23%	20%	0.97	20%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	10%	-	0%	10%	0.03	0%
	33%	1.00	23%	31%	1.00	20%

Appendix C

	SAB 2002			Sappi 2001		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	8,006,050	5.24		1,311,500	4.88	
	6,754,950	2.76		6,071,900	10.40	
				728,600	9.10	
Where marginal tax rate = 35%	14,761,000			8,112,000		
Cost of preference shares						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		23%			20%	
Where expected growth rate = 17.5%						
Determining the weights						
Equity calculated as traditional						
Equity	26,847,000	0.65		12,024,000	0.60	
Preference shares	-	-		-	-	
Debt 1	8,006,050	0.19		1,311,500	0.07	
Debt 2	6,754,950	0.16		6,071,900	0.30	
Debt 3				728,600	0.03	
	41,608,000	1.00		20,136,000	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	42,922,800	0.74		15,104,000	0.65	
Preference shares	-	-		-	-	
Debt 1	8,006,050	0.14		1,311,500	0.06	
	6,754,950	0.12		6,071,900	0.26	
				728,600	0.03	
	57,683,800	1.00		23,216,000	1.00	
WACC (traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	23%	0.65	15%	20%	0.60	12%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	5%	0.19	1%	5%	0.07	0%
	3%	0.16	0%	10%	0.30	3%
				9%	0.03	0%
	31%	1.00	16%	45%	1.00	15%
WACC (adjusted)						
Equity	23%	0.74	17%	20%	0.65	13%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	5%	0.14	1%	5%	0.06	0%
Debt 2	3%	0.12	0%	10%	0.26	3%
Debt 3				9%	0.03	0%
	31%	1.00	18%	45%	1.00	16%

Appendix C

	Sasol 2002			Shoprite 2002		
Cost of new debt	**Debt**	**%**		**Debt**	**%**	
Kd = I(1-t)	4,252,000	2.86		350	3.90	
	266,000	4.42		1,100	3.25	
	846,000	10.40				
Where marginal tax rate = 35%	5,364,000			1,450		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 + g		23%			23%	
Po						
Where expected growth rate = 17.5%						
Determining the weights						
Traditional Equity						
Equity	30,070,000	0.85		1,459,458	1.00	
Preference shares	-	-		-	-	
Debt 1	4,252,000	0.12		350	-	
Debt 2	266,000	0.01		1,100	-	
Debt 3	846,000	0.02				
	35,434,000	1.00		1,460,908	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	67,028,000	0.93		3,149,766	1.00	
Preference shares	-	-		-	-	
Debt 1	4,252,000	0.06		350	-	
Debt 2	266,000	-		1,100	-	
Debt 3	846,000	0.01				
	72,392,000	1.00		3,151,216	1.00	
WACC (traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	23%	0.85	20%	23%	1.00	23%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	3%	0.12	0%	4%	-	0%
Debt 2	4%	0.01	0%	3%	-	0%
Debt 3	10%	0.02	0%			
	41%	1.00	20%	30%	1.00	23%
WACC (adjusted)						
Equity	23%	0.93	22%	23%	1.00	23%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	3%	0.06	0%	4%	-	0%
Debt 2	4%	-	0%	3%	-	0%
Debt 3	10%	0.01	0%			
	41%	1.00	22%	30%	1.00	23%

Appendix C

	Siltek 2000			Sun International 2001		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	135,051	10.40		195,731	8.98	
				188,167	8.47	
				2,505	7.80	
Where marginal tax rate = 35%	135,051			386,403		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		118%			19%	
Where expected growth rate = 17.5%						
Determining the weights						
Traditional equity calculation						
Equity	316,995	0.70		1,845,292	0.82	
Preference shares	-	-		20,000	0.01	
Debt 1	135,051	0.30		195,731	0.09	
Debt 2				188,167	0.08	
Debt 3				2,505	-	
	452,046	1.00		2,251,695	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	350,994	0.72		3,318,064	1.00	
Preference shares	-	-		20,000	0.01	
Debt 1	135,051	0.28		195,731	0.05	
Debt 2				188,167	0.05	
Debt 3				2,505	-	
	486,045	1.00		3,724,467	1.00	
WACC (traditional)	**Cost**	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	118%	0.70	82%	19%	0.82	15%
Preference shares	0%	-	0%	0%	0.01	0%
Debt 1	10%	0.30	3%	9%	0.09	1%
Debt 2				8%	0.08	1%
Debt 3				8%	-	0%
	128%	1.00	85%	44%	1.00	17%
WACC (adjusted)						
Equity	118%	0.72	85%	19%	0.89	16%
Preference shares	0%	-	0%	0%	0.01	0%
Debt 1	10%	0.28	3%	9%	0.05	0.50%
Debt 2				8%	0.05	0.50%
Debt 3				8%	-	0%
	128%	1.00	88%	44%	1.00	22%

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	Tiger Wheel 2002			Woolworths 2002		
Cost of new debt						
	Debt	**%**		**Debt**	**%**	
Kd = I(1-t)	282,952	7.80		300	9.43	
Where marginal tax rate = 35%	282,952			300		
Cost of preference shares - not applicable						
Cost of shareholders' equity (Kr and Ks)						
Dividend yield and growth method						
Kr = D1 / Po + g		21%			22%	
Where expected growth rate = 17.5%						
Determining the weights						
Traditional equity calculation						
Equity	686,111	0.71		2,352,300	1.00	
Preference shares	-	-		-	-	
Debt 1	282,952	0.29		300	-	
	969,063	1.00		2,352,600	1.00	
Equity - deferred taxation and accumulated depreciation classified as equity						
Equity	910,154	0.76		3,390,500	1.00	
Preference shares	-	-		-	-	
Debt 1	282,952	0.24		300	-	
	1,193,106	1.00		3,390,800	1.00	
WACC (traditional)						
	Cost	**Weight**	**Contrib.**	**Cost**	**Weight**	**Contrib.**
Equity	21%	0.71	15%	22%	1.00	22%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	8%	0.29	2%	9%	-	0%
	29%	1.00	17%	31%	1.00	22%
WACC (adjusted)						
Equity	21%	0.76	16%	22%	1.00	22%
Preference shares	0%	-	0%	0%	-	0%
Debt 1	8%	0.24	2%	9%	-	0%
	29%	1.00	18%	31%	1.00	22%

Appendix C

Total-debt-to-total-equity ratio

Amlac	1996	1997	1998	1999	2000	Average
Traditional classification	134%	103%	116%	521%	75%	
Deferred taxation and accumulated depreciation classified as equity	124%	96%	102%	325%	66%	
% deviation	8%	8%	12%	38%	12%	15%
Avis	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	103%	131%	142%	109%	117%	
Deferred taxation and accumulated depreciation classified as equity	78%	94%	96%	83%	86%	
% deviation	25%	28%	32%	24%	27%	27%
City Lodge	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	43%	42%	58%	53%	32%	
Deferred taxation and accumulated depreciation classified as equity	38%	37%	39%	35%	17%	
% deviation	11%	12%	33%	35%	46%	27%
Comair	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	90%	88%	79%	70%	70%	
Deferred taxation and accumulated depreciation classified as equity	64%	69%	60%	57%	55%	
% deviation	30%	22%	24%	19%	21%	23%
Concor	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	140%	178%	262%	260%	321%	
Deferred taxation and accumulated depreciation classified as equity	94%	114%	138%	131%	163%	
% deviation	33%	36%	47%	50%	49%	43%

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COPI	1998	1999	2000	2001	2002	Average
Traditional classification	19%	18%	18%	12%	12%	
Deferred taxation and accumulated depreciation classified as equity	16%	15%	15%	10%	9%	
% deviation	14%	15%	15%	17%	18%	16%
Edgars	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	65%	70%	75%	75%	70%	
Deferred taxation and accumulated depreciation classified as equity	46%	46%	48%	46%	41%	
% deviation	29%	34%	36%	38%	42%	36%
Energy Africa	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	22%	29%	28%	29%	37%	
Deferred taxation and accumulated depreciation classified as equity	12%	10%	10%	11%	14%	
% deviation	48%	65%	63%	63%	62%	60%
Foschini	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	41%	34%	41%	44%	51%	
Deferred taxation and accumulated depreciation classified as equity	32%	26%	18%	25%	32%	
% deviation	20%	23%	55%	42%	37%	36%
Grintek	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	172%	217%	176%	174%	167%	
Deferred taxation and accumulated depreciation classified as equity	125%	166%	144%	149%	143%	
% deviation	27%	24%	18%	15%	14%	20%

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Highveld	1997	1998	1999	2000	2001	Average
Traditional classification	78%	81%	77%	84%	110%	
Deferred taxation and accumulated depreciation classified as equity	43%	42%	41%	44%	59%	
% deviation	45%	48%	46%	47%	46%	46%
Iscor	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	59%	53%	54%	78%	52%	
Deferred taxation and accumulated depreciation classified as equity	30%	30%	29%	41%	30%	
% deviation	48%	44%	47%	47%	43%	46%
IST	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	n/a	84%	49%	51%	59%	
Deferred taxation and accumulated depreciation classified as equity	n/a	78%	44%	41%	48%	
% deviation	n/a	8%	10%	19%	18%	11%
Italtile	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	61%	50%	58%	65%	67%	
Deferred taxation and accumulated depreciation classified as equity	57%	46%	52%	61%	62%	
% deviation	8%	8%	10%	7%	8%	8%
Murray & Roberts	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	119%	124%	132%	118%	107%	
Deferred taxation and accumulated depreciation classified as equity	82%	83%	95%	86%	77%	
% deviation	31%	32%	28%	27%	28%	29%

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Mr Price	1998	1999	2000	2001	2002	Average
Traditional classification	78%	87%	86%	80%	81%	
Deferred taxation and accumulated depreciation classified as equity	65%	66%	40%	39%	38%	
% deviation	16%	24%	54%	51%	53%	40%
Mustek	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	77%	63%	130%	178%	146%	
Deferred taxation and accumulated depreciation classified as equity	76%	62%	123%	160%	137%	
% deviation	2%	2%	5%	10%	6%	5%
Pick 'n Pay	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	240%	277%	247%	211%	191%	
Deferred taxation and accumulated depreciation classified as equity	176%	173%	118%	103%	107%	
% deviation	27%	38%	52%	51%	44%	42%
PPC	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	50%	48%	43%	35%	37%	
Deferred taxation and accumulated depreciation classified as equity	24%	23%	22%	17%	20%	
% deviation	52%	51%	49%	52%	46%	50%
Putco	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	126%	136%	178%	128%	145%	
Deferred taxation and accumulated depreciation classified as equity	40%	44%	40%	48%	69%	
% deviation	68%	67%	78%	62%	52%	66%

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Rainbow	1997	1998	1999	2000	2001	Average
Traditional classification	60%	56%	53%	37%	46%	
Deferred taxation and accumulated depreciation classified as equity	40%	37%	33%	23%	28%	
% deviation	34%	33%	38%	38%	38%	36%
Richemont	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	96%	83%	30%	28%	31%	
Deferred taxation and accumulated depreciation classified as equity	87%	75%	27%	26%	28%	
% deviation	10%	10%	7%	9%	10%	9%
SAB	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	109%	85%	73%	69%	74%	
Deferred taxation and accumulated depreciation classified as equity	49%	43%	32%	33%	37%	
% deviation	55%	50%	56%	52%	51%	53%
Sappi	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	78%	87%	103%	87%	95%	
Deferred taxation and accumulated depreciation classified as equity	63%	58%	50%	40%	42%	
% deviation	19%	33%	51%	55%	56%	43%
Sasol	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	58%	45%	55%	76%	72%	
Deferred taxation and accumulated depreciation classified as equity	22%	17%	22%	35%	34%	
% deviation	61%	62%	59%	54%	53%	58%

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Shoprite	1998	1999	2000	2001	2002	Average
Traditional classification	307%	342%	232%	260%	275%	
Deferred taxation and accumulated depreciation classified as equity	162%	169%	131%	145%	139%	
% deviation	47%	51%	43%	44%	50%	47%
Siltek	**1996**	**1997**	**1998**	**1999**	**2000**	**Average**
Traditional classification	40%	67%	85%	182%	206%	
Deferred taxation and accumulated depreciation classified as equity	39%	63%	78%	162%	192%	
% deviation	3%	6%	8%	11%	7%	7%
Sun International	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	46%	39%	72%	61%	53%	
Deferred taxation and accumulated depreciation classified as equity	37%	32%	37%	34%	26%	
% deviation	19%	19%	48%	44%	51%	36%
Tiger Wheel	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	108%	107%	120%	126%	116%	
Deferred taxation and accumulated depreciation classified as equity	92%	88%	96%	98%	95%	
% deviation	15%	18%	20%	23%	18%	19%
Woolworths	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	70%	55%	59%	55%	64%	
Deferred taxation and accumulated depreciation classified as equity	52%	41%	33%	31%	41%	
% deviation	25%	27%	44%	43%	36%	35%

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Gearing ratio

Amlac	1996	1997	1998	1999	2000	Average
Traditional classification	5%	99%	188%	32%	195%	
Deferred taxation classified as part of equity	5%	98%	184%	32%	195%	
% deviation	0%	1%	2%	0%	0%	1%
Traditional classification	5%	99%	188%	32%	195%	
Deferred taxation and accumulated depreciation classified as part of equity	5%	86%	135%	17%	140%	
% deviation	8%	14%	28%	47%	28%	25%
Avis	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	9%	53%	23%	67%	51%	
Deferred taxation classified as part of equity	6%	41%	14%	50%	34%	
% deviation	28%	23%	39%	26%	34%	30%
Traditional classification	9%	53%	23%	67%	51%	
Deferred taxation and accumulated depreciation classified as part of equity	5%	29%	10%	40%	27%	
% deviation	44%	44%	56%	41%	47%	46%
City Lodge	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	53%	53%	92%	80%	30%	
Deferred taxation classified as part of equity	52%	52%	72%	60%	36%	
% deviation	2%	2%	22%	25%	-20%	6%
Traditional classification	53%	53%	92%	80%	30%	
Deferred taxation and accumulated depreciation classified as part of equity	45%	44%	49%	42%	13%	
% deviation	15%	17%	47%	48%	57%	37%

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Comair	1998	1999	2000	2001	2002	Average
Traditional classification	5%	75%	54%	58%	52%	
Deferred taxation classified as part of equity	5%	68%	48%	45%	42%	
% deviation	6%	9%	11%	21%	19%	13%
Traditional classification	5%	75%	54%	58%	52%	
Deferred taxation and accumulated depreciation classified as part of equity	3%	49%	36%	40%	35%	
% deviation	35%	34%	35%	31%	32%	33%
Concor	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	16%	9%	13%	10%	16%	
Deferred taxation classified as part of equity	13%	9%	13%	10%	16%	
% deviation	18%	0%	0%	0%	0%	4%
Traditional classification	16%	9%	13%	10%	16%	
Deferred taxation and accumulated depreciation classified as part of equity	9%	5%	6%	5%	7%	
% deviation	45%	39%	51%	52%	53%	48%
COPI	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	2%	2%	1%	1%	1%	
Deferred taxation classified as part of equity	2%	1%	1%	0%	0%	
% deviation	0%	50%	0%	100%	100%	50%
Traditional classification	2%	2%	1%	1%	1%	
Deferred taxation and accumulated depreciation classified as part of equity	1%	1%	1%	0%	0%	
% deviation	0%	0%	0%	0%	0%	0%

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Edgars	1998	1999	2000	2001	2002	Average
Traditional classification	32%	18%	16%	18%	16%	
Deferred taxation classified as part of equity	25%	11%	10%	11%	7%	
% deviation	22%	38%	36%	41%	52%	38%
Traditional classification	32%	18%	16%	18%	16%	
Deferred taxation and accumulated depreciation classified as part of equity	19%	8%	7%	7%	5%	
% deviation	41%	55%	56%	60%	69%	56%
Energy Africa	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	14%	21%	15%	17%	24%	
Deferred taxation classified as part of equity	10%	14%	11%	11%	16%	
% deviation	30%	31%	29%	36%	31%	32%
Traditional classification	14%	21%	15%	17%	24%	
Deferred taxation and accumulated depreciation classified as part of equity	6%	6%	4%	5%	7%	
% deviation	58%	73%	72%	73%	71%	69%
Foschini	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	9%	4%	23%	33%	34%	
Deferred taxation classified as part of equity	9%	4%	4%	19%	22%	
% deviation	0%	0%	82%	44%	37%	33%
Traditional classification	9%	4%	23%	33%	34%	
Deferred taxation and accumulated depreciation classified as part of equity	7%	3%	3%	14%	16%	
% deviation	22%	24%	86%	58%	53%	48%

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Grintek	1998	1999	2000	2001	2002	Average
Traditional classification	46%	39%	39%	15%	30%	
Deferred taxation classified as part of equity	46%	39%	39%	15%	30%	
% deviation	0%	0%	0%	0%	0%	0%
Traditional classification	46%	39%	39%	15%	30%	
Deferred taxation and accumulated depreciation classified as part of equity	30%	28%	30%	13%	26%	
% deviation	35%	28%	22%	16%	16%	23%
Highveld	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	78%	86%	73%	62%	64%	
Deferred taxation classified as part of equity	39%	38%	36%	30%	42%	
% deviation	50%	56%	50%	51%	35%	48%
Traditional classification	78%	86%	73%	62%	64%	
Deferred taxation and accumulated depreciation classified as part of equity	28%	27%	25%	20%	23%	
% deviation	64%	68%	66%	68%	65%	66%
Iscor	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	49%	51%	42%	64%	21%	
Deferred taxation classified as part of equity	26%	33%	24%	39%	15%	
% deviation	48%	36%	41%	39%	31%	39%
Traditional classification	49%	51%	42%	64%	21%	
Deferred taxation and accumulated depreciation classified as part of equity	17%	22%	16%	23%	9%	
% deviation	65%	58%	62%	64%	58%	61%

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IST	1998	1999	2000	2001	2002	Average
Traditional classification	n/a	5%	7%	7%	7%	
Deferred taxation classified as part of equity	n/a	5%	7%	4%	5%	
% deviation	n/a	0%	0%	45%	34%	20%
Traditional classification	n/a	5%	7%	7%	7%	
Deferred taxation and accumulated depreciation classified as part of equity	n/a	4%	7%	3%	4%	
% deviation	n/a	8%	10%	51%	43%	23%
Italtile	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	0%	3%	4%	6%	6%	
Deferred taxation classified as part of equity	0%	3%	4%	6%	6%	
% deviation	0%	0%	13%	7%	7%	6%
Traditional classification	0%	3%	4%	6%	6%	
Deferred taxation and accumulated depreciation classified as part of equity	0%	3%	3%	6%	5%	
% deviation	8%	6%	18%	11%	10%	10%
Murray & Roberts	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	45%	44%	42%	29%	22%	
Deferred taxation classified as part of equity	34%	33%	35%	26%	19%	
% deviation	25%	26%	17%	10%	10%	18%
Traditional classification	45%	44%	42%	29%	22%	
Deferred taxation and accumulated depreciation classified as part of equity	24%	22%	21%	17%	13%	
% deviation	46%	50%	49%	43%	39%	45%

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Mr Price	1998	1999	2000	2001	2002	Average
Traditional classification	0%	0%	35%	53%	48%	
Deferred taxation classified as part of equity	0%	0%	0%	14%	9%	
% deviation	0%	0%	100%	74%	80%	51%
Traditional classification	0%	0%	35%	53%	48%	
Deferred taxation and accumulated depreciation classified as part of equity	0%	0%	0%	13%	9%	
% deviation	16%	18%	100%	76%	82%	58%
Mustek	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	6%	1%	7%	14%	53%	
Deferred taxation classified as part of equity	6%	1%	6%	13%	53%	
% deviation	0%	0%	3%	2%	0%	1%
Traditional classification	6%	1%	7%	14%	53%	
Deferred taxation and accumulated depreciation classified as part of equity	6%	1%	6%	13%	52%	
% deviation	2%	1%	4%	3%	1%	2%
Pick 'n Pay	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	29%	36%	35%	44%	51%	
Deferred taxation classified as part of equity	29%	27%	9%	21%	36%	
% deviation	0%	27%	75%	53%	29%	37%
Traditional classification	29%	36%	35%	44%	51%	
Deferred taxation and accumulated depreciation classified as part of equity	20%	16%	5%	11%	19%	
% deviation	32%	56%	86%	76%	62%	62%

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PPC	1997	1998	1999	2000	2001	Average
Traditional classification	25%	38%	31%	30%	29%	
Deferred taxation classified as part of equity	9%	18%	15%	15%	18%	
% deviation	64%	52%	51%	49%	40%	51%
Traditional classification	25%	38%	31%	30%	29%	
Deferred taxation and accumulated depreciation classified as part of equity	6%	12%	11%	11%	12%	
% deviation	76%	68%	66%	65%	58%	67%
Putco	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	25%	17%	16%	32%	114%	
Deferred taxation classified as part of equity	1%	1%	3%	15%	114%	
% deviation	97%	94%	83%	54%	0%	65%
Traditional classification	25%	17%	16%	32%	114%	
Deferred taxation and accumulated depreciation classified as part of equity	0%	0%	1%	6%	34%	
% deviation	99%	98%	93%	81%	70%	88%
Rainbow	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	1%	1%	1%	1%	5%	
Deferred taxation classified as part of equity	0%	0%	0%	0%	4%	
% deviation	92%	93%	94%	94%	15%	78%
Traditional classification	1%	1%	1%	1%	5%	
Deferred taxation and accumulated depreciation classified as part of equity	0%	0%	0%	0%	2%	
% deviation	95%	95%	96%	96%	47%	86%

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Richemont	1998	1999	2000	2001	2002	Average
Traditional classification	85%	78%	13%	12%	7%	
Deferred taxation classified as part of equity	80%	74%	13%	11%	6%	
% deviation	5%	5%	4%	7%	11%	7%
Traditional classification	85%	78%	13%	12%	7%	
Deferred taxation and accumulated depreciation classified as part of equity	71%	67%	12%	10%	6%	
% deviation	16%	15%	10%	13%	18%	14%
SAB	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	51%	71%	32%	52%	72%	
Deferred taxation classified as part of equity	45%	69%	30%	50%	66%	
% deviation	11%	3%	4%	2%	8%	6%
Traditional classification	51%	71%	32%	52%	72%	
Deferred taxation and accumulated depreciation classified as part of equity	30%	44%	21%	34%	47%	
% deviation	41%	38%	33%	34%	34%	36%
Sappi	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Traditional classification	95%	113%	130%	122%	109%	
Deferred taxation classified as part of equity	95%	113%	82%	69%	67%	
% deviation	0%	0%	37%	44%	39%	24%
Traditional classification	95%	113%	130%	122%	109%	
Deferred taxation and accumulated depreciation classified as part of equity	66%	56%	37%	32%	27%	
% deviation	30%	50%	72%	74%	75%	60%

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Sasol	1998	1999	2000	2001	2002	Average
Traditional classification	40%	32%	30%	63%	56%	
Deferred taxation classified as part of equity	10%	10%	9%	35%	32%	
% deviation	74%	70%	71%	45%	43%	60%
Traditional classification	40%	32%	30%	63%	56%	
Deferred taxation and accumulated depreciation classified as part of equity	6%	6%	5%	18%	17%	
% deviation	84%	81%	83%	71%	69%	78%
Shoprite	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	14%	8%	27%	25%	18%	
Deferred taxation classified as part of equity	13%	8%	27%	24%	18%	
% deviation	2%	3%	1%	2%	2%	2%
Traditional classification	14%	8%	27%	25%	18%	
Deferred taxation and accumulated depreciation classified as part of equity	7%	4%	14%	12%	8%	
% deviation	51%	53%	49%	50%	54%	51%
Siltek	**1996**	**1997**	**1998**	**1999**	**2000**	**Average**
Traditional classification	1%	3%	3%	5%	45%	
Deferred taxation classified as part of equity	1%	3%	3%	5%	45%	
% deviation	0%	0%	0%	0%	0%	0%
Traditional classification	1%	3%	3%	5%	45%	
Deferred taxation and accumulated depreciation classified as part of equity	1%	3%	3%	4%	41%	
% deviation	3%	6%	8%	11%	9%	8%

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Sun International	1997	1998	1999	2000	2001	Average
Traditional classification	15%	22%	81%	91%	53%	
Deferred taxation classified as part of equity	15%	22%	43%	56%	27%	
% deviation	0%	0%	47%	39%	50%	27%
Traditional classification	15%	22%	81%	91%	53%	
Deferred taxation and accumulated depreciation classified as part of equity	12%	17%	28%	38%	18%	
% deviation	21%	23%	66%	58%	66%	47%
Tiger Wheel	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	58%	46%	51%	38%	48%	
Deferred taxation classified as part of equity	50%	40%	50%	36%	47%	
% deviation	13%	12%	3%	5%	2%	7%
Traditional classification	58%	46%	51%	38%	48%	
Deferred taxation and accumulated depreciation classified as part of equity	44%	33%	38%	27%	37%	
% deviation	24%	27%	27%	29%	24%	26%
Woolworths	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Traditional classification	5%	3%	16%	13%	14%	
Deferred taxation classified as part of equity	3%	3%	2%	1%	5%	
% deviation	34%	20%	88%	90%	61%	59%
Traditional classification	5%	3%	16%	13%	14%	
Deferred taxation and accumulated depreciation classified as part of equity	2%	2%	1%	1%	4%	
% deviation	49%	40%	91%	93%	71%	69%

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Book entries as percentage of crucial elements in the financial statements

Accumulated book entries						
Amlac	**1996**	**1997**	**1998**	**1999**	**2000**	**Average**
Depreciation	996	2,123	3,580	3,867	5,092	
Deferred taxation	-	82	147	-	-	
	996	2,205	3,727	3,867	5,092	
Book entries as % of Equity	9%	16%	38%	89%	39%	38%
Current year book entries						
Depreciation	1,070	1,395	1,635	1,221	1,224	
Deferred taxation	-	82	65	(4)	-	
	1,070	1,477	1,700	1,217	1,224	
Book entries as % of Turnover	2%	3%	3%	2%	3%	3%
Book entries as % of Cash ex operations	15%	20%	1018%	-186%	-187%	136%
Book entries as % of Cash from operating activities	50%	-87%	16%	42%	14%	13%
Book entries as % of Profit attributable to shareholders	32%	39%	-43%	-24%	14%	4%
Accumulated book entries						
Avis	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	144,011	171,290	210,460	227,309	263,598	
Deferred taxation	10,946	35,171	41,854	91,552	133,859	
	154,957	206,461	252,314	318,861	397,457	
Book entries as % of Equity	32%	50%	49%	40%	39%	42%
Current year book entries						
Depreciation	131,707	186,938	204,475	300,507	333,939	
Deferred taxation	198	27,298	3,765	6,010	15,430	
	131,905	214,236	208,240	306,517	349,369	
Book entries as % of Turnover	25%	31%	24%	25%	28%	26%
Book entries as % of Cash ex operations	53%	82%	63%	80%	74%	71%
Book entries as % of Cash from operating activities	43%	99%	58%	100%	65%	73%
Book entries as % of Profit attributable to shareholders	191%	212%	162%	94%	321%	196%

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Accumulated book entries						
City Lodge	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	39,587	49,058	87,332	97,329	117,786	
Deferred taxation	1,784	1,376	19,416	24,630	32,258	
	41,371	50,434	106,748	121,959	150,044	
Book entries as % of Equity	16%	20%	64%	62%	49%	42%
Current year book entries						
Depreciation	8,598	9,891	16,270	17,771	20,832	
Deferred taxation	(17)	(153)	3,977	5,394	4,123	
	8,581	9,738	20,247	23,165	24,955	
Book entries as % of Turnover	6%	7%	12%	12%	11%	9%
Book entries as % of Cash ex operations	12%	13%	26%	26%	22%	20%
Book entries as % of Cash from operating activities	12%	12%	26%	26%	21%	20%
Book entries as % of Profit attributable to shareholders	20%	24%	61%	62%	45%	43%
Accumulated book entries						
Comair	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	59,176	75,896	100,432	53,723	75,985	
Deferred taxation	399	7,117	11,130	31,168	26,629	
	59,575	83,013	111,562	84,891	102,614	
Book entries as % of Equity	44%	44%	41%	23%	27%	36%
Current year book entries						
Depreciation	19,430	17,407	25,132	14,702	25,456	
Deferred taxation	(8,784)	3,530	3,752	4,252	(4,539)	
	10,646	20,937	28,884	18,954	20,917	
Book entries as % of Turnover	2%	3%	3%	2%	2%	2%
Book entries as % of Cash ex operations	11%	18%	18%	23%	56%	25%
Book entries as % of Cash from operating activities	7%	18%	16%	22%	34%	19%
Book entries as % of Profit attributable to shareholders	18%	27%	26%	20%	137%	46%

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Accumulated book entries						
Concor	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	97,623	117,917	141,958	161,279	182,609	
Deferred taxation	5,125	347	(9,341)	(8,068)	(13,291)	
	102,748	118,264	132,617	153,211	169,318	
Book entries as % of Equity	53%	60%	93%	103%	103%	82%
Current year book entries						
Depreciation	22,385	25,272	28,004	27,785	32,652	
Deferred taxation	163	(2,755)	(9,601)	1,273	(5,148)	
	22,548	22,517	18,403	29,058	27,504	
Book entries as % of Turnover	2%	2%	2%	3%	2%	2%
Book entries as % of Cash ex operations	36%	72%	-79%	64%	44%	27%
Book entries as % of Cash from operating activities	249%	27%	113%	59%	12%	92%
Book entries as % of Profit attributable to shareholders	58%	32%	-34%	352%	173%	174%
Accumulated book entries						
COPI	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	40,103	42,360	42,801	45,311	51,468	
Deferred taxation	2,561	2,982	2,742	3,455	4,289	
	42,664	45,342	45,543	48,766	55,757	
Book entries as % of Equity	12%	13%	12%	11%	12%	12%
Current year book entries						
Depreciation	4,608	5,301	5,541	5,370	4,917	
Deferred taxation	703	323	(184)	731	853	
	5,311	5,624	5,357	6,101	5,770	
Book entries as % of Turnover	3%	3%	3%	4%	3%	3%
Book entries as % of Cash ex operations	54%	53%	272%	1215%	46%	328%
Book entries as % of Cash from operating activities	30%	25%	212%	53%	61%	76%
Book entries as % of Profit attributable to shareholders	13%	13%	22%	17%	15%	16%

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Accumulated book entries						
Edgars	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	704,000	873,000	1,055,000	1,190,000	1,284,000	
Deferred taxation	114,900	130,100	119,300	164,000	174,500	
	818,900	1,003,100	1,174,300	1,354,000	1,458,500	
Book entries as % of Equity	40%	48%	52%	57%	63%	52%
Current year book entries						
Depreciation	171,440	196,414	218,000	203,000	194,900	
Deferred taxation	23,500	27,500	(3,800)	34,900	37,800	
	194,940	223,914	214,200	237,900	232,700	
Book entries as % of Turnover	3%	4%	3%	3%	3%	3%
Book entries as % of Cash ex operations	33%	53%	33%	45%	44%	42%
Book entries as % of Cash from operating activities	114%	52%	67%	82%	32%	69%
Book entries as % of Profit attributable to shareholders	85%	261%	95%	158%	136%	147%
Accumulated book entries						
Energy Africa	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	704,000	1,114,000	1,273,000	1,670,000	2,450,000	
Deferred taxation	40,512	38,459	33,547	65,135	107,120	
	744,512	1,152,459	1,306,547	1,735,135	2,557,120	
Book entries as % of Equity	72%	171%	159%	149%	153%	141%
Current year book entries						
Depreciation	135,726	166,181	71,598	172,997	361,230	
Deferred taxation	-	(21,322)	(6,700)	27,220	25,800	
	135,726	144,859	64,898	200,217	387,030	
Book entries as % of Turnover	40%	34%	18%	19%	27%	27%
Book entries as % of Cash ex operations	68%	57%	24%	27%	40%	43%
Book entries as % of Cash from operating activities	77%	75%	18%	29%	41%	48%
Book entries as % of Profit attributable to shareholders	-87%	-52%	70%	109%	188%	45%

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Accumulated book entries						
Foschini	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	388,000	481,000	576,000	684,000	678,000	
Deferred taxation	(13,000)	(10,200)	324,200	229,000	193,400	
	375,000	470,800	900,200	913,000	871,400	
Book entries as % of Equity	27%	30%	51%	50%	47%	41%
Current year book entries						
Depreciation	88,000	102,900	116,600	131,900	126,800	
Deferred taxation	(3,200)	600	(200)	(95,200)	(18,500)	
	84,800	103,500	116,400	36,700	108,300	
Book entries as % of Turnover	4%	4%	4%	1%	3%	3%
Book entries as % of Cash ex operations	22%	24%	27%	11%	23%	21%
Book entries as % of Cash from operating activities	104%	31%	43%	13%	23%	43%
Book entries as % of Profit attributable to shareholders	44%	49%	50%	32%	54%	46%
Accumulated book entries						
Grintek	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	56,258	64,558	65,924	70,983	86,496	
Deferred taxation	31	(3,182)	(8,540)	(5,828)	(9,561)	
	56,289	61,376	57,384	65,155	76,935	
Book entries as % of Equity	54%	37%	25%	17%	16%	30%
Current year book entries						
Depreciation	22,206	14,073	14,456	14,464	17,302	
Deferred taxation	737	1,012	(9,357)	2,060	(1,438)	
	22,943	15,085	5,099	16,524	15,864	
Book entries as % of Turnover	1%	2%	0%	1%	1%	1%
Book entries as % of Cash ex operations	23%	26%	5%	9%	10%	15%
Book entries as % of Cash from operating activities	43%	10%	3%	37%	10%	21%
Book entries as % of Profit attributable to shareholders	52%	38%	7%	15%	26%	28%

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Accumulated book entries						
Highveld	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Depreciation	833,000	962,000	1,090,000	1,255,000	1,374,000	
Deferred taxation	468,390	635,829	493,344	465,500	225,932	
	1,301,390	1,597,829	1,583,344	1,720,500	1,599,932	
Book entries as % of Equity	79%	87%	85%	91%	113%	91%
Current year book entries						
Depreciation	115,604	141,233	140,996	173,089	196,944	
Deferred taxation	(9,302)	74,467	(86,276)	(32,470)	(240,581)	
	106,302	215,700	54,720	140,619	(43,637)	
Book entries as % of Turnover	3%	6%	2%	3%	-1%	2%
Book entries as % of Cash ex operations	15%	25%	52%	48%	-15%	25%
Book entries as % of Cash from operating activities	15%	21%	-36%	67%	-21%	9%
Book entries as % of Profit attributable to shareholders	96%	99%	97%	159%	9%	92%
Accumulated book entries						
Iscor	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Depreciation	4,531,000	4,895,000	5,465,000	6,109,000	7,289,000	
Deferred taxation	1,437,000	1,140,000	1,211,000	1,399,000	643,000	
	5,968,000	6,035,000	6,676,000	7,508,000	7,932,000	
Book entries as % of Equity	78%	73%	76%	97%	71%	79%
Current year book entries						
Depreciation	698,000	746,000	787,000	836,000	713,000	
Deferred taxation	226,000	(107,000)	51,000	249,000	(73,000)	
	924,000	639,000	838,000	1,085,000	640,000	
Book entries as % of Turnover	7%	5%	6%	7%	5%	6%
Book entries as % of Cash ex operations	55%	62%	48%	38%	29%	46%
Book entries as % of Cash from operating activities	62%	37%	42%	52%	22%	43%
Book entries as % of Profit attributable to shareholders	134%	184%	791%	-150%	15%	195%

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Accumulated book entries						
IST	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	5,100	7,295	11,068	14,096	18,175	
Deferred taxation	549	(1,060)	(697)	3,000	2,672	
	5,649	6,235	10,371	17,096	20,847	
Book entries as % of Equity	n/a	7%	11%	17%	19%	14%
Current year book entries						
Depreciation	1,607	2,335	3,142	3,512	4,587	
Deferred taxation	71	(1,609)	586	866	(328)	
	1,678	726	3,728	4,378	4,259	
Book entries as % of Turnover	2%	0%	2%	2%	2%	2%
Book entries as % of Cash ex operations	n/a	3%	41%	23%	14%	20%
Book entries as % of Cash from operating activities	n/a	29%	151%	17%	10%	52%
Book entries as % of Profit attributable to shareholders	n/a	-11%	173%	42%	20%	56%
Accumulated book entries						
Italtile	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	9,638	12,548	18,307	15,456	24,435	
Deferred taxation	-	-	938	985	1,403	
	9,638	12,548	19,245	16,441	25,838	
Book entries as % of Equity	8%	9%	11%	7%	8%	9%
Current year book entries						
Depreciation	4,787	4,066	5,759	6,497	11,586	
Deferred taxation	-	-	938	47	418	
	4,787	4,066	6,697	6,544	12,004	
Book entries as % of Turnover	2%	1%	2%	1%	2%	1%
Book entries as % of Cash ex operations	14%	9%	10%	7%	8%	10%
Book entries as % of Cash from operating activities	13%	11%	7%	8%	9%	10%
Book entries as % of Profit attributable to shareholders	21%	12%	14%	11%	13%	14%

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Accumulated book entries						
Murray & Roberts	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	1,402,300	1,228,300	930,500	1,051,500	1,229,100	
Deferred taxation	279,500	242,300	110,500	57,200	53,000	
	1,681,800	1,470,600	1,041,000	1,108,700	1,282,100	
Book entries as % of Equity	50%	53%	49%	46%	45%	49%
Current year book entries						
Depreciation	367,800	367,900	232,200	226,700	226,700	
Deferred taxation	10,600	25,000	(15,500)	6,700	(4,200)	
	378,400	392,900	216,700	233,400	222,500	
Book entries as % of Turnover	3%	3%	2%	3%	2%	3%
Book entries as % of Cash ex operations	43%	75%	47%	49%	38%	50%
Book entries as % of Cash from operating activities	24%	61%	46%	38%	29%	40%
Book entries as % of Profit attributable to shareholders	76%	-210%	-29%	93%	44%	-5%
Accumulated book entries						
Mr Price	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	83,202	119,135	162,797	205,235	256,904	
Deferred taxation	(13,748)	(4,740)	163,658	191,072	235,103	
	69,454	114,395	326,455	396,307	492,007	
Book entries as % of Equity	16%	30%	69%	71%	73%	52%
Current year book entries						
Depreciation	28,403	37,237	49,601	50,691	61,388	
Deferred taxation	(10,675)	4,985	33,854	27,613	41,945	
	17,728	42,222	83,455	78,304	103,333	
Book entries as % of Turnover	1%	2%	4%	3%	3%	3%
Book entries as % of Cash ex operations	16%	31%	51%	45%	41%	37%
Book entries as % of Cash from operating activities	20%	31%	119%	107%	38%	63%
Book entries as % of Profit attributable to shareholders	32%	61%	84%	88%	75%	68%

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Accumulated book entries						
Mustek	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	4,365	7,120	21,506	39,536	37,260	
Deferred taxation	(178)	(857)	(4,413)	(16,515)	(10,698)	
	4,187	6,263	17,093	23,021	26,562	
Book entries as % of Equity	2%	2%	5%	6%	6%	4%
Current year book entries						
Depreciation	3,754	3,544	10,118	16,734	15,273	
Deferred taxation	7	(679)	(3,484)	(3,968)	(4,343)	
	3,761	2,865	6,634	12,766	10,930	
Book entries as % of Turnover	0%	0%	0%	1%	0%	0%
Book entries as % of Cash ex operations	5%	4%	9%	9%	5%	6%
Book entries as % of Cash from operating activities	3%	-7%	7%	6%	5%	3%
Book entries as % of Profit attributable to shareholders	4%	3%	25%	69%	17%	24%
Accumulated book entries						
Pick 'n Pay	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	291,000	432,000	813,000	1,063,000	1,233,000	
Deferred taxation	-	49,400	192,900	185,900	134,800	
	291,000	481,400	1,005,900	1,248,900	1,367,800	
Book entries as % of Equity	46%	77%	125%	131%	108%	97%
Current year book entries						
Depreciation	93,500	130,900	187,400	218,500	249,700	
Deferred taxation	-	7,000	(51,100)	(5,600)	(42,900)	
	93,500	137,900	136,300	212,900	206,800	
Book entries as % of Turnover	1%	1%	1%	1%	1%	1%
Book entries as % of Cash ex operations	33%	37%	26%	35%	25%	31%
Book entries as % of Cash from operating activities	20%	26%	28%	32%	19%	25%
Book entries as % of Profit attributable to shareholders	85%	87%	51%	67%	52%	68%

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Accumulated book entries						
PPC	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Depreciation	653,600	739,300	787,600	910,500	1,020,400	
Deferred taxation	169,900	222,900	197,000	223,000	195,900	
	823,500	962,200	984,600	1,133,500	1,216,300	
Book entries as % of Equity	72%	72%	64%	62%	58%	65%
Current year book entries						
Depreciation	76,900	104,700	131,800	151,600	165,000	
Deferred taxation	24,900	53,100	25,200	32,600	5,000	
	101,800	157,800	157,000	184,200	170,000	
Book entries as % of Turnover	6%	8%	8%	10%	8%	8%
Book entries as % of Cash ex operations	26%	36%	41%	39%	27%	34%
Book entries as % of Cash from operating activities	28%	36%	37%	36%	26%	33%
Book entries as % of Profit attributable to shareholders	52%	65%	85%	71%	41%	63%
Accumulated book entries						
Putco	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Depreciation	177,667	190,806	189,642	195,943	218,976	
Deferred taxation	22,732	15,601	13,124	17,205	(3,953)	
	200,399	206,407	202,766	213,148	215,023	
Book entries as % of Equity	208%	204%	201%	186%	228%	205%
Current year book entries						
Depreciation	20,325	22,271	14,562	16,658	23,072	
Deferred taxation	588	(3,884)	724	5,714	(17,098)	
	20,913	18,387	15,286	22,372	5,974	
Book entries as % of Turnover	3%	3%	2%	3%	1%	2%
Book entries as % of Cash ex operations	54%	60%	72%	401%	3%	118%
Book entries as % of Cash from operating activities	51%	42%	33%	64%	4%	39%
Book entries as % of Profit attributable to shareholders	118%	103%	104%	81%	31%	87%

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Accumulated book entries						
Rainbow	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Depreciation	461,019	428,932	477,196	529,127	531,409	
Deferred taxation	6,013	7,008	7,821	8,356	5,591	
	467,032	435,940	485,017	537,483	537,000	
Book entries as % of Equity	50%	48%	59%	58%	63%	56%
Current year book entries						
Depreciation	123,247	58,823	59,729	56,698	47,686	
Deferred taxation	1,351	995	813	535	(2,765)	
	124,598	59,818	60,542	57,233	44,921	
Book entries as % of Turnover	6%	3%	3%	2%	1%	3%
Book entries as % of Cash ex operations	-87%	96%	58%	31%	21%	24%
Book entries as % of Cash from operating activities	-127%	56%	51%	32%	44%	11%
Book entries as % of Profit attributable to shareholders	-43%	-443%	281%	61%	29%	-23%
Accumulated book entries						
Richemont	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	448,656	412,992	376,900	454,000	564,600	
Deferred taxation	78,000	78,400	32,800	56,800	60,000	
	526,656	491,392	409,700	510,800	624,600	
Book entries as % of Equity	17%	15%	6%	6%	8%	10%
Current year book entries						
Depreciation	112,100	114,200	83,500	109,900	133,000	
Deferred taxation	(37,500)	4,800	9,500	1,100	(10,000)	
	74,600	119,000	93,000	111,000	123,000	
Book entries as % of Turnover	1%	1%	3%	3%	3%	2%
Book entries as % of Cash ex operations	6%	10%	15%	13%	19%	13%
Book entries as % of Cash from operating activities	8%	9%	13%	14%	24%	14%
Book entries as % of Profit attributable to shareholders	36%	37%	3%	9%	29%	23%

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Accumulated book entries						
SAB	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	5,397,000	6,157,000	6,647,000	7,532,000	9,190,000	
Deferred taxation	459,800	138,000	164,000	136,000	1,162,800	
	5,856,800	6,295,000	6,811,000	7,668,000	10,352,800	
Book entries as % of Equity	51%	55%	39%	40%	29%	43%
Current year book entries						
Depreciation	1,379,207	1,439,000	1,378,000	1,608,000	2,394,000	
Deferred taxation	15,900	(36,000)	(18,000)	(40,000)	34,200	
	1,395,107	1,403,000	1,360,000	1,568,000	2,428,200	
Book entries as % of Turnover	4%	5%	5%	5%	6%	5%
Book entries as % of Cash ex operations	26%	26%	24%	23%	24%	24%
Book entries as % of Cash from operating activities	28%	26%	25%	22%	22%	25%
Book entries as % of Profit attributable to shareholders	83%	46%	29%	178%	45%	76%
Accumulated book entries						
Sappi	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Depreciation	4,223,600	14,249,800	15,828,500	15,168,000	21,864,000	
Deferred taxation	(165,000)	(692,300)	1,482,700	2,244,000	2,616,000	
	4,058,600	13,557,500	17,311,200	17,412,000	24,480,000	
Book entries as % of Equity	41%	97%	168%	173%	203%	136%
Current year book entries						
Depreciation	1,008,000	1,639,700	2,013,300	1,920,000	2,400,000	
Deferred taxation	-	-	335,900	744,000	(464,000)	
	1,008,000	1,639,700	2,349,200	2,664,000	1,936,000	
Book entries as % of Turnover	6%	7%	9%	9%	6%	7%
Book entries as % of Cash ex operations	41%	36%	48%	42%	31%	40%
Book entries as % of Cash from operating activities	40%	35%	44%	44%	29%	38%
Book entries as % of Profit attributable to shareholders	291%	165%	352%	123%	166%	219%

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Accumulated book entries						
Sasol	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	9,737,000	11,095,000	13,599,000	24,123,000	31,514,000	
Deferred taxation	3,514,000	3,145,000	3,295,000	4,689,000	5,444,000	
	13,251,000	14,240,000	16,894,000	28,812,000	36,958,000	
Book entries as % of Equity	101%	93%	101%	129%	122%	109%
Current year book entries						
Depreciation	238,000	103,000	954,000	8,584,000	799,000	
Deferred taxation	371,000	119,000	(118,000)	(459,000)	99,000	
	609,000	222,000	836,000	8,125,000	898,000	
Book entries as % of Turnover	4%	1%	3%	20%	1%	6%
Book entries as % of Cash ex operations	14%	4%	10%	56%	5%	18%
Book entries as % of Cash from operating activities	15%	5%	11%	58%	5%	19%
Book entries as % of Profit attributable to shareholders	31%	9%	21%	116%	9%	37%
Accumulated book entries						
Shoprite	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	1,080,997	1,214,463	1,264,360	1,403,422	1,686,302	
Deferred taxation	2,385	2,764	3,558	(376,836)	(299,122)	
	1,083,382	1,217,227	1,267,918	1,026,586	1,387,180	
Book entries as % of Equity	100%	108%	95%	70%	93%	93%
Current year book entries						
Depreciation	1,080,997	1,214,463	1,264,360	1,403,422	1,686,302	
Deferred taxation	(198)	520	794	57,063	77,714	
	1,080,799	1,214,983	1,265,154	1,460,485	1,764,016	
Book entries as % of Turnover	7%	7%	7%	7%	8%	7%
Book entries as % of Cash ex operations	277%	380%	224%	227%	213%	264%
Book entries as % of Cash from operating activities	1344%	213%	163%	140%	170%	406%
Book entries as % of Profit attributable to shareholders	447%	1063%	430%	607%	436%	596%

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Accumulated book entries						
Siltek	**1996**	**1997**	**1998**	**1999**	**2000**	**Average**
Depreciation	33,663	35,526	34,829	37,523	33,999	
Deferred taxation	(6,295)	(6,122)	(4,922)	(8,092)	(38,208)	
	27,368	29,404	29,907	29,431	(4,209)	
Book entries as % of Equity	3%	6%	8%	9%	-1%	5%
Current year book entries						
Depreciation	33,663	35,526	34,829	37,523	33,999	
Deferred taxation	1,379	1,092	4,946	(3,710)	(30,051)	
	35,042	36,618	39,775	33,813	3,948	
Book entries as % of Turnover	2%	2%	2%	1%	0%	1%
Book entries as % of Cash ex operations	40%	32%	63%	46%	3%	37%
Book entries as % of Cash from operating activities	27%	77%	75%	492%	15%	137%
Book entries as % of Profit attributable to shareholders	16%	35%	55%	-19%	20%	21%
Accumulated book entries						
Sun International	**1997**	**1998**	**1999**	**2000**	**2001**	**Average**
Depreciation	537,107	641,372	934,058	1,024,893	1,076,134	
Deferred taxation	-	-	374,070	407,696	396,638	
	537,107	641,372	1,308,128	1,432,589	1,472,772	
Book entries as % of Equity	26%	29%	94%	80%	78%	62%
Current year book entries						
Depreciation	537,107	641,372	934,058	1,024,893	1,076,134	
Deferred taxation	(630)	-	8,608	32,687	(2,172)	
	536,477	641,372	942,666	1,057,580	1,073,962	
Book entries as % of Turnover	23%	25%	42%	47%	56%	39%
Book entries as % of Cash ex operations	86%	84%	253%	264%	292%	196%
Book entries as % of Cash from operating activities	84%	88%	212%	511%	372%	254%
Book entries as % of Profit attributable to shareholders	137%	142%	641%	1245%	1259%	685%

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Accumulated book entries						
Tiger Wheel	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	51,068	88,707	152,533	192,287	218,144	
Deferred taxation	15,800	16,132	5,070	8,714	5,899	
	66,868	104,839	157,603	201,001	224,043	
Book entries as % of Equity	21%	25%	33%	36%	29%	29%
Current year book entries						
Depreciation	51,068	88,707	152,533	192,287	218,144	
Deferred taxation	2,493	2,552	(11,470)	3,088	(2,202)	
	53,561	91,259	141,063	195,375	215,942	
Book entries as % of Turnover	6%	6%	9%	9%	9%	8%
Book entries as % of Cash ex operations	56%	65%	73%	92%	84%	74%
Book entries as % of Cash from operating activities	-158%	49%	58%	310%	140%	80%
Book entries as % of Profit attributable to shareholders	77%	139%	419%	365%	257%	221%
Accumulated book entries						
Woolworths	**1998**	**1999**	**2000**	**2001**	**2002**	**Average**
Depreciation	506,746	661,911	745,700	833,400	848,400	
Deferred taxation	26,362	11,163	285,000	260,400	175,000	
	533,108	673,074	1,030,700	1,093,800	1,023,400	
Book entries as % of Equity	32%	35%	49%	46%	43%	41%
Current year book entries						
Depreciation	506,746	661,911	745,700	833,400	848,400	
Deferred taxation	(2,764)	3,961	4,600	(24,600)	(50,000)	
	503,982	665,872	750,300	808,800	798,400	
Book entries as % of Turnover	10%	11%	12%	12%	9%	11%
Book entries as % of Cash ex operations	116%	177%	214%	211%	137%	171%
Book entries as % of Cash from operating activities	281%	197%	232%	283%	250%	249%
Book entries as % of Profit attributable to shareholders	760%	1004%	1131%	1219%	1204%	1064%

Appendix C

Measurement of company's ability to generate internal funds

Amlac	1996	1997	1998	1999	2000
INVEFF (Increase in fixed assets/Volume at beginning)	1.85906	1.08770	0.81369	0.10044	1.39837
SIFA (Sales Increase/Fixed Asset)	4.34967	0.52399	0.56512	-0.71501	-0.47951
CFFA (Cash-flow/fixed assets)	14.14807	6.32623	5.07678	4.93753	4.13352
Avis	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.96026	1.01410	0.82321	1.19312	1.16599
SIFA (Sales Increase/Fixed Asset)	0.36587	0.36837	0.38376	0.66598	-0.002
CFFA (Cash-flow/fixed assets)	2.19191	2.31048	2.51581	3.15501	2.95867
City Lodge	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.13857	0.08579	0.13389	0.29402	0.13520
SIFA (Sales Increase/Fixed Asset)	0.06147	0.02281	0.06175	0.08274	0.10981
CFFA (Cash-flow/fixed assets)	0.53550	0.51247	0.55728	0.78895	0.77104
Comair	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.06307	1.18477	0.34714	1.17563	0.16167
SIFA (Sales Increase/Fixed Asset)	1.72400	0.67131	2.84382	0.59023	0.37380
CFFA (Cash-flow/fixed assets)	6.03994	8.56644	7.04472	9.07688	4.22730
Concor	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.41720	0.42841	1.01732	0.83472	0.83415
SIFA (Sales Increase/Fixed Asset)	3.09257	0.19312	-1.46863	0.69701	1.18851
CFFA (Cash-flow/fixed assets)	15.93485	17.75985	15.74493	19.3269	16.71133
COPI	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.16925	0.33697	0.08044	0.12974	0.19991
SIFA (Sales Increase/Fixed Asset)	-0.28973	0.23483	-0.12039	0.01541	0.27874
CFFA (Cash-flow/fixed assets)	4.81933	4.78286	4.12632	5.03415	5.60559
Edgars	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.40629	0.28259	0.14641	0.20082	0.17551
SIFA (Sales Increase/Fixed Asset)	0.03035	0.24181	0.67387	0.57306	0.67462
CFFA (Cash-flow/fixed assets)	8.31637	7.42869	7.71741	8.27692	10.33578

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Energy Africa	1998	1999	2000	2001	2002
INVEFF (Increase in fixed assets/Volume at beginning)	0.29310	0.26031	0.12933	1.33187	0.88429
SIFA (Sales Increase/Fixed Asset)	0.04711	0.14853	-0.11050	0.59234	0.20536
CFFA (Cash-flow/fixed assets)	0.54700	0.63697	0.71220	1.98713	1.58497
Foschini	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.51639	0.55183	0.41586	0.39975	0.34336
SIFA (Sales Increase/Fixed Asset)	0.53057	0.37073	0.41287	1.01489	1.13834
CFFA (Cash-flow/fixed assets)	10.19385	9.75839	8.90748	9.72017	10.38195
Grintek	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.33516	0.23635	0.84267	0.46693	0.67631
SIFA (Sales Increase/Fixed Asset)	-3.54192	-22.92701	1.68097	1.30760	-0.10463
CFFA (Cash-flow/fixed assets)	21.12885	19.18024	20.64622	15.32787	12.13513
Highveld	**1997**	**1998**	**1999**	**2000**	**2001**
INVEFF (Increase in fixed assets/Volume at beginning)	0.04820	0.10793	0.07118	0.06203	0.05538
SIFA (Sales Increase/Fixed Asset)	0.29157	0.15084	-0.13041	0.41330	-0.0558
CFFA (Cash-flow/fixed assets)	1.43345	1.60464	1.39971	1.82012	1.82937
Iscor	**1997**	**1998**	**1999**	**2000**	**2001**
INVEFF (Increase in fixed assets/Volume at beginning)	0.22255	0.19473	0.14447	0.24638	0.08937
SIFA (Sales Increase/Fixed Asset)	0.06359	-0.03716	0.09712	0.15122	-0.07730
CFFA (Cash-flow/fixed assets)	1.93057	1.73426	1.71987	1.83556	1.54127
IST	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	n/a	0.18022	0.32816	0.17415	0.19140
SIFA (Sales Increase/Fixed Asset)	n/a	2.82193	1.16660	0.03085	1.90733
CFFA (Cash-flow/fixed assets)	n/a	7.31370	8.19668	6.83564	8.66197
Italtile	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.29986	0.69826	0.56364	0.35005	0.27838
SIFA (Sales Increase/Fixed Asset)	0.64852	0.43236	0.63114	0.28921	0.80756
CFFA (Cash-flow/fixed assets)	5.14498	5.32597	4.31523	3.33045	3.61735

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Murray & Roberts	1998	1999	2000	2001	2002
INVEFF (Increase in fixed assets/Volume at beginning)	0.22745	0.36003	0.26110	0.19005	0.37197
SIFA (Sales Increase/Fixed Asset)	0.24096	0.19071	0.26480	-3.89900	0.36782
CFFA (Cash-flow/fixed assets)	4.85634	6.37897	6.69802	6.70367	7.5439
Mr Price	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.38290	0.67540	0.50000	0.46424	0.34044
SIFA (Sales Increase/Fixed Asset)	1.97716	2.03103	2.19137	1.82419	1.86027
CFFA (Cash-flow/fixed assets)	16.07057	17.48707	15.71131	15.68887	15.9964
Mustek	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.58380	0.73780	1.54370	0.60031	0.5803
SIFA (Sales Increase/Fixed Asset)	12.15963	15.11317	8.66487	14.63564	17.59268
CFFA (Cash-flow/fixed assets)	100.0954	114.69623	128.63218	69.30804	72.37973
Pick 'n Pay	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.26572	0.73065	0.43270	0.21450	0.15523
SIFA (Sales Increase/Fixed Asset)	2.20999	1.87852	1.32763	1.50236	3.66356
CFFA (Cash-flow/fixed assets)	22.44239	23.73028	17.13398	15.82407	21.44792
PPC	**1997**	**1998**	**1999**	**2000**	**2001**
INVEFF (Increase in fixed assets/Volume at beginning)	0.37882	0.32955	0.15107	0.10670	0.05885
SIFA (Sales Increase/Fixed Asset)	1.31071	0.07336	-0.02247	-0.07022	0.21065
CFFA (Cash-flow/fixed assets)	2.04278	1.65209	1.33142	1.27191	1.45255
Putco	**1997**	**1998**	**1999**	**2000**	**2001**
INVEFF (Increase in fixed assets/Volume at beginning)	0.11208	0.23714	0.32406	0.12511	0.45469
SIFA (Sales Increase/Fixed Asset)	0.05404	-0.00577	0.25863	0.44607	0.23531
CFFA (Cash-flow/fixed assets)	5.28743	4.64226	4.57668	4.27175	4.51505
Rainbow	**1997**	**1998**	**1999**	**2000**	**2001**
INVEFF (Increase in fixed assets/Volume at beginning)	0.00826	0.04224	0.02896	0.04451	0.07267
SIFA (Sales Increase/Fixed Asset)	0.07106	0.00891	0.18363	0.26742	1.03098
CFFA (Cash-flow/fixed assets)	2.53036	2.62720	2.86838	3.25642	4.17761

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Richemont	1998	1999	2000	2001	2002
INVEFF (Increase in fixed assets/Volume at beginning)	0.40400	0.13933	0.23499	0.53572	0.46889
SIFA (Sales Increase/Fixed Asset)	5.18475	-0.20364	-13.92400	1.10014	0.19446
CFFA (Cash-flow/fixed assets)	35.42070	13.94216	4.02961	7.85732	5.77858
SAB	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.27596	0.33410	0.22372	0.20536	0.18098
SIFA (Sales Increase/Fixed Asset)	0.61960	-0.54368	-0.15550	0.13908	0.63178
CFFA (Cash-flow/fixed assets)	3.95263	2.94205	2.42379	2.44898	3.13676
Sappi	**1997**	**1998**	**1999**	**2000**	**2001**
INVEFF (Increase in fixed assets/Volume at beginning)	0.02500	0.04113	0.02734	0.03168	0.05943
SIFA (Sales Increase/Fixed Asset)	0.13677	0.24251	0.15834	0.08348	0.20084
CFFA (Cash-flow/fixed assets)	1.21623	1.46625	1.06780	1.23741	1.73044
Sasol	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.22237	0.65462	0.74236	0.93512	0.32568
SIFA (Sales Increase/Fixed Asset)	0.07093	0.18867	0.45428	0.60764	0.59443
CFFA (Cash-flow/fixed assets)	1.35706	1.70575	2.06304	3.01111	2.57093
Shoprite	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.51467	0.38717	0.35360	0.36713	0.43040
SIFA (Sales Increase/Fixed Asset)	5.30460	2.43282	0.91524	0.81145	1.54097
CFFA (Cash-flow/fixed assets)	24.67150	18.44314	16.33955	15.01245	15.03606
Siltek	**1996**	**1997**	**1998**	**1999**	**2000**
INVEFF (Increase in fixed assets/Volume at beginning)	0.49076	1.98489	0.46237	0.73798	0.83502
SIFA (Sales Increase/Fixed Asset)	6.60371	0.13049	0.26572	12.11887	14.62914
CFFA (Cash-flow/fixed assets)	61.54666	77.69529	33.37646	42.72166	59.79504
Sun International	**1997**	**1998**	**1999**	**2000**	**2001**
INVEFF (Increase in fixed assets/Volume at beginning)	0.17656	0.08757	0.26480	0.30400	0.04214
SIFA (Sales Increase/Fixed Asset)	0.06201	0.09243	-0.13271	-0.00236	-0.14302
CFFA (Cash-flow/fixed assets)	1.00015	0.96078	0.80495	0.85216	0.65581

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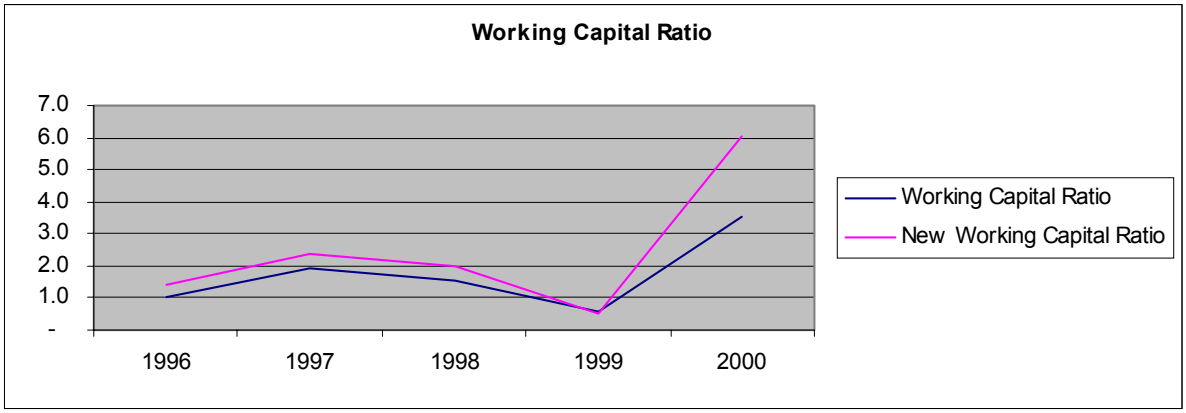
Tiger Wheel	1998	1999	2000	2001	2002
INVEFF (Increase in fixed assets/Volume at beginning)	0.78324	1.18406	0.40847	0.34582	0.28965
SIFA (Sales Increase/Fixed Asset)	2.12896	1.37010	0.40369	0.75757	0.64667
CFFA (Cash-flow/fixed assets)	13.55532	7.10947	4.13052	4.34318	4.63670
Woolworths	**1998**	**1999**	**2000**	**2001**	**2002**
INVEFF (Increase in fixed assets/Volume at beginning)	0.33132	0.25112	0.19716	0.24594	0.32953
SIFA (Sales Increase/Fixed Asset)	0.83438	0.81034	0.40483	0.69428	1.73551
CFFA (Cash-flow/fixed assets)	6.56609	6.08934	6.26744	7.02917	8.69241

Appendix C

Working capital

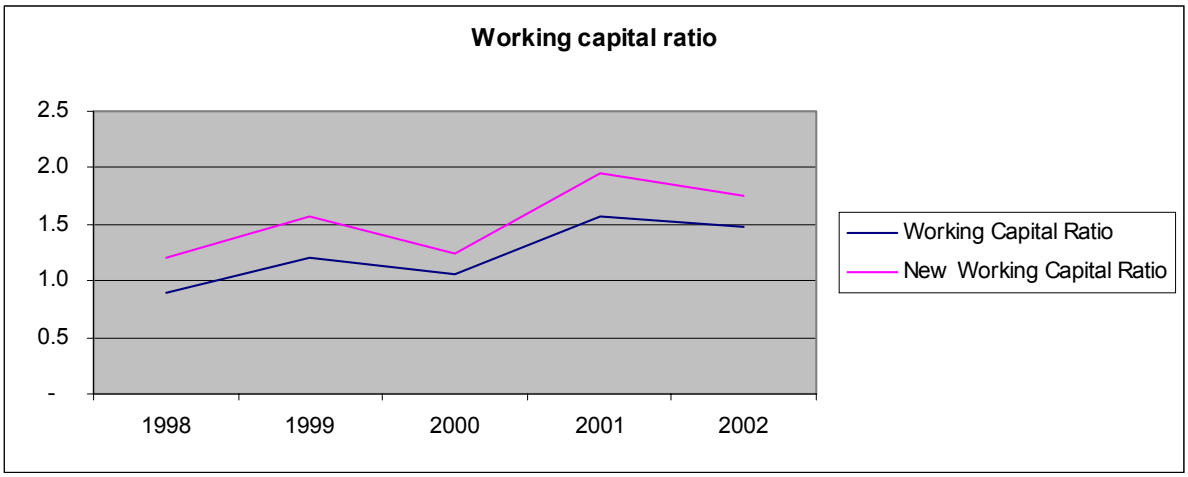
Amlac	**1996**	**1997**	**1998**	**1999**	**2000**
	R'000	R'000	R'000	R'000	R'000
Current Assets	15,311	28,733	22,813	18,842	13,730
Current Liabilities	14,838	15,090	14,552	31,934	3,869
Working Capital	**473**	**13,643**	**8,261**	**(13,092)**	**9,861**
Working Capital Ratio	1.0	1.9	1.6	0.6	3.5
Working Capital	473	13,643	8,261	(13,092)	9,861
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	996	2,123	3,580	3,867	5,092
Assets purchased to maintain added back	6,516	9,699	10,089	1,119	14,715
Real Working Capital	**5,993**	**21,219**	**14,770**	**(15,840)**	**19,484**
New Working Capital Ratio	1.4	2.4	2.0	0.5	6.0



Accumulated depreciation beginning of year	126	1,174	2,480	4,115	4,402
Prior year adjustment					
ROE					
Acquisitions					
Impairment					
Disposals	(22)	(89)		(934)	
Depreciation provided for a year	1,070	1,395	1,635	1,221	1,224
	1,174	2,480	4,115	4,402	5,626
Purchases to maintain	6,516	16,215	26,304	27,423	42,138
	(5,342)	(13,735)	(22,189)	(23,021)	(36,512)
Purchases to expand	-	-	-	-	-
	(5,342)	(13,735)	(22,189)	(23,021)	(36,512)

Appendix C

Avis	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	435,320	712,668	811,163	1,437,160	1,884,703
Current Liabilities	488,421	594,813	769,422	916,479	1,273,634
Working Capital	**(53,101)**	**117,855**	**41,741**	**520,681**	**611,069**
Working Capital Ratio	0.9	1.2	1.1	1.6	1.5
Working Capital	(53,101)	117,855	41,741	520,681	611,069
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	144,011	171,290	210,460	227,309	263,598
Assets purchased to maintain added back	293,250	388,007	356,225	581,709	618,986
Real Working Capital	**96,138**	**334,572**	**187,506**	**875,081**	**966,457**
New Working Capital Ratio	1.2	1.6	1.2	2.0	1.8



Accumulated depreciation beginning of year	114,120	144,011	171,290	210,460	227,309
Prior year adjustment					
ROE					
Acquisitions					
Impairment					
Disposals	(101,816)	(159,659)	(165,305)	(283,658)	(297,650)
Depreciation provided for a year	131,707	186,938	204,475	300,507	333,939
	144,011	171,290	210,460	227,309	263,598
Purchases to maintain	293,250	681,257	1,037,482	1,619,191	2,238,177
	(149,239)	(509,967)	(827,022)	(1,391,882)	(1,974,579)
Purchases to expand	-	-	-	-	-
	(149,239)	(509,967)	(827,022)	(1,391,882)	(1,974,579)

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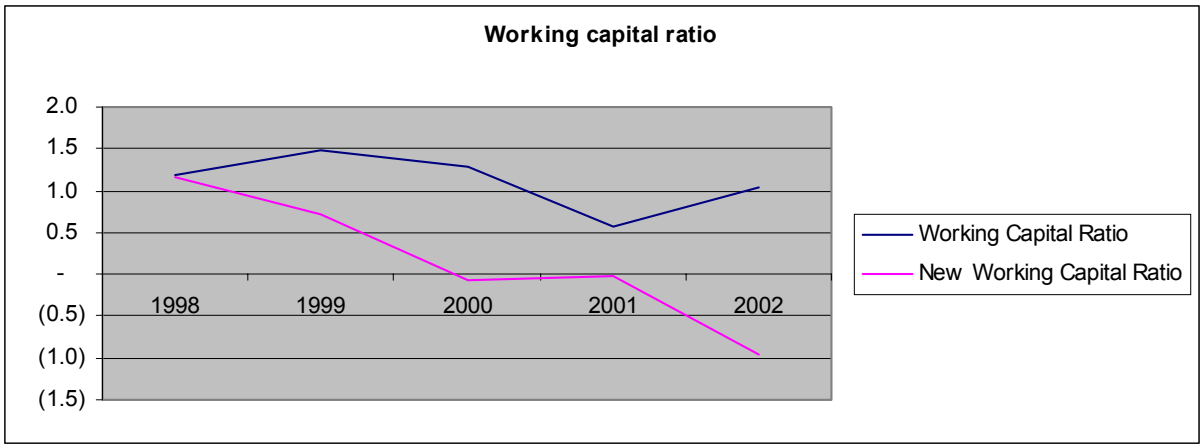
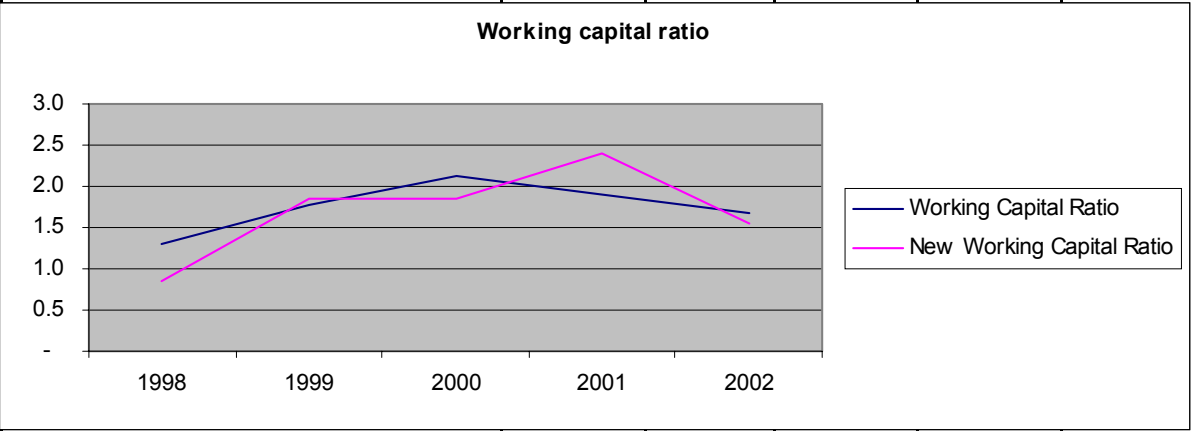
City Lodge	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	38,246	43,136	41,538	18,175	38,001
Current Liabilities	32,227	29,191	32,416	31,563	36,739
Working Capital	**6,019**	**13,945**	**9,122**	**(13,388)**	**1,262**
Working Capital Ratio	1.2	1.5	1.3	0.6	1
Working Capital	6,019	13,945	9,122	(13,388)	1,262
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	39,587	49,058	87,332	97,329	117,786
Assets purchased to maintain added back	39,026	26,714	43,840	78,670	44,312
Real Working Capital	**5,458**	**(8,399)**	**(34,370)**	**(32,047)**	**(72,212)**
New Working Capital Ratio	1.2	0.7	(0.1)	0.0	(1.0)



Accumulated depreciation beginning of year	31,818	38,966	47,784	85,419	94,589
ROE					
Acquisitions			21,365		
Impairment					
Disposals	(1,450)	(1,073)		(8,601)	(1,202)
Depreciation provided for a year	8,598	9,891	16,270	17,771	20,832
	38,966	47,784	85,419	94,589	114,219
Purchases to maintain	39,026	65,740	109,580	188,250	232,562
	(60)	(17,956)	(24,161)	(93,661)	(118,343)
Purchases to expand	-	-	-	-	-
	(60)	(17,956)	(24,161)	(93,661)	(118,343)

Appendix C

Comair	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	157,870	264,574	383,834	372,881	344,894
Current Liabilities	121,694	149,577	179,852	196,337	207,442
Working Capital	**36,176**	**114,997**	**203,982**	**176,544**	**137,452**
Working Capital Ratio	1.3	1.8	2.1	1.9	1.7
Working Capital	36,176	114,997	203,982	176,544	137,452
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	59,176	75,896	100,432	53,723	75,985
Assets purchased to maintain added back	5,565	86,634	49,384	152,146	50,117
Real Working Capital	**(17,435)**	**125,735**	**152,934**	**274,967**	**111,584**

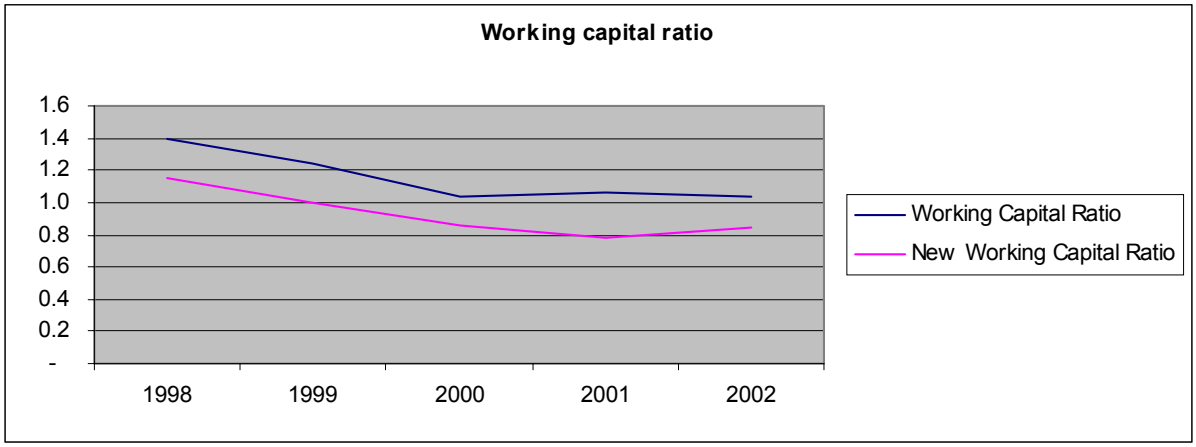


New Working Capital Ratio	0.9	1.8	1.9	2.4	1.5

Accumulated depreciation	40,925	59,176	75,896	100,432	53,723
Prior year adjustment					
ROE					
Acquisitions	589				
Impairment					
Disposals	(1,768)	(687)	(596)	(61,411)	(3,194)
Depreciation provided for a year	19,430	17,407	25,132	14,702	25,456
	59,176	75,896	100,432	53,723	75,985
Purchases to maintain	5,565	92,199	141,583	293,729	343,846
	53,611	(16,303)	(41,151)	(240,006)	(267,861)
Purchases to expand	-	-	-	-	-
	53,611	(16,303)	(41,151)	(240,006)	(267,861)

Appendix C

Concor	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	391,974	446,141	411,306	433,176	607,991
Current Liabilities	281,202	359,450	395,891	409,635	583,411
Working Capital	**110,772**	**86,691**	**15,415**	**23,541**	**24,580**
Working Capital Ratio	1.4	1.2	1.0	1.1	1.0
Working Capital	110,772	86,691	15,415	23,541	24,580
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	97,623	117,917	141,958	161,279	182,609
Assets purchased to maintain added back	30,841	28,813	71,641	50,242	65,500
Real Working Capital	**43,990**	**(2,413)**	**(54,902)**	**(87,496)**	**(92,529)**
New Working Capital Ratio	1.2	1.0	0.9	0.8	0.8



Accumulated depreciation beginning of year	81,637	97,623	117,917	141,958	161,079
Prior year adjustment					
ROE					
Acquisitions					
Impairment					
Disposals	(6,399)	(4,978)	(3,963)	(8,664)	(11,122)
Depreciation provided for a year	22,385	25,272	28,004	27,785	32,652
	97,623	117,917	141,958	161,079	182,609
Purchases to maintain	30,841	59,654	131,295	181,537	247,037
	66,782	58,263	10,663	(20,458)	(64,428)
Purchases to expand	-	-	-	-	-
	66,782	58,263	10,663	(20,458)	(64,428)

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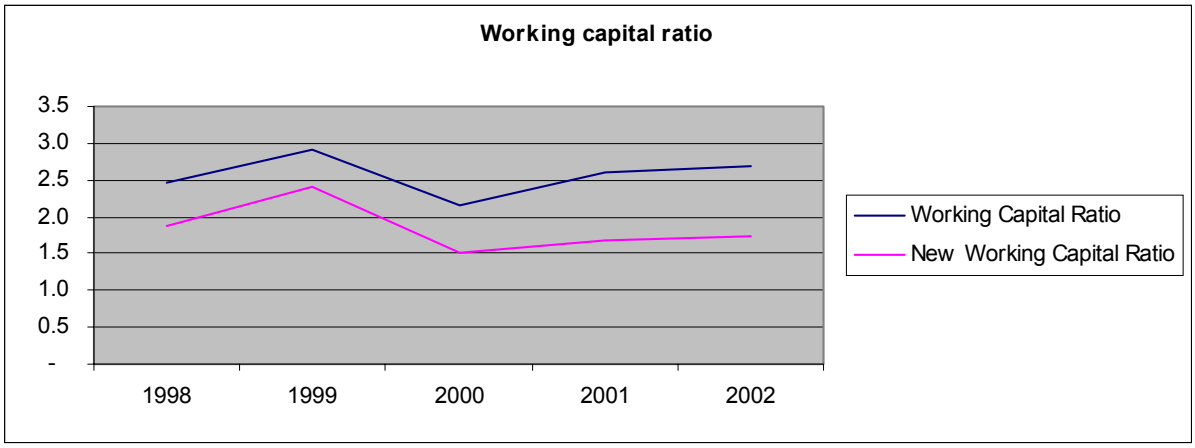
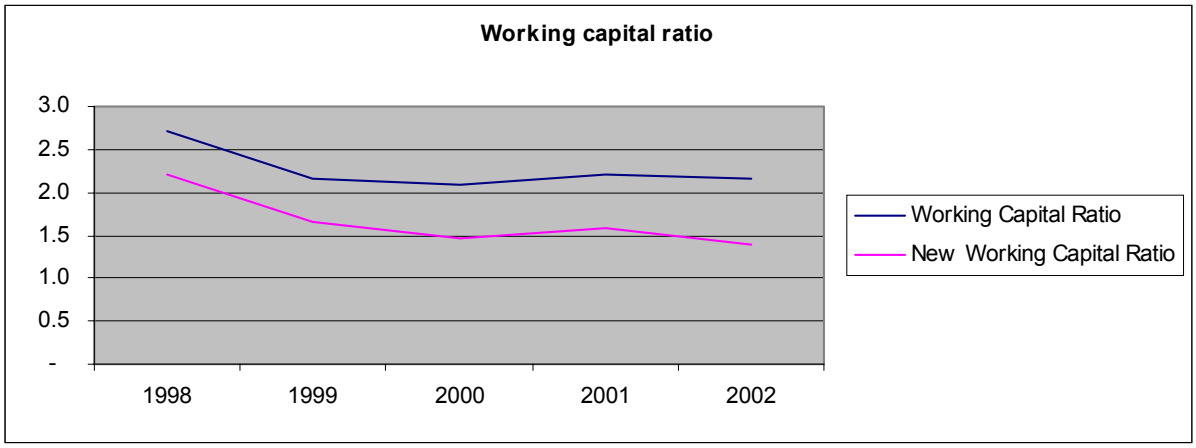
COPI	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	143,778	172,969	131,594	115,694	126,337
Current Liabilities	58,095	59,388	60,668	44,560	46,862
Working Capital	**85,683**	**113,581**	**70,926**	**71,134**	**79,475**
Working Capital Ratio	2.5	2.9	2.2	2.6	2.7
Working Capital	85,683	113,581	70,926	71,134	79,475
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	40,103	42,360	42,801	45,311	51,468
Assets purchased to maintain added back	5,664	12,084	3,270	4,331	6,317
Real Working Capital	**51,244**	**83,305**	**31,395**	**30,154**	**34,324**
New Working Capital Ratio	1.9	2.4	1.5	1.7	1.7



Accumulated depreciation beginning of year	34,333	40,103	42,360	42,801	45,311
Prior year adjustment	1,963				2,484
ROE					
Acquisitions					
Impairment					
Disposals	(801)	(3,044)	(5,100)	(2,860)	(1,244)
Depreciation provided for a year	4,608	5,301	5,541	5,370	4,917
	40,103	42,360	42,801	45,311	51,468
Purchases to maintain	5,664	17,748	21,018	25,349	31,666
	34,439	24,612	21,783	19,962	19,802
Purchases to expand	-	-	-	-	-
	34,439	24,612	21,783	19,962	19,802

Appendix C

Edgars	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	2,875,200	2,879,700	3,226,100	3,622,600	3,235,500
Current Liabilities	1,057,400	1,335,000	1,546,900	1,633,800	1,496,600
Working Capital	**1,817,800**	**1,544,700**	**1,679,200**	**1,988,800**	**1,738,900**
Working Capital Ratio	2.7	2.2	2.1	2.2	2.2
Working Capital	1,817,800	1,544,700	1,679,200	1,988,800	1,738,900
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	704,000	873,000	1,055,000	1,190,000	1,284,000
Assets purchased to maintain added back	167,000	192,000	96,000	158,000	117,000
Real Working Capital	**1,280,800**	**863,700**	**720,200**	**956,800**	**571,900**
New Working Capital Ratio	2.2	1.6	1.5	1.6	1.4



Accumulated depreciation beginning of year	558,000	704,440	872,854	1,054,854	1,189,854
Prior year adjustment					
ROE					
Acquisitions					
Impairment					
Disposals	(25,000)	(28,000)	(36,000)	(68,000)	(101,000)
Depreciation provided for a year	171,440	196,414	218,000	203,000	194,900
	704,440	872,854	1,054,854	1,189,854	1,283,754
Purchases to maintain	167,000	359,000	455,000	613,000	730,000
	537,440	513,854	599,854	576,854	553,754
Purchases to expand	117,000	155,000	185,000	198,000	210,000
	420,440	358,854	414,854	378,854	343,754

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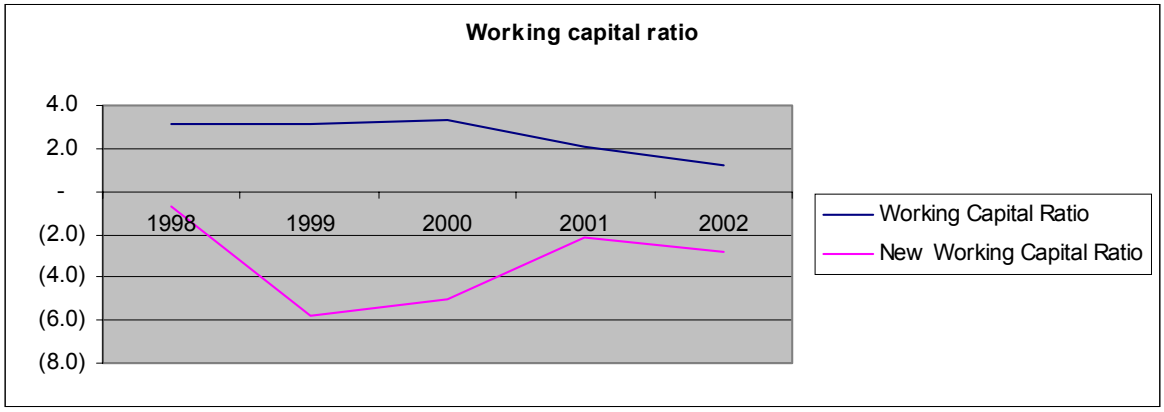
Energy Africa	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	369,936	301,449	481,177	421,536	433,540
Current Liabilities	118,134	97,476	142,686	200,090	361,630
Working Capital	**251,802**	**203,973**	**338,491**	**221,446**	**71,910**
Working Capital Ratio	3.1	3.1	3.4	2.1	1.2
Working Capital	251,802	203,973	338,491	221,446	71,910
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	704,000	1,114,000	1,273,000	1,670,000	2,450,000
Assets purchased to maintain added back	255,000	244,000	79,000	813,000	1,010,000
Real Working Capital	**(197,198)**	**(666,027)**	**(855,509)**	**(635,554)**	**(1,368,090)**
New Working Capital Ratio	(0.7)	(5.8)	(5.0)	(2.2)	(2.8)



Accumulated depreciation beginning of year	227,000	740,000	1,114,000	1,273,000	1,669,997
Prior year adjustment		15,000			409,000
ROE	168,000	(56,000)	83,000	213,000	(1,000)
Acquisitions	5,274	6,819	4,402		
Impairment	204,000	242,000		12,000	12,000
Disposals				(1,000)	(1,000)
Depreciation provided for a year	135,726	166,181	71,598	172,997	361,230
	740,000	1,114,000		1,669,997	2,450,227
			1,273,000		
Purchases to maintain	255,000	499,000	578,000	1,391,000	2,401,000
	485,000	615,000	695,000	278,997	49,227
Purchases to expand	-	-	-	-	-
	485,000	615,000	695,000	278,997	49,227

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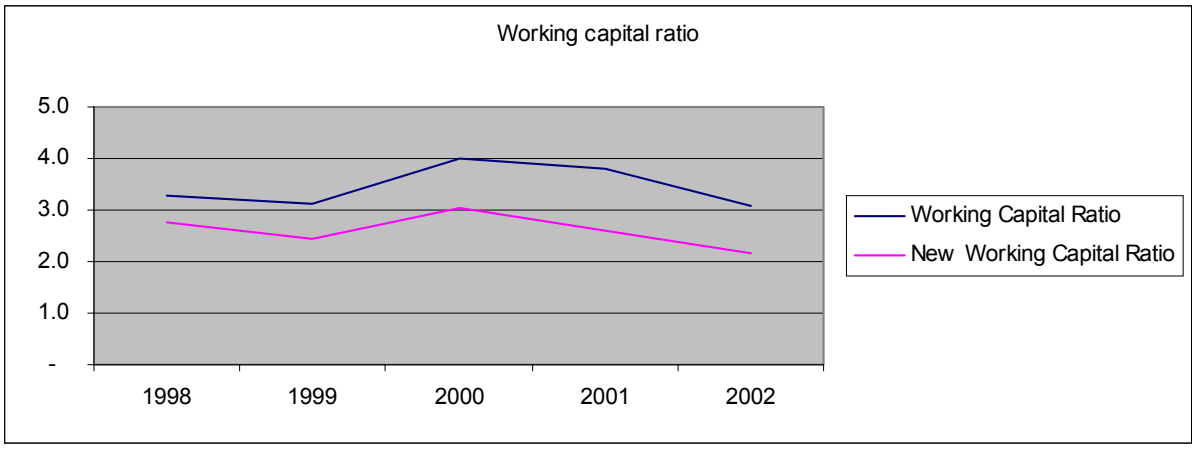
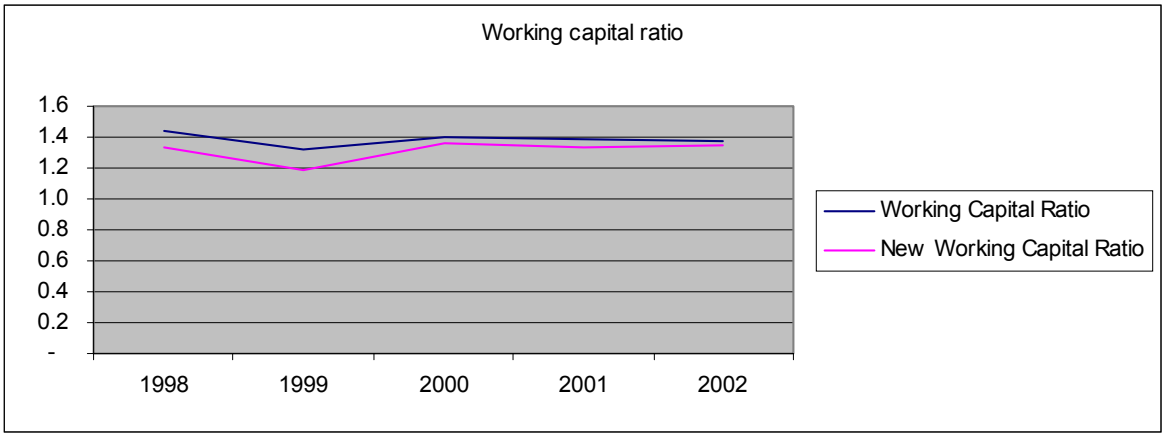
Foschini	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
CurrentAssets	1,619,800	1,517,400	1,887,600	1,781,300	1,910,700
Current Liabilities	493,600	489,000	470,900	470,800	622,200
WorkingCapital	**1,126,200**	**1,028,400**	**1,416,700**	**1,310,500**	**1,288,500**
Working Capital Ratio	3.3	3.1	4.0	3.8	3.1
WorkingCapital	1,126,200	1,028,400	1,416,700	1,310,500	1,288,500
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	388,000	481,000	576,000	684,000	678,000
Assets purchased to maintain added back	126,000	148,000	129,000	128,000	113,000
Real Working Capital	**864,200**	**695,400**	**969,700**	**754,500**	**723,500**
New Working Capital Ratio	2.8	2.4	3.1	2.6	2.2



Accumulated depreciation beginning of year	312,000	388,000	480,900	575,500	683,400
Prior year adjustment					
ROE					
Acquisitions					
Impairment					
Disposals	(12,000)	(10,000)	(22,000)	(24,000)	(133,000)
Depreciation provided for a year	88,000	102,900	116,600	131,900	126,800
	388,000	480,900	575,500	683,400	677,200
Purchases to maintain	126,000	274,000	403,000	531,000	644,000
	262,000	206,900	172,500	152,400	33,200
Purchases to expand	-	-	-	-	-
	262,000	206,900	172,500	152,400	33,200

Appendix C

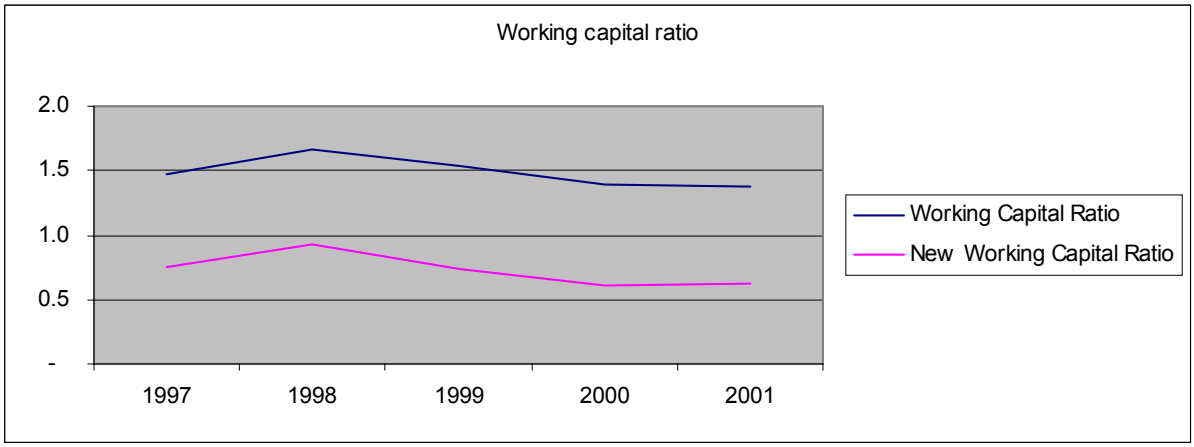
Grintek	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	307,615	514,848	611,104	910,826	983,772
Current Liabilities	213,738	388,695	435,722	655,786	719,068
Working Capital	**93,877**	**126,153**	**175,382**	**255,040**	**264,704**
Working Capital Ratio	1.4	1.3	1.4	1.4	1.4
Working Capital	93,877	126,153	175,382	255,040	264,704
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	56,258	64,558	65,924	70,983	86,496
Assets purchased to maintain added back	34,514	11,786	44,518	37,193	67,330
Real Working Capital	**72,133**	**73,381**	**153,976**	**221,250**	**245,538**
New Working Capital Ratio	1.3	1.2	1.4	1.3	1.3



Accumulated depreciation beginning of year	84,120	56,258	64,558	65,924	70,983
Prior year adjustment					
ROE					
Acquisitions	21				315
Impairment					
Disposals	(50,089)	(5,773)	(13,090)	(9,405)	(2,104)
Depreciation provided for a year	22,206	14,073	14,456	14,464	17,302
	56,258	64,558	65,924	70,983	86,496
Purchases to maintain	34,514	46,300	90,818	128,011	195,341
	21,744	18,258	(24,894)	(57,028)	(108,845)
Purchases to expand	-	-	-	-	-
	21,744	18,258	(24,894)	(57,028)	(108,845)

Appendix C

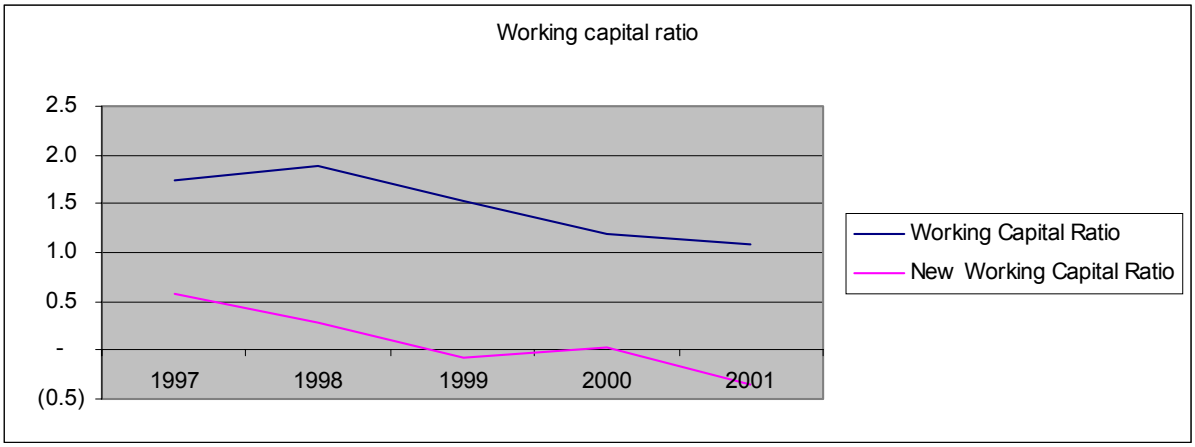
Highveld	1997	1998	1999	2000	2001
	R'000	R'000	R'000	R'000	R'000
CurrentAssets	1,477,530	1,981,574	1,744,272	1,949,221	2,264,333
CurrentLiabilities	1,004,635	1,188,338	1,129,800	1,405,875	1,644,024
Working Capital	**472,895**	**793,236**	**614,472**	**543,346**	**620,309**
Working Capital Ratio	1.5	1.7	1.5	1.4	1.4
Working Capital	472,895	793,236	614,472	543,346	620,309
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	833,000	962,000	1,090,000	1,255,000	1,374,000
Assets purchased to maintain added back	107,000	90,000	184,000	160,000	140,000
Real Working Capital	**(253,105)**	**(78,764)**	**(291,528)**	**(551,654)**	**(613,691)**
New Working Capital Ratio	0.7	0.9	0.7	0.6	0.6



Accumulated depreciation beginning of year	740,000	855,604	996,837	1,137,833	1,310,922
Prior year adjustment					
ROE					
Acquisitions					
Impairment					
Disposals					
Depreciation provided for a year	115,604	141,233	140,996	173,089	196,944
	855,604	996,837	1,137,833	1,310,922	1,507,866
Purchases to maintain	107,000	197,000	381,000	541,000	681,000
	748,604	799,837	756,833	769,922	826,866
Purchases to expand	12,000	188,000	188,000	188,000	188,000
	736,604	611,837	568,833	581,922	638,866

Appendix C

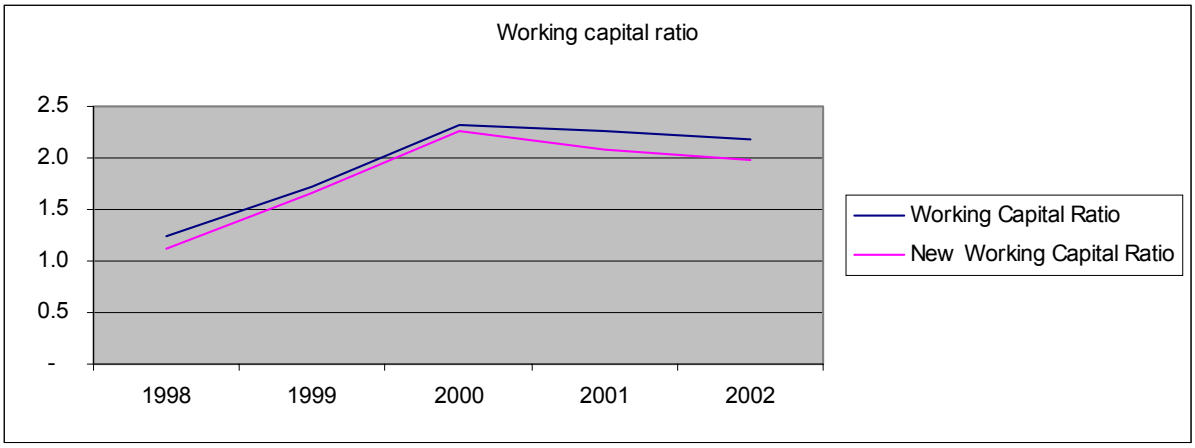
Iscor	1997	1998	1999	2000	2001
	R'000	R'000	R'000	R'000	R'000
Current Assets	5,159,000	4,547,000	4,664,000	5,494,000	5,043,000
Current Liabilities	2,959,000	2,404,000	3,070,000	4,642,000	4,661,000
Working Capital	**2,200,000**	**2,143,000**	**1,594,000**	**852,000**	**382,000**
Working Capital Ratio	1.7	1.9	1.5	1.2	1.1
Working Capital	2,200,000	2,143,000	1,594,000	852,000	382,000
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	4,531,000	4,895,000	5,465,000	6,109,000	7,289,000
Assets purchased to maintain added back	1,058,000	1,049,000	555,000	783,000	618,000
Real Working Capital	**(1,273,000)**	**(1,703,000)**	**(3,316,000)**	**(4,474,000)**	**(6,289,000)**
New Working Capital Ratio	0.6	0.3	(0.1)	0.0	(0.3)



Accumulated depreciation beginning of year	4,346,000	4,531,000	4,895,000	5,465,000	6,109,000
Prior year adjustment					
ROE					
Acquisitions		83,000	13,000	16,000	3,631,000
Impairment					
Disposals	(513,000)	(465,000)	(230,000)	(208,000)	(3,164,000)
Depreciation provided for a year	698,000	746,000	787,000	836,000	713,000
	4,531,000	4,895,000	5,465,000	6,109,000	7,289,000
Purchases to maintain	1,058,000	2,107,000	2,662,000	3,445,000	4,063,000
	3,473,000	2,788,000	2,803,000	2,664,000	3,226,000
Purchases to expand	535,000	1,008,000	1,666,000	3,024,000	3,270,000
	2,938,000	1,780,000	1,137,000	(360,000)	(44,000)

Appendix C

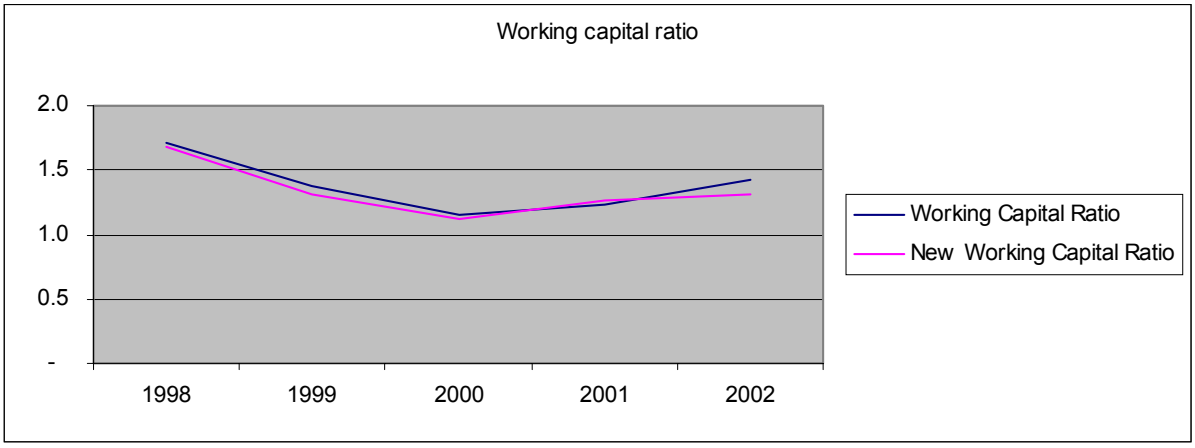
IST	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	36,531	122,266	98,585	104,437	133,284
Current Liabilities	29,576	71,476	42,629	46,060	61,052
Working Capital	**6,955**	**50,790**	**55,956**	**58,377**	**72,232**
Working Capital Ratio	1.2	1.7	2.3	2.3	2.2
Working Capital	6,955	50,790	55,956	58,377	72,232
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	5,100	7,295	11,068	14,096	18,175
Assets purchased to maintain added back	1,821	4,385	8,641	5,534	6,272
Real Working Capital	**3,676**	**47,880**	**53,529**	**49,815**	**60,329**
New Working Capital Ratio	1.1	1.7	2.3	2.1	2.0



Accumulated depreciation beginning of year	3,766	5,100	7,295	10,327	13,356
Prior year adjustment					1,158
ROE					
Acquisitions					
Impairment					
Disposals	(273)	(140)	(110)	(483)	(507)
Depreciation provided for a year	1,607	2,335	3,142	3,512	4,587
	5,100	7,295	10,327	13,356	18,594
Purchases to maintain	1,821	6,206	14,847	20,381	26,653
	3,279	1,089	(4,520)	(7,025)	(8,059)
Purchases to expand	-	-	-	-	-
	3,279	1,089	(4,520)	(7,025)	(8,059)

Appendix C

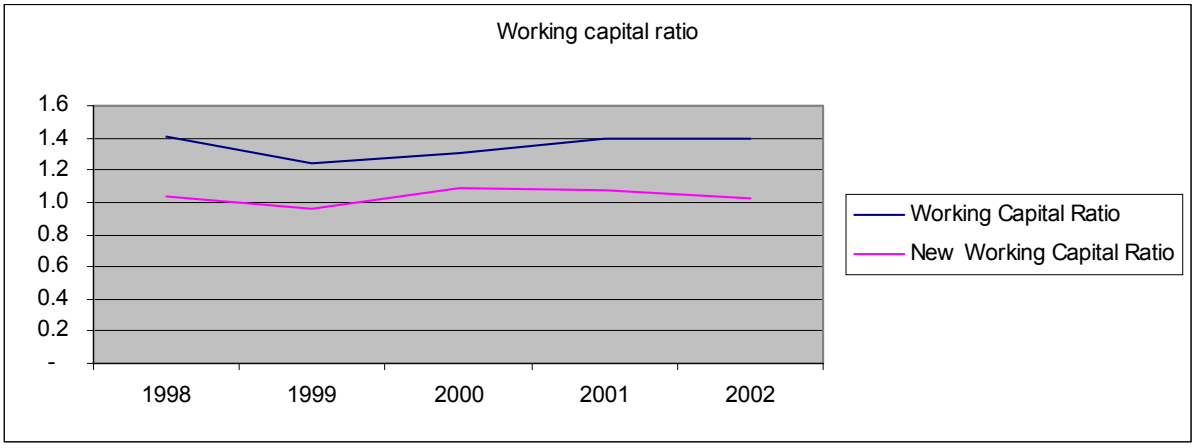
Italtile	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	122,323	92,581	115,910	177,131	300,853
Current Liabilities	71,157	66,936	100,168	143,380	211,787
Working Capital	**51,166**	**25,645**	**15,742**	**33,751**	**89,066**
Working Capital Ratio	1.7	1.4	1.2	1.2	1.4
Working Capital	51,166	25,645	15,742	33,751	89,066
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	9,638	12,548	18,307	15,456	24,435
Assets purchased to maintain added back	6,581	8,142	14,548	19,156	1,625
Real Working Capital	**48,109**	**21,239**	**11,983**	**37,451**	**66,256**
New Working Capital Ratio	1.7	1.3	1.1	1.3	1.3



Accumulated depreciation beginning of year	9,999	9,638	12,548	18,307	15,456
Prior year adjustment					
Roe					
Acquisitions					
Impairment					
Disposals	(5,148)	(1,156)		(9,348)	(2,607)
Depreciation provided for a year	4,787	4,066	5,759	6,497	11,586
	9,638	12,548	18,307	15,456	24,435
Purchases to maintain	6,581	14,723	29,271	48,427	50,052
	3,057	(2,175)	(10,964)	(32,971)	(25,617)
Purchases to expand	11,095	48,443	91,797	125,125	176,739
	(8,038)	(50,618)	(102,761)	(158,096)	(202,356)

Appendix C

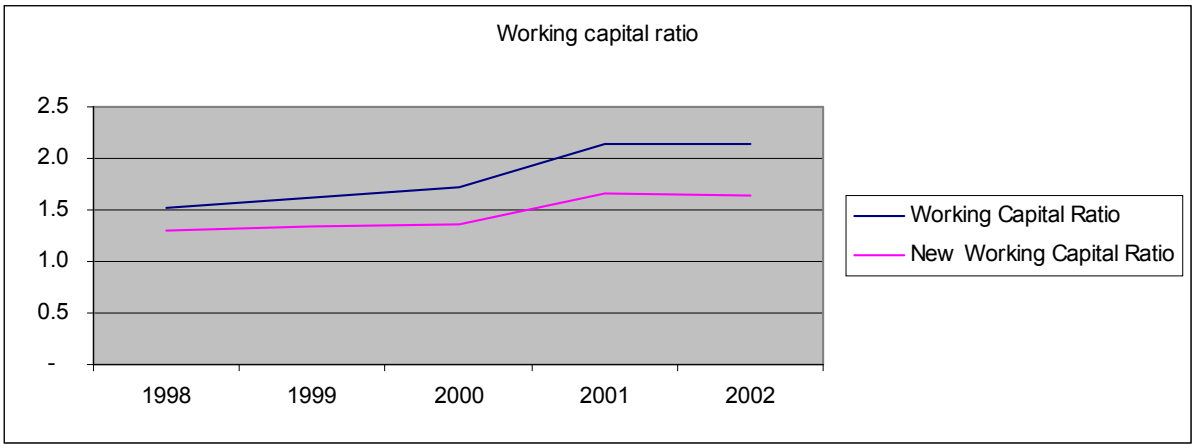
Murray & Roberts	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
CurrentAssets	4,630,700	3,795,700	3,897,600	4,351,200	4,351,200
CurrentLiabilities	3,301,700	3,053,400	2,984,500	3,106,300	3,106,300
Working Capital	**1,329,000**	**742,300**	**913,100**	**1,244,900**	**1,244,900**
Working Capital Ratio	1.4	1.2	1.3	1.4	1.4
Working Capital	1,329,000	742,300	913,100	1,244,900	1,244,900
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	1,402,300	1,228,300	930,500	1,051,500	1,229,100
Assets purchased to maintain added back	185,800	375,900	278,000	36,300	71,000
Real Working Capital	**112,500**	**(110,100)**	**260,600**	**229,700**	**86,800**
New Working Capital Ratio	1.0	1.0	1.1	1.1	1.0



Accumulated depreciation beginning of year	1,701,200	1,387,400	1,213,500	780,000	895,500
Prior year adjustment					156,000
ROE	50,900	(9,900)	22,900	50,600	127,400
Acquisitions			6,300		
Impairment					
Disposals	(732,500)	(531,900)	(694,900)	(161,800)	(176,500)
Depreciation provided for a year	367,800	367,900	232,200	226,700	226,700
	1,387,400	1,213,500	780,000	895,500	1,229,100
Purchases to maintain	185,800	561,700	839,700	876,000	947,000
	1,201,600	651,800	(59,700)	19,500	282,100
Purchases to expand	420,900	797,900	1,048,100	1,260,200	1,645,500
	780,700	(146,100)	(1,107,800)	(1,240,700)	(1,363,400)

Appendix C

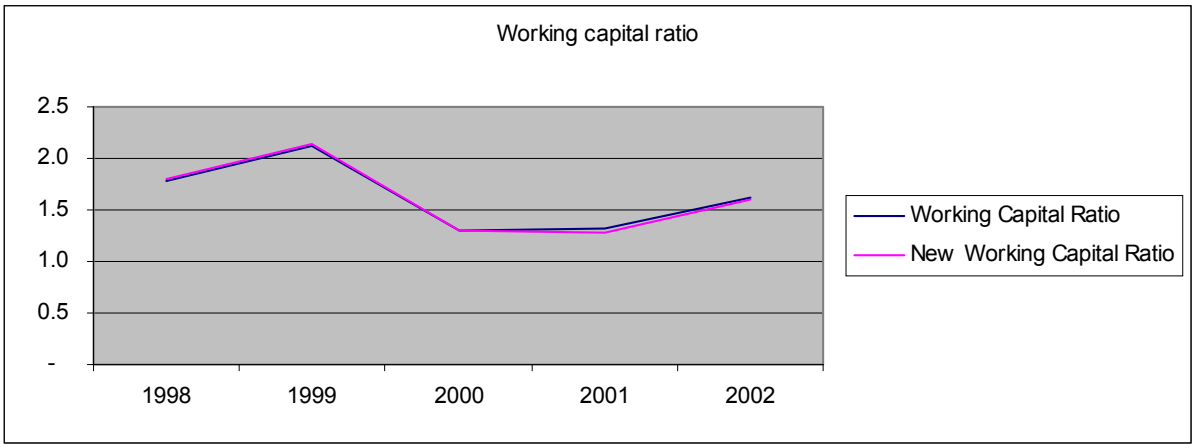
Mr Price	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	506,940	530,246	648,702	820,768	1,036,126
Current Liabilities	333,288	325,703	379,304	384,396	482,603
Working Capital	**173,652**	**204,543**	**269,398**	**436,372**	**553,523**
Working Capital Ratio	1.5	1.6	1.7	2.1	2.1
Working Capital	173,652	204,543	269,398	436,372	553,523
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	83,202	119,135	162,797	205,235	256,904
Assets purchased to maintain added back	10,369	27,725	30,050	20,472	13,175
Real Working Capital	**100,819**	**113,133**	**136,651**	**251,609**	**309,794**
New Working Capital Ratio	1.3	1.3	1.4	1.7	1.6



Accumulated depreciation beginning of year	68,435	83,202	119,135	162,797	205,235
Prior year adjustment					
ROE					
Acquisitions					
Impairment					
Disposals	(13,636)	(1,304)	(5,939)	(8,253)	(9,719)
Depreciation provided for a year	28,403	37,237	49,601	50,691	61,388
	83,202	119,135	162,797	205,235	256,904
Purchases to maintain	10,369	38,094	68,144	88,616	101,791
	72,833	81,041	94,653	116,619	155,113
Purchases to expand	28,204	74,879	118,327	176,415	227,495
	44,629	6,162	(23,674)	(59,796)	(72,382)

Appendix C

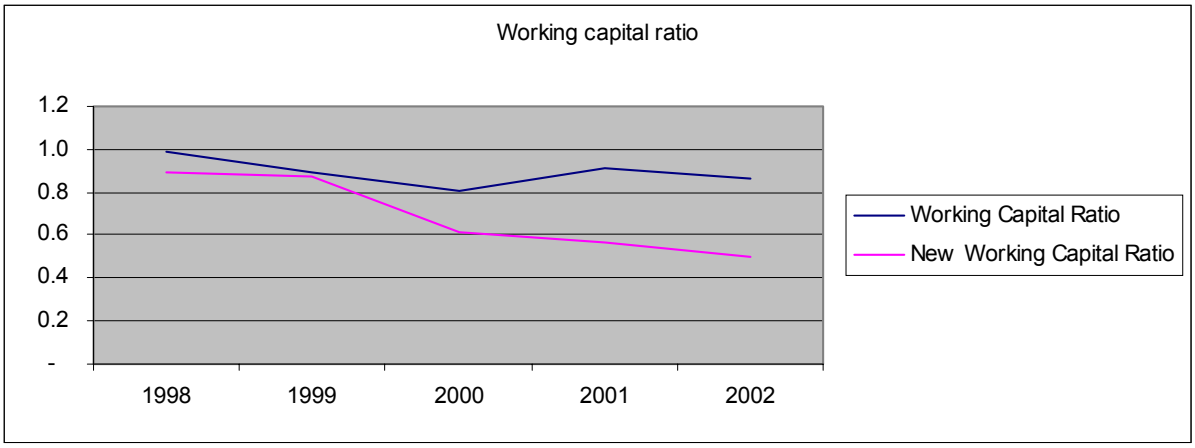
Mustek	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	333,712	466,921	653,185	819,357	1,030,024
Current Liabilities	186,693	219,509	500,934	619,920	632,786
Working Capital	**147,019**	**247,412**	**152,251**	**199,437**	**397,238**
Working Capital Ratio	1.8	2.1	1.3	1.3	1.6
Working Capital	147,019	247,412	152,251	199,437	397,238
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	4,365	7,120	21,506	39,536	37,260
Assets purchased to maintain added back	6,444	8,287	18,756	18,570	22,778
Real Working Capital	**149,098**	**248,579**	**149,501**	**178,471**	**382,756**
New Working Capital Ratio	1.8	2.1	1.3	1.3	1.6



Accumulated depreciation beginning of year	5,002	4,365	7,120	21,506	39,536
Prior year adjustment					(676)
ROE					
Acquisitions			5,782	1,296	
Impairment					
Disposals	(4,391)	(789)	(1,514)		(16,873)
Depreciation provided for a year	3,754	3,544	10,118	16,734	15,273
	4,365	7,120	21,506	39,536	37,260
Purchases to maintain	6,444	14,731	33,487	52,057	74,835
	(2,079)	(7,611)	(11,981)	(12,521)	(37,575)
Purchases to expand	-	-	-	-	-
	(2,079)	(7,611)	(11,981)	(12,521)	(37,575)

Appendix C

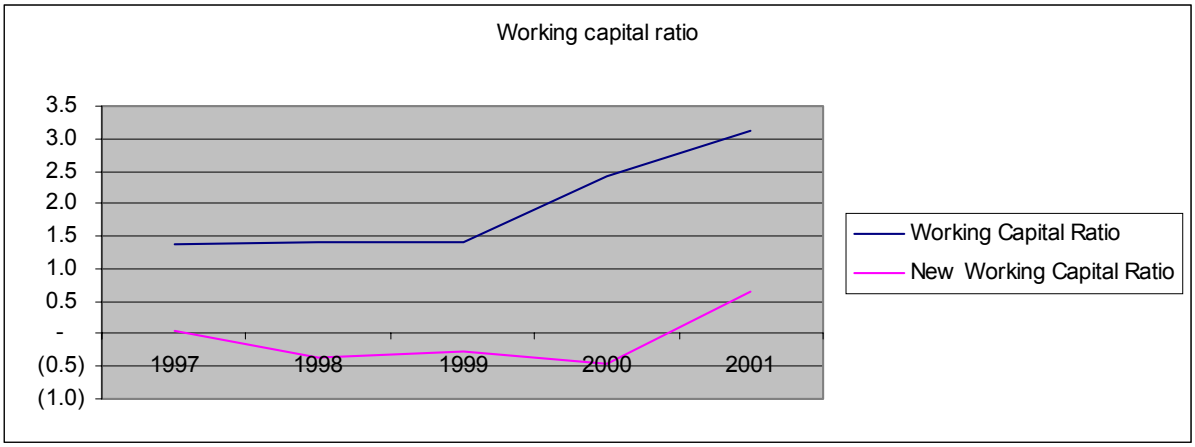
Pick 'n Pay	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	1,704,200	1,870,700	1,904,400	2,238,400	2,611,000
Current Liabilities	1,729,800	2,102,800	2,359,100	2,444,500	3,009,800
Working Capital	**(25,600)**	**(232,100)**	**(454,700)**	**(206,100)**	**(398,800)**
Working Capital Ratio	1.0	0.9	0.8	0.9	0.9
Working Capital	(25,600)	(232,100)	(454,700)	(206,100)	(398,800)
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	291,000	432,000	813,000	1,063,000	1,233,000
Assets purchased to maintain added back	131,000	389,000	353,000	208,000	138,000
Real Working Capital	**(185,600)**	**(275,100)**	**(914,700)**	**(1,061,100)**	**(1,493,800)**
New Working Capital Ratio	0.9	0.9	0.6	0.6	0.5



Accumulated depreciation beginning of year	265,000	290,500	431,400	812,800	1,062,300
Prior year adjustment					
ROE					
Acquisitions		10,000	194,000	31,000	
Impairment					
Disposals	(68,000)				(80,000)
Depreciation provided for a year	93,500	130,900	187,400	218,500	249,700
	290,500	431,400	812,800	1,062,300	1,232,000
Purchases to maintain	131,000	520,000	873,000	1,081,000	1,219,000
	159,500	(88,600)	(60,200)	(18,700)	13,000
Purchases to expand	-	-	-	-	-
	159,500	(88,600)	(60,200)	(18,700)	13,000

Appendix C

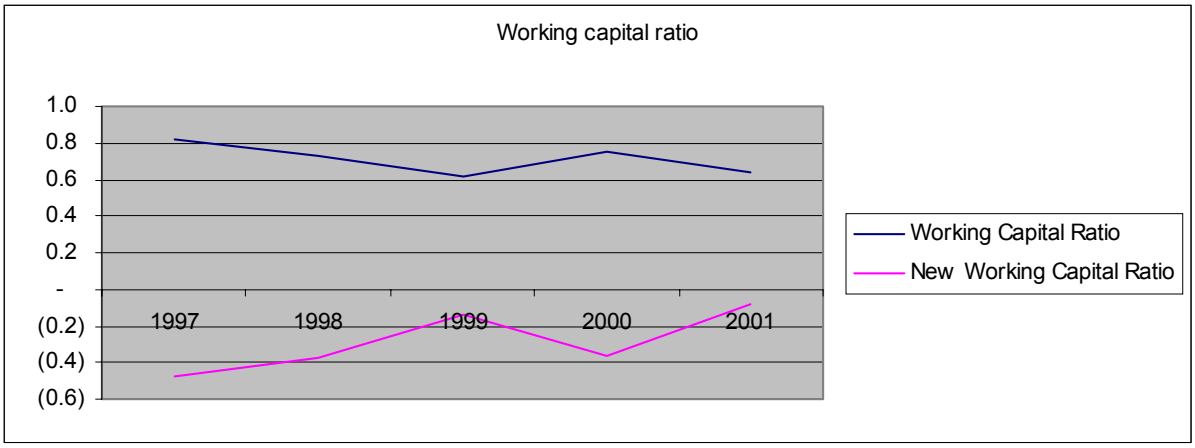
PPC	1997	1998	1999	2000	2001
	R'000	R'000	R'000	R'000	R'000
Current Assets	589,700	528,500	542,400	652,000	1,186,100
Current Liabilities	430,100	373,900	383,700	270,700	379,600
Working Capital	**159,600**	**154,600**	**158,700**	**381,300**	**806,500**
Working Capital Ratio	1.4	1.4	1.4	2.4	3.1
Working Capital	159,600	154,600	158,700	381,300	806,500
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	653,600	739,300	787,600	910,500	1,020,400
Assets purchased to maintain added back	79,400	73,900	136,900	136,000	80,600
Real Working Capital	**(414,600)**	**(510,800)**	**(492,000)**	**(393,200)**	**(133,300)**
New Working Capital Ratio	0.0	(0.4)	(0.3)	(0.5)	0.6



Accumulated depreciation beginning of year	596,600	653,600	739,300	787,600	910,500
Prior year adjustment					
Roe					
Acquisitions	800		5,000		
Impairment					
Disposals	(20,700)	(19,000)	(88,500)	(28,700)	(55,100)
Depreciation provided for a year	76,900	104,700	131,800	151,600	165,000
	653,600	739,300	787,600	910,500	1,020,400
Purchases to maintain	79,400	153,300	290,200	426,200	506,800
	574,200	586,000	497,400	484,300	513,600
Purchases to expand	270,400	600,500	692,600	718,500	728,500
	303,800	(14,500)	(195,200)	(234,200)	(214,900)

Appendix C

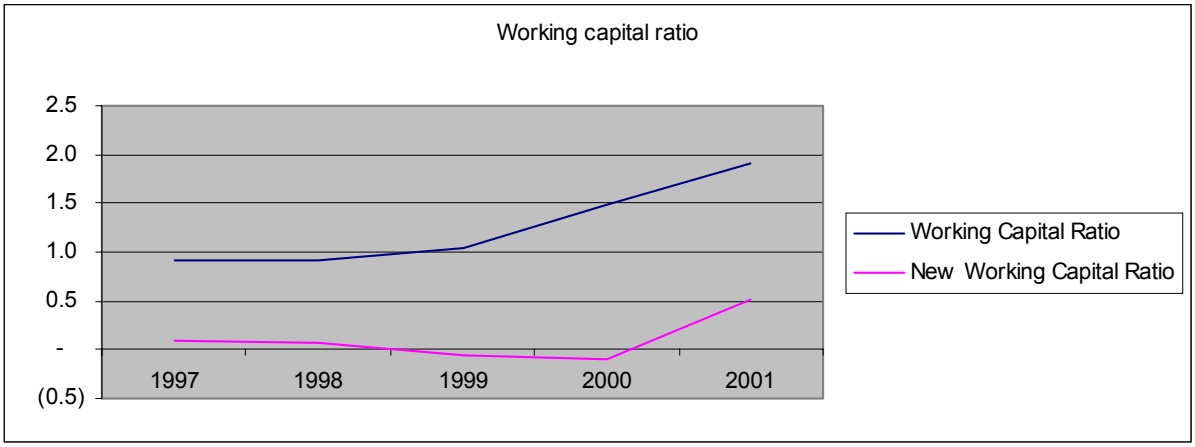
Putco	1997	1998	1999	2000	2001
	R'000	R'000	R'000	R'000	R'000
Current Assets	104,074	104,263	114,563	116,970	118,608
Current Liabilities	126,692	142,275	187,400	156,648	184,578
Working Capital	**(22,618)**	**(38,012)**	**(72,837)**	**(39,678)**	**(65,970)**
Working Capital Ratio	0.8	0.7	0.6	0.7	0.6
Working Capital	(22,618)	(38,012)	(72,837)	(39,678)	(65,970)
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	177,667	190,806	189,642	195,943	218,976
Assets purchased to maintain added back	13,904	33,562	49,330	22,926	85,622
Real Working Capital	**(186,381)**	**(195,256)**	**(213,149)**	**(212,695)**	**(199,324)**
New Working Capital Ratio	(0.5)	(0.4)	(0.1)	(0.4)	(0.1)



Accumulated depreciation beginning of year	168,580	177,667	190,806	189,643	195,944
Prior year adjustment					
Roe					
Acquisitions					10,459
Impairment					
Disposals	(11,238)	(9,132)	(15,725)	(10,357)	(10,499)
Depreciation provided for a year	20,325	22,271	14,562	16,658	23,072
	177,667	190,806	189,643	195,944	218,976
Purchases to maintain	13,904	47,466	96,796	119,722	205,344
	163,763	143,340	92,847	76,222	13,632
Purchases to expand	-	-	-	-	-
	163,763	143,340	92,847	76,222	13,632

Appendix C

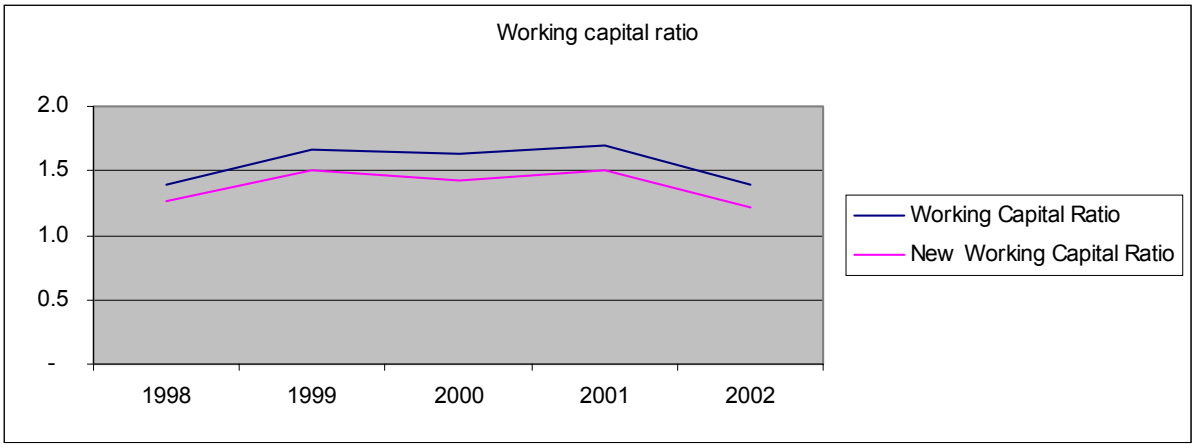
Rainbow	1997	1998	1999	2000	2001
	R'000	R'000	R'000	R'000	R'000
Current Assets	505,517	457,578	449,719	492,976	714,102
Current Liabilities	556,165	503,098	432,799	333,183	373,010
Working Capital	**(50,648)**	**(45,520)**	**16,920**	**159,793**	**341,092**
Working Capital Ratio	0.9	0.9	1.0	1.5	1.9
Working Capital	(50,648)	(45,520)	16,920	159,793	341,092
Internal funds set aside for replacement	461,019	428,932	477,196	529,127	531,409
of fixed assets (Accumulated Depreciation) Assets	7,399	10,768	3,279	2,151	9,491
purchased to maintain added back					
Real Working Capital	**(504,268)**	**(463,684)**	**(456,997)**	**(367,183)**	**(180,826)**
New Working Capital Ratio	0.1	0.1	(0.1)	(0.1)	0.5



Accumulated depreciation beginning of year	355,755	461,019	428,932	477,196	529,127
Prior year adjustment					(22,349)
ROE					
Acquisitions					4,311
Impairment		(32,746)		16,372	(1,258)
Disposals	(17,983)	(58,164)	(11,465)	(21,139)	(26,108)
Depreciation provided for a year	123,247	58,823	59,729	56,698	47,686
	461,019	428,932	477,196	529,127	531,409
Purchases to maintain	7,399	18,167	21,446	23,597	33,088
	453,620	410,765	455,750	505,530	498,321
Purchases to expand	-	24,750	45,236	77,915	122,058
	453,620	386,015	410,514	427,615	376,263

Appendix C

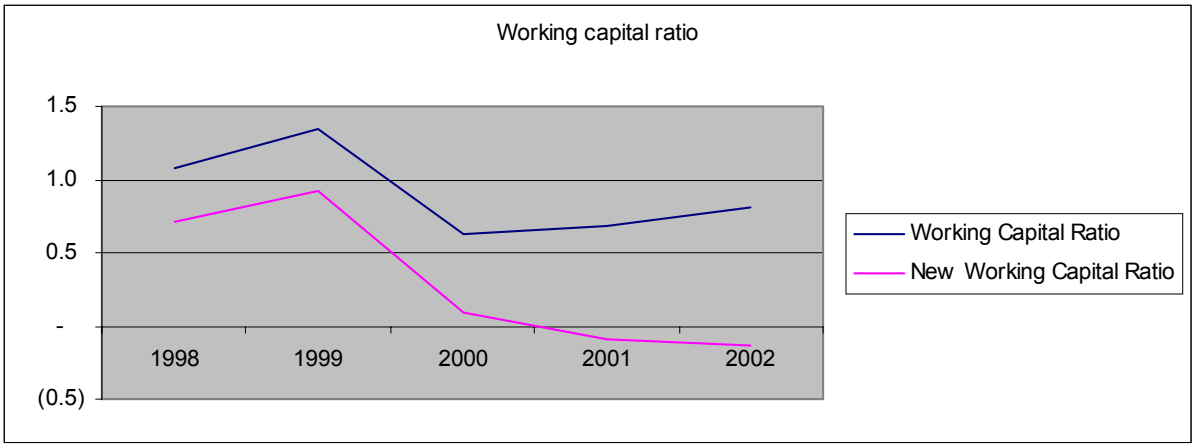
Richemont	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
CurrentAssets	3,155,500	2,975,000	2,197,200	2,588,200	2,922,000
CurrentLiabilities	2,264,700	1,792,100	1,352,400	1,520,900	2,106,000
Working Capital	**890,800**	**1,182,900**	**844,800**	**1,067,300**	**816,000**
Working Capital Ratio	1.4	1.7	1.6	1.7	1.4
Working Capital	890,800	1,182,900	844,800	1,067,300	816,000
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	412,992	376,900	454,000	564,600	680,000
Assets purchased to maintain added back	113,057	97,559	175,400	258,700	324,000
Real Working Capital	**590,865**	**903,559**	**566,200**	**761,400**	**460,000**
New Working Capital Ratio	1.3	1.5	1.4	1.5	1.2



Accumulated depreciation beginning of year	448,656	412,992	376,900	454,000	565,000
Prior year adjustment					
ROE	(61,167)	(61,169)	19,900	11,100	(52,000)
Acquisitions			13,400	41,900	66,000
Impairment					20,000
Disposals	(86,597)	(89,123)	(39,700)	(51,900)	(52,000)
Depreciation provided for a year	112,100	114,200	83,500	109,900	133,000
	412,992	376,900	454,000	565,000	680,000
Purchases to maintain	113,057	210,616	386,016	644,716	968,716
	299,935	166,284	67,984	(79,716)	(288,716)
Purchases to expand	-	-	-	-	-
	299,935	166,284	67,984	(79,716)	(288,716)

Appendix C

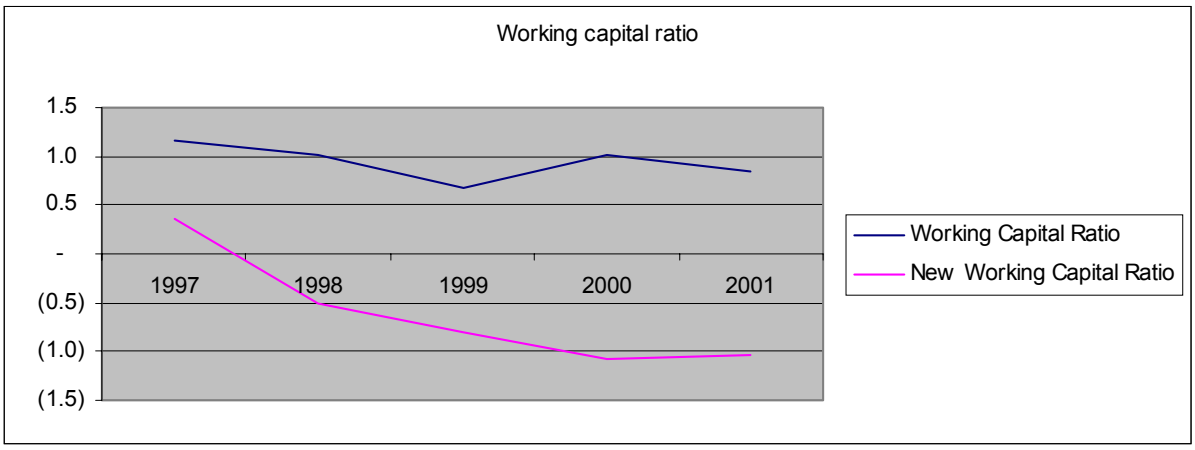
SAB	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	11,643,800	10,302,000	5,707,000	5,856,000	10,636,200
Current Liabilities	10,740,900	7,659,000	9,146,000	8,512,000	13,224,000
Working Capital	**902,900**	**2,643,000**	**(3,439,000)**	**(2,656,000)**	**(2,587,800)**
Working Capital Ratio	1.1	1.3	0.6	0.7	0.8
Working Capital	902,900	2,643,000	(3,439,000)	(2,656,000)	(2,587,800)
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	6,157,000	6,647,000	7,532,000	9,190,000	14,913,000
Assets purchased to maintain added back	2,128,000	3,451,000	2,620,000	2,566,000	2,583,000
Real Working Capital	**(3,126,100)**	**(553,000)**	**(8,351,000)**	**(9,280,000)**	**(14,917,800)**
New Working Capital Ratio	0.7	0.9	0.1	(0.1)	(0.1)



Accumulated depreciation beginning of year	5,397,000	6,157,000	6,647,000	7,532,000	9,190,000
Prior year adjustment		(1,033,000)			
ROE					
Acquisitions		114,000	941,000	424,000	3,855,000
Impairment					
Disposals	(619,207)	(30,000)	(1,434,000)	(374,000)	(526,000)
Depreciation provided for a year	1,379,207	1,439,000	1,378,000	1,608,000	2,394,000
	6,157,000	6,647,000	7,532,000	9,190,000	14,913,000
Purchases to maintain	2,128,000	5,579,000	8,199,000	10,765,000	13,348,000
	4,029,000	1,068,000	(667,000)	(1,575,000)	1,565,000
Purchases to expand	434,000	434,000	434,000	434,000	434,000
	3,595,000	634,000	(1,101,000)	(2,009,000)	1,131,000

Appendix C

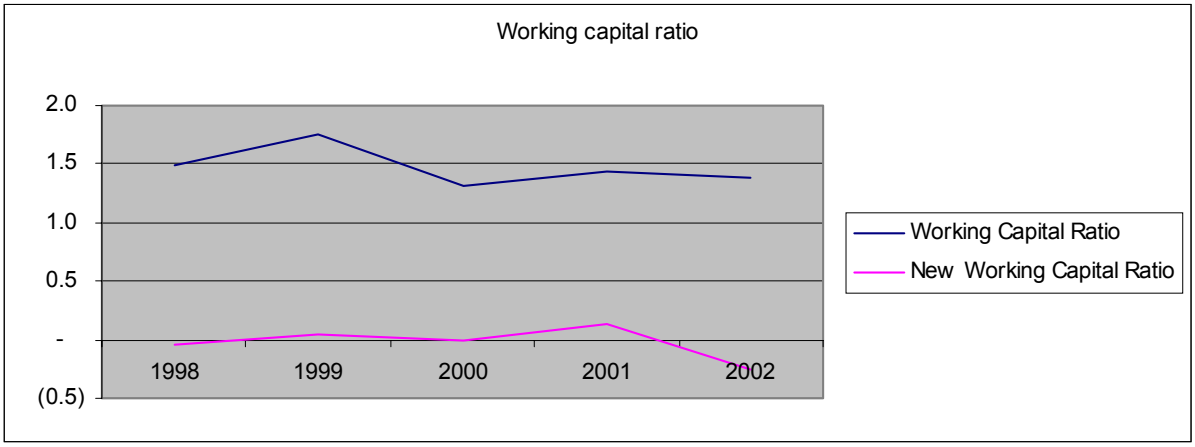
Sappi	1997	1998	1999	2000	2001
	R'000	R'000	R'000	R'000	R'000
Current Assets	5,634,600	9,115,500	6,922,500	6,960,000	9,280,000
Current Liabilities	4,845,000	8,946,400	10,132,300	6,906,000	10,880,000
Working Capital	**789,600**	**169,100**	**(3,209,800)**	**54,000**	**(1,600,000)**
Working Capital Ratio	1.2	1.0	0.7	1.0	0.9
Working Capital	789,600	169,100	(3,209,800)	54,000	(1,600,000)
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	4,223,600	14,249,800	15,828,500	15,168,000	21,864,000
Assets purchased to maintain added back	354,100	683,000	732,000	774,000	1,232,000
Real Working Capital	**(3,079,900)**	**(13,397,700)**	**(18,306,300)**	**(14,340,000)**	**(22,232,000)**
New Working Capital Ratio	0.4	(0.5)	(0.8)	(1.1)	(1.0)



Accumulated depreciation beginning of year	3,420,200	4,223,600	14,249,800	15,828,500	15,168,000
Acquisitions		8,386,500			4,296,000
Impairment					
Disposals	(204,600)		(434,600)	(2,580,500)	
Depreciation provided for a year	1,008,000	1,639,700	2,013,300	1,920,000	2,400,000
	4,223,600	14,249,800	15,828,500	15,168,000	21,864,000
Purchases to maintain	354,100	1,037,100	1,769,100	2,543,100	3,775,100
	3,869,500	13,212,700	14,059,400	12,624,900	18,088,900
Purchases to expand	-	-	-	-	-
	3,869,500	13,212,700	14,059,400	12,624,900	18,088,900
Purchases to expand	354,100	1,037,100	1,769,100	2,543,100	3,775,100
	3,515,400	12,175,600	12,290,300	10,081,800	14,313,800

Appendix C

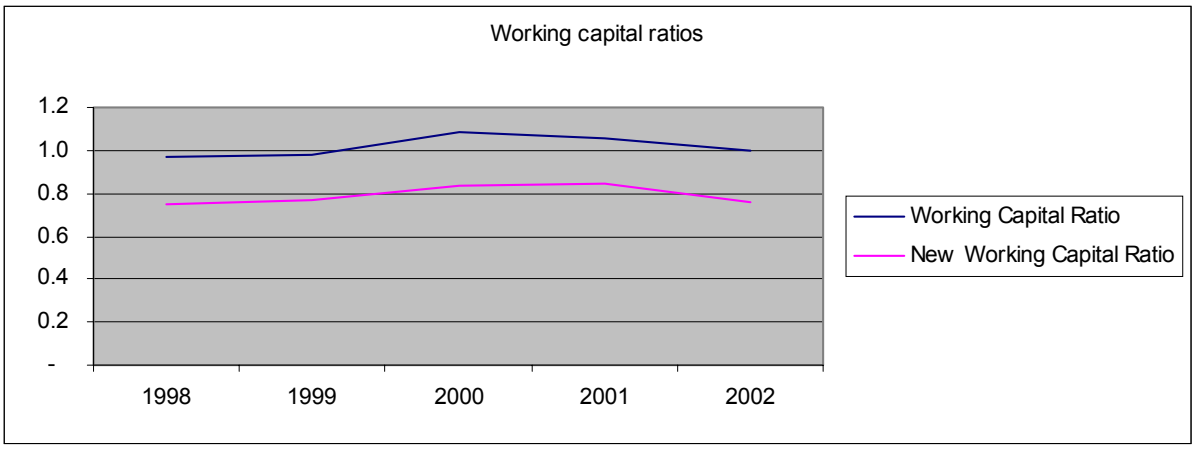
Sasol	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	7,893,000	7,300,000	8,991,000	19,689,000	23,529,000
Current Liabilities	5,269,000	4,182,000	6,857,000	13,696,000	16,919,000
Working Capital	**2,624,000**	**3,118,000**	**2,134,000**	**5,993,000**	**6,610,000**
Working Capital Ratio	1.5	1.7	1.3	1.4	1.4
Working Capital	2,624,000	3,118,000	2,134,000	5,993,000	6,610,000
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	9,737,000	11,095,000	13,599,000	24,123,000	31,514,000
Assets purchased to maintain added back	1,615,000	4,021,000	4,598,000	6,245,000	3,614,000
Real Working Capital	**(5,498,000)**	**(3,956,000)**	**(6,867,000)**	**(11,885,000)**	**(21,290,000)**
New Working Capital Ratio	0.0	0.1	0.0	0.1	(0.3)



Accumulated depreciation beginning of year	8,396,000	9,737,000	11,095,000	13,599,000	24,123,000
Prior year adjustment					34,000
ROE					3,144,000
To intangibles					(30,000)
Impairment					738,000
Adding error					(600,000)
Acquisitions	238,000	103,000	954,000	8,584,000	799,000
Disposals	(94,000)	(150,000)	(178,000)	(399,000)	(811,000)
Depreciation provided for a year	1,197,000	1,405,000	1,728,000	2,339,000	4,117,000
	9,737,000	11,095,000	13,599,000	24,123,000	31,514,000
Purchases to maintain	1,615,000	5,636,000	10,234,000	16,479,000	20,093,000
	8,122,000	5,459,000	3,365,000	7,644,000	11,421,000
Purchases to expand	1,312,000	5,191,000	10,485,000	17,789,000	22,497,000
	6,810,000	268,000	(7,120,000)	(10,145,000)	(11,076,000)

Appendix C

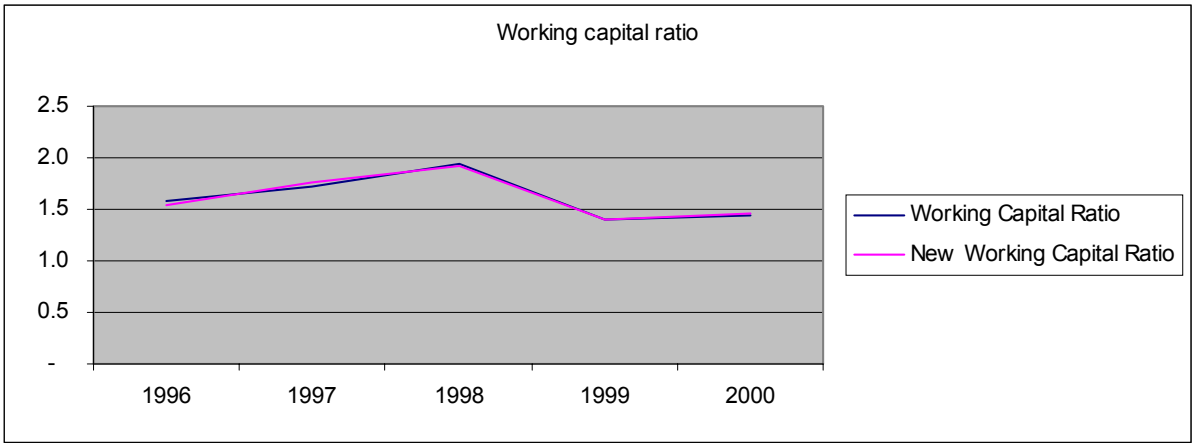
Shoprite	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
CurrentAssets	3,432,169	3,879,544	3,766,049	4,535,797	4,469,221
CurrentLiabilities	3,557,177	3,967,523	3,485,443	4,285,492	4,488,889
Working Capital	**(125,008)**	**(87,979)**	**280,606**	**250,305**	**(19,668)**
Working Capital Ratio	1.0	1.0	1.1	1.1	1.0
Working Capital	(125,008)	(87,979)	280,606	250,305	(19,668)
Internalfunds set aside for replacement of fixed assets (Accumulated Depreciation)	1,080,997	1,214,463	1,264,360	1,403,422	1,686,302
Assets purchased to maintain added back	317,910	373,023	402,546	475,192	618,549
Real Working Capital	**(888,095)**	**(929,419)**	**(581,208)**	**(677,925)**	**(1,087,421)**
New Working Capital Ratio	0.8	0.8	0.8	0.8	0.8



Accumulated depreciation beginning of year	452,569	1,080,997	1,214,463	1,264,360	1,403,422
Prior year adjustment					
ROE					
Acquisitions	489,666				
Disposals		(55,951)	(179,794)	(139,135)	(44,676)
Depreciation provided for a year	138,762	189,417	229,691	278,197	327,556
	1,080,997	1,214,463	1,264,360	1,403,422	1,686,302
Purchases to maintain	317,910	690,933	1,093,479	1,568,671	2,187,220
	763,087	523,530	170,881	(165,249)	(500,918)
Purchases to expand	-	-	-	-	-
	763,087	523,530	170,881	(165,249)	(500,918)
	(763,087)	(523,530)	(170,881)	165,249	500,918
Purchases to expand	-	-	-	-	-
	(763,087)	(523,530)	(170,881)	165,249	500,918

Appendix C

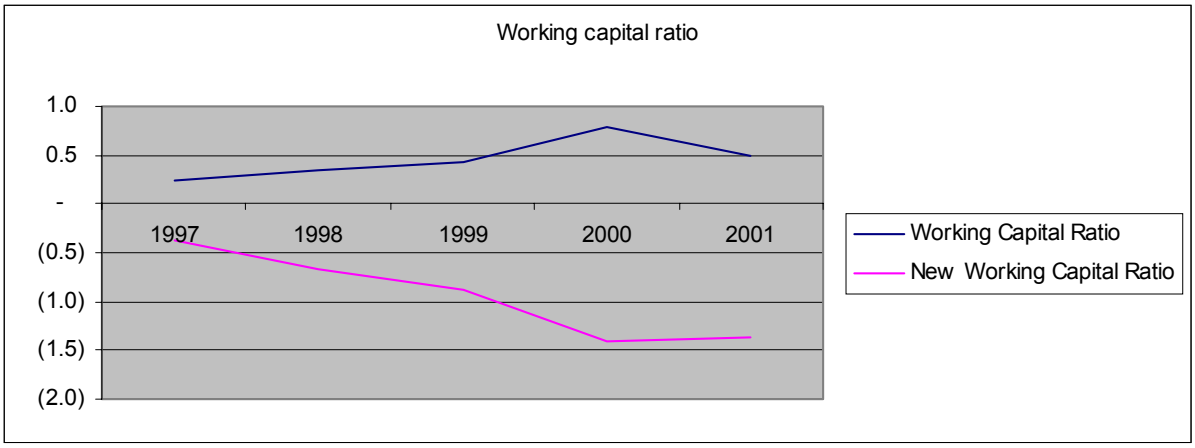
Siltek	1996	1997	1998	1999	2000
	R'000	R'000	R'000	R'000	R'000
Current Assets	613,062	596,472	617,894	782,343	1,165,214
Current Liabilities	388,475	345,736	319,353	560,998	809,548
Working Capital	**224,587**	**250,736**	**298,541**	**221,345**	**355,666**
Working Capital Ratio	1.6	1.7	1.9	1.4	1.4
Working Capital	224,587	250,736	298,541	221,345	355,666
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	33,663	35,526	34,829	37,523	33,999
Assets purchased to maintain added back	15,330	49,396	27,024	46,064	48,348
Real Working Capital	**206,254**	**264,606**	**290,736**	**229,886**	**370,015**
New Working Capital Ratio	1.5	1.8	1.9	1.4	1.5



Accumulated depreciation beginning of year	38,783	33,663	35,526	34,829	37,523
Prior year adjustment				165	
ROE					
Acquisitions					
Disposals	(15,705)	(12,087)	(15,290)	(17,181)	(15,431)
Depreciation provided for a year	10,585	13,950	14,593	19,710	11,907
	33,663	35,526	34,829	37,523	33,999
Purchases to maintain	15,330	64,726	91,750	137,814	186,162
	18,333	(29,200)	(56,921)	(100,291)	(152,163)
Purchases to expand	-	-	-	-	626
	18,333	(29,200)	(56,921)	(100,291)	(152,789)
	(18,333)	29,200	56,921	100,291	153,415
Purchases to expand	-	-	-	-	626
	(18,333)	29,200	56,921	100,291	152,789

Appendix C

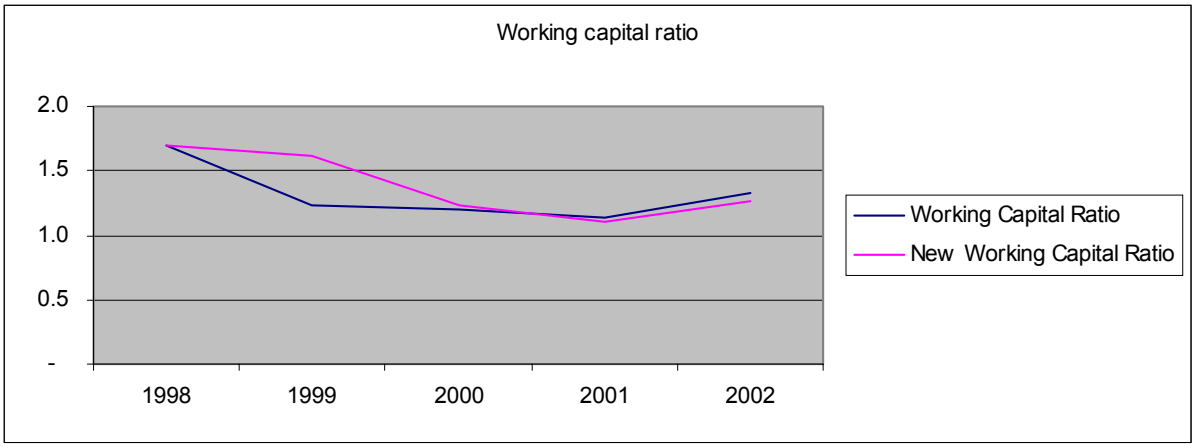
Sun International	1997	1998	1999	2000	2001
	R'000	R'000	R'000	R'000	R'000
Current Assets	182,943	197,370	286,533	339,123	253,186
Current Liabilities	753,186	563,275	666,073	426,162	517,354
Working Capital	**(570,243)**	**(365,905)**	**(379,540)**	**(87,039)**	**(264,168)**
Working Capital Ratio	0.2	0.4	0.4	0.8	0.5
Working Capital	(570,243)	(365,905)	(379,540)	(87,039)	(264,168)
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	537,107	641,372	934,058	1,024,893	1,076,134
Assets purchased to maintain added back	78,878	70,534	60,601	83,272	114,470
Real Working Capital	**(1,028,472)**	**(936,743)**	**(1,252,997)**	**(1,028,660)**	**(1,225,832)**
New Working Capital Ratio	(0.4)	(0.7)	(0.9)	(1.4)	(1.4)



Accumulated depreciation beginning of year	445,937	537,107	641,372	934,058	1,024,893
Prior year adjustment			241,823		
ROE					
Acquisitions					
Disposals	(16,806)	(12,611)	(90,138)	(75,664)	(108,525)
Depreciation provided for a year	107,976	116,876	141,001	166,499	159,766
	537,107	641,372	934,058	1,024,893	1,076,134
Purchases to maintain	78,878	149,412	210,013	293,285	407,755
	458,229	491,960	724,045	731,608	668,379
Purchases to expand	352,682	530,656	1,252,216	2,023,588	2,041,588
	105,547	(38,696)	(528,171)	(1,291,980)	(1,373,209)
	247,135	569,352	1,780,387	3,315,568	3,414,797
Purchases to expand	352,682	530,656	1,252,216	2,023,588	2,041,588
	(105,547)	38,696	528,171	1,291,980	1,373,209

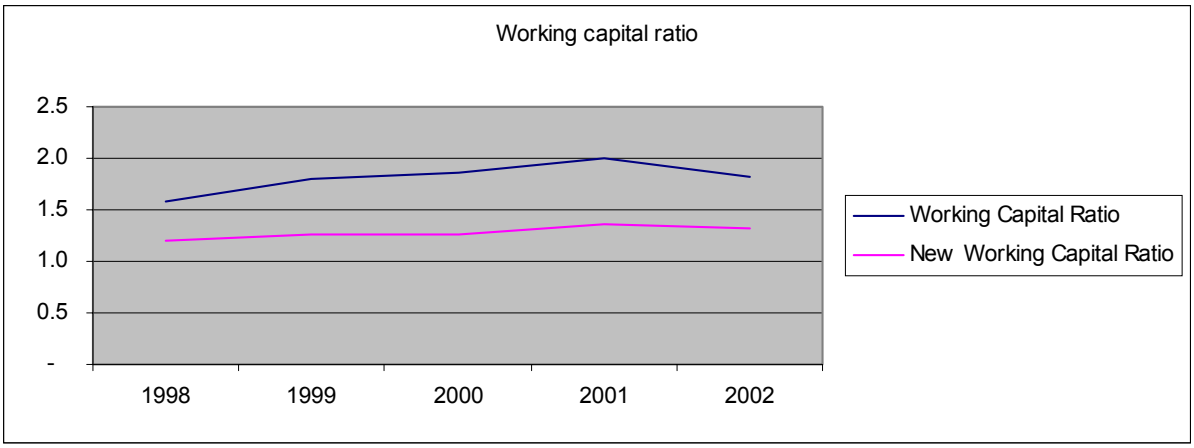
Appendix C

Tiger Wheel	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	545,447	508,125	664,363	783,447	1,125,015
Current Liabilities	320,699	411,555	550,567	691,275	850,270
Working Capital	**224,748**	**96,570**	**113,796**	**92,172**	**274,745**
Working Capital Ratio	1.7	1.2	1.2	1.1	1.3
Working Capital	224,748	96,570	113,796	92,172	274,745
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	51,068	88,707	152,533	192,287	218,144
Assets purchased to maintain added back	51,581	245,086	167,795	170,988	166,146
Real Working Capital	**225,261**	**252,949**	**129,058**	**70,873**	**222,747**
New Working Capital Ratio	1.7	1.6	1.2	1.1	1.3



Accumulated depreciation beginning of year	31,999	51,068	88,707	152,533	192,287
Prior year adjustment					9,872
ROE		(887)	4,646	4,429	41,280
Acquisitions				1,197	
Disposals	(4,795)	(1,391)	(6,337)	(47,530)	(154,718)
Depreciation provided for a year	23,864	39,917	65,517	81,658	129,423
	51,068	88,707	152,533	192,287	218,144
Purchases to maintain	51,581	296,667	464,462	635,450	801,596
	(513)	(207,960)	(311,929)	(443,163)	(583,452)
Purchases to expand	-	-	-	-	-
	(513)	(207,960)	(311,929)	(443,163)	(583,452)
	513	207,960	311,929	443,163	583,452
Purchases to expand	-	-	-	-	-
	513	207,960	311,929	443,163	583,452

Woolworths	1998	1999	2000	2001	2002
	R'000	R'000	R'000	R'000	R'000
Current Assets	1,774,062	1,834,469	2,036,700	2,272,200	2,528,600
Current Liabilities	1,125,246	1,014,362	1,092,200	1,133,800	1,386,900
Working Capital	**648,816**	**820,107**	**944,500**	**1,138,400**	**1,141,700**
Working Capital Ratio	1.6	1.8	1.9	2.0	1.8
Working Capital	648,816	820,107	944,500	1,138,400	1,141,700
Internal funds set aside for replacement of fixed assets (Accumulated Depreciation)	506,746	661,911	745,700	833,400	848,400
Assets purchased to maintain added back	73,479	96,258	90,000	103,300	152,600
Real Working Capital	**215,549**	**254,454**	**288,800**	**408,300**	**445,900**
New Working Capital Ratio	1.2	1.3	1.3	1.4	1.3



Accumulated depreciation beginning of year	366,327	506,746	661,911	745,700	833,400
Prior year adjustment					36,200
ROE	33,410	2,530	5,300	13,800	74,900
Acquisitions					16,700
Disposals	(28,778)	(32,038)	(117,311)	(127,600)	(333,000)
Depreciation provided for a year	135,787	184,673	195,800	201,500	220,200
	506,746	661,911	745,700	833,400	848,400
Purchases to maintain	73,479	169,737	259,737	363,037	515,637
	433,267	492,174	485,963	470,363	332,763
Purchases to expand	188,794	343,653	458,653	608,253	790,653
	244,473	148,521	27,310	(137,890)	(457,890)
	(55,679)	195,132	431,343	746,143	1,248,543
Purchases to expand	188,794	343,653	458,653	608,253	790,653
	(244,473)	(148,521)	(27,310)	137,890	457,890