

**An empirical model of choice between
share repurchases and dividends for
companies in selected JSE-listed sectors**

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Declaration

I, Nicolene Wesson, declare that the entire body of work contained in this dissertation is my own, original work; that I am the sole author thereof (save to the extent explicitly otherwise stated); that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights; and that I have not previously in its entirety or part submitted it for obtaining any qualification.

N. Wesson

24 February 2015

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All that I am and have is by the grace of God.

Abstract

Share repurchases were allowed in South Africa as from 1 July 1999. The concept of repurchasing shares is therefore relatively new in this country, compared to many other countries (e.g. the United States of America and the United Kingdom), where it is an established practice. Considerable research in the field already exists, providing empirical evidence on the extent of share repurchase activities and current theoretical thinking on the motivations for share repurchases and the determinants affecting the choice of payout methods. In South Africa there are indications, as this study demonstrates, that research on payout methods and payout reform has become a matter of urgency.

Share repurchase activity by JSE-listed companies is not comprehensively recorded by South African financial data sources. Prior research on South African share repurchases is limited, mainly owing to the fact that a comprehensive share repurchase database is not available. This study sets out to document the extent of share repurchases by companies in selected JSE-listed sectors (for reporting periods including 1 July 1999 to the 2009 year-ends of the companies) and to test whether empirical evidence and current theoretical thinking also applied in South Africa. The results of these tests were used to develop a model to ascertain what the significant determinants were when a JSE-listed company had to decide between repurchasing shares and paying special dividends.

This study found that the South African regulatory environment pertaining to share repurchases differed from the regulatory environments of other countries. The main differences related to the share repurchase announcement structure (namely the JSE Listings Requirements that open market share repurchases need to be announced via SENS only once a 3% limit has been reached) and that subsidiaries are allowed to repurchase shares in the holding company (and have a tax benefit when compared to share repurchases made by the holding company itself). These differences affected the results of this study.

On compiling a database on share repurchases by companies in selected JSE-listed sectors, it was found that the share repurchase announcements (made via SENS) could not be used as the main source to compile comprehensive share repurchase data (mainly owing to the 3% rule on open market share repurchases). Annual report disclosures were therefore scrutinised to obtain share repurchase data for this study. These disclosures were found to be applied inconsistently by companies (mainly because subsidiaries were allowed to repurchase shares in the holding company; International Financial Reporting Standards and the JSE Listings Requirements did not adequately cater for the differing South African regulatory environment in their disclosure stipulations; and compliance to the disclosure requirements were not adequately monitored). Consequently, an extensive process of verification was applied in order to compile a comprehensive and reliable share repurchase database for this study.

When testing whether empirical evidence and current theoretical thinking on share repurchases also applied in South Africa, it was found that the unique South African regulatory environment led to certain aspects of the South African share repurchase experience not mirroring the global precedent.

The main differences between the South African and global share repurchase evidence which emerged from the present study are that the open market share repurchase type is not the outright favoured repurchase type (as is the case globally); that subsidiaries repurchasing shares in the holding company are the favoured South African share repurchasing entity (as opposed to subsidiaries not being allowed to repurchase shares in most other countries); and that share repurchases announced via SENS do not represent comprehensive share repurchase data (as opposed to global security exchanges requiring share repurchase announcements on a regular and accurate actual-time basis).

When testing the current theoretical thinking on the information-signalling motivation for share repurchases, it was found that the motivation for South African open market and *pro rata* share repurchases mirrored the current theoretical thinking. Open market share repurchases were found to be motivated by the information-signalling hypothesis, while the short-term abnormal returns of *pro rata* offers were offset by the negative abnormal returns over the long term. A share repurchase type unique to the South African share repurchase environment (namely the repurchase of treasury shares by the holding company) was found not to be motivated by the information-signalling hypothesis. This study also found that companies repurchasing shares were generally classified as value companies (which tend to be undervalued) prior to the repurchase transaction which mirrored the current theoretical thinking.

In developing a model of choice to determine what the main determinants were when a company had to decide between open market share repurchases and special dividends, this study found that some of the South African determinants mirrored the current theoretical thinking, but also identified determinants which were not identified as significant determinants in global research. This study found that ownership structure, size of the distribution and level of company undervaluation were the significant factors which affected a company's choice of payout method. It was found that smaller companies, with fewer shareholders and more public investors favoured open market share repurchases over special dividends. Open market share repurchases were found to be selected for smaller distributions when compared to special dividends. Companies paying special dividends were found to exhibit lower degrees of undervaluation when compared to companies which repurchased shares in the open market.

This study found that share repurchases became a popular means of distributing excess cash as from 2005. A total amount of about R384 billion was spent on share repurchases during the reporting periods including 1 July 1999 to the 2009 year-ends of the companies included in the

population of this study. Share repurchases did not exceed dividend payments over the target period and represented about 36 per cent of total payouts. In 2009, the final year of the study, share repurchases represented about 44 per cent of total payouts. The results of this study showed that investors would benefit over the long term when investing in companies which repurchased shares in the open market. It was also found that there were certain characteristics which were evident in companies when choosing open market share repurchases rather than special dividend payments.

This study concluded that the South African regulatory environment possesses many characteristics of a developing economy's financial systems. Suggestions are given on how to improve and better align the South African repurchasing environment to those of developed economies.

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List of abbreviations and acronyms

ANOVA	Analysis of variance
ARs	Abnormal returns
BEE	Black Economic Empowerment
BHARs	Buy-and-hold abnormal returns
CAPM	Capital asset pricing model
CAR	Cumulative abnormal return
CFOs	Chief financial officers
company shares	Number of issued shares of the company
DEBT	Level of debt
DIVYLD	Dividend yield
DSIZE	Distribution size
EPS	Earnings per share
EU	European Union
FRP	Financial Reporting Pronouncement
FSB	Financial Services Board
FTSE	Financial Times Stock Exchange
GDP	Gross domestic product
GEE	Generalised estimating equations
group shares	Number of issued shares in the consolidated annual report (therefore company shares less treasury shares)
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
INSTOWN	Institutional ownership
JSE	Johannesburg Stock Exchange Limited
ln	Natural logarithm
log	Logistic function
LSD	Least significant difference
LSIZE	Company size
MAD	Median absolute deviation
market-to-book	Market capitalisation compared to book value
MISVAL	Company undervaluation
MNL	Multinomial logit
NAV	Net asset value
OLS	Ordinary least squares
OWNER	Officers' and directors' ownership

P/E	Price-earnings
PRIOR	Prior share price performance
RIV	Redundancy of independent variables
SARS	South African Revenue Services
S&P	Standard & Poor's
scrip dividend	The non-cash portion in respect of dividends where shareholders have the option to receive capitalisation shares or cash
SENS	Security Exchange News Service
SHRHOLD	Number of shareholders
STC	Secondary tax on companies
TD	Takeover defence
treasury shares	Shares of the holding company which have been repurchased by subsidiaries and consolidated share trusts
UK	United Kingdom
US	United States of America

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Share repurchases have become an important financial tool for listed companies over the past three decades in the United States of America (US). During the 1990s share repurchases also became popular in countries outside the US (like Canada, the United Kingdom (UK), Germany, Taiwan, Hong Kong and Japan). The total amount spent on share repurchases by companies has increased over time and in the US it currently exceeds the amount of dividends paid. It seems that share repurchases have steadily substituted dividend payments over time. In the US repurchases equalled dividends for the first time in 1998, overtook dividends in 2005 and widened the margin significantly in 2006 (Dittmar, 2008: 27). In 2000, on aggregate, US companies were repurchasing their own shares to an amount in excess of that which they offered for sale in new equity issues (Brennan, 2007: 2). Similar practice has been observed in other countries. European share repurchases, for instance, amounted to half of the total value of cash dividends in 2005, although the practice of repurchasing started much later in Europe than in the US (Von Eije & Megginson, 2008: 348).

Why do companies engage in share repurchases? How do companies make the cash distribution choice between dividends and share repurchases? Studies have been conducted to determine the motivation for share repurchases and to ascertain the determinants of choice between the cash distribution methods. Research was initially conducted on US share repurchases, but research in other countries followed as their share repurchase activities increased.

Share repurchases in South Africa were only allowed as from 1 July 1999, following the implementation of the Companies Amendment Act 37 of 1999 (RSA, 1999). Prior to 1999, dividends were the only cash distribution method available to South African companies. The introduction of share repurchasing created various new challenges: not only for the repurchasing company and its shareholders, but also for the company accountants and financial analysts.

Although 15 years have passed since share repurchases have been allowed in South Africa, only limited research has been conducted on share repurchases by companies listed on the Johannesburg Stock Exchange Limited (JSE). The main reason for the meagre research on South African share repurchases is the lack of a comprehensive database on share repurchases by JSE-listed companies. As a result, the key questions on share repurchases have not yet been adequately addressed in South African research. The following questions are pertinent. To what extent do share repurchases take place when compared to dividend payments? What are the motivations for share repurchases? How do companies choose between repurchasing shares and paying out dividends?

In this study, comprehensive share repurchase data were compiled and the above-mentioned questions in respect of share repurchases were addressed to equip stakeholders when dealing with share repurchase transactions.

1.2 DEVELOPMENT OF THE RESEARCH PROBLEM

South African financial data sources (i.e. Reuters, McGregor BFA and I-Net Bridge) did not record comprehensive share repurchase data on a consistent basis for the period 1999 to 2009 (i.e. the period researched in this study). It was only for the most recent years within the target period that certain information was available. Share repurchases that were announced on the Security Exchange News Service (SENS) of the JSE also did not represent the full extent of share repurchases owing to the JSE Listings Requirements (JSE, 2007) not requiring all general (or open market) share repurchases to be announced via SENS – only when a three per cent limit is reached, an announcement is required. Previous South African research was predominantly based on announced general (or open market) share repurchases and assumed that the South African repurchase environment was comparable to the global repurchase environment (especially that of the US).

South Africa is an emerging economy and a developing country and does not necessarily follow the practice of developed countries. There is a need for a comprehensive share repurchase database in South Africa and to compare the South African repurchase environment to the global environment. Only then will it be possible to ascertain the South African share repurchase experience and to replicate the studies of developed countries in the South African repurchase environment.

The purpose of this study was to document the extent of share repurchases in South Africa and to test whether empirical evidence and current theoretical thinking were also applied in this country.

The research problem of this study therefore was: Does the South African share repurchase experience mirror empirical evidence and current theoretical thinking?

The research problem was addressed by attempting to answer four questions. Propositions or hypotheses were developed in respect of each of the research questions. Seven propositions were developed in respect of the research questions addressing share repurchase evidence, and four hypotheses were developed in respect of research questions addressing current theoretical thinking. The research questions, and resultant propositions and hypotheses of this study were:

Research question 1 and resultant propositions:

To what extent do share repurchases take place when compared to other types of cash distributions?

Proposition 1: Share repurchase value shows a general upward trend.

Proposition 2: Share repurchase value increases more rapidly than dividend payments.

Proposition 3: Share repurchase value does not exceed dividend payments.

Proposition 4: The open market share repurchase method is not the outright favourite share repurchase method.

Proposition 5: Special dividend payment value (based on total dividends paid) decreases over time.

Proposition 6: The JSE share repurchase announcement structure leads to announcements not representing comprehensive data on share repurchase activities.

Proposition 7: Share repurchases by subsidiaries (and therefore also the repurchase of treasury shares by the holding company) represent a significant part of share repurchase activities.

Research question 2 and resultant hypothesis:

Which companies tended to repurchase shares – value companies or growth companies?

Hypothesis 1: Shares are generally repurchased when management views the company to be a value company.

Research question 3 and resultant hypothesis:

What was the initial market reaction to share repurchase announcements?

Hypothesis 2: The traditional information-signalling hypothesis postulates that there is a small positive initial market reaction to share repurchase announcements. This reaction is more evident for *pro rata* offers than for open market share repurchases.

Research question 4 and resultant hypothesis:

What was the long-term market reaction to share repurchase announcements?

Hypothesis 3: The underreaction hypothesis postulates that the long-term market reaction exceeds the initial positive market reaction to open market share repurchase announcements. This reaction is particularly evident in value companies.

Model of choice hypothesis:

The purpose of addressing the four research questions is to develop a model on the significant determinants of choice for one-time cash distributions, i.e. *pro rata* offers, general (or open market) share repurchases and special dividend payments.

Hypothesis 4: Ownership structure, current payout level, the size of the distribution and the share price performance prior to the announcement date are the significant determinants of a company's choice between alternative payout methods.

1.3 RESEARCH DESIGN

1.3.1 Research plan

The first objective of the study was to compile data on share repurchase activities and dividend payments of companies included in the population during the eleven-year target period. Firstly, companies which had entered into share repurchase transactions had to be identified, and then share repurchases had to be distinguished (in number of shares as well as rand values) according to the following categories: different repurchasing entities (i.e. the company, its subsidiaries and its share trusts); different repurchase methods (i.e. general repurchases, *pro rata* offers and specific offers); and whether share repurchases had been announced via SENS or not. Dividend payments made by all companies included in the population during the target period also had to be distinguished according to the different types of dividend payments (i.e. dividends paid from profits, dividends paid from share premium and special dividends paid).

The second objective was to ascertain what the motives were for conducting share repurchases. Signalling that the company's shares are currently undervalued has emerged as the most commonly attributed motive (Dann, 1981; Ofer & Thakor, 1987; Vermaelen, 1981). This information-signalling motivation entails two hypotheses: the traditional information-signalling hypothesis (in respect of the short-term market reaction) and the underreaction hypothesis (in respect of the long-term market reaction). These two hypotheses were tested to ascertain whether the share price of companies which repurchased shares had outperformed the market. A comparison of the market capitalisation and book value (market-to-book), as well as a price-earnings (P/E) ratio comparison, was also done to test whether companies were classified as value companies prior to the share repurchase announcements.

The third objective of the study was to develop a model to establish the determinants of choice when a company had to decide between making share repurchases and paying dividends. The most comprehensive study comparing different payout methods was the study by Caudill, Hudson, Marshall and Roumantzi (2006). The present study was based on the methodology of the Caudill *et al.* (2006) study.

Many techniques were applied to address the research problem and resultant research questions. The compilation of a database on share repurchases and dividends entailed an exploratory study, as defined by Mouton (1996: 105). Explanatory techniques (Mouton, 1996: 104) were applied when comparing share repurchase and dividend activity in respect of Research question 1. Replication techniques (Mouton, 1996: 105) were applied when addressing Research questions 2 to 4 on

ascertaining whether share repurchases were conducted by value companies and establishing the short-term and long-term market reaction on share repurchase announcements. Based on the results of the exploratory, explanatory and replication techniques applied in answering the four research questions, the results were applied to develop a South African model on the determinants of choice for one-time cash distributions.

The results of the exploratory part of the study were utilised to support or reject the stated propositions and hypotheses. Rejected propositions and hypotheses were replaced by a new set of propositions or hypotheses for the South African share repurchase environment. The development of new hypotheses is described as a hypothesis-generating technique by Mouton (1996: 104).

The study therefore addressed the key questions in respect of share repurchases by comparing share repurchase value to dividend payments; testing whether share repurchases were motivated by the information-signalling hypothesis; and developing a model on the determinants of choice between payout methods.

1.3.2 Research population of the study

The following JSE-listed companies were included in the population for the reporting periods including 1 July 1999 to the 2009 year-ends of the companies:

- Companies with listed ordinary and / or N-class shares;
- Companies with the JSE as their primary listing; and
- Companies listed on the Main Board, except for companies listed in the Basic Materials and Financials sectors of the JSE.

Odd lot offers were not treated as share repurchases as they had existed prior to 1999. Companies that fell within the population requirements but had been listed for fewer than three years were also excluded, because data of at least three years were required for certain statistical tests (i.e. in respect of the short-term and long-term market reaction and the model on the determinants of choice) of the study.

The target period enabled the information-signalling hypothesis to be tested over at least a four-year period – similar to the Ikenberry, Lakonishok and Vermaelen (1995) study in which the underreaction hypothesis was first reported. Share repurchases conducted in 2009 could therefore be tested over the four years ending in 2013.

From 1999 to 2009, there were 227 companies (as defined in the research population) listed on the JSE, of which 87 were delisted during the period. Delisted companies were included (up to the date of their delisting) to ensure a comprehensive study of repurchase activities.

1.3.3 Research methodology

Different research methodologies were applied when addressing the propositions and hypotheses of the study. These methodologies are described in the chapters dealing with each of the research questions and in the chapter on the model of choice.

1.3.4 Distinctive characteristics of the research

During the research process the writer published articles in popular and academic journals to educate the users and preparers of annual reports, as well as academics, on the disclosure and accounting aspects inherent to South African share repurchases. These publications led to a series of articles published in the print media and hence the JSE was persuaded to amend the JSE Listings Requirements pertaining to the disclosure of share repurchases in annual reports. The amendments were included in Section 8.63(n) of the Listings Requirements, effective as from 14 January 2013 (JSE, 2013). In support of the educational role of the study the writer also acted as an expert witness in an income tax court case to establish the income tax principle that it was quite normal (i.e. the 'normality' requirement in Section 103(1) of the Income Tax Act (RSA, 1962)) for companies to repurchase treasury shares from their subsidiaries (RSA, 2012).

In the present study, the writer did not merely use available data on share repurchases and replicate global studies, but familiarised herself with the South African regulatory environment and compiled a comprehensive share repurchase and dividend database from the initial source. This is the first comprehensive database on share repurchases by companies in selected JSE-listed sectors.

In testing the information-signalling hypothesis in respect of share repurchases, an improved dataset and more robust methodology were applied and the period of the test was extended, when compared to prior South African studies.

This is the first South African study to compile a model on the determinants of choice for one-time cash distributions.

1.3.5 Limitations of the study

All the necessary measures were applied in establishing a reliable database on share repurchases and dividends. Problems encountered during the data collection process are described in Chapter 4 on data collection.

Data limitations when testing the hypotheses are described in Chapter 6 on value versus growth and in Chapter 8 on determinants of payouts.

Short-term and long-term event studies and the model of choice statistics could not be performed on all share repurchases, because all share repurchases (especially the open market share

repurchases) were not announced via SENS. The announcement date represented the event date in these tests and therefore unannounced share repurchases could not be tested. This aspect is discussed in Chapter 7 on short-term and long-term market reaction and in Chapter 8 on determinants of payouts.

1.4 DETAILS OF THE STUDY

Chapter 2: South African regulatory environment

The South African regulatory environment on share repurchases is critically analysed and compared to the global environment. Challenges unique to South African share repurchase studies are identified. A conclusion is drawn on how the regulatory differences between the South African and the global share repurchase environment affect the methods followed when addressing the research problem of the study.

Chapter 3: Literature review

A review of global and South African research on share repurchases is conducted. Share repurchase activity; motivations for share repurchases; and the determinants of choice between share repurchases and dividends are specifically addressed. In addressing the motivations for share repurchases, the focus is on information-signalling as this is the most prominent motivation that has emerged from literature. Empirical evidence and current theoretical thinking are identified, and propositions and hypotheses are developed in respect of the research questions pertaining to the study.

Chapter 4: Data collection

An exploratory study is conducted to provide an indication of the share repurchase experience and problems to be expected when compiling the comprehensive database of share repurchases by JSE-listed companies.

Comprehensive databases of all share repurchases and all cash dividends paid by companies listed on the JSE (as defined in the research population) during the target period are compiled. The methods of data collection, problems encountered and recommendations put forward are addressed.

Chapter 5: Share repurchases versus dividends

Research question 1 (i.e. To what extent do share repurchases take place when compared to other types of cash distributions?) and the seven resultant propositions are addressed in Chapter 5.

The share repurchase activity (in total; as well as in respect of different repurchase entities and repurchase methods, and whether they were announced or not) and dividend payments (in total; as well as in respect of different types of dividend payments) are addressed. A comparison

between the total value of share repurchases and dividends paid is also made. Extended research on whether special dividends are substituted by share repurchases, as well as research on a unique repurchase type (namely the repurchase of treasury shares by the holding company), is also addressed.

A conclusion is drawn on whether each proposition is supported in the South African share repurchase environment.

Chapter 6: Value versus growth

Research question 2 (i.e. Which companies tended to repurchase shares – value companies or growth companies?) is addressed in Chapter 6.

A market-to-book ratio comparison, as well as a P/E ratio comparison, is performed to ascertain whether the repurchasing entity was classified as a value (or growth) company prior to the repurchase announcement. A conclusion is drawn on whether the results of Hypothesis 1 support the information-signalling hypothesis in the South African share repurchase environment.

Chapter 7: Short-term and long-term market reaction

Research questions 3 and 4 (i.e. What was the initial market reaction to share repurchase announcements and what was the long-term market reaction to share repurchase announcements?) are addressed in Chapter 7.

A short-term event study is performed to ascertain whether short-term abnormal returns are observed subsequent to the share repurchase announcements. A conclusion is drawn on whether the results of Hypothesis 2 support the traditional information-signalling hypothesis.

A long-term event study, as well as a buy-and-hold simulation, is performed to ascertain whether long-term abnormal returns are observed subsequent to the share repurchase announcements. A conclusion is drawn on whether the results of Hypothesis 3 support the underreaction hypothesis.

Extended research is included on the effect of the following factors on the reported results: value versus growth portfolios; small versus large companies; and frequent versus infrequent share repurchases.

Chapter 8: Determinants of payouts

A model of choice is developed to determine what the significant determinants are when JSE-listed companies have to choose between general (or open market) repurchases, *pro rata* offers and special dividends. A conclusion is drawn on whether Hypothesis 4 is supported in the South African regulatory environment.

Chapter 9: Summary and conclusion

A summary of the study is given and a conclusion is drawn.

CHAPTER 2

SOUTH AFRICAN REGULATORY ENVIRONMENT

2.1 INTRODUCTION

The purpose of this study was to document the extent of share repurchases in South Africa and to test whether empirical evidence and current theoretical thinking were also applied in this country. An understanding of the South African regulatory environment was therefore needed to be able to compile a comprehensive share repurchase database and to apply the methodologies of global studies in the South African repurchase environment.

This chapter deals with the regulatory environment that was applicable during the period covered in this study, i.e. as from 1 July 1999 to 31 December 2009. It focuses only on aspects relevant to the purpose of this study.

By allowing companies to repurchase their shares as from 1 July 1999, the Companies Amendment Act (RSA, 1999) effectively abolished the capital maintenance rule. During the following 11 years (until the end of this study, i.e. 2009), JSE-listed companies which entered into share repurchase transactions had to adhere to the requirements for share repurchases contained in the Companies Amendment Act, the JSE Listings Requirements (JSE, 2007) and the South African Income Tax Act (RSA, 1962). Annual report disclosures also had to reflect the share repurchases in line with the relevant International Financial Reporting Standards (IFRS), the Companies Act (RSA, 1973) and the JSE Listings Requirements.

The discussion below firstly addresses the South African regulatory environment (namely the Companies Amendment Act, JSE Listings Requirements, annual report disclosures, and Income Tax Act) and establishes how these regulations affected the compilation of a comprehensive share repurchase database. Secondly, a brief comparison with the global repurchase environment is drawn. The chapter is concluded with a summary of the regulatory differences between South African and global repurchase environments and the effect thereof on the purpose of the study.

2.2 THE SOUTH AFRICAN REGULATORY ENVIRONMENT

2.2.1 Companies Amendment Act

The main requirements of the Companies Amendment Act (RSA, 1999) in respect of share repurchases are as follows:

- A special resolution is needed to approve the repurchase of shares under general and specific authority [Section 85(2)].

- Approval under general authority will only be valid until the next general meeting [Section 85(3)].
- Shares acquired by the company must be cancelled as issued share capital (and their status returned to that of authorised shares) [Section 85(8)].
- Subsidiaries may purchase up to a maximum of 10 per cent, in total, of the issued shares of its holding company. The shares acquired by subsidiaries shall not be cancelled as issued shares [Section 89].
- No payment in respect of share repurchases may be made if the solvency and liquidity requirements [of Section 85(4)] are not met.

The Companies Amendment Act (RSA, 1999) refers to two share repurchase methods (namely general and specific). General repurchases comprise the repurchase of shares on the open market without targeting a specific group, whereas specific repurchases are targeted at a specific group of shareholders (or to all shareholders in proportion to their current shareholding).

An important aspect contained in Section 89 of the Companies Amendment Act is that subsidiaries are also allowed to repurchase 10 per cent (in total) of the shares of the holding company. Two types of entities, the company and its subsidiaries, are therefore allowed to repurchase the shares of the company. When the company repurchases its own shares (in terms of Section 85 of the Act) the repurchased shares need to be cancelled and issued share capital is therefore reduced. However, when subsidiaries repurchase shares in the holding company, these shares are not cancelled from the issued share capital. The reason for not cancelling these shares is that the subsidiary is now the new shareholder, and forms part of the group of companies, which means that these shares will only be deducted from issued shares (and not cancelled) when the consolidated annual report is drawn up. A new concept therefore arose since 1999: the number of issued company shares may differ from the number of issued shares disclosed in the consolidated annual report (hereafter referred to as 'group shares'). This aspect is explained by way of an example in the discussion on annual report disclosure in section 2.2.3 below.

When interpreting the 10 per cent limit to be held by subsidiaries, it needs to be acknowledged that there is a difference between shares in the holding company held by subsidiaries (which may exceed 10%) and the authorisation granted to subsidiaries to acquire shares in the holding company (which may only be granted up to a maximum of 10%). In a study conducted shortly after the implementation of the Company Amendment Act, Butler (1999: 299) stated that it was not clear how the 10 per cent (mentioned in Section 89) should be calculated and that there was uncertainty as to whether shares cancelled according to Section 85 (relating to the repurchase of the company's own shares) should be taken into account. In answer to Butler, the writer suggests that it may be assumed that Section 85 repurchases need to be deducted from issued shares when

calculating the 10 per cent limit, because these repurchases were cancelled from issued shares in terms of Section 85(8). It is also evident that the 10 per cent rule must therefore only apply when authorisation is sought for the repurchase of the shares by the subsidiary (in terms of Section 89). Any subsequent repurchase of a company's own shares (in terms of Section 85) will reduce the number of issued shares (and hence increase the percentage held by the subsidiary) and therefore only affect the future authorisation on subsidiary repurchases. This principle was also confirmed in Income Tax case number 1862 (RSA, 2012).

2.2.2 Listings Requirements

Additional requirements and provisions for share repurchases by listed companies are imposed by the JSE Listings Requirements (JSE, 2007). The requirements in respect of share repurchases under general authority include the following:

- The valid period of the general authority is limited until the next general meeting or for 15 months from the date of the resolution, whichever period is shorter [Section 5.67(h)].
- Shares may not be repurchased at a price higher than 10 per cent above the weighted average market price of the preceding five business days [Section 5.72(d)].
- The maximum number of shares that can be repurchased under general authority by the company in any financial year is 20 per cent in aggregate of the company's issued share capital of that class [Section 5.68].

These requirements were amended in 2000 and 2003 respectively: previously they stated that the maximum number of shares that can be repurchased by the company in any financial year is 20% in aggregate of the company's issued share capital of that class, provided that general repurchases do not exceed 10% of the issued share capital of that class, and that shares may not be repurchased at a price higher than 5% above the weighted average market price of the preceding five business days.

It is further required that the company must report general repurchases through SENS once it has cumulatively acquired three per cent of its initial number of issued shares (of that class, as at the date of the resolution) and at each three per cent thereafter. The announcement should be made as soon as possible, but not later than 08:30 on the second business day following the date on which the threshold is reached or exceeded. Such an announcement should contain the following: dates of repurchase of shares; highest and lowest price paid; number and value of shares repurchased; extent of authority still outstanding by number and percentage; source of funds utilised; a statement by directors (confirming that the liquidity and solvency requirements have been complied with); the effect on earnings per share (EPS), headline EPS, net asset value (NAV) and tangible NAV per share and, if applicable, diluted EPS and diluted headline EPS; and the date on which the shares will be cancelled and their listing terminated, if applicable [Section 11.27].

The Companies Amendment Act only refers to two repurchase methods, i.e. general and specific repurchases, while the Listings Requirements subdivide specific repurchases into *pro rata* offers and specific offers. A *pro rata* offer is an offer to all securities holders *pro rata* to their existing holdings, and a specific offer is an offer to securities holders specifically named [Section 5.69]. In respect of share repurchases under specific authority, an announcement should be made via SENS immediately after the terms of the repurchase have been agreed on [Section 11.25]. Subsequent to the announcement, the company must pursue the proposal, unless the JSE permits the company not to do so [Section 5.69(g)]. The announcement must contain the following: terms of the repurchase; date of general meeting at which authority will be sought; from whom the specific repurchase is to be made; date on which the repurchase is to be made and the date on which the shares will be cancelled and their listing terminated, if applicable; the effect on EPS, headline EPS, NAV and tangible NAV per share, and, if applicable, diluted EPS and diluted headline EPS; and a statement that a circular will be dispatched to all shareholders [Section 11.25]. If the repurchase is from a related party and the price exceeds the weighted average traded price measured over the 30 days prior to the date the price is agreed in writing between the issuer and seller, the board of directors must obtain a fairness opinion (in accordance with Schedule 5 of the Listings Requirements) and include it in the circular [Section 5.69(e)].

It is also evident from the Listings Requirements that regulations on general repurchases are more flexible and less cumbersome than specific repurchases. The authority granted for a general share repurchase (obtained via a special resolution in terms of Section 85(2) of the Act) does not represent a commitment to repurchase. It has become common practice for companies to obtain the general authorisation on an annual basis, irrespective of the definite intention to repurchase shares. On the other hand, specific repurchases are binding commitments once the announcement has been made via SENS (in terms of Section 11.25 of the Listings Requirements) and is executed once the authority is granted via a special resolution in terms of Section 85(2) of the Act. An announcement via SENS of the intention to repurchase shares under specific authority will therefore generally lead to an actual share repurchase transaction.

The three per cent announcement rule pertaining to general share repurchases results in potentially large volumes of share repurchases not being announced via SENS. Companies repurchasing less than the cumulative three per cent never need to announce their general repurchases. The three per cent rule however seemed to be interpreted as three per cent cumulatively per annum by many companies. While the official stance of the JSE is that the three per cent disclosure requirement is not limited to a specific year, it appears that JSE sponsors have advised their clients that the three per cent threshold runs from one annual general meeting, at which shareholders provide the necessary authorisation, to the next (Crotty, 2012f). The three per cent announcement rule on general repurchases may therefore result in significant understatement of actual general share repurchase activities.

For the purpose of this study (especially in respect of the global studies to be replicated on the share repurchase data) it is necessary to highlight that there is a difference in the type of repurchase data reported via SENS for specific, as against general, repurchases: announcements of specific repurchases represent announcements of intention to repurchase, whereas announcements of general repurchases represent share repurchases that have already occurred. Depending on the way in which a company interprets the three per cent rule (i.e. as a cumulative measure or as 3% per annum) and when the limit was reached, the general repurchase announcement may be in respect of share repurchases executed in prior years, earlier in the current year and on the previous day.

The JSE Listings Requirements (in the sections dealing with share repurchases) do not include any requirements pertaining to the repurchase of holding company shares by share trusts. Share trust repurchases therefore do not need to be announced via SENS.

From the discussion above, it was therefore evident that SENS announcements on share repurchases will not represent comprehensive data on share repurchase activities. Although SENS announcements on specific repurchases (i.e. *pro rata* offers and specific offers) will generally represent all actual specific repurchases, the three per cent SENS announcements on actual general share repurchases do not represent all general share repurchases. SENS announcements therefore cannot be the only source when compiling a comprehensive database on share repurchases by JSE-listed companies, as was found to be the case when gathering data for the present study.

2.2.3 Annual report disclosure

In South Africa the annual report disclosure requirements that relate to share repurchases are dealt with in the relevant accounting standards (IFRS), the Listings Requirements and the Companies Act. It is expected that users of annual reports will obtain adequate disclosure on share repurchase activities in any annual report to equip them to make informed decisions on the effect of share repurchase transactions on the company and for their own purposes. By the same token, it was expected, for the purpose of this study, that comprehensive disclosures on share repurchase activities in annual reports would enable the compilation of a database on actual share repurchases. These expectations were tested in the study.

The effect of a share repurchase is a reduction in the number of issued shares. As discussed in section 2.2.1 above, the fact that subsidiaries may also acquire shares in the holding company has resulted in a new concept: the number of company shares and number of group shares may differ. The concept of company versus group results from the consolidation principle which is applied in accounting. 'Company' means the separate company, without applying consolidation principles. 'Group' means the group of affiliated entities, therefore applying the consolidation principles to include the effect of entities over which the company has control on a line-for-line basis in the

annual report. In terms of IFRS the published annual report should be drawn up on a group basis, therefore incorporating the consolidation principle. The separate (or company) annual report is only included as a separate column in or a separate section of the full published annual report.

Prior to 1 July 1999 (the date on which share repurchases were first allowed), the number of shares of the company was the same irrespective of whether the company or consolidated figures were used. The following example will assist in the understanding of the effect of share repurchases on annual report disclosures: Suppose that the number of shares issued by the company were 100, and five shares were then repurchased by the company. The five shares were cancelled from issued shares and the closing number of issued shares of the company (and the group) then was 95. Suppose, however, that a further four shares in the holding company were bought by a subsidiary and were therefore not cancelled. The effect of the subsidiary repurchase was that the closing number of issued shares of the company remained at 95, but the closing number of issued shares of the group changed to 91. The repurchase of holding company shares by subsidiaries has greatly complicated the disclosure of share repurchases in annual reports.

The discussion below deals with each of the requirements affecting annual report disclosures on share repurchase activities (i.e. the requirements of accounting standards, Listings Requirements and the Companies Act). The objective of the discussion on the annual report disclosure requirements was to ascertain whether the disclosures in annual reports would enable the compilation of a comprehensive share repurchase database.

2.2.3.1 Accounting standards

There is no accounting standard that deals specifically with the disclosure and accounting treatment of share repurchases. The accounting and disclosure of share capital is dealt with in *IAS 1 Presentation of financial statements* (SAICA, 2009a) and *IAS 32 Financial instruments: presentation* (SAICA, 2009d) and are therefore applicable to share repurchases.

The accounting standard *IAS 1 Presentation of financial statements* (SAICA, 2009a) was issued by the International Accounting Standards Board (IASB) in September 1997. *IAS 1* par. 79 (a), subsection (iv) and (vi) requires an entity to disclose (either in the statement of financial position or the statement of changes in equity, or in the notes):

"for each class of share capital:

- (iv) a reconciliation of the number of shares outstanding at the beginning and at the end of the period; and
- (vi) shares in the entity held by the entity or by its subsidiaries or associate".

The presentation of treasury shares is dealt with in the accounting standard *IAS 32 Financial instruments: presentation* (SAICA, 2009d). *IAS 32* was issued by the IASB in June 1995. *IAS 32* par. 33 states that:

"if an entity reacquires its own equity instruments, those instruments ('treasury shares') shall be deducted from equity. Such treasury shares may be acquired and held by the entity or by other members of the consolidated group".

In par. 34 of *IAS 32*, the preparer of financial statements, with regard to the disclosure of treasury shares, is referred to the requirements of *IAS 1*, by the statement that:

"the amount of treasury shares held is disclosed separately either in the statement of financial position or in the notes, in accordance with *IAS 1 Presentation of financial statements*".

When interpreting the requirements of *IAS 1* and *IAS 32* in the South African share repurchase environment, they seem to contain conflicting and inconsistent stipulations. Firstly, *IAS 32* defines treasury shares to include shares acquired by the company or by other entities in the group and states that these treasury shares need to be deducted from equity. In South Africa treasury shares can only include shares acquired by companies in the group other than the holding company itself (e.g. subsidiaries), because the shares repurchased by the holding company itself are cancelled from issued share capital in terms of Section 85(8) of the Companies Act. The reason for the conflicting meaning of treasury shares in *IAS 32* is that South African accounting standards are adopted from the IASB, situated in the UK, where the legislation on company repurchases may differ. South African preparers of annual reports therefore need to understand the South African regulatory environment to be able to correctly interpret the term 'treasury shares', as used in IFRS.

Secondly, the fact that there is a difference between the terms 'company shares' and 'group shares' is not evident from the requirements contained in *IAS 1* and *IAS 32*. The requirement to disclose the movement in the number of shares (as contained in *IAS 1* par. 79 (a)(iv)) should therefore apply to the number of company shares (to be disclosed in the separate annual report of the company) and number of group shares (to be disclosed in the group annual report).

Thirdly, the requirements in *IAS 1* par. 79 (a)(vi) and *IAS 32* par. 34 seem to contain conflicting stipulations. *IAS 1* requires the disclosure of the number of treasury shares held, while *IAS 32* requires both the number of shares and a separate disclosure of the total (rand) value of treasury shares held. Companies may interpret these two differing requirements for the disclosure of treasury shares erroneously and, in following the *IAS 32* stipulation, may only disclose the amount of share capital or total (rand) value of shares, and not the number, of treasury shares held. In fact, this may lead companies not to disclose the number of treasury shares at all, particularly if they interpret the requirement of *IAS 1* par. 79 (a)(iv) as a request for the disclosure of the number of company shares only (and not also for group shares).

Another aspect that needs clarification in the South African share repurchase environment is that share incentive schemes may hold shares of the company for the purpose of future entitlement of employees based on certain employment criteria. Share trust repurchases are not explicitly included in the sections of the Companies Act or Listings Requirements dealing with the

requirements in respect of share repurchases, but the shares held by the share incentive schemes may also be treasury shares from an accounting perspective. While the consolidation of subsidiary accounts has been standard practice, uncertainty has existed regarding the accounting treatment of share trusts prior to 2004. In February 2004 the JSE announced that all listed companies, for annual periods ending on or after 31 March 2004, were required to consolidate their share trusts (JSE, 2004; SAICA, 2004). Despite many companies not consolidating their share trusts prior to 2004, it was contended that the application of the principles of the accounting standard *IAS 27 Consolidated and separate financial statements* (SAICA, 2009c) should generally lead to the consolidation of share trusts (Wainer, 2004: 13). The accounting interpretation dealing with special purpose entities, *SIC-12 Consolidation – special purpose entities* (SAICA, 2009e), previously excluded equity compensation plans, but it was amended to include these plans for annual periods beginning on or after 1 January 2005. Consolidation of share trusts qualifying as special purpose entities was therefore required for all companies (listed and non-listed) for annual periods beginning on or after 1 January 2005. The effect of consolidated share incentive schemes therefore also needs to be acknowledged when researching share repurchase activities in South Africa.

Owing to the identified inconsistencies and contradictions in the accounting standards, the application thereof in annual reports needed to be ascertained. The annual reports of 15 randomly selected JSE-listed companies (which had all made share repurchases via the holding company, subsidiaries or share trusts during periods covered in this study as well as pertaining to subsequent periods) were scrutinised as part of the educational role of this study (Wesson & Hamman, 2011). The following questions (in respect of three sub-headings) were addressed:

1. Company versus group shares
 - a) Is the number of shares in issue (of the company or group) reconciled per annum?
 - b) Is there a separate reconciliation for number of group shares?
2. Number of treasury shares
 - a) Is the movement in number of treasury shares reconciled per annum?
 - b) Is a distinction made between treasury shares held by subsidiaries and share trusts?
3. Amount of treasury share capital
 - a) Is the amount of treasury share capital disclosed in the annual report?

The findings elicited from the answers to these questions are summarised in Table 2.1, and Table 2.2 explains the symbols used in Table 2.1. Table 2.1 shows that (Wesson & Hamman, 2011: 33):

- three (20%) of the companies did not disclose any reconciliation of the number of shares;
- eight (53,3%) of the companies did not disclose a reconciliation of the number of group shares;

- eight (53,3%) of the companies did not disclose a reconciliation of the number of treasury shares held;
- the companies did disclose a distinction between treasury shares held by subsidiaries and share trusts (if applicable); and
- four (26,7%) of the companies did not disclose the amount of treasury share capital.

Many disclosure methods were applied by the reporting entities, as described in Table 2.2. It was therefore concluded that a financial reporting pronouncement (FRP) is needed on the disclosure of the number of shares in issue to take account of this local circumstance not specifically covered in IFRS. A distinction between company shares, treasury shares and group shares needs to be made. Currently the term 'shares in issue' is used, without indicating whether treasury shares have been deducted in the calculation thereof. Clarification is also needed on the meaning of *IAS 1* par. 79(a)(vi) in respect of the number or amount of treasury shares to be disclosed (Wesson & Hamman, 2011: 33).

From the discussion on the disclosure requirements of accounting standards on the number of shares, it was evident that, when compiling a share repurchase database, certain information may not be clearly stated in the disclosures on share capital. For the purpose of this study, care needed to be applied when a repurchase database was compiled from these disclosures, especially in respect of whether the company or group shares had been reconciled, and what the number of shares held by subsidiaries was.

Table 2.1: Assessment of reporting standards on disclosure of number of shares in issue by 15 reporting entities

Company**	Question 1a Is the movement in number of shares in issue reconciled per annum?	Question 1b Is there a separate reconciliation for number of group shares?	Question 2a Is the movement in number of treasury shares reconciled per annum?	Question 2b Is a distinction made between treasury shares held by subsidiaries and share trusts?	Question 3 Is the amount of treasury share capital disclosed?
AECI Ltd.	Yes	Yes A*	No H*	n/a	Yes S*
Afrimat Ltd.	Yes	No D*	No I*	Yes	Yes P*
Barloworld Ltd.	Yes	Yes E*	No H*	n/a	No
Digicore Holdings Ltd.	No	No	No M*	n/a N*	Yes S*
ELB Group Ltd.	Yes	Yes	Yes	Yes	Yes P*
Foschini Ltd.	Yes	Yes A*	Yes	Yes	Yes P*
Grindrod Ltd.	No	No F*	No J*	n/a	No
Remgro Ltd.	Yes	No B*	No K*	n/a	Yes Q*
Sable Holdings Ltd.	No	No G*	No L*	n/a	Yes T*
Sanlam Ltd.	Yes	Yes	No H*	n/a	Yes Q*
Sasol Ltd.	Yes	No C*	Yes	n/a	No
SeardeI Investment Corporation Ltd.	Yes	No D*	Yes	Yes	Yes R*
Shoprite Holdings Ltd.	Yes	Yes	Yes	Yes O*	Yes P*
Super Group Ltd.	Yes	No D*	Yes	Yes	No U*
Woolworths Holdings Ltd.	Yes	Yes	Yes	n/a	Yes Q*, V*

* See Table 2.2 for explanation of symbols used.

** Hard copies of the latest available annual reports were assessed: 2009 for all companies except for Afrimat Ltd., Foschini Ltd. and Remgro Ltd. where the 2010 annual reports were assessed.

Source: Wesson & Hamman, 2011: 33.

Table 2.2: Explanation of disclosure methods (as indicated in Table 2.1)

Symbol used	Explanation of symbol
A	Number of company and number of group shares are specifically named as such in the share capital reconciliation.
B	Only the number of company shares is reconciled. The year-end balance of treasury shares is disclosed in a narrative format. The number of group shares is not disclosed separately.
C	Only the number of company shares is reconciled. A separate note on share repurchase programme (representing treasury shares) is disclosed. The number of group shares is not disclosed separately.
D	Only the number of company shares is reconciled. A separate note on number of treasury shares is disclosed. The number of group shares is not disclosed separately.
E	Number of group shares disclosed in the reconciliation differs from the number of group shares disclosed as issued shares.
F	Movement in number of shares for the year only disclosed in narrative format. No indication whether number of shares disclosed as issued shares represents company or group number of shares.
G	Only the amount of share capital (and not the number of shares) is reconciled.
H	A cumulative number of treasury shares is deducted in share capital reconciliation. No annual movement in the number of treasury shares is disclosed separately.
I	A separate treasury share note discloses the number of treasury shares at year-end. Narrative format explains annual movement in number of treasury shares.
J	Only a narrative format explains annual movement in number of treasury shares. No closing balance of number of treasury shares is disclosed.
K	Only a narrative format explains number of treasury shares at year-end. No annual movement in number of treasury shares is disclosed.
L	Only reference to treasury shares was found in EPS note where a reference to the related parties note was included. In related parties note the number and date of treasury share repurchases were included.
M	No disclosure of number of treasury shares held.
N	Disclosure not clear to enable distinction between repurchasing entities.
O	Annual movement in number of treasury shares was split between repurchasing entities, but closing balance of number of treasury shares is not split between repurchasing entities.
P	Disclosed in statement of financial position, a separate column in the statement of changes in equity as well as in a separate treasury shares note.
Q	Disclosed in statement of financial position and in a separate column in the statement of changes in equity.
R	Disclosed in statement of financial position and in a separate treasury shares note.
S	Disclosed in the share capital note.
T	Disclosed in the related parties note.
U	The only disclosure which can be linked to the amount of treasury share capital is the item "share buyback reserve" which is deducted from equity, but has no separate note disclosure.
V	Although a note reference on treasury shares is included in the statement of financial position, the composition of the amount cannot be ascertained from the note on share capital.

Source: Wesson & Hamman, 2011: 34.

2.2.3.2 Listings Requirements

For the purpose of this study, it would have been helpful if the Listings Requirements pertaining to annual report disclosures required certain disclosures which would clarify the information which is not evident from the requirements in the accounting standards, e.g. the number of company and group shares, as well as the number of treasury shares held. Sections 8.62, 8.63 and 4.25 of the Listings Requirements address the annual report disclosures pertaining to share repurchases.

In Section 8.62 of the Listings Requirements (JSE, 2007), it is stated that the financial statements of listed companies need to comply with national law and the relevant IFRS.

In respect of the number of shares that need to be disclosed in the annual report, Section 8.63(e) of the Listings Requirements requires the following disclosures in a shareholder spread:

- i. the number of public shareholders for every class of listed securities;
- ii. the percentages of each class of listed security that is held by public and non-public shareholders; and
- iii. non-public shareholders, analysed in accordance with the categories set out in Section 4.25 of the Listings Requirements.

Section 4.25 of the Listings Requirements states that securities held by the following types of shareholders are classified as non-public, whether held directly or indirectly by:

- a) the directors of the applicant or of any of its subsidiaries;
- b) an associate of a director of the applicant or of any of its subsidiaries;
- c) the trustees of any employees' share scheme or pension fund established for the benefit of any directors or employees of the applicant and its subsidiaries;
- d) any person who, by virtue of any agreement, has a right to nominate a person to the board of directors of the applicant;
- e) any person that is interested in 10 per cent or more of the securities of the relevant class unless the JSE determines that, after taking account of relevant circumstances, such person can be included as a member of the public for the purposes of Sections 4.28(e) and (f), 4.29(f)(iv) and (v), and 4.30(c)(iv) and (v) of the Listings Requirements; or
- f) employees of the issuer, where restrictions on trading in the issuer's listed securities, in any manner or form, are imposed by the issuer on such employees.

Section 8.63(f) of the Listings Requirements stipulates that the names of any shareholders other than a director who holds beneficial interests (as defined in the Listings Requirements) in excess of five per cent of the securities of that class should be disclosed, as well as the extent of those beneficial interests.

In respect of the mentioned Listings Requirements, the assumption can therefore be made that the total number of shares included in the shareholder spread of the annual report should be the number of company shares (before the deduction of treasury shares). This assumption is based on the fact that the shares held by the trustees of an employee share scheme is included in the description of the non-public shareholders, but these shares are usually deducted from the total number of company shares when consolidating the share scheme in terms of IFRS.

The following inconsistencies are however evident from the Listings Requirements:

1. Section 4.25 does not refer to shares held by subsidiaries as a non-public shareholder category. The definition of 'associate' in the definition section of the Listings Requirements does however include a subsidiary. The following interpretations for subsidiary holdings are therefore possible:
 - a) Entities may follow the logical deduction and include subsidiary holdings under non-public shareholders;
 - b) Entities may exclude subsidiary holdings from non-public shareholders and include them under public shareholders; or
 - c) Entities may exclude subsidiary holdings from the shareholder spread.

Entities following the interpretation in b) above therefore overstate their public shareholders and understate their non-public shareholders. Entities following the interpretation in c) above understate their non-public shareholders and do not include all shares issued by the company in their shareholder spread.

2. Section 8.63(d)(iii) requires entities to analyse the non-public shareholder disclosure in accordance with the categories set out in Section 4.25 of the Listings Requirements. The following interpretations of the format of the analysis are therefore possible:
 - a) Entities may interpret the requirement as a calculation and disclosure basis and therefore disclose the identity and percentage held by each non-public category;
 - b) Entities may merely interpret the requirement as a calculation basis. In such a case one figure (or one line) for public and one figure (or one line) for non-public shareholders will be disclosed; or
 - c) Entities may include subsidiary holdings under the subheading 'associates', 'treasury' or 'own holdings', which makes it difficult for the users of annual reports to identify the true nature of the subheading (as the definition of 'associates' includes many of the non-public shareholder categories in Section 4.25 and 'treasury' includes subsidiaries and consolidated share trusts for accounting purposes, whereas 'own holdings' does not have a clear meaning).

Entities following the interpretation in b) and c) above therefore do not disclose the

necessary detail to enable users of annual reports to reconcile the types of shareholders (e.g. subsidiaries) and / or number of shares in issue to the share capital disclosure in the annual report.

The distinction between public and non-public shareholders which is disclosed in the shareholder spread is an important parameter for listing on the JSE: for Main Board listing, 20 per cent of each class of equity securities of the company must be held by the public; and non-public shareholding is used when calculating the free float – to reflect the actual availability of the shares for public investment, as applied in the Financial Times Stock Exchange (FTSE) Index – of a reporting entity.

The following examples of inconsistent shareholder spread disclosures were found in published annual reports, for periods covered in this study as well as pertaining to subsequent periods, and were reported as part of the educational role of this study (Wesson & Hamman, 2013: 21):

- Treatment of subsidiaries in shareholder spread

Many reporting entities included subsidiary holdings under non-public shareholders in the shareholder spread. There were however companies which interpreted Section 4.25 of the Listings Requirements differently, namely:

- ConvergeNet Holdings Ltd. (in 2009 and 2011) did not include shares held by its subsidiary under non-public shareholders. This led to an overstatement of its public shareholders and understatement of its non-public shareholders.
- Netcare Ltd. (2000 to 2011) and Crux Technologies Ltd. (2001) omitted shares held by their subsidiaries from the shareholder spread, which led to the understatement of non-public shareholders. The total number of shares included in the shareholder spread therefore did not reflect the number of company shares in issue, but the group number of shares.
- Bowler Metcalf Ltd. disclosed its subsidiary holdings as a negative percentage (using the term 'treasury') under non-public shareholders (in 2009 to 2011). This led to the understatement of their published non-public shareholders. Only percentages were included in the shareholder spread of Bowler Metcalf Ltd. and the total number of shares could therefore not be verified.

- Analysis of non-public shareholders in shareholder spread

Many reporting entities interpreted the requirement of Section 8.63(d)(iii) of the Listings Requirements as a calculation and disclosure request and therefore disclosed the identity and percentage held by each category of non-public shareholders. There were however companies which interpreted this requirement differently, namely:

- JSE Ltd. (for reporting periods prior to 2010) disclosed one figure for public and one figure for non-public shareholders. Prior to 2010, JSE Ltd. did however present a

separate line disclosure for directors in the shareholder spread. After 2010, JSE Ltd. disclosed each of the components of non-public shareholders separately.

- Remgro Ltd. also disclosed one figure for public and one figure for non-public shareholders (for reporting periods 2004 to 2011). The non-public shareholder figure was described in one line as 'directors and their associates / share trust / treasury shares'.
- Bowler Metcalf Ltd., as mentioned above, disclosed its subsidiary holdings as 'treasury' under non-public shareholders in 2009 to 2011. Invicta Holdings Ltd. used the term 'own holdings' in 2005 and 'treasury stock' in 2011 and 2012.

Reporting entities were therefore found to interpret the Listings Requirements on shareholder spread disclosure in an inconsistent manner, and they also supplied certain disclosures voluntarily. This led to inaccurate calculations of public and non-public shareholders as well as inconsistent disclosures on the categories of non-public shareholders. These inaccurate and inconsistent disclosures should be addressed by the JSE. Section 4.25 of the Listings Requirements should specify subsidiary holdings as a non-public shareholder category and Section 8.63(d)(iii) should be amended to stipulate the disclosure of each of the categories of non-public shareholders. The terms 'treasury' and 'own holdings' should not be acceptable. Section 8.63(d)(ii) should also require disclosure of the number of shares (and not only the percentages) of non-public categories which will enable verification with the share capital disclosure in the annual report. (Wesson & Hamman, 2013: 21)

The discussion on Listings Requirements pertaining to share repurchase disclosures therefore indicated that the shareholder spread disclosures may provide information to verify the number of company shares as well as treasury shares, but that companies interpreted these requirements in an inconsistent manner. Care should therefore be taken when using the shareholder spread disclosures to obtain share repurchase data.

2.2.3.3 Companies Act

No requirements in respect of share repurchases, other than in Section 140A(8) of the Companies Act (RSA, 1973), are included in the Companies Act. The disclosures in terms of Section 140A(8) are usually included in the shareholder spread section of the annual reports.

Section 140A(8) of the Companies Act (RSA, 1973) requires the disclosure of the names of persons holding beneficial interests (as defined in the Companies Act) in excess of five per cent of the securities of that class, as well as the extent of those beneficial interests. Subsidiaries and share trust holdings in excess of five per cent therefore need to be disclosed separately. This disclosure is in line with the disclosure required by Section 8.63(f) of the Listings Requirements, except for the disclosure related to beneficial interests held by directors (which need not be disclosed in respect of the Listings Requirements).

It can therefore be concluded that it is only in respect of shareholders holding shares in excess of five per cent of the issued shares that their personal identities need be disclosed. The disclosure required in terms of Section 8.63(e) of the Listings Requirements (relating to the shareholder spread) only refers to category types of non-public shareholders and not to their personal identity. Different types of non-public shareholders, such as subsidiaries and trusts, may be combined in the shareholder spread disclosure of reporting entities.

For the purpose of this study, the Companies Act requirements contained in Section 140A(8) therefore do not call for much additional share repurchase information, other than when companies have subsidiary and trust holdings in excess of five per cent and disclose these holdings separately.

2.2.3.4 Conclusion on annual report disclosures

The requirements on the disclosure of share repurchases in annual reports have been discussed under the headings of accounting standards, Listings Requirements and the Companies Act. The writer identified inconsistencies and contradictions which affect the disclosure of the number of shares (and hence the disclosure of share repurchase transactions) in annual reports. The user of an annual report will therefore not obtain adequate information on share repurchases in a single note to the annual report, but needs to verify many sections of the annual report to confirm share repurchase activities (especially so in respect of number of shares of company as against group and shares held by subsidiaries). For the purpose of this study it was therefore evident that care needed to be taken to compile a comprehensive and valid share repurchases database.

In pursuance of the educational role which was also undertaken during this study, the writer contributed to the process to amend the JSE Listings Requirements pertaining to the disclosure of share repurchases. The writer provided the necessary detail on the inconsistencies in the South African share repurchase environment for a series of articles published in the *Business Report* of the *Cape Times* in the period June 2012 to February 2013. These articles led to a consultation process in which the JSE was persuaded to amend the Listings Requirements by inserting Section 8.63(n) which specifically deals with the disclosure of share repurchases in the annual report (JSE, 2013). As from 14 January 2013 JSE-listed companies have been required to disclose the number of shares repurchased during the reporting period in a separate note in the annual report. A distinction should be made between shares cancelled and those held as treasury shares by subsidiaries; and the average repurchase price must be disclosed. This amendment will benefit future studies on share repurchases. An extract of Section 8.63(n) of the Listings Requirements is included in Annexure D.

2.2.4 Income Tax Act

When deciding whether to enter into a transaction, a company needs to evaluate the tax implications thereof. The tax effect of a transaction may affect the decision to enter into a transaction or not. For the purpose of this study, the tax implications of share repurchases as well as dividends needed to be ascertained, as they may have affected the company's decision when faced with the choice between share repurchases and dividend payments.

During the period covered in this study (i.e. 1999 to 2009) the following tax legislation was applicable to dividend payments: Secondary tax on companies (STC) was payable on the dividend paid by a company and was governed by Sections 64B and 64C together with the definition of 'dividend' in Section 1 of the Income Tax Act 58 of 1962 (RSA, 1962). The STC rate was 12,5 per cent in respect of the periods 1999 to September 2007 and 10 per cent from October 2007 to December 2009. In terms of Section 64J of the Income Tax Act of 1962 (RSA, 1962), dividends paid were not subject to STC to the extent that the dividend did not exceed the STC credit of the company. A STC credit results from dividends received by the company. The availability of STC credits is however unique to each company.

Share repurchases executed under Section 85 of the Companies Act were treated as dividends for income tax purposes for the period covered in this study. Therefore, shares repurchased by the holding company were treated as a dividend. On the other hand, repurchases of shares by a subsidiary (under Section 89 of the Companies Act) in a holding company (i.e. treasury shares) were not regarded as a dividend and were therefore not subject to STC. As subsidiaries were allowed to hold a maximum of only 10 per cent of the holding company's issued shares as treasury shares, companies could decide to repurchase treasury shares from their subsidiaries to make way for new repurchases by subsidiaries. The repurchase by the holding company of treasury shares held by subsidiaries were specifically dealt with in Section 64B(5)(f) of the Income Tax Act (RSA, 1962) and have undergone three major changes since the inception of share repurchases in South Africa (i.e. 1 July 1999). For periods ending 11 December 2002, companies could choose whether the repurchase of the treasury shares should attract STC (e.g. companies with a STC credit could elect to pay STC and utilise the STC credit). For periods from 12 December 2002 to 30 September 2007, the repurchase of treasury shares did not attract STC for the holding company. For periods beginning on or after 1 October 2007 to December 2009, the repurchase of the treasury shares was a share repurchase executed under Section 85 of the Companies Act and therefore subject to STC. For income tax purposes, the repurchase by the holding company of treasury shares held by subsidiaries therefore had a STC-free period (prior to 1 October 2007, assuming that a company elected not to pay STC) and a STC-payable period (as from 1 October 2007).

All dividend payments falling within the dividend definition were liable for STC. Dividend payments distributed from the nominal value of the share capital account, as well as from the share premium account [Section 76(d) of the Companies Act], were not regarded as a dividend [Section 1 of the Income Tax Act]. For the purpose of this study, scrip dividends – the non-cash portion of the dividend – were excluded from the definition of a dividend, because a scrip dividend does not represent a cash payment.

In terms of the Income Tax Act, the monetary value of the dividend (in a repurchase as well as dividend payment) is the amount by which the profits attributable to shareholders were reduced. Share repurchases (within the dividend definition) at amounts in excess of the nominal value of the shares therefore attracted STC only to the extent that they were paid out of retained earnings. Dividend payments distributed from retained earnings attracted STC, whereas dividends distributed from share premium did not. The source of the distribution (i.e. retained earnings versus share capital and share premium) was therefore important when ascertaining the tax effect of share repurchases and dividend payments. A company without a share premium account paid STC on the full amount of a dividend distribution, but if a share repurchase was made, the STC liability reduced with the effect of the nominal value of the shares repurchased. The tax effect of a share repurchase versus a dividend payment was therefore unique to each company and was also affected by the existence of a STC credit. The only identified tax advantage was when a company repurchased shares of the holding company through a subsidiary, as this method did not attract any STC. There is however a restriction on the volume of these transactions (i.e. only 10% of the holding company's issued shares may be repurchased by subsidiaries) and specific tax implications were applicable if the holding company subsequently repurchased these shares (as discussed above).

The decision for a company to pay a dividend or repurchase shares may depend on the preferences of its shareholders in their individual capacity. Dividends received by South African residents from JSE-listed companies were exempt from taxation in terms of Section 10(1)(k) of the Income Tax Act during the period covered in this study. On the other hand, all proceeds received by the shareholder selling shares to the company were not exempt from tax. The portion of the proceeds that did not represent a dividend was taxable at the marginal tax rate if the shareholder was a share dealer. If the shareholder complied with the requirements of Sections 9B and 9C of the Income Tax Act, the proceeds were deemed to be of a capital nature and capital gains tax was therefore applicable. South African capital gains tax was levied at 50 per cent of the marginal tax rate for companies, and at 25 per cent of the marginal tax rate for individuals, during the period covered in this study.

For the purpose of this study, it was therefore evident that the repurchases of shares in South Africa might have been affected by the income tax treatment thereof, requiring a distinction between repurchasing entities (namely holding companies repurchasing their own shares, and

subsidiaries repurchasing shares of the holding companies). The source of the distribution (i.e. share premium or retained earnings) also affected the tax treatment thereof. Shareholder preferences from a tax perspective would generally have led to dividends as a preferred distribution method (as it was exempt from tax) during the period covered in this study.

The STC legislation which was applicable in South Africa during the period of this study was replaced with a withholding tax system as from 1 April 2012. Future research will therefore apply the new tax legislation on share repurchase and dividend payment decisions.

2.3 BRIEF COMPARISON WITH THE GLOBAL REGULATORY ENVIRONMENT

2.3.1 Introductory remarks

Most countries allow share repurchases. In 2002 Grullon and Michaely (2002) identified Austria, Israel and Norway as countries where share repurchases remained illegal, but these countries have subsequently removed their restrictions on share repurchases. The regulating environment of share repurchases differs from country to country. Most jurisdictions in which share repurchases are legal tend to be tightly regulated. The laws of the US, and possibly Canada, appear to be less restrictive than other countries. Switzerland has relatively loose regulations, but repurchases are unpopular given the significant tax disadvantages thereof. (Kim, Schremper & Varaiya, 2004: 1, 10) Until 2004 the US was the country with the most lenient regulations in respect of share repurchases (Ginglinger & Hamon, 2009: 82).

The following discussion about the comparison between the South African regulatory environment and the global environment pertaining to share repurchases covers types of repurchase methods; the effect of share repurchases on the number of shares (including treasury shares); the announcement of share repurchases; tax treatment; and other issues.

2.3.2 Types of share repurchase methods

In South Africa there are essentially three share repurchase methods available to companies: general share repurchases, *pro rata* offers and specific offers. In the US there are essentially four methods: open market share repurchases; two types of self-tender offers, namely the fixed price tender offer and Dutch auction tender offer; and private offers (Daly, 2002: 5). Other countries have similar methods, e.g. in Australia the open market share repurchases are called on-market repurchases, tender offers are called equal access repurchases and selective buybacks are similar to private offers (Brown, 2007: 370; Cristiano, Clarke & Mitchell, 1997). A South African repurchase under general authority is equivalent in style to that of an US open market share repurchase; a South African specific offer is analogous to a private offer; and the *pro rata* offer is equivalent in style to that of a form of US fixed price tender offer (Daly, 2002: 12-13).

Open market share repurchases are share repurchases transacted on the open market at the prevailing market price. No premium is paid on open market share repurchases and share repurchase programmes are usually executed over several months. Companies are however under no legal commitment to repurchase the shares that were authorised under the general authority and this provides the flexibility to repurchase shares at the most appropriate times.

The two types of self-tender offers, i.e. the fixed price tender offers and Dutch auction tenders, differ in the way the offer is structured. Self-tender offers in the US are offered at a premium to the prevailing market price. In Australia, however, the tender offers (equal access repurchases) are often repurchased at a discount owing to the tax advantages for the seller (Brown, 2007: 370). Once tender offers are accepted, the company is legally obliged to repurchase the shares.

Fixed price tender offers involve the repurchase of a pre-determined number of shares from shareholders at a premium to current market prices, as set by the repurchasing company. Tender offers are valid for a limited period and final acceptance of the repurchase programme may depend on a minimum number of shares being offered. When the offer for repurchase is oversubscribed, the company may choose to increase the number of shares repurchased or repurchase on a *pro rata* basis. The average price premium offered in fixed price offers in the US is 20,6 per cent (Comment & Jarrell, 1991: 1256). A Dutch auction tender offer is a variation on the fixed price tender offer, where the offer price is based on information solicited from the shareholders. Rather than stating a fixed offer price, the company states the number of shares it wants to repurchase during a specified period. Managers set a price range between which bids will be accepted and shareholders are then invited to tender any amount of shares at their minimum acceptable price. The minimum price is set a few percentage points above the prevailing market price and the maximum price is set at a level that would reflect a premium normally offered in fixed price tenders. The offer typically closes after one month and the repurchase price is then determined as the lowest price necessary to acquire the intended number of shares. This price is paid to all shareholders who tendered their shares at the minimum price or lower. If the number of shares tendered exceeds the required number, the company may choose to increase the number of shares offered or repurchase on a *pro rata* basis, similar to oversubscribed fixed price tender offers. The average premium paid during Dutch auction tender offers in the US is 12,8 per cent, which is lower than the 20,6 per cent associated with fixed price tender offers (Comment & Jarrell, 1991: 1257).

Direct or private offers are privately negotiated repurchases from large shareholders. When a large shareholder indicates its intent to sell its shareholding or a large portion thereof, the company runs the risk of a sharp decline in its share price due to the oversupply of shares on the open market. The company may then choose to purchase these shares from the shareholder to avoid this problem. The price negotiated for the repurchase is normally lower than the market price.

The open market share repurchase method is by far the most popular method of repurchase in the US, with 90 per cent of the dollar value of all repurchases between 1984 and 2000 completed through the open market (Grullon & Michaely, 2004: 651; Ikenberry, Lakonishok & Vermaelen, 1995: 182). From 1996 until 2004, open market purchase programmes accounted for 88 per cent of all announced US repurchase programmes and the announced value thereof was over 93 per cent of the total value of repurchase programmes (Banyi, Dyl & Kahle, 2008: 460). In 1997 open market share repurchases amounted to between 90 per cent and 95 per cent of share repurchases in Europe (Fairchild & Zhang, 2005).

Owing to the fact that general repurchases by JSE-listed companies are similar to open market share repurchases (by which name they are internationally known), general share repurchases by JSE-listed companies will hereafter be referred to as open market share repurchases in this study.

2.3.3 The effect of share repurchases on the number of issued shares

In South Africa, shares of the holding company may be repurchased by the company, its subsidiaries and share trusts. Many countries (such as the UK, Canada and Australia) only allow share repurchases of own shares by the holding company and disallow share repurchases of holding companies' shares by subsidiaries and share trusts (Bhana, 2006: 241, 249). US subsidiaries may acquire shares in the holding company, but certain restrictions are imposed on a holding company using a subsidiary company to hold and resell treasury shares on its behalf (Cassim, 2003: 144).

In South Africa, the shares repurchased by the company are cancelled from issued share capital, while the holding company shares repurchased by subsidiaries and share trusts are not cancelled, but treated as treasury shares and merely deducted from the number of shares in the group annual report. Other countries either require shares repurchased to be cancelled from issued and authorised share capital (e.g. Australia), shares repurchased to be cancelled only from issued share capital (e.g. Canada), or shares repurchased to remain as issued shares of the company, subject to the resale or cancellation thereof by the company (e.g. UK, France and the US) (Cassim, 2003: 144, 145, 151). These shares that were repurchased, but not cancelled, are treated as treasury shares and the resale thereof may then, for example, be made to beneficiaries of share incentive schemes (which make the need for the creation of a separate share trust irrelevant) (Cassim, 2003: 147). In France, but not in the US, these shares may be freely resold (Ginglinger & Hamon, 2007: 919).

The term 'treasury shares' therefore refers to different share repurchase transactions depending on the regulatory environment of the country. In South Africa, it is only shares repurchased by entities in the group (such as subsidiaries and share trusts), rather than by the holding company itself, that represent treasury shares. In the UK, treasury shares only refer to shares repurchased by the holding company, as these shares are not cancelled and also because share repurchases by

subsidiaries (and share trusts) are not allowed. In the US, treasury shares refer to shares repurchased by the holding company (as these shares are not cancelled), as well as to shares repurchased by other entities in the group (e.g. subsidiaries). Canada and Australia do not have treasury shares, as repurchases by subsidiaries are not allowed and own shares repurchased are cancelled from issued share capital.

For the purpose of this study, it is important to emphasise that the term 'treasury share' does not have the same meaning in the South African and UK regulatory environments. The accounting rules that are applied in South Africa, i.e. IFRS, are issued by the IASB in the UK. In the discussion on the inconsistent application of IFRS by JSE-listed companies (in section 2.2.3.1 above) the reason proposed was that the regulatory environment in the UK and South Africa differs.

2.3.4 The announcement of share repurchases

In South Africa, announcements of share repurchases by JSE-listed companies are made via SENS. Open market (or general) repurchases are announced under the three per cent rule, which requires share repurchases to be announced only once the cumulative three per cent limit has been reached. This rule is interpreted inconsistently, with many companies interpreting it as a three per cent limit per annum. Specific share repurchases need to be announced via SENS once the terms of the arrangement have been agreed upon.

Most global exchanges require companies to announce their share repurchases immediately after repurchases have been implemented – either on the day following the announcement (in the case of the UK, Hong Kong, Canada and Australia), a week after the repurchase (in the case of France) or at the end of the quarter (in the case of the US) (Ginglinger & Hamon, 2007: 919; Kobokoane, 2007: 16-17; Mitchell & Dharmawan, 2007: 149). In the US there was no formal requirement to announce share repurchases prior to 2004. However, since 2004 US companies have had to announce share repurchases on a quarterly basis (disclosing figures for each month). Prior to 2004 US companies usually only announced their intention to repurchase in the financial media.

The full extent of share repurchase activities is therefore known in most other countries, whereas announcements of South African share repurchases do not represent the full extent of all share repurchase activities because of the three per cent announcement rule on open market share repurchases. The fact that open market share repurchases are by far the most popular repurchase method in the US and Europe, representing between 90 per cent and 95 per cent of the value of share repurchases (as stated in section 2.3.2 above), indicates that announced South African share repurchases may significantly understate the actual share repurchase activity of JSE-listed companies.

It was evident during the course of this study that share repurchase information was not readily available to shareholders and other interested parties owing to the announcement structure of the

JSE, especially pertaining to the announcement of open market share repurchases. Without the necessary information the market cannot react efficiently to share repurchase events. The potential informational value for the market, as well as for South African research, is therefore forfeited by the announcement structure of share repurchase announcements as presently prescribed by the Listings Requirements of the JSE.

2.3.5 Tax treatment of share repurchases and dividends

As discussed in section 2.2.4 above, South African share repurchases by holding companies were taxed like dividend payments (which attracted STC) for the period covered by this research. The profit received by shareholders selling their shares was taxed at the marginal tax rate or as capital gains, depending on the tax status of the individual; whereas a dividend received from a JSE-listed company was exempt from tax.

The tax treatment of share repurchases and dividends differ from country to country. In most countries dividends paid by a company do not attract STC, but a withholding tax (i.e. shareholder tax) is applicable. Capital gains tax regulations are applicable to shareholders in a share repurchase scheme in most countries. In most economies, too, capital gains tax (which would apply to the selling of shares) is generally lower than individual marginal tax rates (which would apply in the case of dividends received) (Weston & Siu, 2003). In the US, dividends received were taxed at a higher rate than repurchase receipts until 2003. Subsequent to 2003, dividends were taxed at the same rate as the capital gains tax on repurchases, therefore limiting the tax advantages of repurchases for investors (Dittmar, 2008).

The South African tax treatment of share repurchases and dividends therefore differed from most other countries. The South African income tax amendments that were promulgated after the period covered in this study are generally in line with the tax treatment that was applied by most other countries during the period of this study, i.e. 1999 to 2009.

2.3.6 Other issues

Most jurisdictions usually impose restrictions on the timing, price, volume and manner of share repurchases. Apart from the aspects which have already been discussed in this study, Kobokoane (2007: 16-17) lists the following as other main features of regulations in most countries:

- Approval – shareholder approval at the annual general meeting is required. In the US, Canada and Japan board approval is sufficient.
- Volume restrictions – the aggregate number of shares to be repurchased may in most cases not exceed 10 per cent of the issued shares of the company.
- Method of finance – in most jurisdictions, repurchases may not be financed by debt.

Regarding these aspects, the following South African regulations were applicable during the target period (and were discussed in section 2.2.1 above):

- Approval – for the period covered in the study, i.e. 1 July 1999 to 31 December 2009, a special resolution was required for open market and specific share repurchases at the annual general meeting. The new Companies Act (RSA, 2008), effective as from 1 May 2011, requires only board approval for share repurchases, but the JSE Listings Requirements still require shareholder approval.
- Volume restrictions – there is a limit of 20 per cent per annum applicable to open market share repurchases (prior to 2003 the 20% limit applied to all share repurchases, provided that open market share repurchases did not exceed 10%).
- Method of finance – the method of finance is not prescribed in South African legislation. A company needs to comply only with the liquidity and solvency requirements of the Companies Act.

These examples of differences between jurisdictions were not regarded to have a material influence on the purpose of the study.

2.4 SUMMARY: SOUTH AFRICAN REPURCHASE ENVIRONMENT COMPARED WITH THE GLOBAL ENVIRONMENT

The most important differences between South Africa and the global regulatory environment that were evident from the discussions above were as follows:

1. Own shares repurchased by South African companies have to be cancelled from issued capital (and therefore do not represent treasury shares), whereas cancellation is not always required when own company shares are acquired in most other countries. Own shares repurchased reduce the number of issued shares in South Africa, whereas they represent treasury shares in most other countries (e.g. the UK and the US). The effect of South African share repurchases on the issued share capital (including treasury shares) and the disclosure thereof in the annual reports are therefore not comparable to most other countries.
2. In South Africa, subsidiaries and share trusts may repurchase shares in the holding company, whereas subsidiary and share trust repurchases are not allowed in many other countries (e.g. the UK, Canada, Australia). The term 'treasury shares' held by subsidiaries (and share trusts) is therefore not applicable in these countries. In the UK treasury shares only refer to own shares repurchased, whereas own shares repurchased and shares held by subsidiaries represent treasury shares in the US. The different interpretation of the definition of treasury shares affects the disclosure on the number of company and group shares in annual reports.

3. In South Africa the actual open market share repurchases are only announced via SENS once the company has cumulatively acquired three per cent of its total number of issued shares (of that class, as at the date of the annual general meeting resolution) and each three per cent thereafter. In other countries all actual share repurchases are reported on a daily, weekly, monthly or quarterly basis. The South African announcement structure therefore leads to the understatement of actual share repurchases and also impacts negatively on the informational value to the market (because the share repurchases on which the market needs to react are not all known). SENS announcements may significantly understate actual share repurchases, especially if the open market share repurchase method is also the preferred repurchase type, as is the case in other countries (e.g. in the US and Europe open market share repurchases represent between 90% and 95% of the total value of share repurchases).
4. South African share repurchases did not, during the target period, necessarily have a tax advantage over dividends, as was the case in other countries. A withholding tax on dividends, and not STC, is applicable in most other countries. In South Africa the STC levied on dividends and share repurchases were usually similar, except for the share capital repayment in respect of share repurchases which did not represent a dividend. Dividends and share repurchases could also be distributed STC-free when paid out of the share premium account and share capital. No STC was however payable when repurchasing shares in the holding company through a subsidiary, but the aggregate of shares repurchased in this way was limited to 10 per cent of the issued share capital of the holding company.

2.5 CONCLUSION

The purpose of this study was to document the extent of share repurchases in South Africa and to test whether empirical evidence and current theoretical thinking also applied in this country. In this chapter an understanding of the South African regulatory environment was obtained, which enabled the compilation of a comprehensive share repurchase database and the replication of global studies in the South African repurchase environment.

This chapter dealt with each of the aspects pertaining to the South African regulatory environment (namely the Companies Act, Listings Requirements, annual report disclosures, and Income Tax Act) and a comparison with the global repurchase environment was made.

It was found that three types of entities may repurchase shares in South Africa: the company, its subsidiaries and its share trusts. Share trust repurchases of holding company shares do not fall within the requirements pertaining to share repurchases as prescribed in the Companies Act and Listings Requirements. There are essentially three repurchase methods in South Africa: open market share repurchases, specific offers and *pro rata* offers.

The JSE Listings Requirements on the announcement of share repurchases (especially in respect of the 3% rule that is applicable to open market share repurchases) were found to result in share repurchases announced via SENS not representing all actual share repurchase activities by JSE-listed companies. It was also observed that the SENS announcements relating to specific share repurchases represent announcements of intention to repurchase, whereas the open market share repurchase announcements represent announcements of actual share repurchases which may have occurred in prior years, earlier in the current year and on the previous day (depending on how the company interpreted the 3% rule and when the limit was reached). Most global exchanges however require announcements of share repurchases on a daily, weekly, monthly or quarterly basis. In most countries the announced share repurchases therefore represent all actual share repurchases, which is not the case in South Africa.

The annual report disclosures of JSE-listed companies therefore also needed to be consulted when compiling a comprehensive share repurchase database for JSE-listed companies. Inconsistencies and contradictions in IFRS and the Listings Requirements (in respect of the shareholder spread) pertaining to share capital disclosures in the annual report were identified. These inconsistencies and contradictions related mainly to the fact that the South African regulatory environment (especially in respect of the cancellation of issued shares and the application of the definition on treasury shares) is not comparable to most global environments (especially the UK, from where IFRS is adopted). In South Africa there is a difference between the number of company shares and the number of group shares, which is not always the case globally (e.g. UK, Canada, Australia). When compiling a database on South African share repurchases from annual report disclosures, care needed to be applied to ensure that the different repurchase entities were included correctly.

The differences between the South African and global regulatory environments need to be acknowledged when applying methodologies of global studies to South African share repurchases. The fact that announced share repurchases may significantly understate actual share repurchases (especially if open market share repurchases are also the preferred repurchase type, as is the case globally) not only leads to the understatement of actual share repurchases, but also negatively impacts on the informational value thereof to stakeholders. In South Africa, share repurchases may also be executed via entities other than the company (e.g. subsidiaries and share trusts), which is not always allowed in most other countries (e.g. UK, Canada, Australia) and it may therefore affect comparability of studies. The South African tax implications for share repurchases, on one hand, and dividends, on the other, are dissimilar to those in most other countries and may affect studies aimed at comparing the motivations for choosing to enter into share repurchases or to pay out dividends.

The results described in this chapter elucidate the South African regulatory environment and provided the basis of understanding needed to compile a comprehensive share repurchase

database and to apply the methodologies of global studies in the South African repurchase environment. The following chapter presents a literature review on the motivations for share repurchases and what the determinants of choice are when a company has to decide between share repurchases and dividend payments. The literature review provides the necessary context to formulate the propositions and hypotheses underlying the research problem of this study – which is articulated in the following question: Does the South African share repurchase experience mirror empirical evidence and current theoretical thinking?

CHAPTER 3

LITERATURE REVIEW

3.1 INTRODUCTION

This chapter investigates empirical evidence and current theoretical thinking on share repurchases in respect of the motivations for share repurchases, as well as the determinants of choice between share repurchases and dividend payments. For the purpose of this study, empirical evidence and current theoretical thinking had to be formulated as propositions and / or hypotheses to be able to address the research problem of this study, namely: Does the South African share repurchase experience mirror empirical evidence and current theoretical thinking?

Global research on share repurchases was initially dominated by studies on US companies. US share repurchases have been allowed for the past four decades, but only became popular during the 1980s (once certain restrictive legislation was lifted) and accelerated during the 1990s (Dittmar, 2008: 27). The UK, where share repurchases were legalised in 1981, showed the next highest growth of share repurchase announcements (Kim *et al.*, 2004: 5; Stonham, 2002: 37). Most other jurisdictions only allowed share repurchases in the 1990s (e.g. Australia (1989); Hong Kong (1991); Korea (1994), Denmark and Japan (1995); Finland and Poland (1997); France, Germany and India (1998); Norway (1999); and Sweden (2000)). As non-US share repurchase markets developed, research was also conducted in those countries. Most of the research in non-US countries dealt with replicating the US studies in a non-US repurchase environment. Corporate trends, and the analysis thereof, tend to be set in the US and followed closely in other jurisdictions (Crotty, 2011: 77). The literature review in this study therefore focuses on research that has been conducted in the US, but it also incorporates non-US research and the most recent research in the field.

Although share repurchases have been allowed in South Africa since 1 July 1999, limited research has been conducted on South African share repurchases. It has yet to be ascertained whether the South African data is in line with the share repurchase evidence and current theoretical thinking of other countries and if the unique South African regulatory environment, as discussed in Chapter 2 on the South African regulatory environment, was acknowledged in these studies.

This chapter firstly addresses the global research on share repurchase activity, motivations for share repurchases, and determinants of choice between different payout methods. Secondly, the South African research on share repurchases is discussed. Thirdly, separate propositions and / or hypotheses are formulated, based on the empirical evidence and current theoretical thinking and the results of South African research.

3.2 GLOBAL RESEARCH

3.2.1 Share repurchase activity

The increased popularity of share repurchases as part of companies' payout policies is well documented in global research. For the purpose of this study it was necessary to ascertain the extent of share repurchase activities and also the relationship between share repurchases and dividends.

Corporate share repurchases grew strongly as a popular means of returning cash to shareholders first in the US, then the UK, and later – in the 1990s – in the continental European countries (Stonham, 2002: 37). From 1980 to 2006 the corporate use of share repurchases in the US has fluctuated around a general upward trend line, with a remarkable surge starting from 2004 (Dittmar, 2008: 27). Grullon and Michaely (2002: 1649) found that share repurchases grew at an average annual rate of 26,1 per cent over the period 1980 to 2000, whereas dividends only grew at a rate of 6,8 per cent. The annual aggregate volume of repurchases by companies, excluding financials and utilities, listed on Compustat equalled dividends for the first time in 1998; surpassed dividends in 2005; and the margin of share repurchases over dividends widened significantly since 2006 (Dittmar, 2008: 27). For Standard & Poor's (S&P) 500 Index companies, share repurchases exceeded dividends during seven of the ten years as from 1997 to 2006, and were dramatically larger in 2005 and 2006 (Stowe, McLeavey & Pinto, 2009: 178). In 2007 US companies spent almost one trillion dollars on share repurchases, which was a record amount – which again exceeded dividend payments (Griffin & Zhu, 2010: 1). According to S&P, share repurchases in the first quarter of 2009 by US companies in the S&P 500 Index dropped by 73 per cent (owing to deteriorating economic conditions) from a year before, but the level of share repurchase activity was still well above the levels in the three to eight years prior to 2009 (Dow Theory Forecasts, 2009: 3; Steverman, 2009: 1). In the first quarter of 2010 the share repurchase figure by the S&P 500 companies, however, shot up to \$230 billion from the \$75 billion figure in the previous year. The high growth rate in share repurchases was therefore expected to continue (Stonehage, 2011: 5).

Fama and French (2001: 39) recorded a drop from 66,5 to 20,8 in the percentage of companies paying cash dividends during the period 1978 to 1998. Skinner (2008), in a study on US industrials during the period 1980 to 2005, confirmed that the fraction of dividend payers fell steadily from 42 per cent during the period 1980 until 1989 to 28 per cent during the period 1995 until 2004. It was found that few companies paid dividends without also making share repurchases. The number of companies which paid dividends every year and made regular repurchases increased modestly, from 4,3 per cent during the period 1980 until 1989 to 4,8 per cent during the period 1995 until 2004, while the fraction of total payout attributed to these companies represented an increase from 30,4 per cent to 61,6 per cent over this period. Companies which paid dividends every year and

made occasional repurchases declined from 6,7 per cent to 2,5 per cent over this period; which represented a decline from 39,4 per cent to 12,8 per cent of total payout. Few companies regularly paid dividends and made regular repurchases: around 1,6 per cent overall in number, representing a decrease in total payout from 6,5 per cent to 2,7 per cent over the period. Companies which regularly paid dividends and made occasional repurchases declined from 6,8 per cent to 2,7 per cent over this period; which represented a decline from 10,5 per cent to 5,5 per cent of total payout. Companies which occasionally paid dividends and repurchased shares increased from 9,4 per cent to 9,6 per cent over this period; which represented an increase from 3,7 per cent to 7,8 per cent of total payout. Companies which only paid dividends declined from 13,2 per cent to 6,8 per cent over this period; which represented a decrease from 8,3 per cent to 1,7 per cent of total payout. Companies which only repurchased shares increased from 20,3 per cent to 28,8 per cent over this period; which represented an increase from 1,3 per cent to 7,9 per cent of total payout. The fraction of companies which did not pay dividends nor made share repurchases increased only modestly, from 37,7 per cent during the period 1980 until 1989 to 43,2 per cent during the period 1995 until 2004. Payout was therefore dominated by a relatively small group of companies which regularly repurchased shares and paid dividends every year. (Skinner, 2008: 587, 589-590)

Von Eije and Megginson (2008: 348) examined share repurchases and dividend payments made by countries which were members of the European Union (EU) prior to May 2004 and found that, over the period 1989 to 2005, dividend and share repurchase policies of EU companies were similar in many ways to US companies. The total value of share repurchases also surged in Europe and accounted for half of total cash payouts in 2005. Large-scale share repurchases started much later in Europe than in the US, but grew even more rapidly since 1994. UK companies accounted for almost exactly half of the value of share repurchases by EU companies for the period 1989 to 2005 (Von Eije & Megginson, 2008: 355).

Companies can distribute cash to shareholders in one of three main ways: regular dividends, special dividends, and share repurchases. DeAngelo, DeAngelo and Skinner (2000) found that there had been a dramatic overall decline in special dividend payments in the US. Special dividends decreased from an average 8 per cent of the total dividends paid in the 1950s to 0,1 per cent for the 1990s, while companies (listed on the New York Stock Exchange) paying special dividends decreased from an average 26,2 per cent in the 1950s to 1,8 per cent in the 1990s (DeAngelo *et al.*, 2000: 315-316).

As was pointed out in the previous chapter, the most popular method of share repurchases globally is the open market share repurchase method. In the US, 90 per cent (in value) of all repurchases between 1984 and 2000 were completed through the open market (Grullon & Michaely, 2004: 651; Ikenberry *et al.*, 1995: 182). Open market repurchase programmes accounted for 88 per cent of all announced US repurchase programmes (representing over 93% of the total value) from 1996 to 2004 (Banyi *et al.*, 2008: 460). In 1997 open market share repurchases amounted to between

90 per cent and 95 per cent of the total value of share repurchases in Europe (Fairchild & Zhang, 2005).

3.2.2 Motivations for share repurchases

3.2.2.1 Overview of global research

Share repurchases can be seen as a change in ownership, capital structure and payout policies of a company (Farrugia, Graham & Yawson, 2011: 156). Literature revealed several motives as to why companies might repurchase their own shares. The most frequently stated motivation for a share repurchase transaction was that companies repurchased shares to signal to the market that their shares were currently undervalued. This is referred to as the information-signalling hypothesis. The information-signalling hypothesis supports the well-known precondition of the investment expert Warren Buffet, on share repurchases which is often quoted in the media:

"There is only one combination of facts that makes it advisable for a company to repurchase its shares: First, the company has available funds – cash plus sensible borrowing capacity – beyond the near-term needs of the business and, second, finds its shares selling in the market below its intrinsic value, conservatively calculated. To this we add a caveat: Shareholders should have been supplied with all the information they need for estimating that value. Otherwise, insiders could take advantage of their uninformed partners and buy out their interests at a fraction of the value" (GuruFocus, 2013).

This precondition was published by Buffet in 1999. In 2011 and 2012 the precondition was however amended by Buffet by stating that, instead of the undervaluation precondition, the shares may trade at a maximum market-to-book ratio of 110 per cent and 120 per cent respectively. The 10 per cent and 20 per cent premium was still considered to be well below the actual value of the shares (GuruFocus, 2013).

Other motivations for share repurchases were also evident from literature, namely dividend substitution; the free cash flow motive; earnings enhancement; change in capital structure; wealth transfer; the management entrenchment motive; takeover defence; and, more recently, share option compensation.

In this study the discussion on the motivations for share repurchases focuses mainly on the information-signalling hypothesis, because this was the most commonly attributed motive. The other motivations, however, are also addressed. Although many global studies have been conducted on various motivations for share repurchases, the aim of the literature review of the present study was to state the observed findings in the most important studies in the field.

3.2.2.2 Information-signalling

The explanation most widely discussed in literature is that corporate managers use share repurchases to signal their optimism about the company's prospects to the market. There are two explanations for this information-signalling hypothesis (Grullon & Ikenberry, 2000: 35). Firstly, repurchases are intended to convey managers' optimism of future increases in earnings, cash flows and share price which is not at that point shared by the market. Secondly, management is not attempting to convey new information to the market, but is rather expressing its disagreement with how the market is pricing the company's performance. In either case, the company's management views the shares as undervalued. The disagreement between the two versions is over the cause of the discrepancy between price and fair value. In the first case, it is the company's inability to communicate its prospects convincingly to the market; in the second, it is the market's failure to reflect publicly available information in the current price.

A company's management is better informed about the company's true value than outside shareholders. This information asymmetry can lead to a share being priced below its intrinsic value. Literature argues that management can only convey its private information in a credible way – not by simply telling investors, but by engaging in actions, like share repurchase plans (Miller & Rock, 1985). Management views the repurchase of shares as 'a good investment' when the shares are undervalued. Stephens and Weisbach (1998) found that share repurchase activity was negatively related with prior share returns, indicating that shares were repurchased when share prices were perceived to be undervalued. A US survey by Brav, Graham, Harvey and Michaely (2005: 496) found that 86,4 per cent of all chief financial officers (CFOs) 'agreed or strongly agreed' with the statement that they repurchased shares when their shares were undervalued.

The first version of the information-signalling theory would imply that companies which repurchase shares should experience increases in future cash flows and earnings. Studies reported that, while there was some evidence of earnings improvement after the announcement of fixed price tender offers (where there is a stronger repurchase commitment and price premium) (Vermaelen, 1981), the more recent research on open market share repurchases contradicted the information-signalling hypothesis, showing a reduction in earnings and profitability (Bartov, 1991; Dann, Masulis & Mayers, 1991; Grullon & Ikenberry, 2000). On the other hand, a study by Lie (2005) found increases in return on investment during the three-year period following an open market announcement. Gong, Louis and Sun (2008) found similar increases in operating performance, but provided evidence that such improvements were partly attributable to pre-purchase downward earnings management, which depressed the value of the shares, thereby allowing the company to repurchase at more attractive prices.

The second version of the information-signalling theory implies that managers are signalling their disagreement on how existing public information is priced by the market. This version of the

information-signalling hypothesis postulates that the positive share price reaction to the announcement of the share repurchase programme should correct the undervaluation prior to the share repurchase announcement (Comment & Jarrell, 1991; Dann, 1981; Vermaelen, 1981). This second version of the information-signalling hypothesis is the focus of the discussion which follows.

Vermaelen (1981) examined the price behaviour of shares repurchased by a company in the open market and through tender offers. A study of 131 tender offers (made between 1962 and 1977) by 111 US companies and 243 open market offers (made between 1970 and April 1978) by 198 US companies found that open market share repurchases had a cumulative abnormal share price decline of -6,99 per cent from day t_{-60} to day t_{-2} . From day t_{-2} to day t_0 the two-day average abnormal share return was 3,37 per cent; and the subsequent cumulative abnormal share return decline from day t_3 to day t_{60} was -1,31 per cent. For tender offer repurchases the corresponding abnormal share returns were 1,93 per cent; 14,14 per cent; and -3,98 per cent. It was therefore concluded that repurchasing companies, on average, experienced an increase in their share price subsequent to the announcement and that the information-signalling hypothesis seemed to explain the abnormal share returns observed after the announcement date to a larger extent in respect of tender offers than for open market share repurchases. It was also found that most companies repurchasing shares through tender offers were small companies, predominantly held by insiders who committed not to tender their shares (Vermaelen, 1981: 179).

Building on the research of Dann (1981), Vermaelen (1981), and Lakonishok and Vermaelen (1990), Comment and Jarrell (1991) examined the relative signalling power of the three common types of share repurchases in the US: Dutch auction tender offers, fixed price tender offers and open market share repurchases. Their study was carried out on 64 Dutch auction and 68 fixed price tender offers from 1984 to 1989, and 1 197 open market share announcements from 1985 to 1988. The study supported the findings of Lakonishok and Vermaelen (1990), in that share returns were generally negative before open market share repurchase announcements (but not before tender offers). The average daily abnormal share return for the three-day period around the announcement date for fixed price tender offers, Dutch auction tender offers and open market share repurchases was 11,0 per cent; 7,9 per cent; and 2,3 per cent respectively. It was also found that, when choosing between fixed price offers and Dutch auctions, large companies with low insider-management holdings favoured Dutch auctions as these companies had a relatively low demand to signal significant share undervaluation. (Comment & Jarrell, 1991: 1257, 1259, 1263)

Bagwell (1992) distinguished between *pro rata* and non-*pro rata* tender offers and found that it was only for non-*pro rata* tender offers that permanent positive abnormal share returns were observed. *Pro rata* tender offers showed a price decline at expiration date (exercise date) which offset the initial announcement effect. The fact that the marginal shareholder did not change in a *pro rata* offer was stated as the motivation for the share price not being affected by the *pro rata* repurchase announcement (Bagwell, 1992: 88).

Ikenberry *et al.* (1995: 183) suggest that the initial positive market reaction of approximately three per cent which was observed in previous studies (Vermaelen, 1981; Lakonishok & Vermaelen, 1990; Comment & Jarrell, 1991) was too low. They argue that it hardly seemed plausible that managers would have the ability to recognise such small valuation errors, and, also, would choose not to react to such minor discrepancies. Ikenberry *et al.* (1995), in support of the information-signalling hypothesis (or the traditional information-signalling hypothesis), developed the underreaction hypothesis. They postulated that the market treated open market repurchase programmes with scepticism and that prices adjusted slowly over time. They studied 1 239 open market share repurchase announcements by US companies between 1980 and 1990 and found that the immediate abnormal returns measured from day t_2 to day t_0 were 3,54 per cent; and they found a return similar to the market for day t_3 to day t_{10} . Applying a buy-and-hold simulation it was found that, for long-runs over a four-year period after the share repurchase announcement, the cumulative abnormal returns moved from 2,04 per cent after one year to 12,14 per cent after four years. For companies with low book-to-market ratios (i.e. glamour or growth shares), the cumulative abnormal returns over a four-year period after the share repurchase announcement moved from -1,11 per cent after one year to -4,31 per cent after four years. For companies with high book-to-market ratios (i.e. value shares), the cumulative abnormal returns over a four-year period after the share repurchase announcement moved from 4,66 per cent after one year to 45,29 per cent after four years. It was thus concluded that, on average, the market underreacted to open market share repurchase announcements and that the full impact of share repurchase announcements could extend over several years, particularly for value shares. The distribution between growth and value shares was relatively even in the population of the Ikenberry *et al.* (1995: 193) study. The fact that value shares outperformed glamour (or growth) shares confirmed that undervaluation was the motivation for these repurchases, because many undervalued shares have high book-to-market ratios. It was therefore expected that companies with high book-to-market ratios would not only outperform the overall market, but would also outperform the benchmark that adjusts for book-to-market (Ikenberry *et al.*, 1995: 198). It was also found that smaller companies showed the highest abnormal returns on average: 8,19 per cent as opposed to the 2,09 per cent for larger companies (Ikenberry *et al.*, 1995: 191).

Ikenberry, Lakonishok and Vermaelen (2000) re-examined the underreaction hypothesis on open market share repurchase announcements made by Canadian companies between 1989 and 1997. The Canadian companies demonstrated abnormal returns of 21,4 per cent (with value shares generating returns of 27% and 10% for growth shares) after three years in a buy-and-hold simulation. The findings of the Canadian study by Ikenberry *et al.* (2000) were therefore consistent with the US study by Ikenberry *et al.* (1995) on value shares, but differed in respect of growth shares: positive, but lower, abnormal returns were observed as opposed to negative abnormal returns which were reported by Ikenberry *et al.* (1995).

Following the Ikenberry *et al.* (1995, 2000) studies, the long-term reaction to open market share repurchases (i.e. underreaction hypothesis) was re-examined in many studies in different countries and resulted in the questioning of the reported results of many previous studies. It was found that results were sensitive to the methods used to calculate abnormal returns (Fama & French, 2001) and that different types of data were used (e.g. announcements of share repurchases that were followed by actual share repurchases as opposed to announcements which did not lead to actual share repurchases).

US studies based on improved methodologies showed mixed results. Bradford (2008) examined post-event long-run returns for announcements of open market share repurchases by US companies from 1993 to 1999. The results showed that buy-and-hold techniques strongly supported the existence of significant abnormal returns in the first two years after the event (23% and 14% respectively); small companies drove the results, but value companies did not. However, after correcting for multicollinearity, no support was found for the existence of long-term abnormal performance subsequent to repurchase announcements. Chan, Ikenberry and Lee (2007), however, found that for a sample of US open market share repurchase announcements from 1980 to 1996, significant abnormal returns did occur.

Studies on US-based open market share repurchases that were announced prior to 2004 (i.e. the date that the announcement of actual share repurchases became mandatory in the US) suffered from one significant drawback: research was based on announcements rather than actual share repurchases. These announcements are simply authorisations and not a commitment to repurchase. Tender offers, on the other hand, are commitments to repurchase, but in most cases companies have the option not to proceed if the offer falls short of its target. Prior to 2004, US regulations on tender offers were stringent, but no regulations existed in respect of intention to repurchase and actual repurchases on the open market (it was mostly announced in the financial press on a voluntary basis). Kim *et al.* (2004: 1) warned that non-mandatory disclosure of intentions to repurchase could create conflicts of interest resulting in wealth transfer between informed insider shareholders and uninformed outsider shareholders.

Stephens and Weisbach (1998), in a US study of 450 open market purchases between 1980 and 1990, reported that between 74 per cent and 82 per cent of shares targeted at the time of the announcement were actually repurchased, and at three years subsequent to the announcement, 57 per cent of the companies repurchased at least the targeted number of shares which were initially announced. Bhattacharya and Dittmar (2004) found that almost 20 per cent of the companies which announced repurchase programmes did not repurchase a single share within the next four years, though the majority of companies (about 54%) began to repurchase shares in the quarter following the repurchase announcement. Banyai *et al.* (2008) concluded that many of the studies on open market share repurchases by US companies prior to 2004 should be revisited as the databases used for these studies included many errors. It was found that the Compustat

database, which was the most accurate of the available databases, deviated from the actual number of shares purchased by more than 30 per cent in about 16 per cent of the cases.

Lie (2005) found that, for US companies, both the operating performance improvement and positive share price returns around announcements were limited to companies which actually repurchased shares during the same fiscal quarter as the announcement. Peyer and Vermaelen (2007) re-examined the long-run returns of open market share repurchases and tender offers for US companies for the periods 1991 to 2001, taking account of only actual share repurchases based on improved methodologies, and concluded that the previous findings of Lakonishok and Vermaelen (1990) and Ikenberry *et al.* (1995) still stand. These researchers found that open market share repurchase announcements experienced an average abnormal return of 2,39 per cent in the three days surrounding the announcement, while long-run excess returns amounted to average monthly abnormal returns of 0,52 per cent (0,50%, 0,45%, 0,44%) using 12-(24-, 36-, 48-) month event windows. Furthermore, the researchers found that value companies experienced an average monthly abnormal return of 0,83 per cent, compared to the 0,41 per cent for glamour (or growth) companies, while small companies displayed the highest long-run abnormal returns over 48 months (Peyer & Vermaelen, 2007: 1706-1707).

Yook (2010) examined all types of share repurchases by US companies for the period 1994 to 2007, by applying improved methodologies. Data were divided in two sub-samples: companies which followed their announcement with actual repurchases and those not repurchasing shares subsequent to the announcement. It was found that, for the full sample, there was no evidence of meaningful long-term abnormal performance for three years subsequent to the announcement. For companies which actually repurchased shares during the four quarters subsequent to the announcement, the results supported the underreaction hypothesis (Yook, 2010: 326-327). Consistent with prior studies, tender offers earned considerably larger abnormal returns (6,27%) in the announcement month than open market share repurchases (0,77%). Both tender offers and open market share repurchases experienced significant positive returns subsequent to the announcement, but tender offers consistently outperformed open market share repurchases by approximately 0,20 per cent each month. The average monthly abnormal returns over the respective periods of one to 12 months; 13 to 24 months and 25 to 36 months were: 0,43 per cent, 0,45 per cent and 0,44 per cent for open market share repurchases; and 0,68 per cent, 0,66 per cent and 0,64 per cent for tender offers. The study however did not find that company size or book-to-market value drove the positive returns and concluded that the primary motivation for repurchasing shares may have changed over time from signalling undervaluation to other possible reasons (Yook, 2010: 329).

Another issue which was highlighted in the Yook (2010: 327) study was the fact that companies which infrequently repurchased shares experienced an average abnormal return (over the long term) twice as large when compared to companies which frequently repurchased shares.

In support of the information-signalling theory, a more recent US study by Stonehage (2011) is of importance. This study compiled an index of US companies which repurchased more than five per cent of their shares in a year during the period 2000 to 2011 and found the following results when compared to the S&P 500 Index: companies which repurchased shares had outperformed the S&P shares by more than two times over the period; the share repurchase index had surpassed its earlier record levels in 2007 (the S&P did not); and the share repurchase index seldom underperformed (and then only to a small extent and for a very short period) (Stonehage, 2011: 4).

Non-US research was usually based on actual share repurchases since reporting frameworks in countries outside the US required a daily, weekly or monthly reporting of actual share repurchases. Most of the non-US studies confirmed that pre-announcement returns were negative, short-term abnormal returns were positive, and that long-term returns exceeded initial positive returns subsequent to announcement. Bradford (2008: 49) stated that differences in regulatory environments may affect the results in respect of short-term and long-term studies on information-signalling.

In a survey which was conducted by J.P. Morgan Investment Bank in 2006, it was found that the average time between announcement and implementation of an EU share repurchase programme was 77 days. The results of the survey showed that most of the share price performance was achieved over the first 60 days after the announcement, rather than after the date of actual repurchase, and the authors suggested that companies needed to implement their share repurchases swiftly to take advantage of the short-term positive abnormal return (Stonham, 2002: 41). It was found, in respect of UK share repurchase announcements made between 1988 and 1997, that 77 per cent of the repurchase programmes were completed (i.e. actually repurchased) in 1999. French companies showed very low completion rates, resulting in the overall completion rate for repurchases among European companies being only three per cent in 1990 (Stonham, 2002: 37-38). The completion rate of on-market (or open market) share repurchases during 1996 to 2001 in Australia was found to be similar to that of the US, i.e. 10 per cent of companies made little or no repurchases (Mitchell & Dharmawan, 2007: 156).

In a non-US study on the traditional (or short-term) information-signalling hypothesis in the European environment, it was found that German and Italian share repurchases for the period 1990 to 2005 were met with positive and significant share price response (with abnormal returns around the repurchase date ranging between 2,76% and 3,58% in Germany and between 0,97% and 1,93% in Italy), while UK share repurchases showed a positive response of only 0,82 per cent and French repurchases showed no positive response (Lee, Ejara & Gleason, 2010: 122). These findings supported the results of the Lasfer (2000) study: when comparing the intention to repurchase ordinary shares by UK and other European companies over the period 1985 to 1998, the cumulative abnormal returns over the five day period (t_2 to t_2) amounted to 1,48 per cent for the whole sample: 1,64 per cent in the UK; and 1,06 per cent for the rest of Europe (Lasfer,

2000: 9). Other non-US studies using share repurchase announcements (and not actual share repurchases) to test the traditional information-signalling hypothesis generally found abnormal returns in the three-day period commencing on the announcement date to be positive, ranging between three per cent and four per cent in countries like Australia, Japan, China and New Zealand; and between 1,5 per cent and two per cent in countries like Korea and Malaysia (Isa, Ghani & Lee, 2011: 31). Studies using actual share repurchases (conducted in Hong Kong, Canada and China) to test the traditional information-signalling hypothesis generally found abnormal returns in the three-day period commencing on the repurchase day to be between 2,5 per cent and 3,5 per cent, except for Hong Kong in which the abnormal return was much lower (less than 1%) (Isa *et al.*, 2011: 32). Mitchell and Dharmawan (2007: 148) stated that the structural and legislative environment on Australian share repurchases were substantially different to both the UK and US, particularly in respect of the transparent announcement procedures. It was found that for on-market (or open market) share repurchases during the period 1996 to 2001, the signalling incentives (evident from company undervaluation prior to the announcement date) were substantially greater than comparable US evidence. In respect of Australian equal access offers (tender offers) the abnormal returns around the announcement date was found to be much lower than those reported in US studies owing to the discount to market price at which the offer was made (which reflected the taxation arrangements in Australia) (Brown, 2007). Hyderabad (2009) found that Indian capital markets were more undervalued (than those of the US and UK), that there was a greater degree of information asymmetry, and that open market share repurchases had greater signalling ability than fixed price tender offers in the Indian context.

Non-US studies testing the underreaction hypothesis included a study by Rau and Vermaelen (2002: 277) on share repurchases by UK companies from 1985 to 1998 and found that the long-term market reaction was lower than in the US as a result of the different tax rules and announcement structures in the UK: insignificant negative abnormal returns were observed in the year following the announcement, and were largely driven by the tax reforms on share repurchases during their research period. McNally and Smith (2007) found no abnormal return for announcement of share repurchase programmes by Canadian companies during the period 1987 to 2000, but, when computing long-run abnormal returns following actual share repurchases, they did document the existence of an abnormal return of 4,22 per cent one year subsequent to the expiry date of the programme (McNally & Smith, 2007: 713). Skjeltorp (2004) reported a three-year average abnormal return for share repurchases by Norwegian companies during the period 1999 to 2002 of about 11 per cent. Zang (2005) reported a three-year average abnormal return of 21 per cent for Hong Kong companies during 1993 to 1997. De Ridder (2009), in a study on actual share repurchases in Sweden for the period 2000 to 2007, confirmed that small companies outperformed large companies, and that value companies tended to outperform growth companies.

Recent studies in Australia (Farrugia *et al.*, 2011) and Sweden (De Ridder & Råsbrant, 2014) on the relationship between market reaction and frequency of share repurchases found that frequent Australian share repurchases were greeted more favourably by investors over the short term; whereas infrequent share repurchases were greeted more favourably in Sweden. De Ridder and Råsbrant (2014: 103) found no abnormal return in respect of infrequent share repurchases over the long term, while significant positive abnormal returns were reported in respect of occasional and frequent repurchase programmes. These results did not support the findings of Yook (2010) where significantly higher share performances were reported on infrequent repurchases over the long term.

There were also studies that questioned the signalling explanation for open market share repurchases given the fact that they are flexible, non-committal methods of returning cash to shareholders (Ikenberry & Vermaelen, 1996). Tender offers were perceived to have a convincing signalling explanation as they are commitments to repurchase shares. Chan, Ikenberry, Lee and Wang (2010) claimed that open market share repurchases provide management with an opportunity to con the market: it is a low-cost means to send a false signal to the market to manipulate expectations. Repurchases therefore differ in their probability to convey a signal.

The methodologies applied when testing the traditional information-signalling (or short-term market reaction) hypothesis and the underreaction (or long-term market reaction) hypothesis are discussed in Chapter 7 on the short-term and long-term market reaction.

3.2.2.3 Other motivations for share repurchases

Apart from the information-signalling motive, literature also revealed other motives for share repurchases, namely dividend substitution; the free cash flow motive; earnings enhancement; change in capital structure; wealth transfer; the management entrenchment motive; takeover defence; and, more recently, share option compensation.

Although research identifies dividend substitution as a separate motivation for share repurchases, it was not discussed as a share repurchase motivation in the present study. Dividend substitution implies that share repurchases have replaced dividends over time. This inference comprises the determinants of choice when a company is faced with the decision to pay dividends or repurchase shares. The determinants of choice between share repurchases and dividends are addressed in section 3.2.3.

Vermaelen (1981) warned that various alternative motives were not mutually exclusive, while Jun, Jung and Walking (2009: 212) stated that different hypotheses should be disentangled to isolate the separate effects.

In this study the discussion on other motivations for share repurchases gave the main assumptions on which each motivation was based and was not intended to represent the studies relevant to each motivation comprehensively.

Free cash flow motive

Free cash flow is the cash flow in excess of what is required to fund projects with positive net present values (when discounted at the relevant cost of capital) (Jensen, 1986). A positive relationship between share repurchases and levels of cash flow was reported by Stephens and Weisbach (1998). Companies with higher 'temporary' operating cash flows were found to be more likely to repurchase shares due to the financial flexibility of share repurchases; whereas companies with higher 'permanent' operating cash flows were more likely to pay dividends as dividends represent an ongoing commitment (Guay & Harford, 2000: 412; Jagannathan, Stephens & Weisbach, 2000: 382; Lee & Rui, 2007: 140). Dittmar (2008: 31) found that share repurchase activity occurred in waves, which were driven by the impact of changes in economic activity on the company's surplus cash flow.

Earnings enhancement

Share repurchases reduce the number of issued shares and therefore could lead to an increase in EPS, assuming that earnings remain constant. Winkler and Vorweg (1998) however stated that share repurchases do not always enhance EPS, because income is forfeited when interest generating cash is used for share repurchases, and EPS actually decreases when the earnings-to-price (or earnings yield) ratio is below the interest rate earned by the cash used for repurchasing shares. Companies with a high P/E ratio (therefore low earnings yield) were therefore found to be less likely to undertake share repurchases (Bens, Nagar, Skinner & Wong, 2003: 54, 76). Bens *et al.* (2003: 86) found that executives were more likely to undertake share repurchases when earnings fall short of the levels necessary to sustain prior growth rates in reported EPS. Hribar, Jenkins and Johnson (2006) confirmed that company executives used share repurchases to meet or beat analysts' EPS forecasts, but investors in general were knowledgeable enough to recognise and discount this earnings management behaviour.

Change in capital structure

The change in capital structure motivation is based on the effect of a share repurchase on leverage. A company's capital structure and its seeking of an optimal capital structure will affect the decision to repurchase shares. A share repurchase financed by debt will increase leverage more than when financed by cash. External funds are often utilised when repurchasing shares and therefore share repurchases are a means to access debt capacity (Bagwell & Shoven, 1989; Dittmar, 2000; Mitchell & Dharmawan, 2007; Ofer & Thakor, 1987). Share repurchases replace

relatively expensive equity with cheaper cash or debt and the extent thereof is dependent on the relative yields (Stonham, 2002: 39). The relative yields are addressed in the following discussion on wealth transfer.

Wealth transfer

The wealth transfer motivation is linked to whether the repurchasing company is under- or overvalued and the extent of this wealth transfer depends on the method in which the repurchase is financed, as well as the comparative yields on different types of assets. There is a general assumption that the announcement of a share repurchase programme will result in increased value through a rising share price (i.e. the information-signalling theory). A rising share price following a share repurchase will generally increase total shareholder value. If the repurchase is financed by cash, earnings will improve only if the yield on cash is below the gross earnings yield of the equity market. If the repurchase is financed by debt, earnings will improve only if the company repurchases shares when the cost of equity is well above the cost of debt, or when the equity risk premium is well below normal levels. (Stonham, 2002: 38-39)

The wealth transfer effect benefits long-term shareholders at the expense of sellers if the shares of the repurchasing company are undervalued. By selling some or all of their shares, investors are swapping the repurchase price for the future distribution (dividends and future selling price) which these shares would have afforded them. Conversely, if the shares of the repurchasing company are overvalued in the market, they dilute the shares of the remaining shareholders and shift wealth from long-term shareholders to sellers (Stowe *et al.*, 2009: 178).

Management entrenchment motive

Companies with high managerial ownership were found to be more likely to use share repurchases to increase the percentage of managerial ownership and thereby entrench their managerial control (Vafeas, 1997). Management entrenchment supports the agency theory (which is discussed in section 3.2.3.2. below), because higher managerial ownership would reduce the conflict of interest between ownership and control by better aligning the interests of management with those of other shareholders (Jensen, 1986). The management entrenchment motive is linked to the share option compensation motive, which is discussed below.

Takeover defence

Companies facing a takeover threat can thwart this offensive by repurchasing their own shares. Share repurchases by the acquisition target company increase the cost of the acquisition by changing the distribution of shareholders' valuations. Essentially, repurchases eliminate the shareholders with low valuations, thus skewing the remaining shareholders towards a higher valuation and thereby increasing the cost of the takeover (Bagwell, 1991a; Persons, 1994).

Share option compensation

As stated under the earnings enhancement motive, share repurchases reduce the number of issued shares and therefore could lead to an increase in EPS, assuming that earnings remain constant. If a company has outstanding share options, these options affect diluted EPS (namely these options increase the number of shares used as the denominator in the diluted EPS calculation). When the share options are exercised, the number of shares used in the EPS calculation increases and EPS will therefore reduce. In anticipation of exercisable options, management may therefore decide to repurchase shares to mitigate the negative effect of exercised options on EPS. The discussion above on EPS enhancement is therefore also applicable when a company has outstanding share options.

Share options formed an integral part of managements' compensation in recent years. Share repurchases usually lead to an increase in share prices (i.e. the information-signalling theory) and generally do not affect the number and exercise price of share options held (Jolls, 1998). Share repurchases therefore make employee options more valuable and this adds to management option compensation (Stonham, 2002: 39). Given the positive association between share price and share repurchase announcements, a share repurchase announcement might be a secondary measure used to manipulate market opinion and enable a manager with exercisable options to benefit from the positive signalling effects associated with the announcement (Balachandran, Chalmers & Haman, 2008: 47).

Fenn and Liang (2001: 47-48) found a negative relationship between dividends and management share options and a positive relationship between share repurchases and management share options. Several studies observed a link between share repurchases and share options granted as compensation to management and boards (Bartov, Krinsky & Lee, 1998; Gumpport, 2006; Gumpport, 2007; Jolls, 1998; Kahle, 2002; Weisbenner, 2000).

As stated above under the management entrenchment motive, a company with high managerial ownership is more likely to use share repurchase to increase the percentage of managerial ownership and thereby entrench their managerial control. If management is also in possession of exercisable share options, the resulting effect will therefore be increased when these options are exercised.

3.2.3 Determinants of choice between payout methods

3.2.3.1 Overview of global research

When a company has excess capital resources, it is faced with two alternatives: either invest the funds to advance business goals or return the cash to claim holders through dividends, debt repayments or share repurchases. The choice between dividends and share repurchases is in many circumstances determined by the motive behind the distribution. Miller and Modigliani (1961)

suggested that when markets are incomplete, companies can convey information about future cash flows through changes in payout policy.

For the purpose of this study, it is necessary to highlight that there are two closely related aspects relevant to the literature on the determinants of choice between different payout methods. Firstly, the choice of payment method depends on the specific characteristics of the company when deciding between different types of dividend payments and / or different types of share repurchases. Secondly, a detailed analysis of share repurchases and dividends may confirm the substitution hypothesis, namely that share repurchases substituted dividends over time. The substitution effect is therefore the result of the payment choice, based on the specific characteristics of the company making the distribution. The first aspect (i.e. the specific company characteristics affecting the payout choice) was relevant for the purpose of this study. The second aspect (i.e. the dividend substitution hypothesis) adds to the understanding of payout practice.

The specific company characteristics discussed below identifies those characteristics which affect the choice between share repurchases and dividend payments and do incorporate certain aspects discussed in sections 3.2.2.2 and 3.2.2.3 above on the motivation for share repurchases.

3.2.3.2 Company characteristics affecting choice of payout

Various studies in the US market elucidated the factors which may influence the choice of distribution method. Ofer and Thakor (1987) compared dividend increases and share repurchases, but failed to discriminate between the different types of repurchases. Brennan and Thakor (1990) differentiated between open market and self-tender offers, but not between the different types of self-tender offers. Comment and Jarrell (1991) and Vafeas (1997) evaluated all the different share repurchase methods, but failed to include special dividends as an alternative. Bagwell (1991b, 1992) and Persons (1994) only compared the different types of self-tender offers.

Lie and Lie (1999) included all types of share repurchases as well as special dividends and regular dividend increases in their study. They compared self-tender offers to special dividends and open market share repurchases with dividend increases rather than regarding them as independent alternatives. Caudill *et al.* (2006) completed the most comprehensive study by including special dividends, Dutch auction self-tender offers, fixed price self-tender offers and open market share repurchases of US companies for the period 1986 to 1990.

Caudill *et al.* (2006) developed the first empirical model of choice among all four one-time corporate cash disbursement methods in the US. These authors reported that the ownership structure, current payout level, the size of the distribution, and the share price performance prior to the announcement date were the significant determinants of a company's choice between alternative payout methods. Caudill *et al.* (2006) based their model on the expected relationship between different payout methods and the main company characteristics, as derived from prior

theoretical work. These characteristics comprised shareholder heterogeneity; level of company undervaluation; dividend payment history; size of distribution; agency cost (including inside shareholding and degree of financial leverage); share performance prior to distribution; and takeover threat. For the purpose of this study, the global research on each of these company characteristics will be discussed, including the findings of Caudill *et al.* (2006).

Shareholder heterogeneity

Brennan and Thakor (1990) developed a theory on the choice between share repurchases and dividends which assumes that all public and private information on a company's prospects is not reflected in the share price, and that the acquisition of information is costly. Uninformed shareholders are more willing to incur informational cost if they think that there are also other uninformed investors. Larger companies (which tend to have a larger number of shareholders) generally have larger institutional holdings when compared to smaller companies (which tend to have a smaller number of shareholders). Institutional owners define to a great degree the share price of companies. These institutional owners are in a privileged position to access information from the company and its competitors and therefore exercise a surveillance function (Allen, Bernardo & Welch, 2000).

Studies found – all else being constant – that the following types of companies were expected to experience high degrees of diversity in shareholder valuations and significant informational asymmetries: small companies; companies in which institutional investors own relatively low percentages of shares; and companies with a small number of shareholders. These companies were more likely to select a fixed price self-tender offer or special dividend, because the informational cost pertaining to these payout methods was not high.

On the other hand, the following types of companies were expected to experience low degrees of diversity in shareholder valuations and insignificant informational asymmetries: large companies; companies in which institutional investors own relatively high percentages of shares; and companies with a large number of shareholders. These companies were more likely to select a Dutch auction self-tender offer or an open market share repurchase, because of the lower degree of uncertainty in respect of the value of the shares. (Bagwell, 1991a; Bagwell, 1992; Brennan & Thakor, 1990; Jain, 2007; Merton, 1987; McNally, 1999; Persons, 1994)

Caudill *et al.* (2006: 44-45) supported the findings of previous studies. A negative relationship was found between institutional holdings and the probability of a special dividend; and number of shareholders and the probability of a special dividend. A positive relationship was found between institutional holdings and the probability of an open market share repurchase; and number of shareholders and the probability of an open market share repurchase. Companies with higher levels of informational asymmetry therefore preferred special dividends over open market share repurchases (Caudill *et al.*, 2006: 46).

Agency cost (including inside ownership and degree of financial leverage)

The agency theory analyses the conflict of interest resulting from the separation of the ownership and control of a company. There might therefore be a divergence between the interests of managers and shareholders. The cost incurred to ensure that managers will act as better agents, is called 'agency cost'. Two recognised methods to reduce agency costs are for management to increase its ownership in the company (thereby better aligning its interest with shareholders' interest); and to increase payouts to shareholders (thereby reducing resources under management's control and hence increasing the likelihood that management will monitor capital markets when obtaining new capital) (Jensen, 1986: 323).

The decision to make a distribution to shareholders may be more likely if the company's financial leverage is below its target. The impact on financial leverage of either payout method – holding the size of the distribution constant – should be equal. However, if financed through debt (as is the case with many repurchase programmes in the US), a larger increase in financial leverage would be obtained (Ofer & Thakor, 1987). Vafeas (1997) found a positive relationship between insider ownership and leverage and the probability of self-tender offers, but not between insider ownership and leverage and the probability of open market share repurchases.

Caudill *et al.* (2006: 39, 45-46) found no significance in the results of the inside ownership and financial leverage determinants.

Level of company undervaluation

Management regards share repurchases as a substitute for real investments and would therefore be more likely to repurchase shares when the shares are undervalued. Ikenberry *et al.* (1995: 198) stated that many undervalued shares have high book-to-market ratios and that smaller companies were more likely to be undervalued owing to the diversity in shareholder valuations. Fenn and Liang (2001) found a negative relationship between open market share repurchases, as well as dividend payments, and market-to-book ratio. They reported that undervalued companies showed a marginally higher preference for open market share repurchases compared to dividend payments (Fenn & Liang, 2001: 60).

Both share repurchases and special dividends could effectively be used by management to signal that the company's shares are undervalued. On average, tender offers experienced a larger share price increase (i.e. signal) than a special dividend (Howe, He & Kao, 1992). The initial excess return was higher for tender offers than for open market share repurchases, with the fixed price tender offer experiencing the highest signalling effect (Comment & Jarrel, 1991; Ikenberry *et al.*, 1995; Ofer & Thakor, 1987; Persons, 1994).

Fenn and Liang (2001: 70) observed that, given the increase in share prices, companies have become more overvalued over time. Abnormal returns subsequent to share repurchase

announcements however strongly suggest that the companies were in fact undervalued at the time of the announcement (Stephens & Weisbach, 1998: 316).

Caudill *et al.* (2006: 45-46) did not find a significant relationship between company undervaluation and payout method.

Size of distribution

It was found that a company was likely to use a special dividend for small distributions, an open market share repurchase for larger distributions and a self-tender offer for the largest distributions (Brennan & Thakor, 1990; Comment & Jarrell, 1991; Vafeas, 1997).

Caudill *et al.* (2006: 45-46) found that an increase in distribution size had the highest relationship with the probability of a special dividend. The size of the distribution was a significant factor for all payout methods. The positive relationships, in order of highest to lowest relationship were as follows: special dividend; Dutch auction self-tender; and fixed price tender. A negative relationship was found between the size of the distribution and open market share repurchases. These results therefore differed from earlier studies. Caudill *et al.* (2006) found that open market share repurchases were used for the smallest distributions, while the largest distributions were made through special dividends, followed by tender offers.

Share performance prior to distribution

It was found that companies were likely to follow a strong share price performance with a dividend increase or special dividend payment (Vafeas, 1997). Companies favoured fixed price tender offers or open market share repurchases if the distribution was preceded by a poor share price performance (Jagannathan *et al.*, 2000).

Caudill *et al.* (2006: 46-47) found that if a company's prior share price performance was negative, it was more likely to choose a fixed price tender offer or open market share repurchase than a special dividend, and companies with good prior share price performance were more likely to choose a special dividend.

History of dividend payment (or clientele effect)

Under the clientele effect theory it is assumed that investors who want to earn investment income (i.e. dividends) will invest in high-dividend-payout companies (Pettit, 1977). A company which had the reputation of paying high dividends, therefore characterised by a high dividend yield, was more likely to pay special dividends rather than repurchase shares. Companies with low dividend yields were likely to choose self-tender offers over special dividends (Lie & Lie, 1999). In most countries shareholders preferred share repurchases over dividends, because share repurchases were taxed at lower rates (via capital gains tax) than dividend income (via marginal tax rates). Subsequent to

2003 the advantage has been partially neutralised in the US and UK, as dividends were then taxed at the same rate as capital gains on repurchases (Dittmar, 2008; Stonham, 2002: 39). The tax advantage of share repurchases as opposed to dividends however persisted, given the fact that capital gains tax is levied on the profit compared to base cost, whereas total dividend income is taxed as part of personal income.

Financial flexibility is also relevant when addressing the history of dividend payments. Companies can gain financial flexibility by announcing the intention rather to utilise excess cash by repurchasing shares in the open market, than to increase dividend payments. If a potential large investment or acquisition opportunity arises, a share repurchase programme could be halted with greater ease and with less damage to shareholder confidence than if cash were to be retained by cutting dividends (Stonham, 2002: 40).

Caudill *et al.* (2006: 46) found a positive relationship between dividend yield and special dividends, and a negative relationship between dividend yield and open market share repurchases. Companies already paying high dividends were found to be more likely to pay a special dividend than institute an open market share repurchase.

Takeover threat

Insider management may prevent outsiders from gaining control of an undervalued company by increasing the share value through share repurchases (Vermaelen, 1984). Share repurchases were found to be a more effective takeover deterrent than cash dividends when there was a high level of diversity in shareholder valuations. Shareholders willing to tender were those with the lowest valuations, thereby raising the cost of the takeover (Bagwell, 1991a: 84). A company facing a takeover threat, when choosing between a fixed price tender offer and a Dutch self-tender offer, was more likely to use a Dutch self-tender offer if their company was larger with relatively lower levels of diversity in shareholder valuations (Persons, 1994: 1395). Billett and Xue (2007) postulated that open market share repurchases deterred a takeover threat from occurring in the first place and found a significant positive relationship between open market share repurchases and takeover probability.

Caudill *et al.* (2006: 46) found that companies facing a potential takeover threat chose a fixed price self-tender offer rather than any other payout method.

3.2.3.3 Dividend substitution

The dramatic increase in share repurchase activities in the US since the 1980s raised the question whether share repurchases were substituting cash dividends. Dittmar (2000: 349) found that companies were not replacing dividends with share repurchases in the period 1977 to 1996 since repurchasing companies were not paying lower dividends. Fama and French (2001: 39) however

recorded a drop in the proportion of dividend-paying companies (in the non-financial non-utility sectors) from 66,5 per cent in 1978 to only 20,8 per cent in 1999. This decline was ascribed to a change in the general profile of listed companies following the surge of listings of small companies. These small companies had low profitability but high growth opportunities, which made them less likely to pay dividends. Other companies, irrespective of their characteristics, were also found to be less likely to pay dividends, indicating that the benefits of dividends had declined over time. Some of the reasons offered for this decline included lower transaction costs for selling shares, larger holding by managers preferring capital gains, and better corporate governance technologies (e.g. more prevalent use of share options) (Fama & French, 2001: 40). Grullon and Michaely (2002) developed a substitution hypothesis confirming that companies were using funds for share repurchases that would previously have been used for dividend increases. Like Fama and French (2001) they found that young companies repurchased shares instead of paying out cash, while large, established companies maintained their level of dividends despite showing a higher propensity to repurchase shares.

The findings of the studies mentioned above may imply that dividends were falling into disuse. However, later studies by DeAngelo, DeAngelo and Skinner (2004: 426) revealed that, although the number of dividend-paying US industrials declined by more than 50 per cent from 1978 to 2000, the real value of dividends paid by these industrial companies actually increased. These findings reflected a practice of a few large, dividend-paying companies paying even larger dividends, while companies paying small dividends stopped paying dividends altogether. The listed industrial companies exhibited a two-tier structure, with the first tier representing a narrow band of high earners paying handsome dividends and a second tier of low earners contributing very little towards dividend payouts. Despite the increased prevalence of share repurchases, dividends were found to be still very much part of company shareholder distribution policies.

Lee and Rui (2007: 140) conducted a US study and found that share repurchases were associated with temporary cash flows and dividends with permanent cash flows and that there was strong evidence for substitution between the two over time. Dittmar and Dittmar (2008) postulated that it was the underlying economic conditions that were driving the wave of corporate finance transactions and not the tendency of markets to undervalue shares. More specifically, the growth in gross domestic product (GDP) was the most important determinant of repurchases. Economic expansion increased operating cash flows, creating a 'free cash flow' problem (especially for the larger, more mature companies) and given the cyclical character of such earnings, and the risk associated therewith, it was likely that repurchases would be chosen over dividends. Von Eije and Megginson (2008: 353) compared dividends and share repurchases of countries that formed part of the EU (prior to May 2004), for the period 1989 to 2005, and found that the fraction of European-listed industrials paying dividends declined from 88 per cent in 1989 to 51 per cent in 1990, while total real dividends increased. The propensity to repurchase shares increased during the period

1989 to 2005 and it was concluded that dividend payments and share repurchases were seen by European industrials as complementary to each other.

In a study by Skinner (2008) on US companies, for the period 1980 to 2005, it was concluded that changes in earnings helped explain changes in payout policy for this period and that repurchases had increasingly become a substitute for dividends. Three principal groups of payers had emerged: namely companies which paid regular dividends and made regular repurchases; companies which did not pay dividends but made regular repurchases; and companies which did not pay dividends but made occasional repurchases. The first group was a relatively small group which dominated the earnings and payout aggregates in recent years. These companies continued to pay dividends largely because of history. Their dividend policies had become increasingly conservative. The relationship between earnings and repurchases was found to be strong, while the relationship between dividends and earnings was weak. Repurchases increasingly absorbed the variation in earnings and therefore repurchases substituted dividends in these companies. Repurchases were typically made every other year, and the link between earnings and repurchases was stronger over a two-year period than a one-year period. This suggested that earnings drove the level of repurchases over two- to three-year windows, but managers timed those repurchases when the share price was low to offset dilution associated with employee share options, to boost reported EPS or to distribute excess cash. The other two principal groups of payers which made repurchases but did not pay dividends were a relatively small group which made regular repurchases and a relatively large group which repurchased occasionally. Neither of the two sets of companies had any significant dividend policy. Earnings explained the repurchases of these companies from 1980 to 2005. In respect of companies which regularly repurchased, the repurchases responded more strongly to earnings over two-year (as opposed to one-year) windows. Dividends were found to be largely the domain of those companies which paid annual dividends and made regular repurchases. These companies were mostly large, mature and profitable and were continuing to pay dividends, but also made regular share repurchases. (Skinner, 2008: 583-584, 587, 589-590, 607)

All share repurchases do not have the potential to be a dividend substitute. When companies repurchase shares with the intention of re-issuing the shares to employees (when exercising share options) or as part of acquisitions, these repurchases were means of financing transactions rather than earnings payouts (Fama & French, 2001).

3.3 SOUTH AFRICAN RESEARCH

3.3.1 Share repurchase activity

South African share repurchases got off to a slow start owing to uncertainty regarding the treatment of repurchases under tax laws at the time and inconsistencies between the Companies

Act and the JSE Listings Requirements (Kruger, 2000: 5). Once the tax implications had been clarified and companies became familiar with this new distribution mechanism, repurchase programmes were initiated by many JSE-listed companies (Daly, 2002: 47). The first repurchase announcement was made by Quyn Holdings Ltd. on 17 December 1999 (Bester, 2008: 96).

By the end of June 2007, 121 industrial companies had made a total of 312 repurchase announcements via SENS for open market as well as specific share repurchases. The total number of repurchased shares noted in the 312 announcements was 4,2 billion shares worth a value of R47,2 billion (Bester, 2008: 94). Punwasi (2012) found that 264 share repurchase announcements were made by 99 companies during the period January 2003 to August 2012. These announcements included 195 open market and 69 specific announcements which were made by companies listed in August 2012 (therefore excluding all announcements made by companies that were delisted during the target period) (Punwasi, 2012: 38). Punwasi reported that the Industrial Goods and Services sector made the most announcements during this period, followed by the Financials and Basic Resources sectors. In respect of number of shares, Punwasi reported that the Insurance sector made the most announcements, followed by the Healthcare and Industrial Goods and Services sectors (Punwasi, 2012: 37-38). It is not clear whether Punwasi used super or sub-sectors in his sector classifications. For the purpose of the present study, it was found that the Punwasi (2012) study included 192 announcements to repurchase 1 791 630 283 shares during the period January 2003 to December 2009 by companies that were still listed in August 2012.

Previous studies did not reveal the full extent of share repurchase activities in South Africa, because announcements of share repurchases (made via SENS) were used as the data source in these studies. In the Bester (2008) study an arbitrary sub-sample of 33 companies was selected to calculate the actual share repurchases, based on data from share repurchases announced via SENS, as well as disclosures in annual reports. Bester, Wesson and Hamman (2010) used the sub-sample of 33 companies of Bester (2008) and extended the research period (to the 2008 financial year-ends of the companies) to obtain an indication of the share repurchase experience in South Africa. The 33 companies repurchased a total of 2 306 193 555 shares (with a value of R52 133 169 286) during the research period. The following share repurchase behaviour was observed for the sample: 59,0 per cent of open market share repurchases in volume (and 49,3% in value) were not reported via the three per cent SENS announcements; actual open market share repurchases represented 47,9 per cent in volume (and 60,5% in value) of total share repurchases; and share repurchases in volume were affected as follows by the different reporting entities: 26,1 per cent own shares repurchased by the company; 56,8 per cent repurchased by subsidiaries; and 17,1 per cent subsequently repurchased by the company from subsidiaries (in value different reporting entities represented 29,1%, 53,7% and 17,2%, respectively) (Bester *et al.*, 2010: 54). The results of Bester *et al.* (2010) indicated that open market share repurchases seemed to be the

preferred method of repurchase based on value of repurchases (but not based on volume), but that it might not be the outright favoured method (as was evidenced globally). Based on the sub-sample of 33 companies it was found that the three per cent announcement rule resulted in about 30 per cent (i.e. 49,3% of 60,5%) of actual share repurchase value not being reported via SENS.

The only study which compared dividends to share repurchases was the Bester (2008) study. Bester (2008: 144) compared share repurchases to dividend payments for 121 industrial companies (namely excluding the Basic Materials and Financials sectors) listed on the JSE during the period March 1998 to June 2007 and recorded the results of announced share repurchases by repurchase method and repurchase entity. It was found that dividends were still the preferred payout method for industrial companies, increasing from 47,8 per cent of companies utilising dividends in 1999 to 74,2 per cent in 2007. Companies using share repurchases (based on announcements via SENS) in 2006 represented 21,2 per cent of the total listed companies. Over the period 1989 to 2007, based on number of companies, 75,0 per cent made use of dividends, while 52,3 per cent announced share repurchases via SENS. A distribution by value showed that 57 per cent of the value was attributed to normal dividends, 14 per cent to special dividends, nine per cent to dividends paid out of share premium, 14 per cent to announced open market share repurchases and six per cent to announced specific repurchases. (Bester, 2008: 102-103,107) The split by share repurchase entity showed that 52,5 per cent of the number of shares was repurchased by the company; 47,2 per cent by its subsidiaries; and 0,3 per cent by its share trusts (Bester, 2008: 95). Repurchases by the holding company of treasury shares held by subsidiaries were not included by Bester (2008).

3.3.2 Motivations for share repurchases

Notable South African studies on the information-signalling hypothesis (traditional information-signalling hypothesis and underreaction hypothesis) were performed by Daly (2002), Bhana (2007), and Pienaar and Krige (2012). Punwasi (2012) tested only the traditional information-signalling hypothesis. Daly (2002) analysed the share returns of 45 JSE-listed companies which made 88 announcements of open market share repurchases between 1 July 1999 and 30 September 2001. Bhana (2007) published the first scientific article in South Africa on the same topic. His research covered the period October 2000 to March 2003 and his sample comprised 117 open market share repurchase announcements. Pienaar and Krige (2012) covered the period October 2000 to December 2007 and analysed 113 open market share repurchase announcements made by 63 companies. Punwasi (2012) covered the period January 2003 to August 2012 and analysed 167 announcements made by 62 companies that were listed in August 2012 (therefore excluding all announcements made by companies that were delisted during the target period). Daly's, Pienaar and Krige's as well as Punwasi's research samples comprised the three per cent SENS announcements of actual open market share repurchases (Daly, 2002: 39;

Pienaar & Krige, 2012: 103; Punwasi, 2012), whereas Bhana's research sample comprised open market share repurchase announcements of intention to repurchase, irrespective of whether the repurchases were actually executed (Bhana, 2007: 27).

The results of the Daly (2002) study proved inconclusive owing to the short period available for research. Bhana (2007) confirmed that the South African market reaction to share repurchase announcements was similar to that experienced in the US study by Ikenberry *et al.* (1995): the initial abnormal return (from day $t-2$ to day t_2) was 4,38 per cent; the long-run three-year abnormal return was 14,35 per cent; and for value shares the long-run three-year abnormal return was 32,8 per cent. Pienaar and Krige (2012) confirmed the results of Bhana (2007) with a long-run three-year abnormal return of 26,57 per cent for non-resource companies. Pienaar and Krige (2012) did not observe a conclusive result on value versus glamour shares. Punwasi (2012: 44) observed a small positive initial abnormal return in the two days following the event (of 0,51%).

Chivaka, Siddle, Bayne, Cairney and Shev (2009) investigated the motivations of South African executives when repurchasing shares under specific authority. The study was conducted by scrutinising the circulars on specific share repurchases for the stated reasons. A total of 55 repurchases (by 47 companies) in the time period 1999 to the end of 2004 were examined. The most frequently stated reasons were sweeping up odd lots (14%), to increase EPS (13%) and to increase NAV (10%). The study concluded that, for all potentially contentious issues (where the reasons for share repurchases potentially affected the interests of multiple stakeholders), there was a significant difference between the theoretical reasons and the stated reasons of executives. Two prominent theoretical reasons, being the signalling mechanism and tax efficiency, were conspicuously absent from the reasons stated in the circulars. Although the underlying reasons were not overtly stated, the real motivations may well be in line with feasible theories.

Marcus and Gore (2008: 6) stated that the South African Revenue Services (SARS) made amendments to the STC system in 2008, mainly to remove opportunities for perceived tax avoidance schemes – more specifically relating to the ability of groups to unwind existing treasury shares structures. These structures typically entailed treasury shares held by the treasury company (the subsidiary) to use as consideration for vendor payments or, more commonly, for use in employee incentive schemes. Wesson and Hamman (2012) examined the repurchase by the holding company of treasury shares held by subsidiaries to ascertain whether repurchasing was a regular transaction conducted by JSE-listed companies; whether these companies undertaking repurchasing transactions complied with the relevant legal and reporting requirements; and what the stated motivations were for these repurchases. The study concluded that the repurchase of treasury shares was a regular occurrence for JSE-listed companies; that the relevant regulatory requirements were not always met; and that the motivations for these transactions differed from share repurchase motivations discussed in global literature. The details of the findings of the Wesson and Hamman (2012) study are discussed in Chapter 5 on share repurchases versus

dividends. The relevance of the findings of the income tax case in which the writer acted as an expert witness is addressed in Chapter 5 as part of the discussion on the repurchase of treasury shares by the holding company.

A recent study by Kruger (2013) addressed the benefit or loss experienced by shareholders and option holders when shares are repurchased by the company. Data constraints (owing to inadequate disclosures in annual reports) led to only one company which is dual-listed, namely Sasol Ltd., being analysed for the period 2006 to 2011. The study was based on the Gumpert model (Gumpert, 2007) and supported the findings of Gumpert, i.e. that dividends favoured shareholders over option holders and share repurchases favoured option holders over shareholders.

Popular articles also observed that share repurchases were a means of making a company look good (by increasing EPS) without the company having to work harder to generate more profit (De Klerk, 2001: 8); and that management members were simultaneously being generously compensated via the increased value of their share options and other compensation linked to EPS performance (Crotty, 2012d; 2013a; 2013b).

3.3.3 Determinants of choice between payout methods

In the study by Bester (2008) on the payout behaviour of JSE-listed industrial companies from March 1998 to June 2007, an attempt was made to determine the factors which may have an obvious influence on the choice of distribution method. Special dividends, open market share repurchases and specific share repurchases were identified as distribution methods. Owing to the lack of data on actual share repurchases and the presumption that special distribution methods (like specific repurchases and special dividends) would be insignificant when compared to other distribution methods (Bester, 2008: 48), the study only applied individual interpretation of data rather than an empirical statistical analysis. A case study methodology was applied on a sub-sample of 20 companies. Bester's methodology entailed identifying factors which should be present for a company (i.e. company characteristics) to execute a distribution method. Bester (2008: 121) then compared the actual company characteristics with the distribution methods which were chosen by the 20 companies on an individual interpretation basis and found that the characteristics which predominantly confirmed the expected outcome were tax implications and share price valuations (i.e. undervaluation). Size of distributions, shareholder dividend preferences, shareholder diversity, and Black Economic Empowerment (BEE) requirements had a significant, but lesser influence on these distribution options. The study noted that BEE transactions may be a stronger motive for future share repurchases in the South African context. Although Bester (2008) provided insight into the payout behaviour of the 20 companies in the sub-sample, it did not provide statistical evidence on determinants of choice between payout methods. The tax implications which were used as a determinant in the Bester study referred to the tax effect of the

transaction on the company which was making the payment – it specifically referred to the fact that payments via subsidiaries, as well as payments from stated capital and share premium accounts, did not attract STC, and that a STC credit reduced a STC liability. Global studies usually based their tax determinant on the tax effect of the transaction on the shareholders receiving the payment, based on their applicable tax laws, namely withholding tax on dividends and capital gains tax on the sale of a shareholder's shares. These aspects were discussed in Chapter 2 on the South African regulatory environment.

The objective of a study by Firer, Gilbert and Maytham (2008) was to ascertain the key factors which drove dividend and share repurchase policies of South African companies, and also to compare these views to modern dividend theories. A questionnaire was sent to 312 directors of JSE-listed companies on 16 August 2006. Only 46 (15%) responses could be used in the analysis. It was found that South African managers targeted a payout ratio and were very conservative when setting dividends in order to avoid having to cut dividends in the future. South African managers considered share repurchases to be more flexible than dividends, but did not seem to have clear share repurchase policy targets. Managers viewed dividends and share repurchases as complements, not substitutes.

In a recent study by De Vries, Erasmus, Hamman and Wesson (2012), it was investigated whether the introduction of specific share repurchases resulted in differences in dividend payout ratios. The research covered the period 1990 to 2009 in respect of all companies listed on the JSE during this period. Payout ratio was measured by dividing ordinary dividends declared by profit attributable to ordinary shares. The results indicated that dividend payout ratios were significantly lower during the 10-year sub-period following the introduction of share repurchases (in July 1999) than before. The payout ratios for those companies involved in specific repurchases were however not significantly different from payout ratios in general (De Vries *et al.*, 2012: 14-15). It needs to be noted that the De Vries *et al.* (2012) study only included specific repurchases and results may be biased due to the omission of open market share repurchases.

Makasi and Kruger (2013) conducted an exploratory study on 27 JSE-listed companies over the period 2001 to 2008 to ascertain whether share repurchase announcements affected earnings. Three measures were used to calculate the effect on earnings prior and subsequent to the share repurchase announcement, i.e. EPS percentage change; dividend per share percentage change; and cash flow per share percentage change. Although the sample size was small, it was found that both dividend per share and cash flow per share showed a significant effect on earnings change after the announcement. It was concluded that further research may indeed reveal that South African companies were substituting share repurchases for dividends (Makasi & Kruger, 2013: 45).

3.3.4 Share repurchases and financial reporting

Bester, Hamman, Brummer, Wesson and Steyn-Bruwer (2008) stated that share repurchases introduced additional complexity into financial reporting. These authors found that only about 25 per cent of the JSE-listed companies (included in the former industrial sector of the JSE) which published market capitalisation in their 2006 annual reports based it on the correct number of group shares (i.e. after the deduction of treasury shares). About 75 per cent of the JSE-listed companies which published market capitalisation in their 2006 annual reports did not base it on the number of group shares: they omitted to deduct subsidiary repurchases and / or trust consolidations in their calculation of the number of shares. Hamman and Wesson (2009) also found that the JSE, when calculating daily market capitalisation, based it on the number of company shares (i.e. before the deduction of treasury shares). This led to the overstatement of market capitalisation of companies involved in share repurchases via subsidiaries and consolidated share trusts.

Vermeulen and Yaffar (2014) found that the NAV per share which was disclosed in the 2009 annual reports of a sample of 75 JSE-listed companies was calculated inconsistently. They found that most companies used two different numbers of issued shares when calculating these ratios (namely number of company shares for market capitalisation and number of group shares for NAV per share).

Inconsistent and contradictory requirements were identified in IFRS on the disclosure of share capital, as well as in the Listings Requirements on the disclosure of the shareholder spread section of the annual report (Wesson & Hamman, 2011; 2013). As discussed in Chapter 2 on the South African regulatory environment, these inconsistencies and contradictions led to inconsistent disclosures in annual reports and made it difficult to ascertain share repurchases made by the holding company, its subsidiaries and also repurchases of treasury shares (held by subsidiaries) by the holding company.

In the light of the fact that a potential large volume of share repurchases are never announced via SENS (owing to the 3% announcement rule on open market share repurchases), as well as the difficulty of ascertaining the extent of actual share repurchases and the limited research on motivations for share repurchases in South Africa, a series of articles on share repurchases was published by Crotty (editor of the *Business Report of Cape Times*) in the *Business Report* during the period June 2012 to February 2013. Crotty (2012b; 2012c; 2012g) questioned why companies in South Africa, such as Telkom SA Ltd. and Anglo American plc., repurchased shares at prices above NAV and continued to repurchase while prices were increasing. The US precedent where shares repurchased exceeded new share issues was also questioned as it indicated that companies no longer used the securities exchange to obtain capital, but rather perhaps to increase the value of option holders (especially when management is in possession of exercisable options)

(Crotty, 2012d). Crotty stated that share repurchases may be the "next great corporate scandal", as was predicted by US academic, Martin Gumpert. Gumpert contended that the most credible explanation for the increase in share repurchases was that share option strike prices were usually not adjusted for dividends: dividends therefore hurt share options, while share repurchases assisted them (Crotty, 2012a). The uncritical approach of shareholders when authorising share repurchases was an identified concern, especially in respect of institutional investors, but Crotty detected some tentative signs of change (e.g. 21% of shareholders of Pick n Pay Stores Ltd. voted against granting general authority to repurchase shares in the open market at the 2012 annual general meeting) (Crotty, 2012e). In an effort to make share repurchase transactions more transparent, Crotty tried to encourage the JSE to replace the three per cent announcement rule with a daily reporting rule (as is the case in most countries). She was met with a response from Burke, head of the JSE listings department, stating that daily announcements should not be made, because the market will take positions against the company and drive up the price. Crotty contended that this appreciation of a supposedly undervalued share price would in fact achieve one of the stated reasons for share repurchases (Crotty, 2012a). As was discussed in Chapter 2 on the South African regulatory environment, the JSE was eventually persuaded, after the intervention of the Financial Services Board (FSB), to amend the JSE Listings Requirements by inserting a separate section on disclosure of share repurchase activities in annual report disclosures (Crotty, 2012f). As from 14 January 2013 JSE-listed companies were required to disclose a separate note on number and average price of shares repurchased, distinguishing between shares repurchased by the holding company and shares repurchased by subsidiaries (and not cancelled) (JSE, 2013). Although this amendment did not resolve the issue of timely information, it would ensure an improvement in the disclosure on actual share repurchase activities in annual reports in the future. An extract of the JSE Listings Requirements amendment (contained in Section 8.63) is included in Annexure D.

3.3.5 Application of global studies on South African research

Share repurchases and their interaction with dividends are well understood and implemented in global financial markets. Data on share repurchase activities are readily available globally because the announcement structures in different jurisdictions require daily, weekly, monthly or quarterly announcements of actual share repurchases. The South African share repurchase environment differs from the global environment, as was stated in Chapter 2 on the South African regulatory environment. The most important difference is that the full extent of South African share repurchase activity does not comprise the share repurchases announced via SENS (mainly owing to the 3% announcement rule on open market share repurchases). South African financial data sources, as well as the JSE, do not provide comprehensive daily data on share repurchases and

therefore total actual share repurchases per reporting period can only be obtained by scrutinising annual report disclosures in combination with SENS announcements.

Globally the information-signalling motive has emerged as the main motivation behind share repurchases and has been the topic of many global studies. Most of the global studies were conducted on open market share repurchases as it was by far the favourite share repurchase method. Global studies on the determinants of choice have also been conducted to ascertain the determinants of choice between payout methods. The study by Caudill *et al.* (2006) was found to be the most comprehensive study on the determinants of choice between payout methods.

Share repurchases in South Africa, and their interaction with dividends, are not well researched. Notable research on the information-signalling hypothesis was all conducted on open market share repurchases, with most covering only limited periods (for instance Daly (2002) and Bhana (2007)), and either using announcements of intention to repurchase (such as Bhana, (2007)) or using actual three per cent announcements of share repurchases in their data (such as Daly (2002) and Pienaar & Krige (2012)). Only Pienaar and Krige (2012: 106) noted that their dataset did not represent all open market share repurchases because of the three per cent announcement rule. All the studies on the information-signalling hypothesis were based on replicating the study of Ikenberry *et al.* (1995), without taking into account how the South African regulatory environment affected the expected results of the studies.

Share repurchases in South Africa may also be executed via subsidiaries (and share trusts), and these shares are not cancelled (but represent treasury shares). These treasury shares may subsequently be repurchased by the holding company and cancelled from issued share capital. Different motivations are applicable when a company repurchases via a subsidiary (and not directly through the holding company); and these motivations also differ from the motivations which are applicable when the holding company subsequently repurchases the treasury shares. Wesson and Hamman (2012) researched the stated motivations when the holding company subsequently repurchased the treasury shares, but the motivations which are applicable when a company repurchases shares via a subsidiary (and not directly through the holding company) have not yet been tested empirically in a South African study. Comparable global studies were not available owing to the fact that share repurchases via subsidiaries were not allowed in most countries, and the subsequent repurchase of treasury shares by the holding company is unique to the South African regulatory environment.

The only study comparing dividends to share repurchases and attempting to ascertain determinates of choice between different payout methods was conducted by Bester (2008). The study however compared announced share repurchases to total dividends and did not include all repurchasing entities (e.g. the repurchase of treasury shares by the holding company were excluded). The determinants of choice between share repurchases and dividends were only

studied on a sub-sample of 20 companies and the methodology applied was a case study basis rather than an empirical analysis.

Earlier South African share repurchase studies did not ascertain the payout behaviour of actual share repurchases and dividends; did not incorporate the implications of the unique South African share repurchase environment when researching the information-signalling hypothesis; and did not ascertain the determinants of choice between different payout methods on a comprehensive and scientific basis.

The major issues in respect of share repurchases in South Africa were therefore still unresolved. These unresolved issues may be explained in the following questions: To what extent do share repurchases take place when compared to dividend payments? What are the motivations for share repurchases? How do companies choose between repurchasing shares and paying out dividends?

3.4 DEVELOPMENT OF PROPOSITIONS AND HYPOTHESES

The literature review confirmed that corporate practice, and the analysis thereof, tend to be set in the US, as share repurchases and the related research have been done in that country since the 1980s. For the purpose of this study, it needed to be acknowledged by the writer that South Africa is an emerging economy and a developing country and may therefore possess different practices when compared to developed countries. Studies on other emerging economies and developing countries (like China, India, Korea and Malaysia) however confirmed the presence of the information-signalling theory (Hyderabad, 2009; Isa *et al.*, 2011). Global studies also noted that differences in regulatory environments may lead to different returns when testing the information-signalling hypothesis (Bradford, 2008: 49). It was therefore necessary to ascertain whether the fact that South Africa is an emerging economy and developing country, as well as that the South African regulatory environment differed from the global environment, resulted in the South African share repurchasing experience differing from the global precedent.

The literature review on South African share repurchases showed that limited research had been done and that empirical evidence and current theoretical thinking still needed to be successfully tested in the South African repurchase environment.

For the purpose of this study, four research questions were identified. Research question 1 deals with share repurchase (and dividend) activity. Research questions 2 to 4 deal with the motivation for share repurchase transactions (specifically the information-signalling hypothesis). The main empirical evidence and current theoretical thinking, as reported in global studies, were summarised in respect of these four research questions. Expected propositions (in respect of identified empirical evidence) and hypotheses (in respect of identified current theoretical thinking) were developed by applying the South African regulatory environment to identified empirical evidence and current theoretical thinking. The aim of the four research questions and resultant propositions

and hypotheses was to enable the development of a model of choice showing what the significant determinants are when companies have to choose between different payout methods.

The four research questions of this study are:

Research question 1

To what extent do share repurchases take place when compared to other types of cash distributions?

Research question 2

Which companies tended to repurchase shares – value companies or growth companies?

Research question 3

What was the initial market reaction to share repurchase announcements?

Research question 4

What was the long-term market reaction to share repurchase announcements?

The following global evidence was identified in respect of Research question 1:

1. Share repurchase value shows a general upward trend (Dittmar, 2008: 27; Grullon & Michaely, 2002: 1649).
2. Share repurchase value increases more rapidly than dividend payments (Fama & French, 2001: 39; Grullon & Michaely, 2002: 1649; Skinner, 2008: 587-590).
3. Share repurchase value exceeds dividend payments (Dittmar, 2008: 27; Dow Theory Forecasts, 2009: 3; Griffin & Zhu, 2010: 1; Steverman, 2009: 1).
4. The open market share repurchases method is the outright favourite share repurchase method (i.e. representing about 90% of share repurchase value) (Fairchild & Zhang, 2005; Grullon & Michaely, 2004: 651; Ikenberry *et al.*, 1995).
5. Special dividend payment value (based on total dividends paid) decreases over time (DeAngelo *et al.*, 2000).

The following current theoretical thinking was identified in respect of Research questions 2 to 4 (on the information-signalling motive):

1. Shares are generally repurchased when management views the company to be a value company (Ikenberry *et al.*, 1995; Stephens & Weisbach, 1998).

2. The traditional information-signalling hypothesis postulates that there is a small positive initial market reaction to share repurchase announcements. This reaction is more evident for tender offers than for open market share repurchases (Vermaelen, 1981; Bagwell, 1992).
3. The underreaction hypothesis postulates that the long-term market reaction exceeds the initial positive market reaction to open market share repurchase announcements. This reaction is particularly evident in value companies (Ikenberry *et al.*, 1995).

In respect of the model of choice the following current theoretical thinking was identified on the determinants of choice between different payout methods:

1. Ownership structure, current payout level, the size of the distribution and the share price performance prior to the announcement date are the significant determinants of a company's choice between alternative payout methods (Caudill *et al.*, 2006).

These identified empirical evidence and current theoretical thinking had to be developed into propositions or hypotheses to be tested in the South African share repurchase environment. A summary of the effect of the South African regulatory environment on the identified empirical evidence and current theoretical thinking are discussed below, under the following headings: Share repurchase activity; Information-signalling motive; and Determinants of choice between different payout methods.

Share repurchase activity

The results of earlier South African research indicated that it should not be expected that South African share repurchases would exceed dividend payments (as was the case in the US) during the 11 years covered in this research, because share repurchases had only been allowed since 1 July 1999, while US share repurchases had been executed from as early as the 1980s. Although Bester (2008) only compared announced share repurchases to dividend payments, the results indicated that many companies had still been paying dividends until 30 June 2007 (the end date of the Bester study). It was also not expected that the open market share repurchase method would be the outright favourite repurchase method. Although the sample of the Bester *et al.* (2010) study comprised only 33 companies, the results indicated that open market share repurchases did not represent about 90 per cent of share repurchase value (as was the case globally). It was also expected that the announced share repurchases would not represent comprehensive share repurchase data for JSE-listed companies, as was indicated in the exploratory study of Bester *et al.* (2010). Repurchasing entities unique to the South African share repurchase environment (namely subsidiaries and the holding company as repurchaser of treasury shares) were also expected to comprise a significant part of share repurchase activities, as was indicated by Bester *et al.* (2010).

In respect of Research question 1 (i.e. To what extent do share repurchases take place when compared to other types of cash distributions?) the following propositions were therefore formulated for South African share repurchase activity for the reporting periods including 1 July 1999 to the 2009 year-ends of the companies:

- Proposition 1: Share repurchase value shows a general upward trend.
- Proposition 2: Share repurchase value increases more rapidly than dividend payments.
- Proposition 3: Share repurchase value does not exceed dividend payments.
- Proposition 4: The open market share repurchase method is not the outright favourite share repurchase method.
- Proposition 5: Special dividend payment value (based on total dividends paid) decreases over time.
- Proposition 6: The JSE share repurchase announcement structure leads to announcements not representing comprehensive data on share repurchase activities.
- Proposition 7: Share repurchases by subsidiaries (and therefore also the repurchase of treasury shares by the holding company) represent a significant part of share repurchase activities.

Information-signalling motive

The South African three per cent announcement rule on open market share repurchases does not apply in the global environment. Globally the signalling effect was measured on the basis of the daily, weekly, monthly or quarterly announcements of actual share repurchases. South African open market share repurchases (announced in SENS under the 3% rule) may represent shares repurchased in the preceding year(s) or in the current year and on the previous day – depending on how the three per cent rule was interpreted and when the limit was reached.

It was therefore expected that the short-term market reaction (or traditional information-signalling hypothesis) to open market share repurchases would not be as high as is the case globally because of the potential low market response to announcements not necessarily related to the actual share repurchase dates. Announcements on *pro rata* offers (which are similar to a global *pro rata*-type fixed price tender offer) were expected - in line with current theoretical thinking - to show initial positive abnormal returns, but were not expected to be credible signals subsequent to the exercise date (Bagwell, 1992). Announcements on other specific offers (which are similar in type to global direct or private offers) were not expected to be credible signals subsequent to the exercise date, in line with current theoretical thinking where private offers were not included in literature on the information-signalling motivation. It was expected that specific share repurchases that resulted from treasury shares repurchased by the holding company would not be credible signals as these repurchases were not necessarily motivated by the undervaluation of the company's shares (Wesson & Hamman, 2012).

The current theoretical thinking on the long-term market reaction (or underreaction hypothesis) was expected also to apply in the South African share repurchase environment. An abnormal return lower than observed globally was not expected on open market share repurchases, because of the long-term nature of the study. As stated above, in line with current theoretical thinking, announcements on *pro rata* offers and other specific offers were not expected to be credible signals. It was also not expected that the specific share repurchases that resulted from treasury shares repurchased by the holding company would show significant excess returns.

Prior South African studies on the information-signalling hypothesis (e.g. Bhana (2007) and Pienaar and Krige (2012)) were conducted only on open market share repurchases and supported the current theoretical thinking on the traditional and underreaction hypothesis. The present study applies an improved dataset, an extended research period and more robust methodologies when compared to the prior South African research. The prior South African research on the information-signalling hypothesis supports the expectation of the present study, namely that current theoretical thinking on the information-signalling hypothesis is mirrored in South Africa.

In respect of Research question 2 (i.e. Which companies tended to repurchase shares – value companies or growth companies?) the following hypothesis was therefore formulated:

Hypothesis 1: Shares are generally repurchased when management views the company to be a value company.

In respect of Research question 3 (i.e. What was the initial market reaction to share repurchase announcements?) the following hypothesis was therefore formulated:

Hypothesis 2: The traditional information-signalling hypothesis postulates that there is a small positive initial market reaction to share repurchase announcements. This reaction is more evident for *pro rata* offers than for open market share repurchases.

In respect of Research question 4 (i.e. What was the long-term market reaction to share repurchase announcements?) the following hypothesis was therefore formulated:

Hypothesis 3: The underreaction hypothesis postulates that the long-term market reaction exceeds the initial positive market reaction to open market share repurchase announcements. This reaction is particularly evident in value companies.

Determinants of choice between different payout methods

Prior studies on South African share repurchases did not address the determinants of choice and hence in this study it was expected that the significant South African determinants of choice would follow the precedent of the US study by Caudill *et al.* (2006). Redefining of the measurement bases underlying the variables in the Caudill *et al.* (2006) study and incorporating the research results of

the present study were however required to reflect the available data and the characteristics of the South African regulatory environment.

The following hypothesis was formulated on the determinants of choice between different payout methods:

Hypothesis 4: Ownership structure, current payout level, the size of the distribution and the share price performance prior to the announcement date are the significant determinants of a company's choice between alternative payout methods.

3.5 CONCLUSION

This chapter addressed the global and South African literature on share repurchase and dividend payment evidence; the current theoretical thinking on motivations for share repurchases; and the current theoretical thinking on determinants of choice between share repurchases and dividend payments. Identified empirical evidence and current theoretical thinking were used to formulate four research questions to be able to address the research problem of this study. The research problem of this study was based on the following question: Does the South African share repurchase experience mirror empirical evidence and current theoretical thinking?

Research question 1 addressed share repurchase activity and Research questions 2 to 4 addressed the current theoretical thinking on the information-signalling motive. Propositions and hypotheses were developed to address the four research questions. The purpose of addressing these research questions was to enable the development of a model to determine what the significant determinants of choice are between different payout methods. A hypothesis was also formulated in respect of the identified global theoretical thinking on determinants of choice. In this study all hypotheses which were developed to address the relevant research questions represent the alternative hypotheses in the classical statistical testing of hypotheses.

The propositions and hypotheses incorporated the results of the previous chapter on the South African regulatory environment which showed that the South African regulatory environment differed from the global environment. The results in respect of the propositions and hypotheses will show whether the differing regulatory environment, as well as the fact that South Africa is a developing country as opposed to developed countries where the share repurchase evidence and current theoretical thinking are set, led to the South African share repurchase experience differing from the global results.

The following chapter deals with the methods applied in compiling the database on share repurchases and dividends by companies in selected JSE-listed sectors. Chapter 5 on share repurchases versus dividends addresses Research question 1 (and Propositions 1 to 7); Chapter 6 on value versus growth addresses Research question 2 (and Hypothesis 1); and Chapter 7 on the

short-term and long-term market reaction addresses Research questions 3 and 4 (and Hypotheses 2 and 3). Chapter 8 on the determinants of payouts tests Hypothesis 4.

CHAPTER 4

DATA COLLECTION

4.1 INTRODUCTION

The purpose of this study was to document the extent of share repurchases in South Africa and to test whether empirical evidence and current theoretical thinking were also followed in this country. In this chapter the procedures applied to document the extent of share repurchases and dividend payments by companies in selected JSE-listed sectors for the reporting periods including 1 July 1999 to the 2009 year-ends of the companies are described.

For the purpose of this study, share repurchase data per reporting period per company was required on the following: number of shares repurchased; rand value of shares repurchased; repurchasing entity (i.e. holding company or subsidiary or share trust); type of repurchase (i.e. open market or specific repurchase, as well as a distinction between the types of specific repurchases – *pro rata* offers and specific offers); and whether the share repurchase was announced via SENS or not. Dividend data per reporting period per company was required on the rand value of the type of dividend paid (i.e. dividends paid from profits or dividends paid from share premium or special dividends paid).

Data on share repurchases in countries such as the US, UK, Canada and Australia, are readily available owing to their share repurchase announcement requirements, as was discussed in Chapter 2 on the South African regulatory environment and in Chapter 3 in the literature review, and resulted in numerous global studies on share repurchase behaviour and current theoretical thinking. None of the financial data-providing agencies in South Africa have kept detailed records on share repurchase activities or dividends (per type of dividend paid per annum) for the full 11 years (i.e. 1999 to 2009) covered in this study. The lack of comprehensive South African share repurchase data has led to a low level of research on share repurchases by JSE-listed companies.

The first comprehensive database of share repurchases by companies in selected JSE-listed sectors was compiled in this study. This comprehensive database on share repurchases enabled a comparison of South African share repurchases with empirical evidence.

4.2 SHARE REPURCHASE DATA

4.2.1 Exploratory study

For the purpose of the present study, previous research on share repurchases could not be used as a starting point for data collection on share repurchases. Although Daly (2002) included certain details in his research report (i.e. names of companies, dates of SENS announcements, values of the repurchases, and whether the repurchases were made by the company or the subsidiary), his

research was only in respect of announced open market share repurchases for the period 1 July 1999 to 30 September 2001. Bester (2008) verified and expanded Daly's dataset on announced open market share repurchases to include the period July 1999 to June 2007 and published certain repurchase details in his research report (i.e. names of companies, number of SENS announcements, number of shares repurchased and value of the repurchases). Announcements of shares repurchased by the holding company from its subsidiaries were however not included on a comprehensive basis by Bester (2008). Punwasi (2012) only included the number of shares and number of announcements per JSE sector per annum in his study.

Previous South African research on share repurchases (Bester, 2008; Bhana, 2007; Daly, 2002; Pienaar & Krige, 2012; Punwasi, 2012) was based predominantly on open market share repurchases that were announced via SENS. The trend in global research (especially in the US and UK) was that announced open market share repurchases represented more than 90 per cent of share repurchase value (Banyi *et al.*, 2008: 460; Fairchild & Zang, 2005; Ikenberry *et al.*, 1995: 182). It was therefore seen to be necessary to ascertain whether the empirical evidence was also evident in South Africa. It also needed to be ascertained whether the South African three per cent announcement rule applicable to open market share repurchases led to the understatement of announced share repurchases. The confirmation of a similarity to empirical evidence would indicate that announced share repurchases could be used as the main source of data collection when compiling a database of share repurchases by JSE-listed companies. Non-confirmation of the empirical evidence would indicate that a comprehensive share repurchase database had to be compiled in the present study and that previous research did not fully represent actual share repurchase activities by JSE-listed companies. An exploratory study on a small sample of JSE-listed companies was therefore conducted by researchers including the writer (Bester *et al.*, 2010) to derive an indication of share repurchase behaviour.

A sample of 33 JSE-listed companies, all of which entered into ordinary or N-class share repurchases during the reporting periods including 1 July 1999 to the 2008 year-ends of the companies, were selected for the exploratory study. The selection was based on the sample of 33 companies which were selected in the Bester (2008) study. Bester (2008) included data until June 2007 and did not consistently include the repurchase of treasury shares by the holding company. In the exploratory study data on all share repurchase entities and share repurchase types (as were identified in the present study) were captured until the 2008 year-ends of the companies included in the sample.

In the exploratory study three data collection methods were applied. The first approach was to search SENS announcements for repurchase activities. This was a relatively quick way of obtaining share repurchase data, because the information could be obtained via electronic searches of the JSE SENS announcements, as stored in the McGregor BFA database (product called News). The format of the SENS announcements was inconsistent over time and the

following keywords had to be searched separately to identify the required announcements: 'repurchase', 'buy-back', 'buyback', 'buy back' and 'treasury'. Information in respect of specific share repurchases sourced in this manner was quite reliable, because these offers usually resulted in actual repurchases when accepted by shareholders. However, the incremental three per cent SENS announcements in respect of actual share repurchases under general authority (i.e. open market share repurchases) created a limiting effect for the purpose of the study: if a company carried out an open market share repurchase during a specific reporting period, but failed to cross the three per cent threshold, no announcement was made in that specific reporting period. This data collection approach therefore did not uncover the complete extent of open market share repurchases in South Africa over a specific time period. It also did not uncover accurate data in respect of the movement of shares between repurchase entities (i.e. holding company, subsidiaries and share trusts), because share repurchases by share trusts are not required to be announced via SENS.

A different approach was therefore adopted to determine the actual shares repurchased by analysing the annual reports from 1999 to 2008 and noting changes in the number of shares issued. The directors' reports, share capital notes to the balance sheet (or statement of financial position) and shareholder analysis (or shareholder spread) of annual reports were carefully scanned for changes in issued shares, including treasury shares held by subsidiaries or share trusts. Although this approach proved to be immensely time-consuming, it was possible to identify the following: repurchases by the holding company (which were cancelled); repurchases by subsidiaries (and not cancelled but regarded as treasury shares and consolidated) and sales by subsidiaries (to the holding company as well as to other external parties); and details of the movement in consolidated share trusts' shares. The share trust repurchase activity could however not be split between repurchases and sales (only a net annual movement on number of shares could be calculated), because there is inadequate reporting thereof in annual reports and because share trust repurchases are not reported via SENS.

Finally, a verification process was followed to ensure that no share repurchase activities had been omitted. This process was based on comparing the total share repurchases (as obtained from the annual reports) with the announced share repurchases (as derived from the SENS announcements) to obtain the unannounced share repurchases and to verify the split between open market and specific share repurchases.

The exploratory study (Bester *et al.*, 2010: 54-55) reported the following share repurchase behaviour in respect of share repurchases excluding the net movements in share trust repurchases: that announced open market share repurchases did not represent the majority of share repurchase activities (announced open market share repurchases represented only 19,6% of the number of shares repurchased and 30,7% of the value thereof); that the majority of open market share repurchases were not announced via SENS (only 41% of the number of open market

shares repurchased and 50,7% of the value thereof were announced via SENS); and that open market share repurchases were not to be the outright favoured method of repurchase (open market share repurchases represented 47,9% of the number of shares repurchased and 60,5% of the value thereof). Specific share repurchases represented 52,1 per cent of the number of shares repurchased and 39,5 per cent in value. Specific share repurchases comprised mainly specific offers, which could be distinguished between the repurchase of treasury shares by the holding company (representing 32,8% in number and 43,6% in value of specific share repurchase activity) and other specific offers (representing 40,2% in number and 26,3% in value of specific share repurchase activity). *Pro rata* offers represented 27,0 per cent in number and 30,1 per cent in value of specific share repurchase activity. It was also found that share repurchase activity per repurchasing entity was mainly dominated by subsidiaries repurchasing shares in their holding company (representing 56,8% in number and 53,7% in value), followed by holding companies repurchasing their own shares (representing 26,1% in number and 29,0% in value), and holding companies repurchasing treasury shares held by subsidiaries (representing 17,1% in number and 17,2% in value).

The results of the exploratory study (Bester *et al.*, 2010) on 33 companies, during their reporting periods including 1 July 1999 to their 2008 year-ends, may not be entirely representative owing to the relatively small data sample. A clear indication was however found that announced share repurchases (and specifically the open market announcements under the 3% rule) did not represent comprehensive share repurchase activities of JSE-listed companies during this period; that open market share repurchases were not the outright favourite repurchase method; and that aspects unique to the South African share repurchase environment (namely share repurchases by subsidiaries and the repurchase by holding companies of treasury shares held by subsidiaries) had to be acknowledged in South African research. The repurchase by the holding company of treasury shares was found to be a unique type of specific offer (and repurchasing entity) and therefore justified a separate identification thereof in the dataset of the Bester *et al.* (2010) study.

The results of the exploratory study (Bester *et al.*, 2010) showed that comprehensive data on share repurchases by JSE-listed companies could only be obtained by applying extensive methods of data collection where SENS announcements as well as annual report disclosures had to be consulted and reconciled.

4.2.2 Collection of share repurchase data

For the purpose of the present study, the share repurchase data per reporting period per company were captured in respect of the following (in number of shares and rand value): repurchasing entity (i.e. holding company repurchasing its own shares, holding company repurchasing treasury shares held by subsidiaries, subsidiary repurchasing shares in the holding company, and share trust net movements of shares held in the holding company); type of repurchase (i.e. open market share

repurchases, *pro rata* offers, repurchases by the holding company of treasury shares held by subsidiaries, and other specific offers); and share repurchases announced via SENS and not announced via SENS.

The companies included in the population were identified by capturing company names from the Profile Stock Exchange Handbook (Profile Media, 2010) per JSE sector as from 1 July 1999 to December 2009 and noting name changes, new listings and delistings, as well as movements between sectors. As was set out in Chapter 1 containing the introduction, the companies included in the population were companies with listed ordinary and / or N-class shares; the JSE was their primary listing; and they were listed on the Main Board, excluding the Basic Materials and Financials sectors.

The data collection methods which were applied in the exploratory study were followed to collect the share repurchase data, but these methods were refined and expanded to address all data issues.

Firstly, each company included in the population was searched via SENS (as obtained from McGregor BFA: product called News) under each of the following keywords: 'repurchase', 'buy-back', 'buyback', 'buy back' and 'treasury'. The following details on each announcement were captured: announcement date; keyword used; type of share repurchase (i.e. open market, *pro rata*, the repurchase by the holding company of treasury shares, or other specific offer); repurchasing entity (i.e. holding company repurchasing its own shares, holding company repurchasing treasury shares, subsidiary repurchasing shares in the holding company, or the net movement in number of shares held by consolidated share trusts); whether shares were cancelled or not; number of shares repurchased; date of repurchase; and rand value of repurchase.

Secondly, the annual report of each company included in the population was retrieved for each reporting period during the target period for which the company was listed. The annual report for the 1999 financial year was only included for those companies with a reporting period ending on / after 1 July 1999. Hard copies of annual reports were predominantly used and, if not available from companies, electronic annual reports were retrieved via McGregor BFA (product called Library) or the internet. Share repurchase activities were not always disclosed in a standardised format in annual reports during the target period. Different sections of each annual report therefore had to be scrutinised to identify share repurchase activities and to ascertain the number of shares, rand value, type of repurchase and repurchasing entities. The directors' report, balance sheet (or statement of financial position), cash flow statement, statement of changes in equity, share capital note, and shareholders' analysis (or shareholder spread) were predominantly used to obtain the information.

Three separate sets of data were captured from the annual report of each company. The first set of data which was captured was a reconciliation of number of shares per reporting period (showing

opening and closing balances for number of company shares, shares held by subsidiaries, and shares held by consolidated share trusts). The number of company and group shares was therefore calculated per reporting period and verified from the annual report disclosures (either in the share capital note, or from a combination of disclosures if the share capital note was not comprehensive). In the reconciliation per reporting period, a distinction was made between share repurchase entities, i.e. the holding company repurchasing its own shares; the holding company repurchasing treasury shares; the subsidiary repurchasing shares in the holding company; the subsidiary selling shares to the holding company; the subsidiary selling shares to other external parties; and net share trust movements. The second set of data was to ascertain whether the identified share repurchases were open market or specific share repurchases, based on information disclosed in annual reports. The third set of data was to capture the rand values of share repurchases per repurchase entity and repurchase type, based on information disclosed in the annual report. A comparison between the group statement of changes in equity and company statement of changes in equity was important when verifying the rand value of subsidiary repurchases and holding company repurchases of treasury shares held by subsidiaries. The amounts disclosed in the statement of changes in equity and cash flow statement were specifically noted and captured separately.

Thirdly, the information which was obtained in the two data collection methods was compared to ensure that no share repurchases were omitted; to identify which announcements led to actual share repurchases; to finalise the allocation of rand values and number of shares to different types of share repurchases and types of repurchasing entities; and to identify the unannounced share repurchases. Open market share repurchases which were announced subsequent to the actual repurchase date (owing to the application of the 3% announcement rule) were allocated to the reporting period in which the actual repurchase was made in order to obtain the announced and unannounced components. For delisted companies, share repurchases announced before delisting, but subsequent to the final published annual report, were only included in the share repurchase dataset if the share repurchase could be verified as a cancellation in the number of issued shares on the McGregor BFA database (product called Price Data).

The three data collection methods enabled a summary of share repurchases to be drawn up per company per reporting period (in number of shares and rand values) in a final dataset, based on three different categories: repurchase entities; repurchase types; and announced versus unannounced share repurchases. The 227 companies included in the population comprised a total of 1 827 reporting periods during the target period. Their 1 827 annual reports therefore had to be scrutinised for share repurchase activities and reconciled to the SENS announcements of each of the 227 companies (as was described above under the three methods of data collection).

Examples of share repurchases identified during the data collection process, but excluded from the final dataset, were as follows:

- Repeated announcements, as when companies announced the same share repurchase more than once in SENS (the study only included the actual share repurchases);
- Fraudulent announcements of share repurchases (e.g. three false announcements by Control Instruments Group Ltd. in 2008 which were discovered during the annual audit) (Control Instruments Group Ltd., 2008: 11);
- Announcements of share repurchases which had occurred subsequent to the publication of the final annual report, but before the delisting of the company, and which could not be verified with the daily movement in number of shares as obtained from McGregor BFA (product called Price Data). All announcements of share repurchases by subsidiaries before delisting, but subsequent to the final annual report, were excluded from the dataset, because only daily movements in the number of company shares are captured on McGregor BFA (product called Price Data);
- Share repurchases by subsidiaries which had been announced in SENS or disclosed in the annual report, but were subsequently deemed 'null and void' by the company owing to the violation of the 10 per cent limit which may be held by subsidiaries (e.g. Brandcorp Holdings Ltd. in 2003 and Connection Group Holdings Ltd. in 2003); and
- Share repurchases made by companies which had been listed for less than three years during the target period. There were three companies which had been listed for less than three years, but repurchased shares. The share repurchases of Crux Technologies Ltd. (64 642 857 shares repurchased for R23 772 000), Voltex Holdings Ltd. (859 241 shares repurchased for R2 275 000), and Power Technologies Ltd. (8 204 562 shares repurchased for R23 813 000) were therefore excluded from the dataset.

4.2.3 Problems encountered and recommendations put forward

The following problems were encountered when obtaining information on share repurchases for the purpose of this study:

- None of the financial data sources as well as the JSE kept detailed records on share repurchase activities for the full 11 years covered in this study (i.e. 1999 to 2009). Research or analysis on share repurchases therefore required time-consuming investigations of the SENS database (as published by McGregor BFA: product called News) and company annual reports; as well as extensive verifications.
- The database search on SENS (as published by McGregor BFA: product called News) proved to be incomplete owing to inconsistent use of terminology. Share repurchase

announcements could, for example, include any of the following key words or phrases: 'repurchase', 'buy-back', 'buyback', 'buy back' and 'treasury'. Each keyword had to be searched separately on the McGregor BFA database.

- Actual share repurchases under general authority (i.e. open market share repurchases) are only reported on SENS at each three per cent increment, which meant that if open market share repurchases remained below this limit, they were not reported in SENS. An announcement in terms of the three per cent rule could refer to share repurchases disclosed in a previous year's annual report which complicated the compilation of an accurate share repurchase database.
- Annual reports did not include a standardised disclosure format on share repurchase activities during the full 11 years covered in this research (i.e. 1999 to 2009). Share repurchases were usually mentioned in the annual report under the chairman's review or the directors' report. However, these references did not always provide detailed information in respect of the number of shares repurchased, repurchasing entity, and the cost of the repurchase. Ultimately, a detailed review of the balance sheet, statement of changes in equity, cash flow statement, shareholder spread and notes to financial statements were required to determine accurate share repurchase activities.
- Company annual reports did not always show an annual reconciliation of treasury shares (often omitting number or rand value) and seldom distinguished between treasury shares held by subsidiaries and share trusts in the notes to the financial statements. Treasury shares repurchased (and sold) by subsidiaries could therefore only be split between number and value by scrutinising other sections of the financial statements (such as the directors' report, statement of changes in equity, and the shareholder spread section) in combination with SENS announcements (if applicable). Share trust repurchase activity could however not be split between repurchases and sales (only a net annual movement in number could be calculated), as there was inadequate reporting thereof in annual reports and because share trust repurchases were not reported via SENS. As stated in Chapter 2 on the South African regulatory environment, the main contributing factor to the inconsistent share repurchase disclosures was the fact that share repurchases by subsidiaries and trusts were allowed in South Africa, as opposed to most global environments where it was not allowed. Inconsistent annual report disclosures led to five share repurchases for which rand values could not be obtained. These share repurchases comprised Amalgamated Electronic Corporation Ltd. (1 481 001 shares repurchased in 2006); Business Connexion Group Ltd. (31 908 116 shares repurchased in 2004); Group Five Ltd. (4 453 432 shares repurchased in 2001); Metrofile Holdings Ltd. (40 000 shares repurchased in 2003); and Pick n Pay Stores Ltd. (10 000 000 shares repurchased in 2003). These five share repurchases were identified as share repurchases in the dataset on the number of shares repurchased, but a Rnil was

assigned to the value thereof. Group Five Ltd. was the only company which only made one share repurchase without disclosing the rand value thereof. The other four share repurchases were made by companies which also entered into other share repurchases transactions during the target period – and rand values for these other share repurchases were disclosed.

The following recommendations were put forward to improve analysis and research on share repurchase activities of JSE-listed companies:

- SENS announcements should be standardised in terms of terminology to enable accurate data searches. This could be achieved through SENS announcement templates with predefined titles or SENS identification codes that identify particular types of announcements.
- It is recommended that all JSE share repurchases should be announced on a daily basis. The three per cent announcement rule applicable to open market share repurchases was not comparable to global share repurchase announcement rules and negatively impacted on the informational value of the announcement to stakeholders.
- A share repurchase summary should be included in annual reports in the directors' report under the share capital topic with specific reference to number of shares repurchased, value / cost of repurchases, the type of repurchase (i.e. open market, *pro rata* offers, holding company repurchases of treasury shares and other specific offers), and repurchasing entity (i.e. holding company repurchasing its own shares, holding company repurchasing treasury shares, subsidiary repurchasing shares in the holding company and share trust repurchases). This recommendation has since been partially fulfilled by the revised JSE Listings Requirements (JSE, 2013), effective as from 14 January 2013, which required separate disclosure in annual reports of number of shares repurchased during the reporting period by the holding company and number of holding company shares repurchased by a subsidiary, as well as the average price paid for the repurchase. As was stated in Chapter 2 on the South African regulatory environment and in Chapter 3 in the literature review these new disclosure requirements will benefit future research, especially in respect of ascertaining share repurchases by subsidiaries. All aspects were however not addressed in these amendments: treasury shares repurchased by the holding company, share trust repurchases, as well as disclosures on the type of repurchase (namely open market or specific repurchase) and repurchase price per type of repurchase, were not addressed.
- The Listings Requirements in respect of the shareholder analysis (or shareholder spread) on the definition of non-public shareholders should be amended specifically to include subsidiaries as a separate line in the definition and should also require the number and percentage of shares held by each of the categories of non-public shareholders. In Chapter 2

on the South African regulatory environment, details on the recommended amendments to the Listings Requirements pertaining to the shareholder analysis were discussed.

4.3 DIVIDEND DATA

For the purpose of this study, dividend data were required to ascertain the relationship between share repurchases and dividends during the target period (i.e. 1999 to 2009). A company may utilise profits or share premium when paying dividends. A payment from the share premium account is usually called a 'capital distribution' as opposed to a 'distribution' or 'dividend', which are used when paying dividends from profits (or retained earnings). Dividends are also classified as either normal (regular) or special. Special dividends are paid over and above the normal dividend payments and are described as such by the company when announcing the payment thereof to emphasise the fact that they are infrequent payments. Most companies pay an interim as well as a final dividend. Final dividends are usually declared subsequent to the end of the reporting period of the company, based on the published results (which are only available after the last day of the reporting period). For the purpose of this study, the rand value of dividends paid per company per reporting period on their listed ordinary and N-class shares had to be collected for each type of dividend payment (i.e. dividends paid from profits, dividends paid from share premium, and special dividends paid).

The rand value of dividends paid during the target period of this study was not readily available in annual report disclosures or from the McGregor BFA database. In respect of reporting periods beginning before 1 October 2005, IFRS allowed companies to make provision for dividends declared subsequent to the end of the reporting period (namely the final dividend declaration). In respect of reporting periods beginning on / after 1 October 2005, IFRS only allowed companies to account for dividends in the annual report of a specific reporting period if it was declared prior to the last day of the specific reporting period. The final dividend declaration made subsequent to the last day of the reporting period therefore had to be accounted for in the subsequent reporting period (namely the reporting period in which the declaration and payment was made). Companies were allowed to apply the new IFRS requirement prior to the effective date (i.e. reporting periods beginning on / after 1 October 2005) (SAICA, 2009b). Annual report disclosure on dividends paid (as per the statement of changes in equity and notes to the statement of financial position) was therefore not comparable over the full period of this study. The McGregor BFA database (product called Financial Statements) did not apply the changed rules of IFRS on dividends which were declared subsequent to the last day of the reporting period, but recalculated the published results to include the dividends declared subsequent to the end of the reporting period as if it were declared prior to the end of the reporting period of the company. Dividends paid per company per reporting period therefore differed depending on the source of information (i.e. published in annual reports or McGregor BFA database: product called Financial Statements) during the target period.

For the purpose of this study the actual dividend payments per annum were required. The dividend payments of the McGregor BFA database (product called Financial Statements) could therefore not be used.

A distinction between the different types of dividends (i.e. from profit, from share premium and special dividend paid) was also not readily available in annual report disclosures or the McGregor BFA database during the target period of this study. Annual reports hardly ever disclosed a separate rand value for special dividends paid. In the McGregor BFA history of dividend payments (product called Dividend History) each dividend declaration per company was listed separately, including details on whether it was an interim or final or special dividend, as well as the dividend per share. This database was only started in 2003 and was therefore not available for the entire research period of this study. It was also found that McGregor BFA (product called Dividend History) included dividends paid from share premium in its description of special dividends.

Owing to the inconsistencies in the dividend data, a different process of collecting dividend data was followed to ensure reliable data per dividend type for the target period of this study. Three steps were followed to obtain the dividend data.

Firstly, each annual report of each company included in the population was consulted for disclosures on dividend payments. The directors' report, statement of changes in equity, statement of cash flows and notes on dividend payments were scrutinised to capture the following information on listed ordinary and N-class shares: dividends paid per type of dividend (as disclosed in the statement of changes in equity); total dividends paid (as per statement of cash flows); interim and final dividends paid (as per notes to the annual report); and dividend per share. The rand value of dividends paid per the dividend note was reconciled to the amounts disclosed in the statement of changes in equity and statement of cash flows. Periods prior to 2005 (when the dividends paid per statement of changes in equity differed from the actual payments per statement of cash flows) were noted and prior year annual report disclosures (on final dividends paid) were also captured to enable the allocation of final dividends to the period in which the dividend was paid.

Secondly, special dividends had to be identified. The McGregor BFA database (product called News) was searched using the keyword 'special dividends' to capture details on special dividends declared. The McGregor BFA database (product called Dividend History) was also searched per company to identify special dividends paid. Each special dividend included in the McGregor BFA database was also compared to the annual report disclosures to ensure that the special dividends did not refer to share premium payments. The rand amount of each special dividend declared was calculated by multiplying the dividend per share (as obtained from McGregor BFA: product called Dividend History or News, or annual report disclosures) with the number of shares on record date (as obtained from McGregor BFA: product called Price Data).

Thirdly, the dividend data on periods prior to 2005 were verified to ensure that dividends which were actually paid were included in the data. It was found that many companies applied the amended IFRS rules (of including only dividends declared prior to end of the reporting period in the annual report) as from 2003. Under the amended IFRS rules the reconciliation of dividend data (as per statement of changes in equity, statement of cash flows and dividend notes) was fairly easy. For reporting periods where companies still applied the previous IFRS rules, prior year annual reports and the McGregor BFA database (product called Dividend History) were scrutinised to ensure that data included dividends actually paid in the reporting period.

Based on the data collection methods applied, a reliable database distinguishing between dividends paid from profits (i.e. normal or regular dividends), dividends paid from share premium, and special dividends paid could be compiled.

4.4 CONCLUSION

In this chapter the data collection procedures which were followed to compile a share repurchase and dividend dataset were discussed. Prior to compiling a comprehensive share repurchase database, an exploratory study was conducted by researchers including the writer to ascertain the share repurchase behaviour of JSE-listed companies (Bester *et al.*, 2010). Although the sample of the exploratory study was relatively small (only 33 companies), it was observed that open market share repurchases were not the outright favourite repurchase method and that the announcement requirements (especially the 3% announcement rule on open market share repurchases) led to material understatement of actual share repurchases. It was also observed that there were repurchase types and repurchase entities which were unique to the South African share repurchase environment (namely share repurchases by subsidiaries and the repurchase by holding companies of treasury shares held by subsidiaries). It was however found that share repurchases by share trusts were not adequately disclosed in annual reports nor had to be announced via SENS, and hence only a net movement in number of shares repurchased by share trusts (and not a split between purchases and sales per annum) could be included in the dataset.

None of the financial data-providing agencies had kept detailed records on share repurchase activities or dividends for the full 11 years (i.e. 1999 to 2009) covered in this study. Own methods of data collection had to be followed to obtain comprehensive and reliable data.

Share repurchase data were compiled by reconciling and verifying searches on the McGregor BFA database (product called News) and disclosures in annual reports (mainly the directors' report, balance sheet, statement of cash flows, statement of changes in equity, share capital note, and shareholder spread section). The share repurchase data were summarised per repurchase entity (i.e. holding company repurchasing its own shares, holding company repurchasing treasury shares, subsidiary repurchasing shares in the holding company and share trust activity); repurchase type (i.e. open market share repurchases, specific share repurchases by the holding

company of treasury shares held by subsidiaries, other specific offers, and *pro rata* offers); and announced and unannounced repurchases, between which a distinction was made. All data were captured in number of shares as well as the rand value thereof, except for share trust activity which was only captured in net movement in number of shares (due to data constraints).

Dividend data were compiled by reconciling and verifying searches on the McGregor BFA database (product called News and Dividend History) and disclosures in annual reports (mainly the directors' report, statement of cash flows, statement of changes in equity, and dividend note). The dividend data were summarised per dividend type (i.e. paid from profits, paid from share premium and special dividends paid).

Problems which were encountered when collecting the data, as well as recommendations on share repurchase announcement rules and the disclosure of share repurchases in annual reports, were addressed. Current announcement rules (as prescribed by the JSE Listings Requirements) and the inconsistent annual report disclosures on share repurchases negatively impacted on the informational value of the share repurchase information available to stakeholders. Although an amendment to the JSE Listings Requirements pertaining to annual report disclosures was effective as from 14 January 2013, it did not address the problems resulting from the current announcement rule on the three per cent threshold applicable to open market share repurchases. This amendment also did not address all aspects relevant to comprehensive share repurchase disclosures (namely treasury shares repurchased by the holding company, share trust repurchases, open market share repurchases, specific repurchases, and the repurchase price per type of repurchase were not addressed).

The unique South African share repurchase environment, as was discussed in Chapter 2 on the South African regulatory environment, necessitated the data collection procedures which were followed in this study. Previous research on share repurchases by JSE-listed companies mainly focused on announced open market share repurchases and did not reflect comprehensive share repurchase activity. The database on share repurchases of the present study enabled research based on actual total repurchase activity by companies in selected JSE-listed sectors.

In the next chapter, the share repurchase database and dividend database are applied to ascertain how South African share repurchase activities compared to empirical evidence. Research question 1 of the study will be addressed, i.e. To what extent do share repurchases take place when compared to other types of cash distributions?

CHAPTER 5

SHARE REPURCHASES VERSUS DIVIDENDS

5.1 INTRODUCTION

The research problem of this study is: Does the South African share repurchase experience mirror empirical evidence and current theoretical thinking? Four research questions were formulated in an attempt to address the research problem of this study. This chapter addresses Research question 1, i.e. To what extent do share repurchases take place when compared to other types of cash distributions?

In Chapter 3 in the literature review, empirical evidence on the extent of share repurchases in relation to other types of cash distributions was identified. Based on the literature on the South African share repurchase environment, seven propositions were formulated to be tested in respect of the extent of share repurchases by companies in selected JSE-listed sectors in relation to other types of cash distributions.

The following empirical evidence was identified in Chapter 3 in the literature review:

1. Share repurchase value shows a general upward trend.
2. Share repurchase value increases more rapidly than dividend payments.
3. Share repurchase value exceeds dividend payments.
4. The open market share repurchase method is the outright favourite share repurchase method (i.e. representing about 90% of share repurchase value).
5. Special dividend payment value (based on total dividends paid) decreases over time.

The following propositions for South African share repurchase activity were formulated in Chapter 3 in the literature review:

1. Share repurchase value shows a general upward trend.
2. Share repurchase value increases more rapidly than dividend payments.
3. Share repurchase value does not exceed dividend payments.
4. The open market share repurchase method is not the outright favourite share repurchase method.
5. Special dividend payment value (based on total dividends paid) decreases over time.
6. The JSE share repurchase announcement structure leads to announcements not representing comprehensive data on share repurchase activities.
7. Share repurchases by subsidiaries (and therefore also the repurchase of treasury shares by the holding company) represent a significant part of share repurchase activities.

In this chapter, the share repurchase and dividend data were firstly analysed and a comparison of total share repurchases and total dividends were made. Thereafter each of the propositions is dealt with separately to ascertain whether the South African share repurchase experience mirrors empirical evidence.

This chapter includes the extended research on share repurchases by holding companies of treasury shares held by subsidiaries, which elaborates on Proposition 7.

The results and comparisons in this chapter emanate from the first comprehensive analysis comparing dividends and share repurchases of companies in selected JSE-listed sectors.

5.2 THE EXTENT TO WHICH SHARE REPURCHASES ARE USED TO DISTRIBUTE EXCESS CASH

5.2.1 Definition of share repurchase activity

This study defines total share repurchase activity as the repurchase by the holding company and its subsidiaries of shares which were previously issued by the holding company. In Chapter 3 in the literature review, three repurchasing entities were identified, namely the holding company; its subsidiaries; and its consolidated share trusts. In Chapter 4 on data collection, it was found that accurate data on shares repurchased by share trusts was not available owing to inconsistent disclosures in annual reports and because share trust repurchases are not required to be announced under the JSE Listings Requirements on share repurchases. Only net annual movements in number of shares held by share trusts could be obtained from annual reports, but this data did not represent share repurchases as the net figures included purchases and sales. Owing to data constraints, the share repurchases by share trusts therefore did not represent share repurchase activity for the purpose of this study.

The holding company may repurchase shares from shareholders that represent entities over which it has control (i.e. subsidiaries and share trusts) or from shareholders over which it does not have control. For the purpose of this study, repurchases from share trusts were treated as repurchases from shareholders which the company does not control owing to data constraints on identifying these repurchases (as discussed above). Share repurchases by the holding company of shares held by subsidiaries were classified as the repurchase of treasury shares in this study. In the consolidated financial statements, the repurchase of treasury shares by the holding company has a nil effect on cash flows and equity, because the sale by the subsidiary and repurchase by the holding company cancel out. This study dealt with gross share repurchases and therefore included the repurchase of treasury shares by the holding company in the definition of share repurchase activity. In this chapter, the effect of the repurchase of treasury shares by the holding company was underscored by making a distinction, in certain reported results, between figures including and excluding the repurchase of treasury shares.

In Chapter 4 on data collection, it was explained that share repurchases were captured in the number of shares and rand value over the target period. In this chapter, share repurchase activity was compared over time and compared to dividend activity. For the purpose of establishing a trend in share repurchase activity, the rand value of share repurchases represented the share repurchase activity. An adjustment for inflation was needed when comparing the rand value of share repurchases, as well as dividends, over time. A deflator factor was applied in all the graphical figures of Chapter 5 (except for Figures 5.4, 5.7 and 5.19 depicting share repurchase behaviour based on value, the ratio of share repurchase value to market capitalisation, and payment behaviour based on value respectively) to deflate all rand amounts from 2000 to 2009 in terms of June 1999 prices. All the tables in Chapter 5, however, show the monetary value of the payouts. During 2013 the CPI All Index using December 2012 as a base (=100) was obtained. This index, as reported by Statistics South Africa and compiled by the Stellenbosch Bureau of Economic Research, was manually changed so that June 1999 represented the base (=100). June CPI indices per annum were used to deflate share repurchases and dividends in Chapter 5, because the exact dates of share repurchases and dividends were not always known and the assumption was therefore made that these transactions occurred at the midpoint of the calendar years. (If, for instance, a R800 million transaction occurred in 2008, and the June 2008 Index was 79,00 and the June 1999 index was 46,80, then the R800 million would be deflated to $800 \times 46,8 / 79 = R473,9$ million in terms of June 1999 CPI prices.)

The target period of this study is 11 years (as share repurchases were allowed as from 1 July 1999). The first share repurchases, however, only occurred in the reporting periods ending in 2000 in respect of the companies included in this study. All graphs and tables in this chapter therefore reflect 10 years, i.e. 2000 to 2009. These years refer to the end of the reporting periods of the relevant companies. Dividend data therefore also reflected 10 years as these data were compared to share repurchase activity.

When viewing the results, it needs to be borne in mind that the number of JSE-listed companies changed every year from 1999 to 2009 owing to new listings and delistings. As was stated in Chapter 1 containing the introduction, the 227 companies included in the population of this study comprised the companies listed for three or more years from 1999 to 2009.

5.2.2 Total share repurchase activity

This study found that 115 (or 50,66%) of the 227 companies included in the population repurchased shares in the reporting periods including 1 July 1999 to the 2009 year-ends of the companies. These companies repurchased 5 657 718 920 shares at a total value of R136 886 511 758. Table 5.1 shows the number and rand value of shares which were repurchased per annum, the number of companies which were involved in repurchase activities per annum, and the percentage of listed companies (as defined in the population of the study) which were involved

in repurchase activities per annum. Table 5.1 also shows that share repurchase activity, excluding the repurchase of treasury shares by the holding company, represented R93 974 522 658 over the target period. The share repurchase value excluding the repurchase of treasury shares by the holding company represented the cash effect of share repurchases in the consolidated annual reports.

Annexure A lists the 227 companies included in the population, as well as the 115 companies which repurchased shares during the target period.

Table 5.1: Share repurchases per annum

Year	Number of companies	Percentage of companies	Total number of shares repurchased	Total share repurchase rand value per annum	Share repurchases excluding the repurchase of treasury shares by the holding company
				R	R
2000	16	7.77%	216 252 229	2 681 648 478	2 681 648 478
2001	38	18.18%	582 736 898	2 969 991 036	2 948 381 036
2002	47	23.50%	602 536 151	4 322 450 445	4 272 587 445
2003	56	29.63%	626 992 511	3 718 359 573	3 454 319 366
2004	41	24.70%	307 499 278	2 938 399 471	2 923 413 471
2005	40	25.81%	585 529 319	12 183 006 110	8 630 784 191
2006	38	26.03%	873 006 292	20 108 963 794	12 093 570 194
2007	29	19.33%	290 007 097	25 804 509 767	9 709 435 319
2008	40	27.78%	482 290 098	21 659 223 717	21 382 602 050
2009	33	23.57%	1 090 869 047	40 499 959 367	25 877 781 108
TOTAL			5 657 718 920	136 886 511 758	93 974 522 658

The deflated figure for total share repurchases over the target period was R89 726 525 757. Figure 5.1 shows the rand value of total share repurchases, adjusted to reflect 1999 prices, per annum. Share repurchases started off slowly, decreased in 2003 and 2004, and became popular from 2005. Share repurchase activity in total increased from 2005 to 2007, decreased slightly in 2008 and showed a steady increase in 2009 (with a value in excess of the 2007 share repurchase levels). In respect of share repurchases excluding the repurchases of treasury shares by the holding company, a similar trend was observed until 2006, but in 2007 there was a decrease, while 2008 showed a large increase, and a steady increase was again observed in 2009. A decrease in share repurchase activities excluding the repurchases of treasury shares by the holding company in 2007 was expected in response to the global financial crisis in 2007 / 2008.

The repurchase of treasury shares by holding companies contributed extensively to total share repurchase activities in 2007, but not in 2008. In Chapter 3 in the literature review, it was explained that the motivations for companies repurchasing treasury shares from subsidiaries differed from the motivations which are discussed in global literature. A separate discussion on the repurchase

of treasury shares by the holding company follows in section 5.5 below and addresses the motivations for the identified trends.

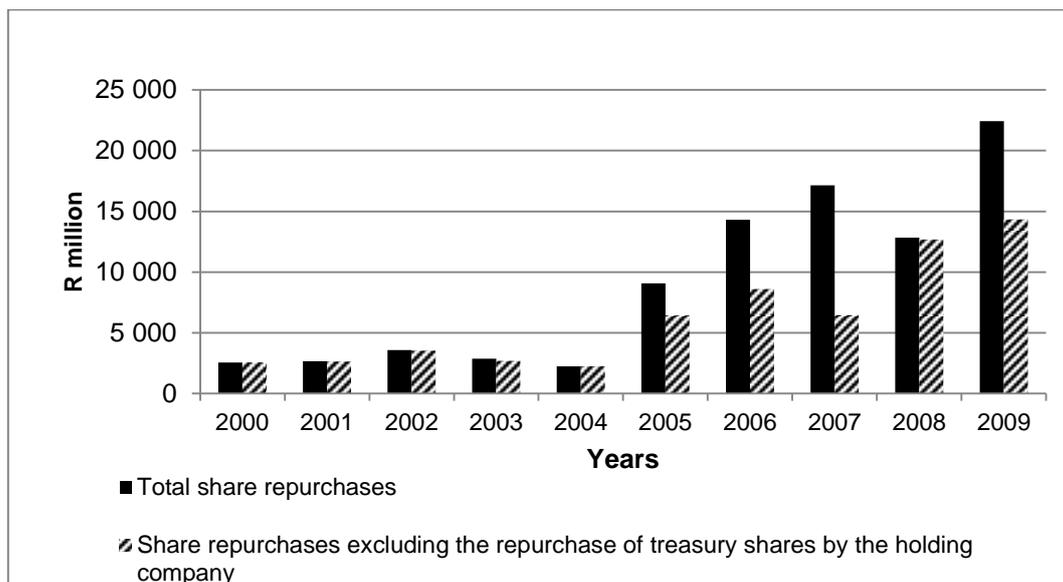


Figure 5.1: Share repurchase activity (adjusted to reflect 1999 prices)

Figure 5.2 shows the percentage of listed companies (as defined in the population of the study) per annum which has entered into share repurchase transactions during the target period. The percentage of companies increased steadily to about 30 per cent in 2003, after which the percentage decreased slightly to about 25 per cent in 2004 to 2006. In 2007 the percentage dropped to about 18 per cent. In 2008 the percentage increased to about 28 per cent and again decreased to about 24 per cent in 2009. The trend in the number of companies did not correspond to the trend in the share repurchase activity (as observed in Figure 5.1) and indicated that the value of share repurchases per company was low prior to 2005 and that companies spent larger amounts on share repurchases after 2005 (and especially in 2007).

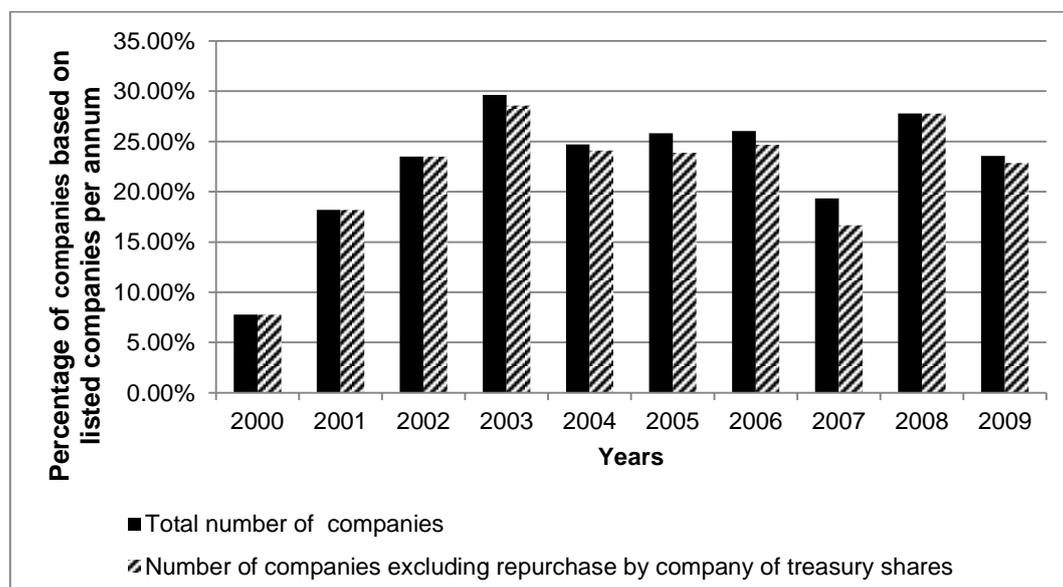


Figure 5.2: Percentage of companies repurchasing shares

Figure 5.3 indicates the percentage of companies which repurchased shares on a regular basis (i.e. companies which made repurchases in more than 50 per cent of the reporting periods in which the company was listed); companies which only repurchased shares in one reporting period during the target period; and companies which repurchased shares more than once, but in less than 50 per cent of the reporting periods in which the company was listed (i.e. irregularly). In respect of the 115 companies which repurchased shares during the target period, it was found that 37 companies (or 32,17%) repurchased shares regularly; 31 companies (or 26,96%) only repurchased once; and 47 companies (or 40,87%) repurchased shares irregularly.

Ozz Ltd. was the only company which repurchased shares in all the reporting periods in which it was listed, which were three. The maximum number of reporting periods in which companies repurchased shares during the period which was examined was eight years. There were four companies (namely The Bidvest Group Ltd., Grindrod Ltd., Sasol Ltd. and Truworths International Ltd.) which repurchased shares in eight of the 10 years in which share repurchases occurred.

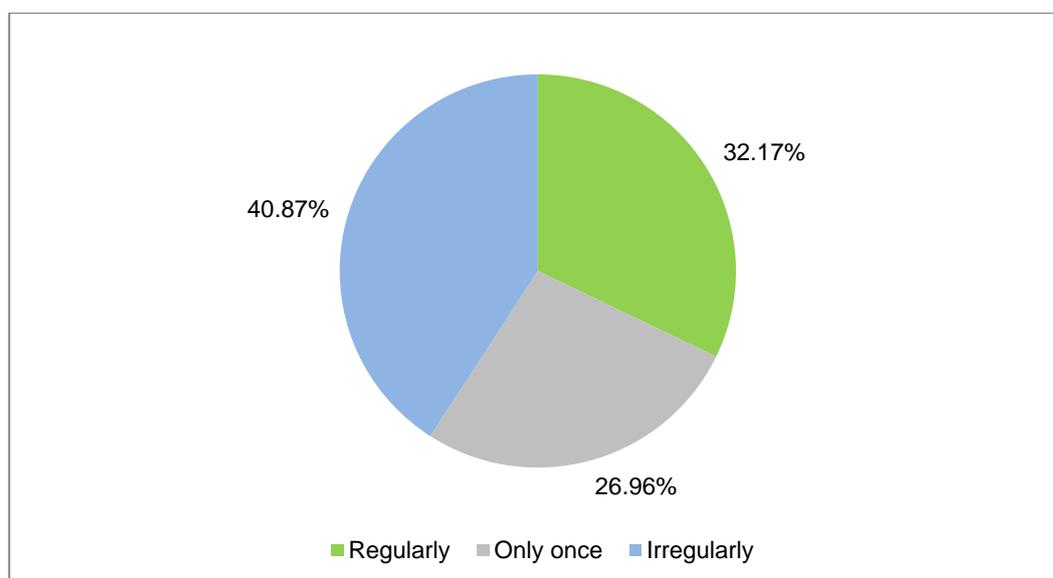


Figure 5.3: Share repurchase behaviour based on number of companies

Figure 5.4 shows that most of the share repurchase value (i.e. 65,50%) was contributed by companies which repurchased shares regularly. Companies repurchasing irregularly and only once represented about the same percentage of the share repurchase value (i.e. 17,84% and 16,67% respectively). The share repurchase behaviour based on value therefore differed from the behaviour based on number of companies (as observed in Figure 5.3). Most of the share repurchase value (i.e. 65,50%) was contributed by the 32,17 per cent of companies which regularly repurchased shares, while 40,87 per cent of the companies repurchased shares irregularly and only contributed 17,84 per cent of the repurchase value.

Two companies contributed more than 40 per cent (in total) towards the share repurchase activity during the target period: Sasol Ltd. made share repurchases to the value of R38 billion

(representing 27,69% of total repurchase value) and MTN Group Ltd. made repurchases to the value of R21 billion (representing 15,51% of total repurchase value). Sasol Ltd. repurchased shares regularly, while MTN Group Ltd. only made one share repurchase. Remgro Ltd. and Netcare Ltd. both regularly repurchased shares and each contributed more than five per cent towards the total share repurchase value. More than 50 per cent of the share repurchase value was therefore contributed by only four companies.

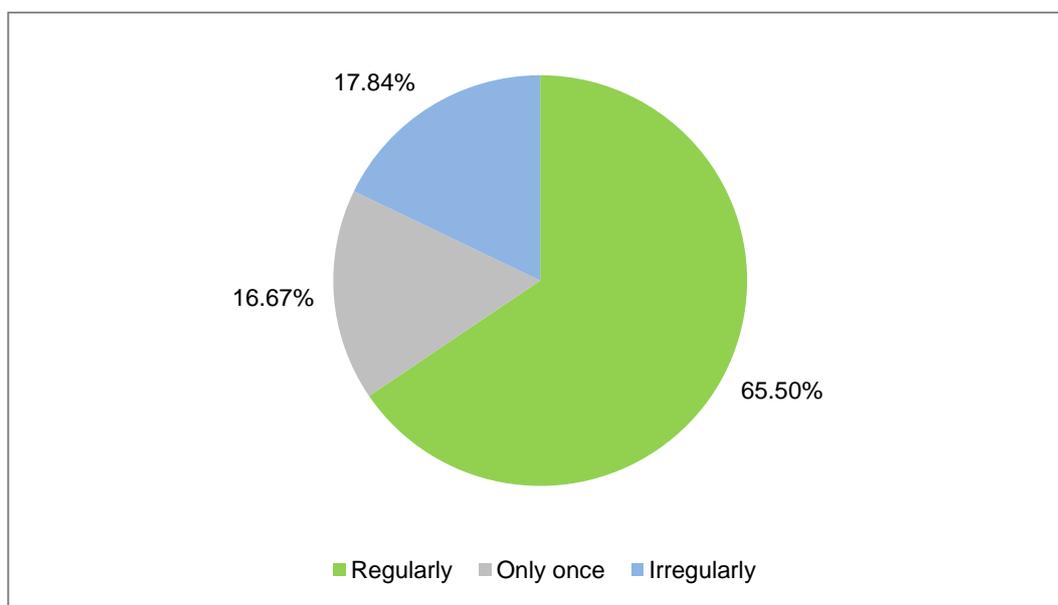


Figure 5.4: Share repurchase behaviour based on value

Figure 5.5 makes a distinction in share repurchase value per annum in terms of small, medium and large companies. The company size was obtained by comparing the actual market capitalisation of the company at the end of the reporting period in which the share repurchase was made to a small / medium / large norm based on market capitalisation. The small / medium / large norm was calculated by ranking all companies listed on the JSE All Share Index (usually about 160 companies) as at the end of June for each of the years covered in the study, in ascending order of market capitalisation. The small / medium / large classification was obtained by identifying the first third of market capitalisations on the list as small companies; the next third as medium; and the final third as large. From Figure 5.5 it may be observed that share repurchase value per annum was dominated by companies with large market capitalisations.

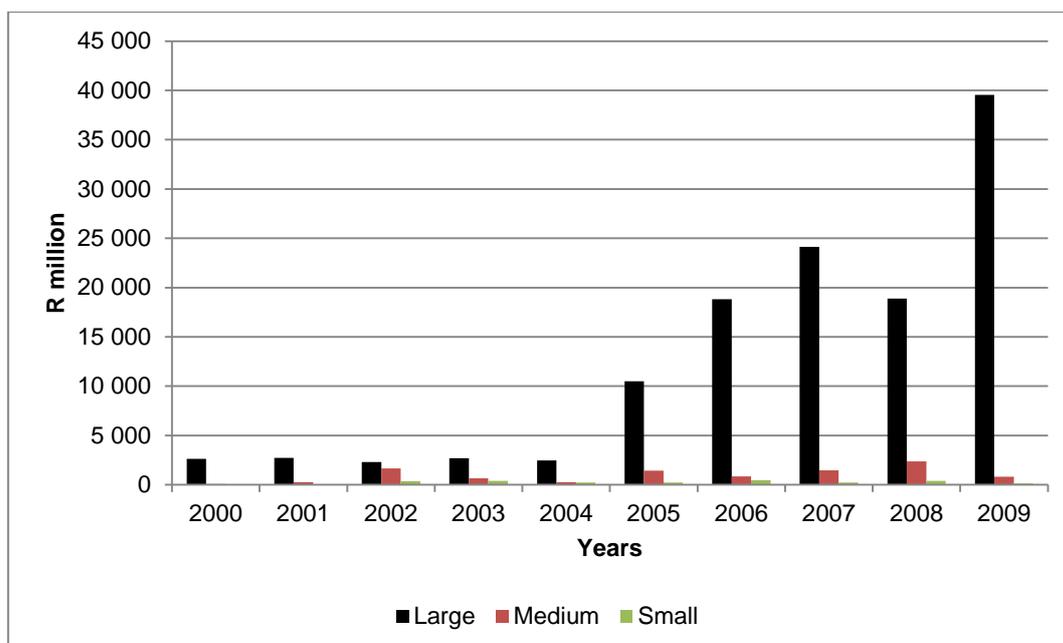


Figure 5.5: Share repurchase value based on market capitalisation

Figure 5.6 however shows that, based on number of companies per annum, it was mostly small companies that entered into share repurchases over the target period. Although small companies did not dominate the first two years of repurchase activity (based on number of companies), this group dominated all other years, except 2004 to 2006 where this group equalled the number of large capitalisation companies entering into share repurchases. Smaller companies therefore repurchased more regularly, but the value of share repurchases was dominated by companies with large market capitalisations (as may be observed in Figure 5.5).

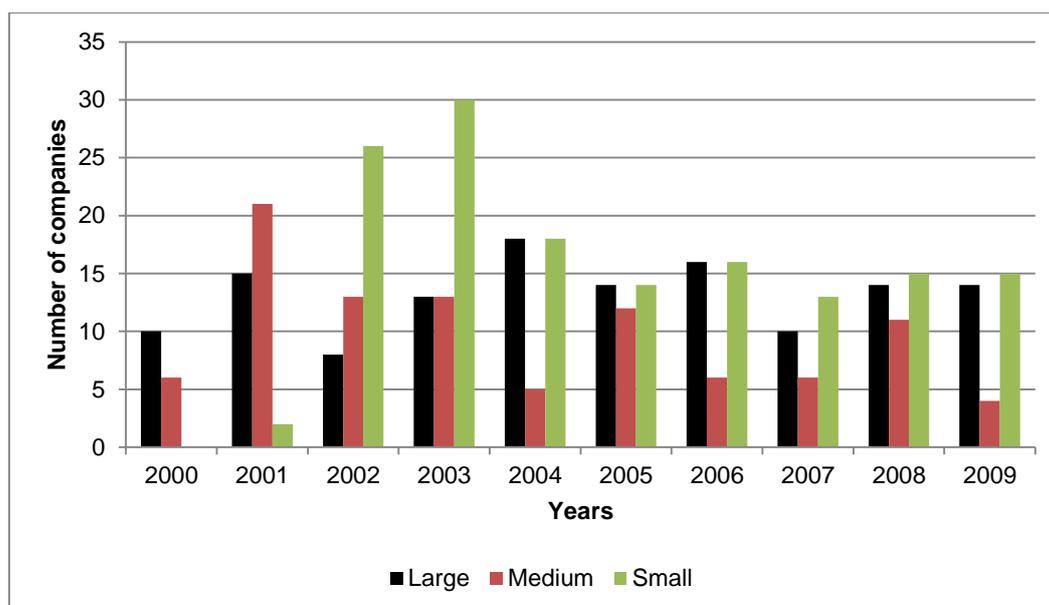


Figure 5.6: Number of companies repurchasing shares based on market capitalisation

Figure 5.7 shows the relative size of share repurchases when compared to market capitalisation. The ratio was calculated by dividing the rand value (of actual repurchases – therefore not a deflated figure) of the cumulative share repurchases per reporting period by the cumulative market capitalisations of the repurchasing companies at the end of their relevant reporting period. Share repurchases initially represented about 0,05 (or 5%) of total market capitalisation, but that ratio steadily dropped to 0,01 in 2004; increased again to about 0,05 in 2006; then decreased slightly in 2007 and showed a large decrease in 2008 to about 0,04. The 2009 reporting period showed the highest value over the target period, i.e. just above 0,06. The 2000 share repurchase level (relative to market capitalisation) was again reached in 2006. The decrease in 2007 and 2008 was probably related to the economic conditions during the financial crisis period (2007 / 2008). The 2009 share repurchase level again returned to a level exceeding the 2006 level.

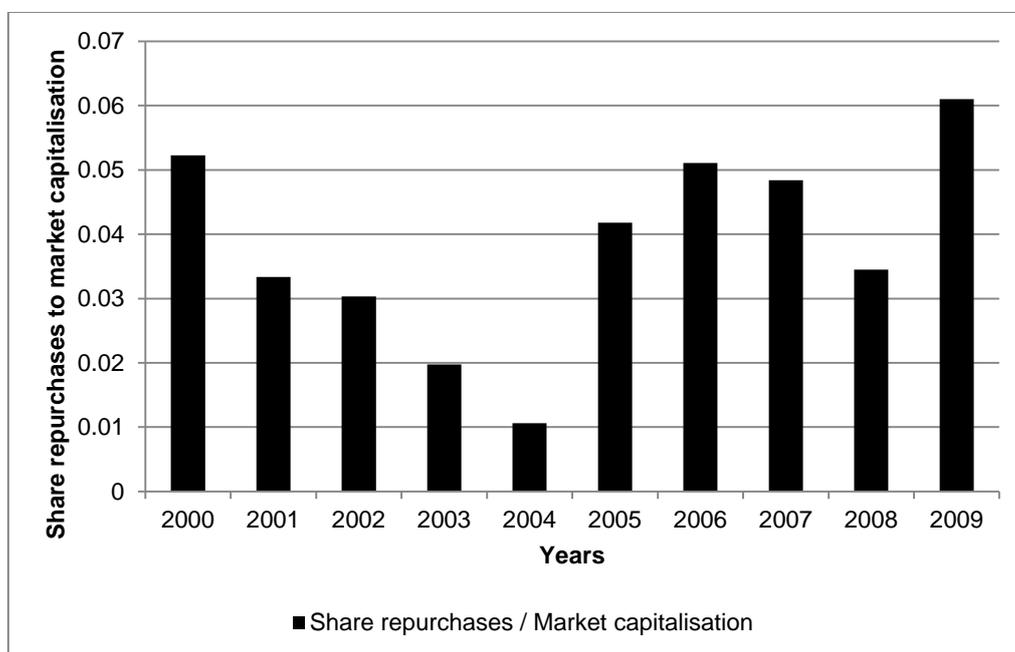


Figure 5.7: Share repurchase value to market capitalisation

Table 5.2 shows the mean, median and standard deviation of total share repurchases per annum. The large standard deviation, as well as the maximum, confirmed the reported results, namely that a small number of large capitalisation companies contributed most to the share repurchase value per annum.

Table 5.2: Descriptive statistics on share repurchases

Year	Mean	Median	Minimum	Maximum	Standard deviation	Standard deviation %
2000	167 603 030	15 441 578	1 826 000	1 290 000 000	356 344 503	212.61%
2001	80 270 028	13 920 000	166 000	1 111 900 000	197 341 235	245.85%
2002	93 966 314	17 814 000	56 981	1 020 000 000	203 006 128	216.04%
2003	67 606 538	14 508 000	7 000	704 000 000	142 656 958	211.01%
2004	73 459 987	13 012 500	102 920	476 600 000	111 678 016	152.03%
2005	304 575 153	32 953 000	2 768	2 916 000 000	618 667 416	203.12%
2006	529 183 258	37 673 000	1	5 512 000 000	1 307 978 508	247.17%
2007	889 810 682	36 197 000	44 000	17 975 000 000	3 324 548 262	373.62%
2008	541 480 593	123 157 500	4 000	7 300 000 000	1 305 180 429	241.04%
2009	1 227 271 496	18 411 000	30 425	21 226 000 000	3 958 641 795	322.56%

5.2.3 Share repurchase activity per repurchase entity

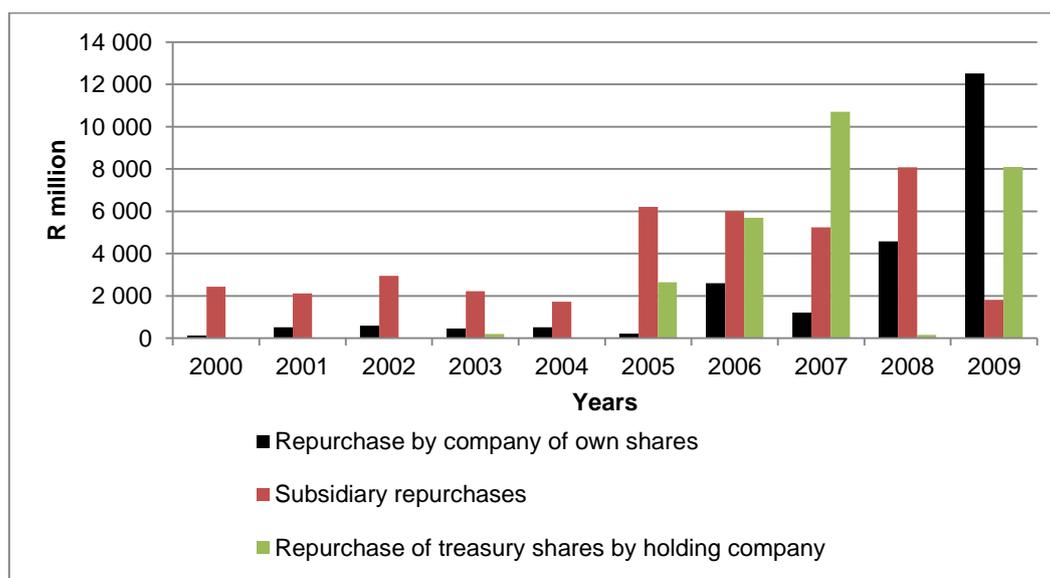
In South Africa, shares may be repurchased by the holding company, its subsidiaries and its share trusts. As explained in section 5.2.1 above, share repurchases by share trusts did not represent share repurchase activity for the purpose of this study. In Chapter 3 in the literature review the repurchase by the holding company of treasury shares held by subsidiaries was identified as a share repurchase activity which should be separately identified as it represents a unique South African share repurchase activity. For the purpose of this study there were therefore three repurchase entities, i.e. the holding company repurchasing its own shares; subsidiaries repurchasing shares in the holding company and the holding company repurchasing treasury shares held by subsidiaries.

Table 5.3 shows the rand value of shares which were repurchased by the three types of repurchasing entities per annum. The share repurchase activity per repurchasing entity over the target period was as follows: R38 817 084 222 (or 28,36%) by the holding company repurchasing its own shares; R55 157 438 435 (or 40,29%) by subsidiaries repurchasing shares in the holding company; and R42 911 989 101 (or 31,35%) by the holding company repurchasing treasury shares held by subsidiaries. The number of companies involved in each of the three types of activity was as follows over the target period: 61 companies repurchased through the holding company; 99 companies repurchased through the subsidiaries; and 36 companies repurchased treasury shares held by subsidiaries. The preferred share repurchase entity (both in value and per number of companies) was the subsidiaries repurchasing shares in the holding company. Share repurchases of own shares by the holding company were chosen by more than half of the repurchasing companies (namely 115) in the population, but only contributed 28,36 per cent of the repurchase value. The repurchase of treasury shares by the holding company was selected by 36 (or 36,4%) of the 99 companies which repurchased shares through subsidiaries and comprised 31,35 per cent of the total repurchase value.

Table 5.3: Share repurchases per repurchasing entity

Year	Total share repurchases	Repurchase by company of own shares	Subsidiary repurchases	Repurchase of treasury shares by holding company
	R	R	R	R
2000	2 681 648 478	127 127 000	2 554 521 478	0
2001	2 969 991 036	587 110 430	2 361 270 606	21 610 000
2002	4 322 450 445	709 123 201	3 563 464 244	49 863 000
2003	3 718 359 573	582 406 472	2 871 912 894	264 040 207
2004	2 938 399 471	673 718 000	2 249 695 471	14 986 000
2005	12 183 006 110	296 709 673	8 334 074 518	3 552 221 919
2006	20 108 963 794	3 667 400 002	8 426 170 192	8 015 393 600
2007	25 804 509 767	1 833 652 808	7 875 782 511	16 095 074 448
2008	21 659 223 717	7 739 373 333	13 643 228 717	276 621 667
2009	40 499 959 367	22 600 463 303	3 277 317 804	14 622 178 260
TOTAL	136 886 511 758	38 817 084 222	55 157 438 435	42 911 989 101
Percentage	100.00%	28.36%	40.29%	31.35%

Figure 5.8 shows the rand values, adjusted to reflect 1999 prices, of the shares repurchased by the three types of repurchasing entities over the target period. Subsidiaries were the most popular repurchase entity until 2006 and again in 2008. In 2009 the holding company repurchasing its own shares was the most popular type of repurchase entity. Subsidiary repurchases affected the repurchase of treasury shares by the holding company owing to the 10 per cent limit on shares to be held by subsidiaries (as was discussed in Chapter 2 on the South African regulatory environment). The high value of share repurchase activity attributable to the holding company repurchasing treasury shares held by subsidiaries is addressed in section 5.5 below.

**Figure 5.8: Repurchasing entities (adjusted to reflect 1999 prices)**

5.2.4 Types of share repurchases

In South Africa, there are essentially three types of share repurchases: open market share repurchases and two types of specific share repurchases, namely *pro rata* offers and specific offers. In Chapter 3 in the literature review, the repurchase by the holding company of treasury shares held by subsidiaries was identified as a specific share repurchase type which should be identified separately as it represents a unique South African share repurchase activity. For the purpose of this study, four types of share repurchases were therefore taken into consideration, i.e. open market share repurchases, *pro rata* offers, the repurchase by the holding company of treasury shares, and other specific offers. The open market and total specific share repurchases were firstly compared, and thereafter the different types of specific share repurchases were identified.

Table 5.4 shows the rand value of open market and specific share repurchases per annum. Open market share repurchases represented R58 260 821 938 (or 42,56%) and specific repurchases represented R78 625 689 820 (or 57,44%) of the total share repurchases over the target period. There were 103 companies which entered into open market share repurchases and 63 companies which entered into specific repurchases over the target period. The specific repurchase method was therefore the preferred method, based on total value of share repurchase activity.

Table 5.4: Open market versus specific repurchases

Year	Total share repurchases R	Open market repurchases R	Specific repurchases R
2000	2 681 648 478	2 681 648 478	0
2001	2 969 991 036	2 269 668 041	700 322 996
2002	4 322 450 445	3 377 492 321	944 958 124
2003	3 718 359 573	3 187 726 344	530 633 228
2004	2 938 399 471	2 228 158 272	710 241 199
2005	12 183 006 110	5 569 791 279	6 613 214 831
2006	20 108 963 794	11 929 743 121	8 179 220 673
2007	25 804 509 767	8 243 790 319	17 560 719 448
2008	21 659 223 717	14 835 293 535	6 823 930 182
2009	40 499 959 367	3 937 510 228	36 562 449 139
TOTAL	136 886 511 758	58 260 821 938	78 625 689 820
Percentage	100.00%	42.56%	57.44%

Figure 5.9 shows the rand values, adjusted to reflect 1999 prices, of open market and specific share repurchases per annum. Open market share repurchases were initially the favoured repurchase method, but specific share repurchases were the preferred method in 2005, but then dropped back to levels below the open market share repurchases in 2006. In 2007 specific share repurchases were more than double the rand value of open market share repurchases, but then dropped again to less than half the value of open market share repurchases in 2008. In 2009

specific share repurchases were at their highest level over the target period and represented more than five times the value of open market share repurchases.

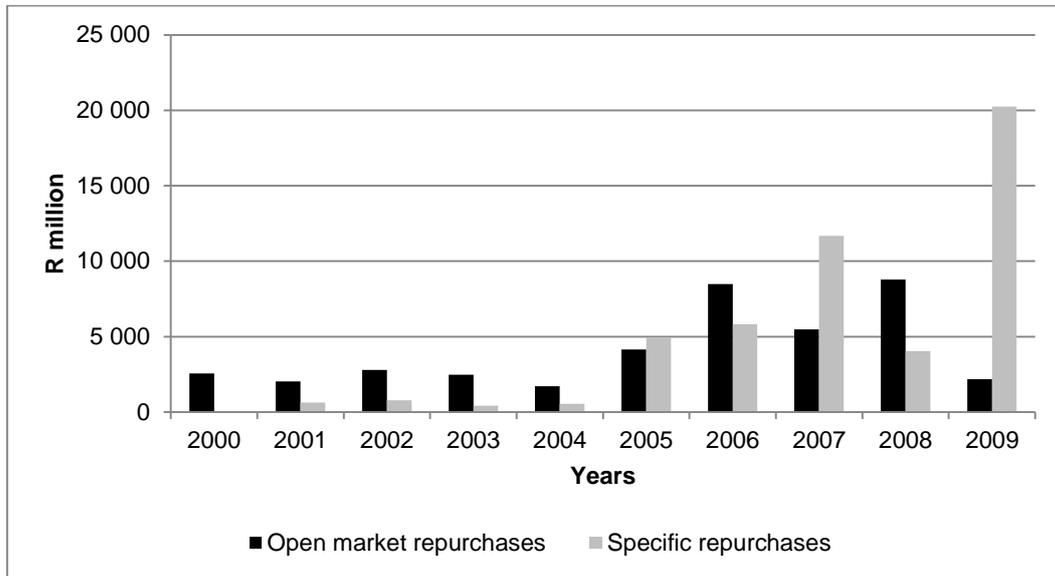


Figure 5.9: Open market versus specific repurchases (adjusted to reflect 1999 prices)

Table 5.5 identifies the repurchase activity in respect of the three types of specific share repurchases over the target period. The repurchase by the holding company of treasury shares held by subsidiaries was the preferred specific share repurchase method, representing R42 911 989 101 (or 54,58%) of total specific share repurchases over the target period. Other specific offers represented R25 599 455 440 (or 32,56%), while *pro rata* offers were the least preferred specific share repurchase method, representing R10 114 255 279 (or 12,86%) over the target period.

Table 5.5: Specific share repurchase types per annum

Year	Total specific repurchases	Repurchase of treasury shares by holding company	Other specific offers	<i>Pro rata</i> offers
	R	R	R	R
2000	0	0	0	0
2001	700 322 996	21 610 000	272 612 996	406 100 000
2002	944 958 124	49 863 000	665 578 124	229 517 000
2003	530 633 228	264 040 207	202 211 313	64 381 708
2004	710 241 199	14 986 000	205 261 199	489 994 000
2005	6 613 214 831	3 552 221 919	599 705 191	2 461 287 721
2006	8 179 220 673	8 015 393 600	124 149 164	39 677 909
2007	17 560 719 448	16 095 074 448	1 465 645 000	0
2008	6 823 930 182	276 621 667	124 011 574	6 423 296 941
2009	36 562 449 139	14 622 178 260	21 940 270 879	0
TOTAL	78 625 689 820	42 911 989 101	25 599 445 440	10 114 255 279
Percentage	100.00%	54.58%	32.56%	12.86%

Figure 5.10 illustrates that, based on total share repurchase activity, each of the four repurchase types represented the following portion of total share repurchase activity: 42,56 per cent for open market share repurchases; 31,35 per cent for repurchases by the company of treasury shares held by subsidiaries; 18,70 per cent for other specific offers and 7,39 per cent for *pro rata* offers. The number of companies involved in each of the four types of share repurchases was as follows over the target period: 103 companies entered into open market share repurchases; 36 companies repurchased treasury shares held by subsidiaries; 35 companies entered into other specific offers; and 15 companies entered into *pro rata* offers.

Based on total share repurchase activity the open market share repurchase method was therefore not the preferred repurchase method; and the repurchase of treasury shares by the holding company attributed to most of the specific repurchase value.

Based on share repurchase activity excluding the repurchase of treasury shares by the holding company, the open market share repurchase method was however the preferred share repurchase type, i.e. open market share repurchases represented 62,00 per cent; other specific offers represented 27,24 per cent and *pro rata* offers represented 10,76 per cent.

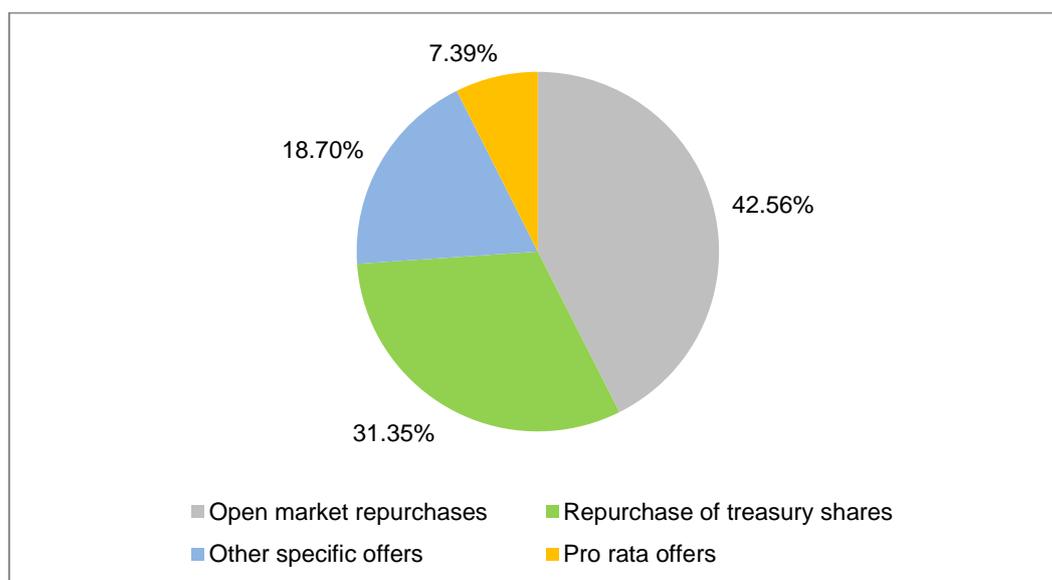


Figure 5.10: Repurchase types based on value

Figure 5.11 shows the rand values, adjusted to reflect 1999 prices, of the different types of specific share repurchase types per annum. Specific share repurchase activity was initially low. In 2005 to 2007, the share repurchases by the holding company of treasury shares held by subsidiaries represented most of the specific share repurchase value, but dropped dramatically in 2008. *Pro rata* offers were the most popular specific share repurchase type in 2008, while other specific offers showed the highest repurchase activity in 2009 and also the highest specific share repurchase activity per specific share repurchase type per annum over the target period.

A separate discussion on the repurchase of treasury shares by the holding company follows in section 5.5 below.

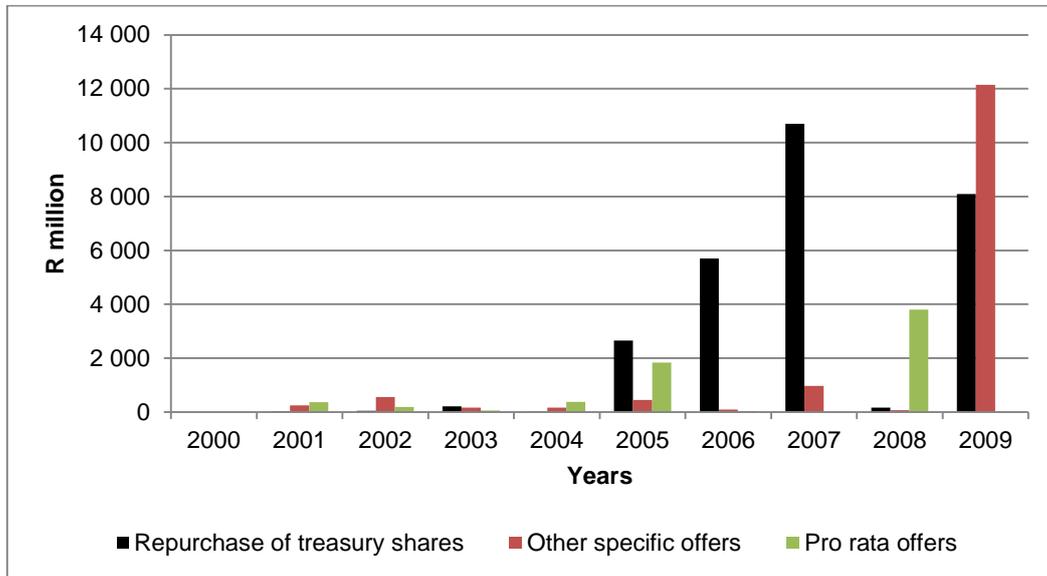


Figure 5.11: Specific repurchase types (adjusted to reflect 1999 prices)

5.2.5 Announced and unannounced share repurchases

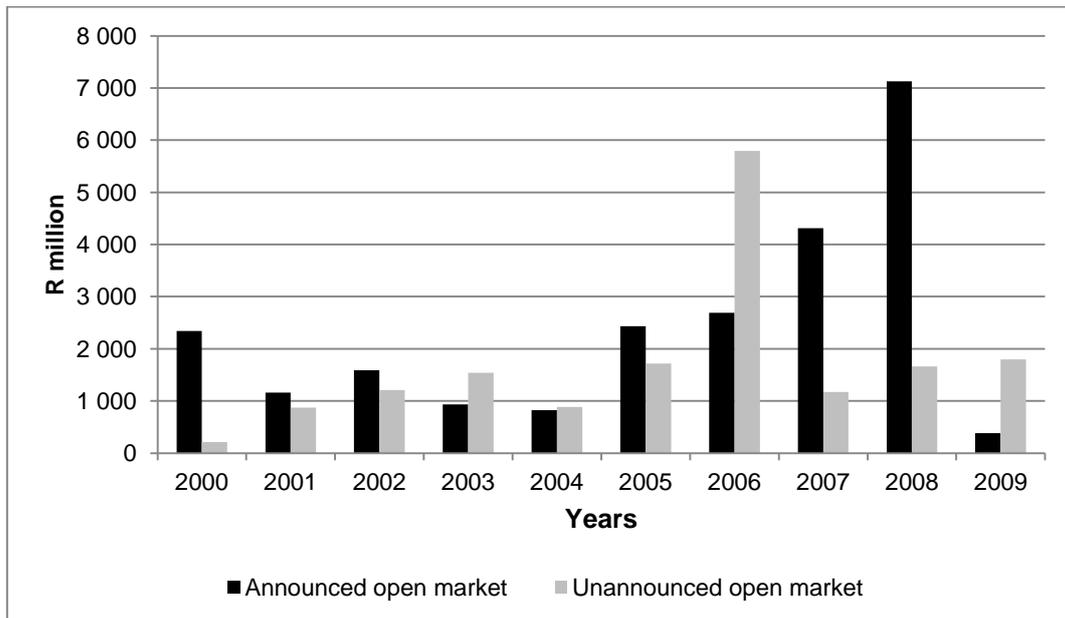
Table 5.6 shows the distribution between announced and unannounced open market share repurchases per annum over the target period. Total announced open market share repurchases represented R34 209 129 094 (or 58,72%) and unannounced open market share repurchases represented R24 051 692 844 (or 41,28%) of the total value of open market share repurchases. The unannounced open market share repurchases resulted from the application of the three per cent announcement rule, as stipulated in the JSE Listings Requirements.

Based on total share repurchase activity, the three per cent announcement rule resulted in announced open market share repurchases only representing 24,99 per cent of total share repurchase value. Based on share repurchase activity excluding the repurchase of treasury shares by the holding company, announced open market share repurchases represent 36,40 per cent of share repurchase value.

Table 5.6: Announced and unannounced open market share repurchases

Year	Total open market repurchases R	Announced open market repurchases R	Unannounced open market repurchases R
2000	2 681 648 478	2 461 253 199	220 395 279
2001	2 269 668 041	1 293 448 616	976 219 425
2002	3 377 492 321	1 920 102 818	1 457 389 503
2003	3 187 726 344	1 205 311 113	1 982 415 231
2004	2 228 158 272	1 074 200 050	1 153 958 222
2005	5 569 791 279	3 266 258 735	2 303 532 544
2006	11 929 743 121	3 783 765 734	8 145 977 387
2007	8 243 790 319	6 482 967 599	1 760 822 720
2008	14 835 293 535	12 033 931 555	2 801 361 980
2009	3 937 510 228	687 889 675	3 249 620 553
TOTAL	58 260 821 938	34 209 129 094	24 051 692 844
Percentage	100.00%	58.72%	41.28%

Figure 5.12 shows the rand values, adjusted to reflect 1999 prices, of the announced and unannounced open market share repurchases per annum. All open market share repurchases per annum were not announced via SENS. In 2003, 2006 and 2009 unannounced open market share repurchases exceeded the announced share repurchases per annum by far.



**Figure 5.12: Announced versus unannounced open market repurchases
(adjusted to reflect 1999 prices)**

Table 5.7 shows the distribution between announced and unannounced specific share repurchases per annum over the target period. As discussed in Chapter 2 on the South African regulatory environment, specific share repurchases always need to be announced via SENS in terms of the JSE Listings Requirements. The unannounced specific share repurchases of R5 604 131 153 (or 7,13%, based on total specific share repurchases) mostly related to the repurchase of treasury

shares by the holding company (representing 98,38% of unannounced specific repurchases) and led to 12,85 per cent of total repurchases of treasury shares by the holding company not being announced via SENS during the target period. The fact that there were indeed unannounced specific share repurchases (in contrast with the JSE Listings Requirements requiring all specific repurchases to be announced via SENS) is addressed in section 5.5 below.

Table 5.7: Unannounced specific share repurchases

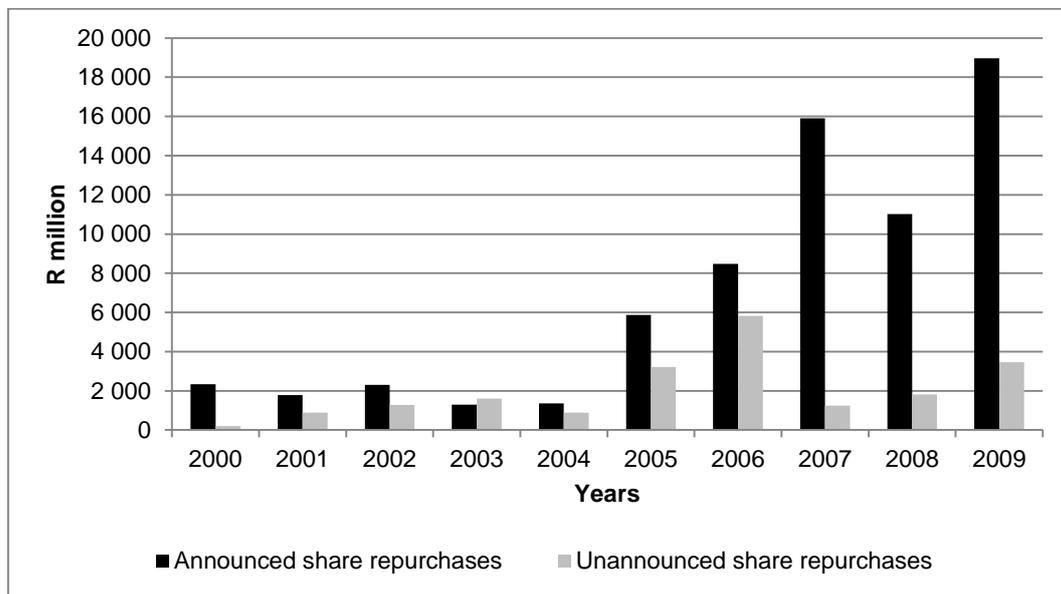
Year	Total unannounced specific repurchases R	Unannounced per type		
		Treasury share repurchases R	Other specific offers R	<i>Pro rata</i> offers R
2000	0	0	0	0
2001	7 624 000	7 624 000	0	0
2002	76 139 068	12 763 068	63 376 000	0
2003	75 309 347	71 309 347	4 000 000	0
2004	4 440 000	3 590 000	0	850 000
2005	2 011 413 000	2 011 413 000	0	0
2006	36 136 000	36 136 000	0	0
2007	112 050 000	112 050 000	0	0
2008	269 247 241	246 824 667	22 422 574	0
2009	3 011 772 497	3 011 772 497	0	0
TOTAL	5 604 131 153	5 513 482 579	89 798 574	850 000
Percentage	100.00%	98.38%	1.60%	0.02%

Table 5.8 shows the distribution between announced and unannounced total share repurchases per annum over the target period. Total announced share repurchases represented R107 230 687 761 (or 78,34%) and unannounced share repurchases represented R29 655 823 997 (or 21,66%) of the total value of share repurchases. The high level of announced share repurchases resulted mainly from the specific repurchases (comprising 57,44% of total share repurchase activity, as may be observed in Table 5.4), which were almost always announced in terms of the JSE Listings Requirements (as illustrated in Table 5.7); whereas the unannounced share repurchases resulted mainly from the application of the three per cent rule on open market share repurchases (as illustrated in Table 5.6).

Table 5.8: Announced and unannounced share repurchases

Year	Total share repurchases	Announced share repurchases	Unannounced share repurchases
	R	R	R
2000	2 681 648 478	2 461 253 199	220 395 279
2001	2 969 991 036	1 986 147 611	983 843 425
2002	4 322 450 445	2 788 921 874	1 533 528 571
2003	3 718 359 573	1 660 634 995	2 057 724 578
2004	2 938 399 471	1 780 001 249	1 158 398 222
2005	12 183 006 110	7 868 060 566	4 314 945 544
2006	20 108 963 794	11 926 850 407	8 182 113 387
2007	25 804 509 767	23 931 637 047	1 872 872 720
2008	21 659 223 717	18 588 614 496	3 070 609 221
2009	40 499 959 367	34 238 566 317	6 261 393 050
TOTAL	136 886 511 758	107 230 687 761	29 655 823 997
Percentage	100.00%	78,34%	21,66%

Figure 5.13 shows the rand values, adjusted to reflect 1999 prices, of announced and unannounced share repurchases per annum and confirmed the trends of Table 5.8 (namely that the high level of announced share repurchases resulted mainly from the specific repurchases and the unannounced share repurchases resulted mainly from the application of the 3% rule on open market share repurchases).



**Figure 5.13: Announced versus unannounced share repurchases
(adjusted to reflect 1999 prices)**

5.3 THE EXTENT TO WHICH DIVIDEND PAYMENTS ARE USED TO DISTRIBUTE EXCESS CASH

This study found that 178 (or 78,41%) of the 227 companies included in the population paid dividends to the total value of R247 148 767 838 during their 2000 to 2009 reporting periods. Table 5.9 shows the number of companies involved in dividend payments per annum, the percentage of listed companies (as defined in the population of the study) which paid dividends per annum, as well as the rand value of dividend payments per annum over the target period.

Annexure A lists the 178 companies that were involved in dividend payments over the target period.

Table 5.9: Dividend payments per annum

Year	Number of companies	Percentage of companies paying dividends	Rand value per annum
2000	121	58.74%	6 280 574 526
2001	108	51.67%	7 102 326 467
2002	104	52.00%	11 314 716 930
2003	116	61.38%	14 861 913 925
2004	124	74.70%	20 060 301 607
2005	114	73.55%	22 756 592 469
2006	119	81.51%	37 127 437 255
2007	115	76.67%	37 145 896 443
2008	115	79.86%	39 641 247 520
2009	105	75.00%	50 857 760 696
TOTAL			247 148 767 838

For the purpose of this study, there are three types of dividend payments: dividends paid from profits; dividends paid from share premium; and special dividends. Table 5.10 shows the rand value attributed to each of the three types of dividend payments per annum. The regular dividend payment method (or dividends paid from profits) was the preferred dividend payment method and represented 75,39 per cent of total dividend paid. Dividends paid from share premium and special dividends represented only 11,21 per cent and 13,40 per cent respectively of total dividends paid over the target period.

The number of companies involved in the three types of dividend payments was as follows over the target period: 174 companies paid dividends from profits; 57 companies paid dividends from share premium; and 37 companies paid special dividends.

Table 5.10: Identification of three types of dividend payments per annum

Year	Dividends from profits	Dividends from share premium	Special dividends
	R	R	R
2000	5 540 643 526	172 845 000	567 086 000
2001	6 399 507 467	437 363 000	265 456 000
2002	9 319 459 930	1 361 791 000	633 466 000
2003	11 612 217 431	1 446 344 494	1 803 352 000
2004	13 985 017 953	2 891 776 000	3 183 507 654
2005	17 040 161 469	3 050 285 000	2 666 146 000
2006	22 625 958 255	4 102 122 000	10 399 357 000
2007	25 274 351 443	5 845 265 000	6 026 280 000
2008	30 616 084 520	5 176 783 000	3 848 380 000
2009	43 922 241 696	3 207 386 000	3 728 133 000
TOTAL	186 335 643 690	27 691 960 494	33 121 163 654
Percentage	75.39%	11.21%	13.40%

Figure 5.14 shows the rand value, adjusted to reflect 1999 prices, of total dividends, as well as the dividends paid per dividend type, per annum. Dividends paid from profits increased over time, while dividends from share premium and special dividends fluctuated at lower levels during the target period. In 2006 special dividends showed a sharp increase, after which they showed a steady decrease until 2009.

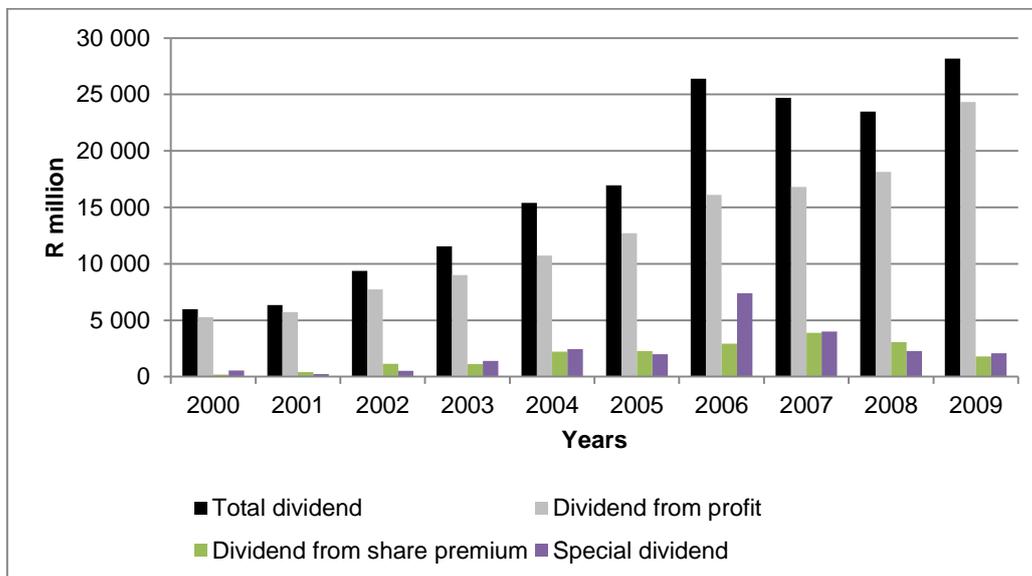
**Figure 5.14: Total dividends and dividend types (adjusted to reflect 1999 prices)**

Table 5.11 shows the mean, median and standard deviation of annual dividend payments. Dividend payments show a high standard deviation percentage, indicating that large payments were made by a few companies.

Table 5.11: Descriptive statistics on annual dividend payments

Year	Mean	Median	Minimum	Maximum	Standard deviation	Standard deviation %
2000	49 383 981	13 270 000	534 000	301 900 000	83 641 858	169.37%
2001	51 905 575	13 336 000	78 000	1 025 000 000	122 408 374	235.83%
2002	65 762 282	17 087 000	400 000	1 763 000 000	181 768 950	276.40%
2003	108 795 355	29 983 000	500 000	2 530 000 000	287 253 234	264.03%
2004	128 119 948	29 437 500	1 292 000	3 107 000 000	346 778 891	270.67%
2005	161 776 626	39 329 000	660 000	3 014 000 000	366 564 151	226.59%
2006	199 619 232	50 263 500	500 000	3 135 000 000	431 021 225	215.92%
2007	311 995 271	76 187 000	37 000	5 014 000 000	764 858 139	245.15%
2008	323 007 795	65 504 353	627 000	4 885 000 000	765 444 539	236.97%
2009	344 706 500	82 160 000	1 594 000	6 020 000 000	843 633 290	244.74%

5.4 A COMPARISON BETWEEN SHARE REPURCHASES AND DIVIDENDS

5.4.1 Total share repurchases versus dividends

Table 5.12 shows the rand values per annum of share repurchases and dividends which were paid by the company. Dividend payments do not represent the cash effect for the group, but the cash effect for the company. Share repurchases include the repurchase of treasury shares by the holding company, which represent a Rnil cash effect in the consolidated annual report. The repurchase of treasury shares by the holding company was included in the comparison with dividend payments, because this repurchase type needs to be acknowledged in the South African share repurchase environment. The writer also compared the share repurchases excluding the repurchase of treasury shares by the holding company to dividend payments in the discussion below.

Total payout for the company was R384 035 279 596 of which R136 886 511 758 was spent on share repurchases and R247 148 767 838 on dividend payments over the target period. Share repurchases therefore represented 35,64 per cent of the total cash distributions made by the company and 55,39 per cent of dividend payments over the target period. Based on total cash distributions made by the company, share repurchases increased from 29,92 per cent in 2000 to 44,33 per cent in 2009, while dividends decreased from 70,08 per cent in 2000 to 55,67 per cent in 2009.

The payout excluding the repurchase of treasury shares by the holding company (therefore the cash effect of the payout for the group) represented R341 123 290 495 over the target period, of which 27,55 per cent was spent on share repurchases and 72,45 per cent on dividend payments. Based on the cash effect of the payout for the group, share repurchases increased from 29,92 per cent in 2000 to 33,72 per cent in 2009, while dividends decreased from 70,08 per cent in 2000 to 66,28 per cent in 2009.

Share repurchases therefore did not exceed dividend payments over the target period.

Table 5.12: Share repurchases and dividends paid per annum

Year	Total cash distributions R	Share repurchases R	Dividends paid R
2000	8 962 223 004	2 681 648 478	6 280 574 526
2001	10 072 317 503	2 969 991 036	7 102 326 467
2002	15 637 167 375	4 322 450 445	11 314 716 930
2003	18 580 273 498	3 718 359 573	14 861 913 925
2004	22 998 701 078	2 938 399 471	20 060 301 607
2005	34 939 598 579	12 183 006 110	22 756 592 469
2006	57 236 401 049	20 108 963 794	37 127 437 255
2007	62 950 406 210	25 804 509 767	37 145 896 443
2008	61 300 471 237	21 659 223 717	39 641 247 520
2009	91 357 720 063	40 499 959 367	50 857 760 696
TOTAL	384 035 279 596	136 886 511 758	247 148 767 838
Percentage based on total distributions		35.64%	64.36%
Percentage on dividends paid		55.39%	100.00%

The number of companies involved in share repurchases (as reported in Table 5.1) increased from 16 in 2000 (or 7,77% of total number of companies included in the population of this study in 2000) to 33 in 2009 (or 23,57% of total number of companies included in the population of this study in 2009). The number of companies involved in dividend payments (as reported in Table 5.9) decreased in number from 121 in 2000 to 105 in 2009, but, based on the number of companies listed in 2000 and 2009 respectively, it increased from 58,74 per cent in 2000 to 75,00 per cent in 2009.

Figure 5.15 shows the rand values, adjusted to reflect 1999 prices, of total dividends paid and share repurchases per annum. Total dividends increased steadily until 2005. The drastic increase in dividends paid in 2006, as well as the decrease in 2007 and 2008, was mainly attributable to special dividend behaviour in those years (as may be observed in Figure 5.14). The sharp increase in the 2009 dividend figure was attributable to the increase in dividends paid from profits (as may be observed in Figure 5.14). Share repurchases became popular in 2005 after which they showed a steady increase until 2007. The drop in share repurchases in 2008 was attributable to the sharp decrease in repurchases by the company of treasury shares held by subsidiaries (as may be observed in Figure 5.11). In 2009 share repurchases increased sharply owing to the sharp increase in other specific offers (as may be observed in Figure 5.11). In 2009 both share repurchases and dividends paid reached their highest value over the target period. It seemed as if the negative economic conditions in 2007 / 2008 affected both dividends and total share repurchases. The fluctuations in dividends were mostly related to special dividend payments and the fluctuations in share repurchases mostly related to the repurchase of treasury shares by the

holding company. The fluctuation in special dividends is addressed in section 5.4.2. The repurchase of treasury shares by the holding company is addressed in section 5.5.

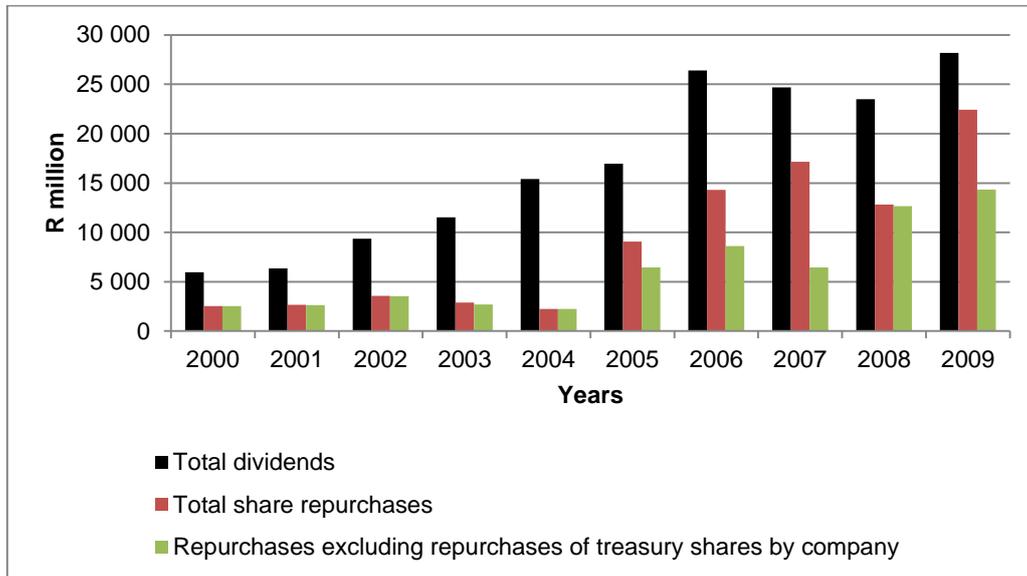


Figure 5.15: Share repurchases versus dividends based on value (adjusted to reflect 1999 prices)

Figure 5.16 shows the growth rate per annum, based on rand values adjusted to reflect 1999 prices, of share repurchases and dividends. The growth rates were in line with the trends shown in Figure 5.15. As from 2005 share repurchases showed positive growth, except in 2008. Dividends showed negative growth only in 2007 and 2008. The fluctuation in special dividends and the repurchase of treasury shares by the holding company are addressed in sections 5.4.2 and 5.5 respectively.

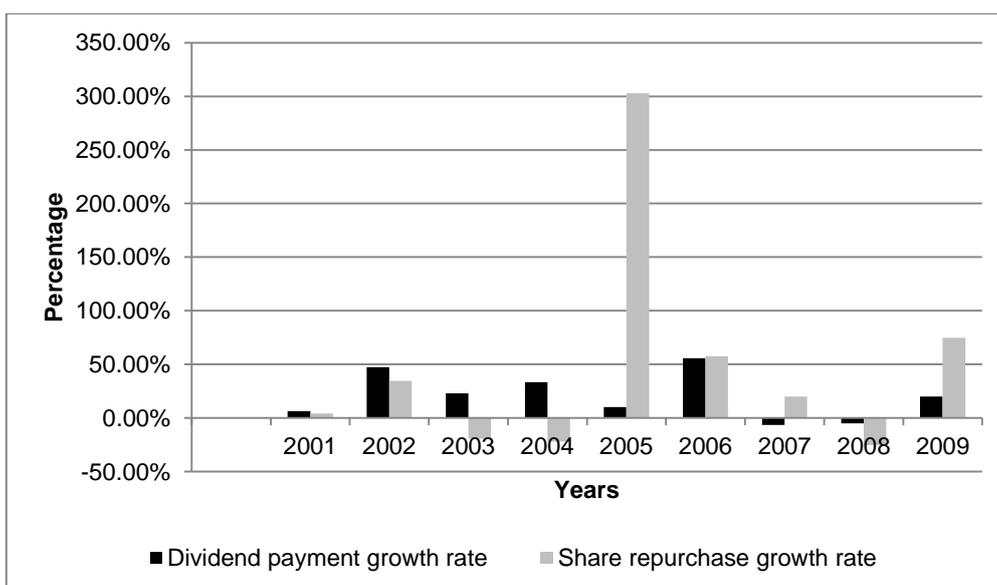


Figure 5.16: Share repurchases and dividends annual growth rates (based on values adjusted to reflect 1999 prices)

The method of using present value and future value was applied when calculating the compound growth rate. The calculated compound growth rate per annum (based on deflated figures) from 2000 to 2009 was 27,32 per cent for share repurchases and 18,8 per cent for dividend payments.

Figure 5.17 shows the percentage of companies (based on total listed companies, as defined in the population of the study, per annum) involved in share repurchases versus dividend payments per annum. There was a negative trend (namely when the percentage of companies paying dividends decreased, the percentage of companies repurchasing shares increased and vice versa) on a yearly basis between dividend-paying companies and companies repurchasing shares until 2006, but after 2007 the trend was positive.

The number of companies involved in dividend payments fluctuated between 100 and 120 companies per annum over the target period. The number of companies involved in share repurchases fluctuated between 20 and 40 companies per annum during most years, except in 2002 and 2003 when about 50 companies were involved in share repurchases.

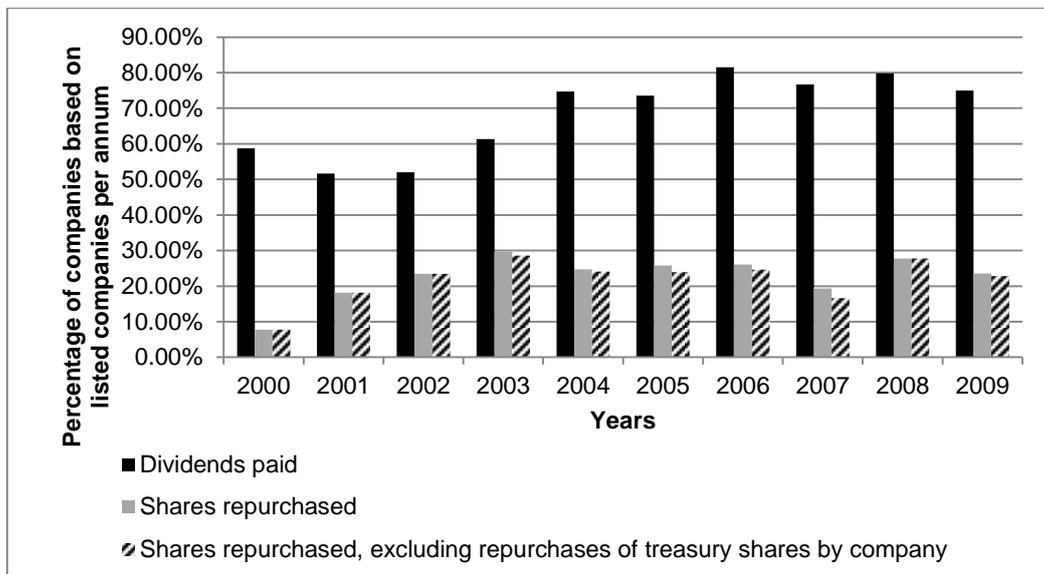


Figure 5.17: Share repurchases versus dividends based on percentage of companies

Figure 5.18 compares the different payment behaviours of companies over the target period. Of the 227 companies included in this study, 12 (or 5,29%) only repurchased shares, and did not pay dividends; 75 (or 33,04%) only paid dividends, and did not repurchase shares; 103 (or 45,37%) paid dividends and made share repurchases; and 37 (or 16,30%) neither paid dividends nor made share repurchases over the target period. The 103 companies which paid dividends and repurchased shares during the target period could be divided into two categories: those who paid dividends every year and regularly repurchased shares (i.e. during 50 per cent or more of the reporting periods in which the company was listed), and those who paid dividends (but not every year) and irregularly repurchased shares (i.e. during less than 50 per cent of the reporting periods).

in which the company was listed). These two categories represented 22 (or 9,69%) and 81 (or 35,68%) companies, respectively, over the target period.

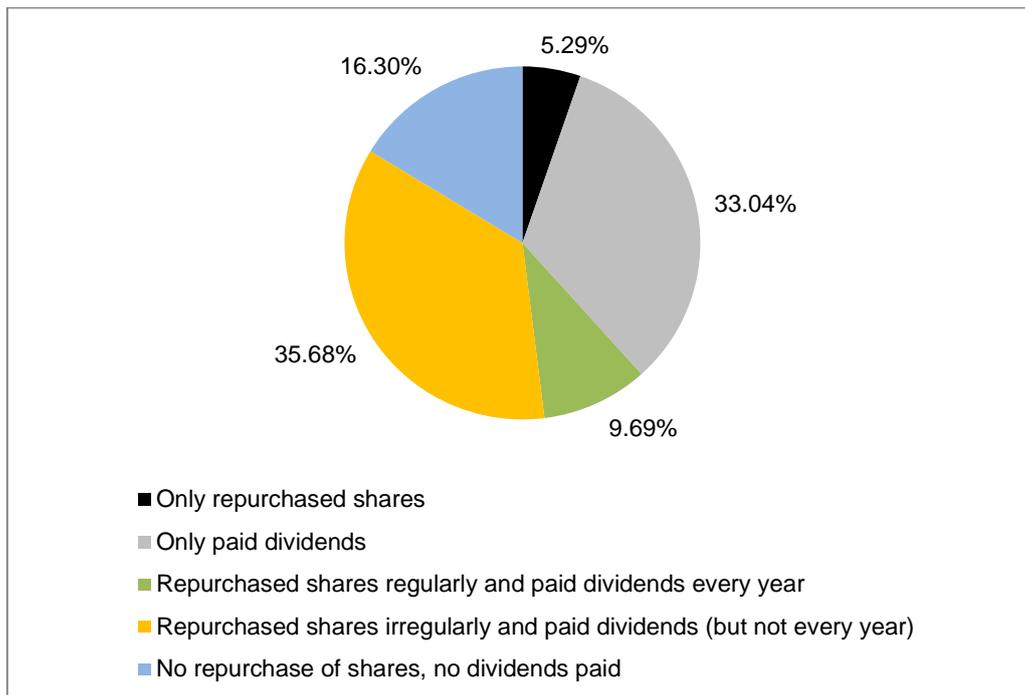


Figure 5.18: Payment behaviour based on number of companies

Figure 5.19 shows that companies only repurchasing shares comprised 0,04 per cent and companies only paying dividends comprised 7,2 per cent of total cash disbursements. Companies which regularly repurchased shares and paid a dividend every year comprised 46,92 per cent of total cash distributions. Companies which paid dividends (but not every year) and irregularly repurchased shares comprised 45,84 per cent of total cash disbursements. In total, companies paying dividends and repurchasing shares therefore comprised 92,76 per cent of total cash disbursements. It could therefore be concluded that a small number of companies (only 9,69%) which always paid dividends and regularly repurchased shares contributed to the majority of cash distributions (i.e. 46,92%) over the target period.

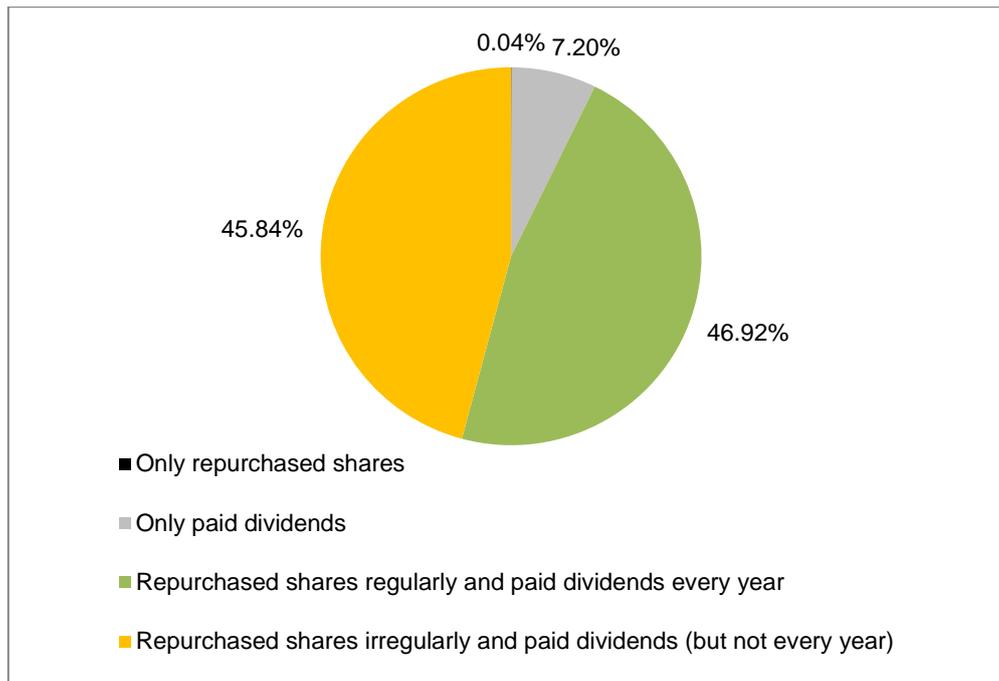


Figure 5.19: Payment behaviour based on value

Figure 5.20 shows the distinction between the different payment behaviours of companies (based on the number of companies defined in the population of the study) per annum over the target period. In all years, excluding 2002, the percentage of companies paying dividends, but not repurchasing shares represented the favourite behaviour and was the choice of between 40 and 60 per cent of the number of listed companies per annum (representing between 70 and 110 companies, respectively). It was only in 2002 where the percentage of companies not repurchasing shares nor paying dividends represented the favourite behaviour. The percentage of companies not repurchasing shares nor paying dividends dropped from about 40 per cent in 2000 to percentages between about 18 and 22 per cent in 2004 until 2009. Companies repurchasing shares and paying dividends represented less than 18 per cent prior to 2002 and subsequently fluctuated between 18 and 22 per cent per annum. The least favoured behaviour per annum was observed in companies repurchasing shares, but not paying dividends, which fluctuated at levels below 5 per cent per annum for most of the years included in the study.

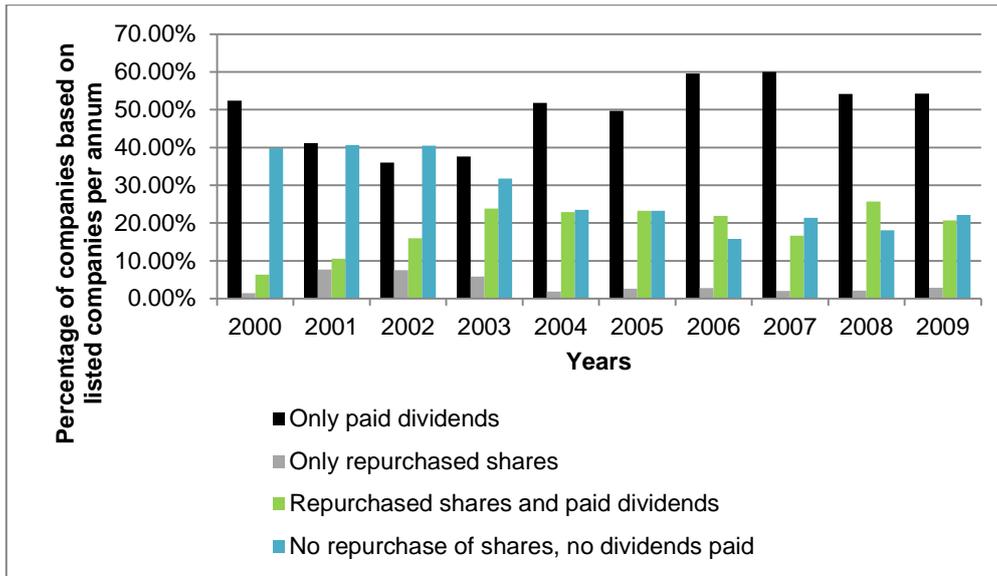


Figure 5.20: Payment behaviour per annum based on percentage of companies

5.4.2 Special dividends versus share repurchases

Special dividends are paid from excess cash and represent an infrequent payment. From Table 5.10 and 5.12 it is evident that special dividends, as a percentage of total dividends, decreased from 9,03 per cent in 2000 to 7,33 per cent in 2009; and, based on total cash distributions, these special dividends decreased from 6,33 per cent in 2000 to 4,08 per cent in 2009. Fluctuations in special dividends from 2006 to 2009 affected the trend in total dividend payments (as may be observed in Figure 5.14). It needed to be ascertained whether the steady decrease in special dividends since 2007 was because share repurchases were being chosen in preference to special dividends.

In Figure 5.21 the value, adjusted to reflect 1999 prices, of share repurchases (total share repurchases as well as share repurchases excluding the repurchase of treasury shares by the holding company) and special dividends are compared per annum. Share repurchases were always the preferred distribution method, except in 2004 when special dividends predominated marginally. The value of special dividends showed a steady decrease from 2006. The total share repurchase increase in 2007, as well as the decrease in 2008, was driven by the fluctuation in the repurchase of treasury shares by the holding company. The repurchase of treasury shares by the holding company represents a unique repurchase entity and repurchase type in South Africa (and is addressed in section 5.5). For the purpose of this study, the comparison between share repurchases and special dividends was based on share repurchases excluding the repurchase of treasury shares by the holding company.

Share repurchases excluding the repurchase of treasury shares by the holding company showed a decrease in 2007, a steady increase in 2008, and a slight increase in 2009. The negative economic

conditions may explain the decrease in the share repurchases (excluding the repurchase of treasury shares by the holding company) and special dividends in 2007. In 2008 and 2009 share repurchases (excluding the repurchase of treasury shares by the holding company) however showed a positive trend as opposed to the negative trend observed for special dividends. It may therefore be concluded that share repurchases (excluding the repurchase of treasury shares by the holding company) were replacing special dividends when distributing excess cash.

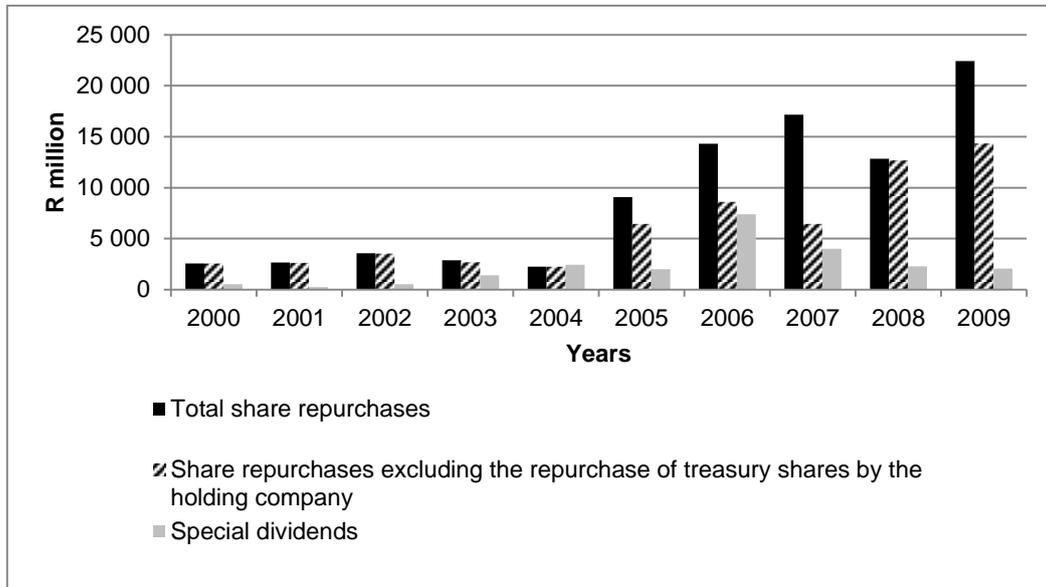
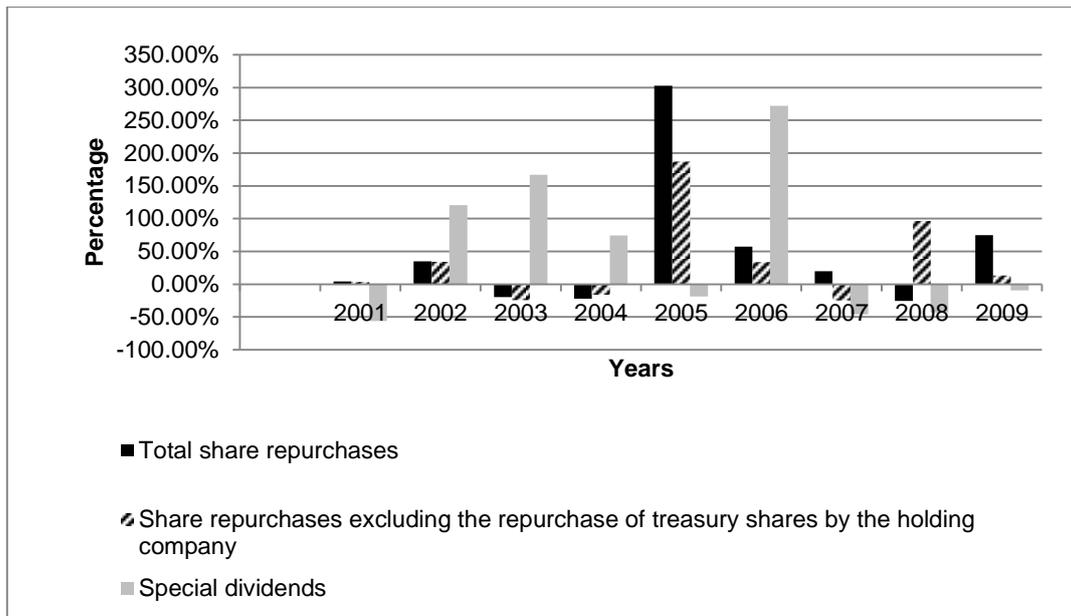


Figure 5.21: Share repurchases versus special dividends based on value (adjusted to reflect 1999 prices)

Figure 5.22 compares the growth rate per annum, based on rand values adjusted to reflect 1999 prices, of share repurchases (total share repurchases, as well as share repurchases excluding the repurchase of treasury shares by the holding company) and special dividends. Total share repurchases showed positive growth in 2002 and a very high growth in 2005. From 2005 the growth was positive, except in 2008. Share repurchases excluding the repurchase of treasury shares by the holding company showed the same trend as total share repurchases until 2006. A negative growth was however observed in 2007 and a positive growth in 2008. Special dividends showed negative growth in 2001 and 2005, as well as in 2007 to 2009.

When comparing the growth rate of special dividends and share repurchases excluding the repurchase of treasury shares by the holding company, it was observed that, subsequent to 2007, the negative growth in special dividends might be offset by the positive growth in share repurchases excluding the repurchase of treasury shares by the holding company during that period (i.e. reflecting a substitution effect).



**Figure 5.22: Growth rate of share repurchases versus special dividends
(based on values adjusted to reflect 1999 prices)**

The method of using present value and future value was applied when calculating the compound growth rate. The compound growth rate for share repurchases (based on deflated figures) was calculated at 27,32 per cent and at 16,08 per cent per annum for special dividends from 2000 to 2009.

Figure 5.23 shows the percentage of companies (based on total listed companies, as defined in the population of the study, per annum) paying special dividends compared to those repurchasing shares per annum. The number of companies involved in share repurchases excluding the repurchase of treasury shares by the holding company is not shown separately as it did not differ materially from the number of companies involved in total share repurchase activities (as may be observed in Figure 5.2.)

Share repurchases were preferred over special dividends. Share repurchases were selected by between 18 and 28 per cent of the companies during the target period (except in 2000, representing about 8%), while special dividends were usually selected by less than 10 per cent of the companies per annum during the target period. The negative trend between the value of share repurchases (excluding the repurchase of treasury shares by the holding company) and special dividends subsequent to 2007 (which may be observed in Figure 5.21) was however not evident based on the number of companies selecting between special dividends and share repurchases. The number of companies therefore did not provide a conclusive result other than that fewer companies selected special dividends than share repurchases.

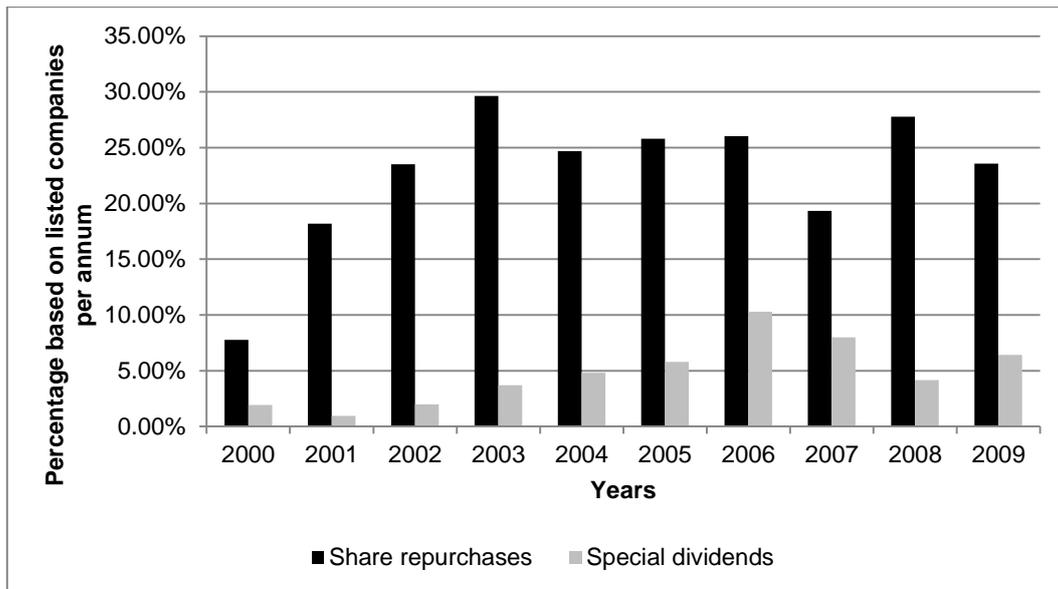


Figure 5.23: Share repurchases versus special dividends based on percentage of companies

5.5 HOLDING COMPANY REPURCHASES OF TREASURY SHARES

5.5.1 The extent to which holding companies enter into treasury share repurchases

The holding company repurchasing of treasury shares was found to be a popular repurchase entity and repurchase type for companies in selected JSE-listed sectors during their 2000 to 2009 reporting periods and represented 31,35 per cent (as observed in Table 5.3 and Figure 5.10) of total share repurchase activity. The repurchase of treasury shares by the holding company affected the trend in total share repurchase activity over the target period.

In Figure 5.11 it may be observed that the repurchase of treasury shares by the holding company became popular in 2005, showed a large increase in 2007, decreased drastically in 2008 and then again increased drastically in 2009. In section 5.2.5 it was reported that 7,13 per cent of specific share repurchases were not announced via SENS. The unannounced specific share repurchases were mainly attributable to the repurchase of treasury shares by the holding company. Unannounced holding company repurchases of treasury shares represented 12,85 per cent (as reported in section 5.2.5) of total holding company repurchases of treasury shares during the target period. All specific share repurchases however should be announced via SENS (as was discussed in Chapter 2 on the South African regulatory environment) and the reason for non-compliance with the Listings Requirements therefore had to be ascertained.

Global literature did not address the repurchase of treasury shares by the holding company, because share repurchases by subsidiaries (and therefore the subsequent sale of these shares to the holding company) were not allowed in most countries during the target period (as was

discussed in Chapter 2 on the South African regulatory environment). An exploratory study (Wesson & Hamman, 2012) was therefore conducted to ascertain what the motivation was for this repurchase type and why there was non-compliance to the regulatory requirements pertaining to this repurchase type. The Wesson and Hamman (2012) study was undertaken after the income tax court case (RSA, 2012) in which the writer acted as expert witness. The writer delivered evidence on the extent of this repurchase type in South Africa and could prove that the repurchase of treasury shares by the holding company was a regular occurrence and hence the 'normality' requirement of Section 103(1) of the Income Tax Act (1962) was met.

In the present study the results of the Wesson and Hamman (2012) study were applied to ascertain the motivations for a holding company entering into the repurchase of treasury shares and how it impacted on the observed trends.

The Wesson and Hamman (2012) study was based on 53 different transactions in which 35 companies repurchased treasury shares from their subsidiaries during the reporting periods including 1 July 1999 to the 2009 year-ends of the companies. These transactions were identified from SENS announcements and / or annual report disclosures. The data collection methods described in Chapter 4 on data collection were followed to identify and verify the data, but no rand values were calculated (as rand values had not yet been calculated at that stage of the data collecting process).

The 35 companies, investigated in the Wesson and Hamman (2012) study, were all included in the present study. The present study added one more transaction in the final results and therefore comprised 36 companies which repurchased treasury shares during the target period. The additional transaction was identified from the annual report disclosure (no SENS announcement was made in respect of this transaction).

5.5.2 Compliance with the regulatory environment

The repurchase of treasury shares by the holding company is a repurchase in terms of Section 85 of the Companies Amendment Act (RSA, 1999) and represents a share repurchase executed under specific authority (because the identity of the selling party is stipulated in the special resolution to authorise the repurchase). As discussed in Chapter 2 on the South African regulatory environment, a company repurchasing treasury shares is obliged to make a SENS announcement once the terms of the share repurchase have been agreed upon (as stipulated by Section 11.25 of the Listings Requirements) and a circular has to be sent to the JSE and distributed to all shareholders (as stipulated by Section 11.23 and 11.25 of the Listings Requirements).

Table 5.13 shows that only 11 (20,8%) of the 53 transactions were announced via SENS and a circular. In respect of 19 (35,8%) of the 53 transactions, only announcements via SENS were

made. Three (5,7%) of the 53 transactions were only announced via a circular to shareholders. A total of 20 (37,7%) of the 53 transactions were not announced via SENS or circulars.

Table 5.13: Compliance with JSE Listings Requirements on specific repurchases

	Number of transactions	%
Announced in SENS and a circular	11	20.8
Announced only in SENS	19	35.8
Announced only in a circular	3	5.7
Unannounced	20	37.7
Total	53	100.0

Source: Wesson & Hamman, 2012: 41.

The Wesson and Hamman (2012) study concluded that holding companies did not always comply with the Listings Requirements on SENS and circular announcements for specific share repurchases when the holding company repurchased treasury shares held by subsidiaries. The study stated that it seemed as if companies did not recognise the repurchase of treasury shares by the holding company as a specific repurchase type, but merely saw it as an internal group transaction. From e-mail communications with the JSE on this issue, the writer learned that the sponsor of each company was indeed required to confirm that the JSE Listings Requirements had been followed and that compliance testing was not the responsibility of the JSE (Van Rhyne, 2008).

For the purpose of the present study, it was concluded that since the repurchase of treasury shares by the holding company was a repurchase type unique to the South African regulatory environment, this meant that companies did not always comply (and sponsors did not recognise their non-compliance) with the Listings Requirements pertaining to the announcement thereof.

5.5.3 Motivation for the repurchase of treasury shares by the holding company

In the Chivaka *et al.* (2009), study it was concluded that, for all potentially contentious issues (e.g. the signalling mechanism and tax efficiency), there was a significant difference between the theoretical reasons and the reasons which were stated by executives in the circulars on specific share repurchases. A logical explanation of possible motivations for the repurchase by the holding company of treasury shares held by subsidiaries was therefore needed. Of specific interest was whether the change in the income tax treatment of the repurchase of treasury shares affected the decisions. As discussed in Chapter 2 in the literature review, the share repurchases by subsidiaries were excluded from the dividend definition (and therefore did not attract any STC) during the target period, while share repurchases of own shares by the holding company were included in the dividend definition (and therefore did attract STC) during the target period. In respect of the holding company repurchasing treasury shares held by subsidiaries, there were in essence two relevant periods: periods prior to 1 October 2007 (when no STC was payable when the holding company

repurchased treasury shares) and periods subsequent to 1 October 2007 (when STC was payable on these transactions). It was thus possible for a company to arrange its affairs in accordance with the tax legislation by initially repurchasing shares through its subsidiaries, then repurchasing those treasury shares from the subsidiaries and consequently pay no STC (as opposed to paying STC if the shares were initially repurchased by the holding company itself).

In the Wesson and Hamman (2012: 37) study the following examples of reasons why a subsidiary may seek to acquire shares in the holding company were listed:

- To transfer the repurchased shares to a share incentive trust or to the beneficiaries of a share option scheme or employee incentive scheme;
- To utilise the repurchased shares as payment in a business transaction;
- To structure a BEE transaction;
- To utilise the investment opportunity when the share price is trading below the NAV; or
- To utilise the advantage of no STC payable on share repurchases by subsidiaries.

The following examples were listed of reasons why a holding company may seek to repurchase the treasury shares held by the subsidiary:

- The business purposes identified as motivations to hold the treasury shares in the subsidiary (as stated above) are no longer applicable;
- The 10 per cent limit (on treasury shares held by subsidiaries) has been reached; or
- To utilise the advantage of no STC payable on these share repurchases (only applicable to periods prior to 1 October 2007).

These examples were stated as not referring to the general theories associated with share repurchases, e.g. traditional information-signalling hypothesis, underreaction hypothesis, agency theory, etc. They were listed only as examples of why a company may seek rather to utilise a subsidiary for the repurchase (and not the holding company itself). The fact that the shares acquired by a subsidiary (i.e. treasury shares) are not cancelled from issued capital (and can therefore be utilised for a specific purpose), while timing the purchase price at a price below NAV were the main features underlying the above-mentioned examples of motivations (Wesson & Hamman, 2012: 37).

In the Wesson and Hamman (2012) study, the SENS announcements and circulars were scrutinised for stated motivations for the 53 transactions by the holding company repurchasing treasury shares held by subsidiaries. Evidence on whether the tax benefit was a motivation was compiled by comparing the date of the share cancellation (as observed in McGregor BFA: product called Price Data) to the STC-free period (prior to 1 October 2007) and STC payable period (1 October 2007 to 31 December 2009).

Table 5.14 shows that for 13 (24,5%) of the 53 treasury share repurchase transactions the stated motivation was that the 10 per cent limit (on treasury shares held by subsidiaries) had nearly been reached. This indicated that these companies intended to continue to hold treasury shares in the subsidiary, because the repurchase by the holding company of the treasury shares made room for the subsidiary again to repurchase shares in the holding company. For the purpose of this study, the fact that the 10 per cent limit had been reached did however not represent a real motivation: there were other underlying motivations as to why the company initially chose to repurchase through subsidiaries and subsequently repurchase those treasury shares through the holding company. The stated motivation on 10 (18,9%) of the 53 transactions included various business reasons (e.g. enabling of a BEE deal, unbundling of the company, liquidation of the company or capital restructuring). For 30 (56,6%) of the 53 transactions no motivation was stated in either the annual report, SENS announcement or circular.

Table 5.14: Motivations for the repurchase of treasury shares from subsidiaries

	Number of transactions	%
10% limit reached	13	24.5
Various business purposes	10	18.9
No reasons stated	30	56.6
Total	53	100.0

Source: Wesson & Hamman, 2012: 42.

Table 5.15 shows that 39 (73,6%) and 14 (26,4%) of the 53 transactions were respectively executed in the STC-free period (i.e. from 1 July 1999 to 30 September 2007) and the STC-payable period (i.e. from 1 October 2007 to the 2009 year-end of the specific company). The first repurchase by the holding company of treasury shares held by subsidiaries was made by Brandcorp Holdings Ltd. on 11 September 2001. The STC-free period therefore represented about six years of the period researched in the Wesson and Hamman (2012) study, while the STC-payable period represented only about two years. The research period was therefore extended until the end of the 2011 reporting periods of the companies which were included in the sample in order to include a more comparable STC-payable period (in total four years). It was found that an additional seven treasury share repurchase transactions occurred subsequent to 2009. Therefore 39 (65%) and 21 (35%) of the 60 transactions were respectively executed in the STC-free period and STC-payable period. Treasury share repurchases therefore still occurred, irrespective of the negative income tax implications applicable from 1 October 2007.

Table 5.15: Tax implications as a motivation for the repurchase of treasury shares from subsidiaries

	Number of transactions	%
Treasury shares repurchased 1/7/1999 to 30/9/2007	39	73.6
Treasury shares repurchased 1/10/2007 to 31/12/2009	14	26.4
Total	53	100.0

Source: Wesson & Hamman, 2012: 42.

Wesson and Hamman (2012) found that various reasons were given by companies as to why the holding company repurchased treasury shares, of which the reaching of the 10 per cent limit was stated most often. No motivation was stated for 56,6 per cent of the transactions. It was found that the holding company repurchasing of treasury shares still occurred subsequent to the negative income tax treatment thereof (Wesson & Hamman, 2012).

The present study confirmed the relation between share repurchases by subsidiaries and the holding company repurchasing treasury shares held by subsidiaries owing to the 10 per cent limit on shares held by subsidiaries. The fact that subsidiaries performing repurchases were the preferred repurchase entity until 2006 (as observed in Figure 5.8) may therefore have necessitated the holding companies to repurchase treasury shares as from 2005 to 2007 (as observed in Figure 5.8). Subsidiary repurchases were again at high levels in 2008 and dropped drastically in 2009, while the high increase in holding company repurchasing of treasury shares in 2009 may be in response to the high subsidiary repurchases in 2008 (as observed in Figure 5.8).

When applying the results of the Wesson and Hamman (2012) study on taxation as a motivation for the repurchase of treasury shares by the holding company, it needs to be acknowledged that the results of the Wesson and Hamman (2012) study (as reported in Table 5.15) were based on number of transactions and not the rand value thereof. The results of the present study on the trend in the rand values of the repurchase of treasury shares by the holding company (as reported in Figure 5.8) showed a drop in the 2008 figure which cannot necessarily be related to the STC payable period starting on 1 October 2007. The payment of STC on the repurchase of treasury shares by the holding company affected only those companies with reporting periods ending subsequent to 30 September 2008. The 2008 figure in Figure 5.8 however includes STC-free payments for all companies with reporting periods ending on or before 30 September 2008. The results of the present study did not therefore contradict the results of the Wesson and Hamman (2012) study which stated that the holding company repurchasing of treasury shares still occurred subsequent to the negative income tax treatment thereof.

5.5.4 Conclusion

The Wesson and Hamman (2012) study found that, owing to the non-existence of a global precedent, companies seemed not fully to understand the regulatory implications when the holding company repurchased treasury shares. This repurchase type represented a specific share repurchase, but it was found that the JSE Listings Requirements pertaining to the announcement thereof were not always met.

It was also stated that the motivations for treasury share repurchases by the holding company differed from general motivations for share repurchases of shares by the holding company (as stated in global literature). It was concluded that the main motivation which was stated by companies when the holding company repurchased treasury shares held by subsidiaries (i.e. that the 10% limit was reached) did not prove to be a real motivation: underlying motivations were applicable as to why the subsidiary initially repurchased the shares and the holding company subsequently repurchased these treasury shares (as opposed to the holding company initially repurchasing these shares directly). The observation of the Chivaka *et al.* (2009) study (namely that for all potentially contentious issues there was a significant difference between the theoretical reasons and the reasons which were stated by executives in the circulars on specific repurchases) may also hold true for the stated motivations on holding company repurchases of treasury shares. It was however found that, irrespective of the negative income tax treatment (as from 1 October 2007), the holding company repurchases of treasury shares still occurred.

5.6 PROPOSITIONS ON SOUTH AFRICAN SHARE REPURCHASE ACTIVITIES

5.6.1 Introductory remarks

The seven propositions for South African share repurchase activity were formulated to ascertain the South African share repurchase experience and to conclude whether empirical evidence on share repurchases is mirrored in this country.

In the discussion below, the seven propositions are tested based on the results reported in this chapter. A comparison is also made with global and South African research results.

5.6.2 Share repurchase value shows a general upward trend

Proposition 1 corresponds with empirical evidence and stated: Share repurchase value shows a general upward trend.

Dittmar (2008: 27) concluded that share repurchases in the US fluctuated around a general upward trend line from 1980 to 2006, with a remarkable surge starting from 2004. Grullon and Michaely (2002: 1649) found that US share repurchases grew at an average annual rate of 26,1 per cent over the period 1980 to 2000.

In the present study the results of this chapter showed (in Figure 5.1) that share repurchases (based on value adjusted to reflect 1999 prices) became popular in 2005, after which a steady increase was observed until 2007. Figure 5.1 shows that the decrease in share repurchases in 2008 was attributable to the sharp decrease in share repurchases by the holding company of treasury shares held by subsidiaries. The decrease in share repurchases by the holding company of treasury shares held by subsidiaries was a result of the high level of share repurchases by the holding company of treasury shares held by subsidiaries in 2007, which led to the 10 per cent limit not yet being reached in respect of shares held by subsidiaries in 2008 (and hence no repurchases by the holding company of treasury shares were required). In 2009 share repurchases were at a value in excess of the 2007 share repurchase levels (after adjusting to reflect 1999 prices). From Table 5.1 it may be observed that the percentage of companies involved in share repurchases increased from 7,77 per cent in 2000 to 23,57 per cent in 2009.

For the purpose of the present study, it was therefore concluded that share repurchases by JSE-listed companies fluctuated around a general upward trend line from 1999 to 2009 and became popular subsequent to the 2004 reporting periods of the companies included in the population. Share repurchases increased at an average compound growth rate (based on deflated figures) of 27,32 per cent per annum from 2000 to 2009.

The present study therefore supports the proposition that share repurchase value shows a general upward trend. This South African experience mirrors empirical evidence.

5.6.3 Share repurchase value increases more rapidly than dividend payments

Proposition 2 corresponds with empirical evidence and stated: Share repurchase value increases more rapidly than dividend payments.

Grullon and Michaely (2002: 1649) found that the US share repurchase value increased at an average annual rate of 26,1 per cent over the period 1980 to 2000, whereas dividend payment value increased at a rate of only 6,8 per cent. Fama and French (2001: 39) recorded a drop from 66,5 to 20,8 in the percentage of companies paying cash dividends during the period 1978 to 1998.

Skinner (2008), in a study on US industrials during the period 1980 to 2005, confirmed that the fraction of dividend payers fell steadily from 42 per cent from 1980 until 1989 to 28 per cent from 1995 until 2004. It was found that few companies paid dividends without also making share repurchases. Payout was found to be dominated by a relatively small group of companies which regularly repurchased shares and paid dividends every year (Skinner, 2008: 587, 589-590).

In the present study, the results (in Figure 5.16) indicate that the growth rate per annum of share repurchases, based on rand values adjusted to reflect 1999 prices, showed positive growth from 2005, except in 2008. Dividends showed negative growth only in 2007 and 2008. The calculated

compound growth rate (based on deflated figures) per annum for share repurchases was 27,32 per cent and for dividends 18,8 per cent from 2000 to 2009.

From Table 5.12 it can be calculated that share repurchases and dividends comprised 29,92 per cent and 70,08 per cent of total cash distributions in 2000, respectively, while share repurchases and dividends comprised 44,33 per cent and 55,67 per cent of total cash distributions in 2009, respectively. The percentage of companies involved in share repurchases increased from 7,77 per cent in 2000 to 23,57 per cent in 2009. The percentage of companies involved in dividend payments increased from 58,74 per cent in 2000 to 75,00 per cent in 2009. Relative to total cash distributions by the company, share repurchases therefore increased and dividend payments decreased over the target period. Based on number of companies, both share repurchases and dividend payments increased from 2000 to 2009.

The present study found that few companies paid dividends without also making share repurchases. Companies paying dividends and repurchasing shares over the target period comprised 45,37 per cent of the total number of companies and 92,76 per cent of total payout value. A small group of companies (i.e. 9,69%), which always paid dividends and regularly repurchased shares, accounted for the majority of cash distributions (i.e. 46,92%) over the target period.

The present study therefore supports the proposition that share repurchase value increases more rapidly than dividend payments. This South African experience mirrors empirical evidence.

5.6.4 Share repurchase value does not exceed dividend payments

Proposition 3 does not correspond to empirical evidence. Empirical evidence was: Share repurchase value exceeds dividend payments. Based on the results reported by Bester (2008: 102-103, 107) the following proposition was formulated: Share repurchase value does not exceed dividend payments.

Dittmar (2008: 27) found that the annual aggregate volume of share repurchases by US companies, except financials and utilities included on Compustat, equalled the value of dividends for the first time in 1998; surpassed that of dividends in 2005; and the margin of share repurchases over dividends widened significantly since 2006. In 2007 US companies spent almost one trillion dollars on share repurchases, which was a record amount, which again exceeded the amount spent on dividend payments (Griffin & Zhu, 2010: 1). According to S&P, share repurchases in the first quarter of 2009 by US companies in the S&P 500 Index dropped by 73 per cent (owing to deteriorating economic conditions) from a year before, but the level of share repurchase activity was still well above the levels three to eight years prior to 2009 (Steverman, 2009: 1; Dow Theory Forecasts, 2009: 3).

In a study by Bester (2008) on industrials listed on the JSE, it was found that dividends still seemed to be the preferred payout method at that stage (i.e. at 30 June 2007): only 20 per cent of total payouts were spent on share repurchases and 80 per cent on dividends during the period. It was also found that, based on number of companies, 52 per cent announced share repurchases and 75 per cent paid dividends. Bester (2008) did not include all share repurchases: only announced open market and announced specific share repurchases were included and the holding company repurchases of treasury shares were not consistently included.

In the present study it was found that no share repurchases were conducted during the 1999 reporting periods of the companies included in the population, and hence the target period for the purpose of comparing payouts for the present study was 2000 to 2009.

Table 5.12 shows that a total of about R384 billion was spent on share repurchases and dividends (i.e. total payouts) during the target period, of which about R137 billion (or 35,64%) was spent on share repurchases and about R247 billion (or 64,36%) on dividend payments. About R43 billion was spent by holding companies repurchasing treasury shares held by subsidiaries. The cash effect for the group (namely total payouts excluding the holding company repurchases of treasury shares held by subsidiaries) was therefore about R341 billion. Based on the cash effect of total payouts for the group (i.e. about R341 billion), share repurchases therefore represented about R94 billion (or 27,55%) and dividends about R247 billion (or 72,45%).

In 2009 share repurchases represented 44,33 per cent of the total payouts and 79,63 per cent of total dividends paid. Based on the cash effect of the group, share repurchases represented 33,72 per cent (and 50,88% of total dividends paid) in 2009.

Based on number of companies, it was found that share repurchases were made by 50,66 per cent and dividends were paid by 78,41 per cent of the companies included in the population of this study.

The present study therefore supports the proposition that share repurchase value does not exceed dividend payments. This South African experience does not mirror empirical evidence.

5.6.5 Open market share repurchase method is not the outright favourite

Proposition 4 does not correspond to empirical evidence. Empirical evidence was: The open market share repurchase method is the outright favourite share repurchase method (i.e. representing about 90% of share repurchase value).

Based on the results of the Bester *et al.* (2010) study, the following proposition was formulated: The open market share repurchase method is not the outright favourite share repurchase method.

Global studies found that 90 per cent (in value) of all US repurchases between 1984 and 2000 was conducted through the open market (Grullon & Michaely, 2004: 651; Ikenberry *et al.*, 1995: 182).

The Bester *et al.* (2010) study found that, based on a sample of only 33 companies, open market share repurchases represented 60,5 per cent of total share repurchase value for the reporting periods including 1 July 1999 to the 2008 year-ends of the sample companies.

Table 5.4 of the present study shows that open market share repurchases represented about R58 billion (or 42,56%) and specific share repurchases represented about R79 billion (or 57,44%) of total share repurchase value over the target period. There were 103 companies which entered into open market share repurchases and 63 companies which entered into specific share repurchases over the target period.

Based on the cash effect of share repurchases for the group (namely total share repurchases excluding the holding company repurchases of treasury shares held by subsidiaries), open market share repurchases represented 62 per cent and specific share repurchases represented 38 per cent over the target period.

The present study therefore supports the proposition that the open market share repurchase method was not the outright favourite share repurchase method during the target period (therefore not representing about 90% of share repurchase value). Based on the cash effect of share repurchases for the group, the open market share repurchase method was however the preferred method (since it represented 62% of the repurchase value), but it was not the outright favourite method – as was observed globally.

The present study therefore supports the proposition that the open market share repurchase method is not the outright favourite share repurchase method. This South African experience does not mirror empirical evidence.

5.6.6 Special dividend payment value decreases over time

Proposition 5 corresponds with identified empirical evidence and stated: Special dividend payment value (based on total dividends paid) decreases over time.

DeAngelo *et al.* (2000) found that there was a dramatic overall decline in the value of special dividend payments in the US. The value of special dividends decreased from an average eight per cent of the total dividends paid in the 1950s to 0,1 per cent for the 1990s, while the number of companies (listed on the New York Stock Exchange) paying special dividends decreased from an average 26,2 per cent in the 1950s to 1,8 per cent for the 1990s (DeAngelo *et al.*, 2000: 315-316).

In Table 5.10 of this study, it is shown that the rand value attributed to special dividends represented about R33 billion (or 13,40%) of the total dividend payments over the target period. Special dividends decreased as a percentage of both total dividends paid and total distributions from 2000 to 2009: the value of special dividends decreased from 9,03 per cent to 7,33 per cent based on total dividends paid and from 6,33 per cent to 4,08 per cent based on total payouts by the company.

In Figure 5.14 the rand value, adjusted to reflect 1999 prices, shows a sharp increase for special dividends in 2006, after which a steady decrease until 2009 was observed. Figure 5.22 on the growth rate per annum (based on rand values adjusted to reflect 1999 prices) special dividends show negative growth from 2007 to 2009, as well as in 2001 and 2005. The compound growth rate (based on deflated figures) for special dividends was calculated at 16,08 per cent per annum from 2000 to 2009.

Figure 5.23, depicting the number of companies paying special dividends, shows that special dividends were usually chosen by less than 10 per cent of the companies per annum during the target period. When data from 2000 and 2009 were compared, it was found that the number of companies paying special dividends increased from 2,43 per cent to 6,43 per cent.

From Figure 5.21 the observation is made that the decrease in special dividends from 2006 to 2009 may be as a result of share repurchases that replaced special dividends. Trends based on the percentage of companies (as observed in Figure 5.23), however, did not confirm the preference-driven replacement of special dividends by share repurchases. The number of companies paying special dividends was however very low during the target period (mostly below 10 companies per annum) and fluctuations based on number of companies were therefore not the most reliable measure.

Although special dividend payments showed a positive compound growth rate over the period of the study, the negative growth per annum from 2007 to 2009 may indicate that special dividends are becoming a less popular method of distributing excess cash to shareholders. The present study supports the proposition that special dividend payment value (based on total dividends paid) decreases over time. This South African experience mirrors empirical evidence.

5.6.7 The JSE announcement structure leads to incomplete data

Proposition 6 does not correspond to empirical evidence. Based on the results of the Bester *et al.* (2010) study, the following proposition was formulated: The JSE share repurchase announcement structure leads to announcements not representing comprehensive data on share repurchase activities.

Most global exchanges require daily, weekly, monthly or quarterly announcements of share repurchases. The JSE Listings Requirements however require that open market share repurchases need to be announced via SENS only once three per cent of the issued shares have been repurchased by the company. This requirement was interpreted by some of the sponsors as three per cent per annum (and not cumulatively, as was intended by the JSE Listings Requirement). The Bester *et al.* (2010) study found that, based on a sample of only 33 companies for reporting periods including 1 July 1999 to the 2008 year-ends of the companies, announced open market share repurchases represented 30,7 per cent of total actual share repurchase value.

In Table 5.6 of this study it may be observed that announced open market share repurchases represented about R34 billion (or 58,72%) and unannounced open market share repurchases represented about R24 billion (or 41,28%) of the total value of open market share repurchases. The unannounced open market share repurchases resulted from the application of the three per cent rule, as stipulated in the JSE Listings Requirements, on the announcement of open market share repurchases. Open market share repurchases represented 42,56 per cent of total share repurchase activity and therefore announced open market share repurchases comprised only 24,99 per cent of total share repurchase activity (Table 5.4). Based on the cash effect of share repurchases for the group (namely total share repurchases excluding the holding company repurchases of treasury shares held by subsidiaries), announced open market share repurchases represented 36,40 per cent of share repurchase value.

Although all specific share repurchases should be announced via SENS in terms of the JSE Listings Requirements, it was found (as reported in section 5.2.5) that 7,13 per cent of total specific share repurchases were not announced via SENS. The unannounced specific share repurchases mostly related to the repurchase of treasury shares by the holding company. It was observed that the repurchase of treasury shares by the holding company was a repurchase type unique to the South African share repurchase environment and, without the global precedent, companies seemed not to recognise that it represented a specific share repurchase. The unannounced specific share repurchases therefore did not result from the JSE announcement structure, but from the interpretation thereof by the holding companies repurchasing treasury shares.

The present study therefore supports the proposition that the JSE share repurchase announcement structure leads to announcements not representing comprehensive data on share repurchase activities, and this was especially true in respect of open market share repurchases. This South African experience does not mirror empirical evidence.

5.6.8 Significance of subsidiary repurchases (and subsequent treasury repurchases)

Proposition 7 does not correspond to empirical evidence. Based on the results of the Bester *et al.* (2010) study, the following proposition was formulated: Share repurchases by subsidiaries (and therefore also the repurchase of treasury shares by the holding company) represent a significant part of share repurchase activities.

Most countries do not allow share repurchases by subsidiaries. In South Africa subsidiaries may acquire up to 10 per cent of the shares in the holding company. These shares are called treasury shares. A subsidiary may dispose of the shares held in the holding company by selling them to external parties or to an entity within the group (e.g. the holding company). The subsequent holding company repurchases of treasury shares and the initial repurchase of shares by subsidiaries are therefore related (Wesson & Hamman, 2012). Bester *et al.* (2010) found that, based on a sample of only 33 companies, subsidiary repurchases represented 56,8 per cent and

holding company repurchases of treasury shares represented 17,1 per cent of total share repurchase value.

In Table 5.3 of the present study it is shown that, based on the rand value of share repurchases per repurchasing entity, repurchases to the value of about R55 billion (or 40,29%) were made by subsidiaries and repurchases to the value of about R43 billion (or 31,35%) were made by the holding company repurchasing treasury shares from subsidiaries.

Figure 5.8 confirms that subsidiaries were the most popular repurchase entity per annum until 2006, based on rand values adjusted to reflect 1999 prices. In 2007 and 2009 the holding company repurchases of treasury shares held by subsidiaries and company repurchases of its own shares were respectively the most popular repurchase entity, with subsidiaries again being the favourite in 2008.

Table 5.5 also confirms that repurchasing executed by the holding company of treasury shares held by subsidiaries was the preferred specific share repurchase method, representing 54,58 per cent of total specific share repurchases over the target period.

The present study therefore supports the proposition that share repurchases by subsidiaries (and therefore also the repurchase of treasury shares by the holding company) represents a significant part of share repurchase activities. This South African experience does not mirror empirical evidence.

5.7 CONCLUSION

This chapter addressed Research question 1, i.e. To what extent do share repurchases take place when compared to other types of cash distributions? In Chapter 3 in the literature review the empirical evidence was identified. Data on the South African share repurchase environment were incorporated to formulate seven propositions, three of which corresponded with empirical evidence; and four propositions which differed from empirical evidence.

In this chapter the seven propositions were tested against the share repurchase data of the JSE-listed companies included in the population of this study for the reporting periods including 1 July 1999 to the 2009 year-ends of the companies. The reported results supported all seven propositions.

The present study has therefore contributed to international literature by stating that some empirical evidence was also evident in South Africa, namely:

- Share repurchase value shows a general upward trend;
- Share repurchase value increases more rapidly than dividend payments; and
- Special dividend payment value decreases over time.

The South African share repurchase experience however differed from empirical evidence in respect of the following aspects:

- Share repurchase value did not exceed dividend payments during the target period: share repurchases comprised 35,64 per cent of total payout value over the target period and in 2009 share repurchases comprised 44,33 per cent of total payout value.
- Open market share repurchases is not the outright favourite share repurchase method: open market share repurchase value represented 42,56 per cent of total share repurchase value during the target period.
- The JSE share repurchase announcement structure leads to announcements not representing comprehensive data on share repurchase activities: announced open market share repurchase value represented only 24,99 per cent of total share repurchase value during the target period.
- Share repurchases by subsidiaries (and therefore also the repurchase of treasury shares by the holding company) represent a significant part of share repurchase activities: share repurchases by subsidiaries represented 40,29 per cent of total share repurchase value and the repurchase of treasury shares by the holding company represented 31,35 per cent of total share repurchase value over the target period.

South Africa is a developing country and share repurchases were implemented much later in this country than in most developed countries (where empirical evidence is set). The results of this chapter however showed that there were South African share repurchase experiences which mirrored empirical evidence. The South African experiences which were found to differ from empirical evidence were attributable to the fact that South African share repurchases only became popular in 2005 and hence the reporting periods ending in 2009 (the final period included in this study) may not yet reflect empirical evidence where share repurchase value exceeds dividends after about 20 years from the date it became popular; and also because the South African regulatory environment differs from the global environment (e.g. in respect of the share repurchase announcement rules and the group entities which are allowed to repurchase shares in the holding company).

The next chapter addresses Research question 2, which is the first of three research questions on the motivations for share repurchases. Chapter 7 addresses the other research questions on the motivations for share repurchases (namely Research questions 3 and 4).

Research question 2 is: Which companies tended to repurchase shares – value companies or growth companies? The hypothesis to be tested in respect of Research question 2 is: Shares are generally repurchased when management views the company to be a value company.

CHAPTER 6

VALUE VERSUS GROWTH

6.1 INTRODUCTION

This chapter addresses Research question 2, i.e. Which companies tended to repurchase shares – value companies or growth companies? Hypothesis 1 which was tested in this chapter is: Shares are generally repurchased when management views the company to be a value company.

In Chapter 3 in the literature review, it was reported that global studies found that the main motivation for share repurchases was to signal to the market that the shares were undervalued (namely the information-signalling theory). Companies with high book-to-market ratios (namely value companies) are usually undervalued – and companies with low book-to-market ratios (namely growth companies) are usually overvalued. It was therefore expected that value companies would outperform the overall market (and also outperform the benchmark that adjusted for book-to-market) when testing the information-signalling theory (Ikenberry *et al.*, 1995: 198).

This chapter sets out to ascertain whether companies in selected JSE-listed sectors which entered into share repurchases during 1999 to the end of their 2009 reporting period were in fact value companies prior to the repurchase of the shares. The value classification will strengthen the argument that the repurchases were done to signal that the company was undervalued. In the following chapter (Chapter 7 on the short- and long-term market reaction to share repurchases) it will be tested whether the announcement of the share repurchases did in fact result in the company outperforming the market subsequent to the announcement and hence confirm the information-signalling hypothesis.

The Ikenberry *et al.* (1995) study applied the book-to-market ratio to test for value versus growth companies. Recent studies (Mordant & Muller, 2003; Mutooni & Muller, 2007; Ward & Muller, 2010) applied the P/E ratio when determining value versus growth. In the present study, value or growth are tested on the basis of market-to-book ratios (which are the inverse of book-to-market ratios) as well as on P/E ratios. A company with a low market-to-book ratio or a low P/E ratio is therefore classified as a value company.

6.2 DATA COLLECTION

The data collection methods on identifying and quantifying the share repurchases of the companies in selected JSE-listed sectors were described in Chapter 4 on data collection. It was found that 115 of the 227 companies included in this study repurchased shares during the target period (i.e. 1999 to 2009). These share repurchases were executed in a total of 378 reporting periods. The exact number of share repurchase transactions could not be quantified, because all

share repurchases were not announced via SENS. Unannounced share repurchases were calculated annually as a balancing figure between annual report disclosures (in directors' report, statement of changes in equity, cash flow statement, shareholders' analysis and the notes on share capital) and SENS announcements and could not be identified on the basis of announcement dates.

Owing to the fact that all South African share repurchases were not announced via SENS and that more than one share repurchase transaction may be executed by a company in a reporting period, this study used the last day of the reporting period prior to the reporting period in which a share repurchase transaction was executed as the calculation date when ascertaining the value or growth classification prior to the share repurchase.

The calculation of value versus growth was done by comparing the ratios (market-to-book and P/E respectively) of each repurchasing company (as at the end of the reporting period prior to the repurchase) to a benchmark ratio. The benchmark ratio for the market-to-book and P/E comparisons was calculated as the mean ratio, as well as the median ratio, (market-to-book and P/E respectively) of all JSE-listed companies included in the population of this study as at the end of the relevant reporting period. The price-to-book ratio and P/E ratio calculations of the McGregor BFA database (product called Financial Ratios) were used in this comparison. All ratios with negative values were excluded from the dataset to avoid possible misclassification of the companies. A company was classified as a value company if the relevant ratio (market-to-book and P/E respectively) of the repurchasing company was lower than the benchmark ratio. The growth classification applied if the relevant ratio (market-to-book and P/E respectively) of the repurchasing company was higher than the benchmark ratio.

The data collection procedure which was applied to ascertain the value or growth classification prior to the share repurchase (as described above) was also applied to ascertain the value or growth classification of companies which were included in the population of this study, but which did not repurchase shares in a reporting period. The ratio (market-to-book and P/E respectively) of each company which did not repurchase shares in a reporting period was therefore compared to the benchmark ratio as at the end of the prior reporting period.

6.3 RESULTS

The results of the classification of value or growth companies (based on market-to-book ratios and P/E ratios compared to means and medians) were used to test whether shares are generally repurchased when management views the company to be a value company. The null hypothesis (for statistical purposes) was that the percentage of value companies which repurchased shares did not differ significantly from the percentage of value companies which did not repurchase shares. A chi-square test, based on a two-by-two contingency table, was firstly applied to test the null hypothesis. Thereafter the generalised estimating equations (GEE) method, which takes

possible time-dependence of data (more than one year's data per company) into account, was applied on the yearly data per company to test the null hypothesis.

The GEE results were found to be similar to the results of the chi-square test for three of the calculation methods (namely market-to-book ratios compared to means and P/E ratios compared to means and medians respectively). The possible dependence of the data did therefore not affect the results. It was only in respect of the calculation method based on the market-to-book ratios compared to medians where the p value of the chi-square test reported statistical significance (at the 5% level), but the p value of the GEE test was 0,16.

Table 6.1 shows the results of the value classifications (and hence also the complementary values for the growth classifications) and the p values of the chi-square and GEE test. It shows that companies repurchasing shares were predominantly (representing 70.41% of the reporting periods in which repurchases occurred) classified as value companies when applying the market-to-book ratios compared to means method, but that this value classification did not differ statistically significantly from companies which did not repurchase shares. When the classification was based on medians (under the market-to-book ratios method) the growth classification was the dominant classification for repurchasing companies, but the growth classification was found not to differ statistically significantly from companies which did not repurchase shares. When the classification was based on P/E ratios compared to means and medians the value classification was the dominant classification for repurchasing companies and this value classification was found to differ statistically significantly at the one per cent level from companies which did not repurchase shares.

It was therefore found that there was a statistically significant difference between the percentage of value companies which repurchased shares and the percentage of value companies which did not repurchase shares when applying the P/E ratio calculation method (based on means and medians). The null hypothesis was therefore rejected.

A histogram of the data exhibited that the P/E ratios, as well as the market-to-book ratios, of the population are skewed. The classification of value or growth based on medians is therefore more appropriate. Table 6.1 shows that, when applying the P/E ratio method based on medians, companies were generally classified as value companies (representing 54,65 per cent of the reporting periods in which share repurchases occurred) prior to the repurchase of shares and that this value classification differed significantly from the value classification of companies which did not repurchase shares in the reporting periods included in this study.

Table 6.1: Value classification and significance results

	Market-to-book ratios		P/E ratios	
	Based on means	Based on medians	Based on means	Based on medians
	Value %	Value %	Value %	Value %
Reporting periods in which companies repurchased shares	70.41	44.66	79.15	54.65
Reporting periods in which companies did not repurchase shares	73.28	51.33	69.45	48.31
Chi-square p value	0.28	0.02	<0.01	0.04
GEE p value	0.43	0.16	<0.01	<0.01

Figures 6.1 to 6.4 show the value or growth classifications per annum for companies which repurchased shares in a reporting period compared to companies which did not repurchase shares in a reporting period. As reported in Table 6.1, it is only in respect of the trends which are reported in Figure 6.3 (when applying the P/E ratios compared to means method) and Figure 6.4 (when applying the P/E ratios compared to medians method) that a statistically significant difference was found between the classifications (value or growth) of companies which repurchased shares compared to companies which did not repurchase shares.

Figures 6.1 and 6.3 show that, when the classification is based on means (when applying the market-to-book ratios and the P/E ratios methods respectively), most companies per annum tended to be value companies. Figure 6.2 reports the classification based on market-to-book ratios compared to medians and shows that companies which repurchased shares were predominantly classified as value companies only in 2000 and 2001. Figure 6.4 reports the classification based on P/E ratios compared to medians and shows that companies which repurchased shares were predominantly classified as value companies in 2000 to 2002, 2005, 2007 and 2008.

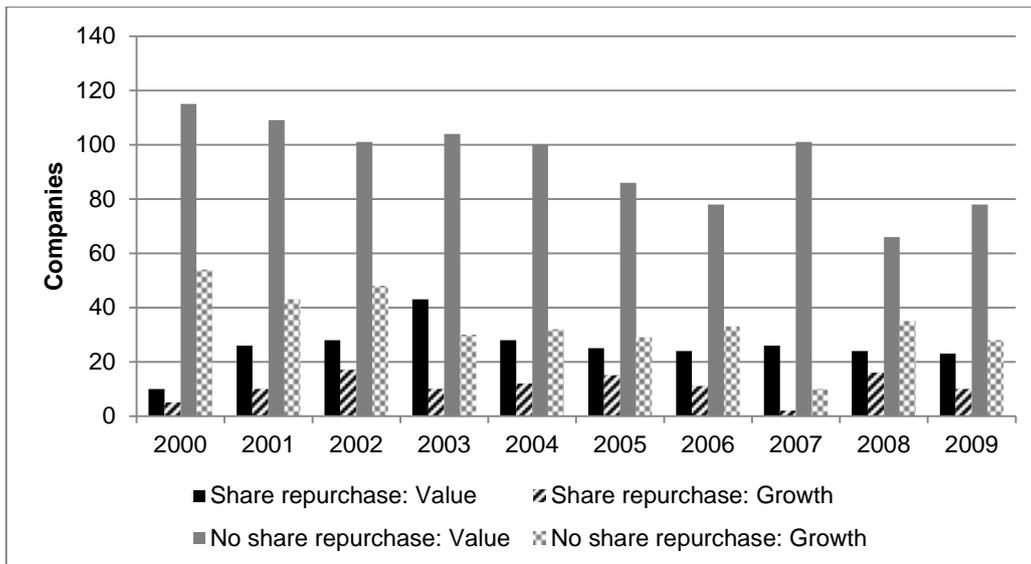


Figure 6.1: All companies based on market-to-book ratio compared to mean

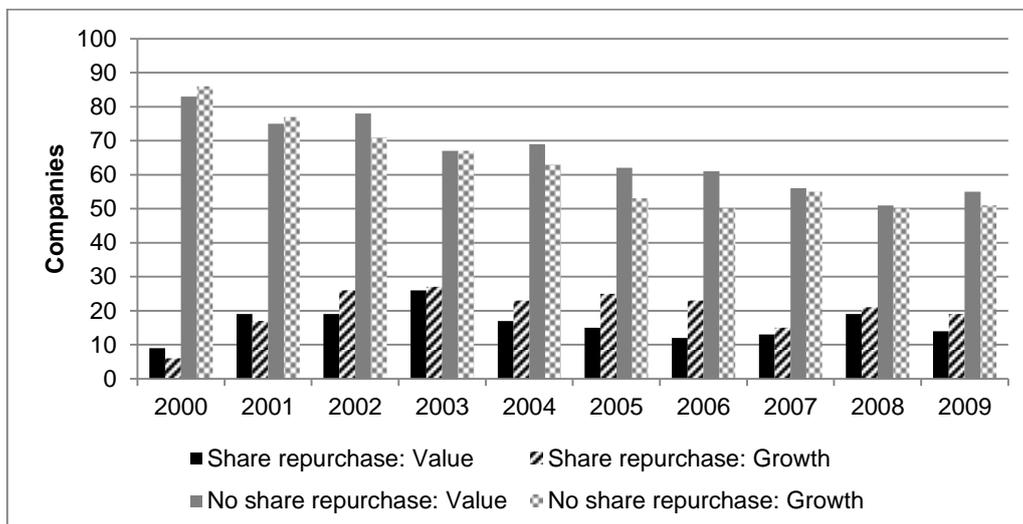


Figure 6.2: All companies based on market-to-book ratio compared to median

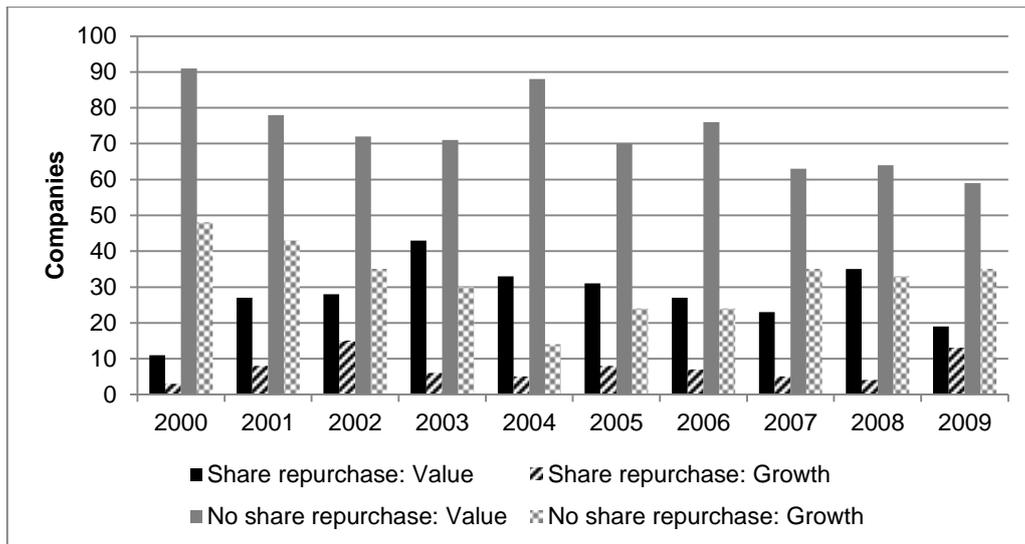


Figure 6.3: All companies based on P/E ratio compared to mean

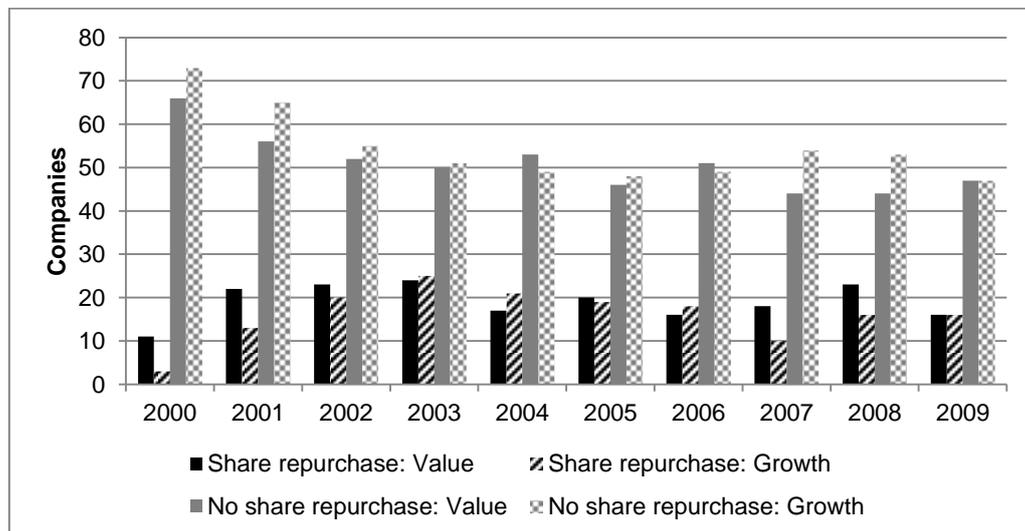


Figure 6.4: All companies based on P/E ratio compared to median

6.4 CONCLUSION

This chapter addressed Research question 2 of this study, i.e. Which companies tended to repurchase shares – value companies or growth companies? Hypothesis 1 which was tested was: Shares are generally repurchased when management views the company to be a value company.

Market-to-book ratios and P/E ratios were applied to classify companies as value or growth companies. When market to book ratios or P/E ratios was lower (higher) than the respective means and medians, a company was classified as a value (growth) company. The announcement of and reporting on share repurchases by JSE-listed companies however affected the calculation method applied for value or growth classifications. All share repurchases were not announced via SENS (especially owing to the 3% announcement rule on open market share repurchases), and

annual report disclosures did not include the date of share repurchase announcements. The test for value or growth was therefore based on the last day of the reporting period prior to the share repurchase transaction(s). This date may not be a true reflection of the value of the company prior to the share repurchase transaction, but was the only viable solution to estimate the value or growth classification.

It was found that the percentage of value companies which repurchased shares differed statistically significantly from the percentage of value companies which did not repurchase shares when the calculation was based on P/E ratios compared to means and medians. When the classification of value or growth was based on market-to-book compared to means and medians no statistical significant difference was reported between the percentage of value companies which repurchased shares and the percentage of value companies which did not repurchase shares.

The results of the market-to-book calculation method differed from the results of the P/E calculation method. Both these ratios are publicly available. The management of the company which repurchases the shares, however, makes the decision to repurchase shares and has more information available to calculate the value or growth classification. Management may, for instance, calculate a more appropriate book value. It seems as if it is difficult to make a general statement on which ratio is appropriate to classify a company as a growth or value company, because different methods are applied by management to ascertain the true value of the company.

The results of the P/E calculation method, however, agreed with the expectations, and Hypothesis 1 was thus not rejected. Companies entering into share repurchases were found to predominantly possess value characteristics when compared to companies not repurchasing shares. Shares are therefore more likely to be repurchased when management views the company to be a value company (when applying the P/E ratios method of classification).

The value classification prior to the repurchase of shares strengthens the argument that the repurchases were done to signal that the company was undervalued. In the next chapter it will be tested whether the announcement of the share repurchases resulted in companies outperforming the market subsequent to share repurchase announcements. Such an outperformance would indicate that the shares were in fact worth more than the share price prior to the share repurchase announcement and hence the companies conducted the share repurchases to signal that their true value was not reflected in the share price prior to the share repurchase transaction.

CHAPTER 7

SHORT-TERM AND LONG-TERM MARKET REACTION

7.1 INTRODUCTION

This chapter addresses Research questions 3 and 4 of the study and builds on the results obtained from Research question 2 (which were tested in the previous chapter on value versus growth). Research questions 2 to 4 (and the resultant Hypotheses 1 to 3) dealt with whether information-signalling was the motivation for the share repurchases.

Research question 3 was: What was the initial market reaction to share repurchase announcements? Hypothesis 2 to be tested was: The traditional information-signalling hypothesis postulates that there is a small positive initial market reaction to share repurchase announcements. This reaction is more evident for *pro rata* offers than for open market share repurchases.

Research question 4 was: What was the long-term market reaction to share repurchase announcements? Hypothesis 3 to be tested was: The underreaction hypothesis postulates that the long-term market reaction exceeds the initial positive market reaction to open market share repurchase announcements. This reaction is particularly evident in value companies.

In Chapter 6 on value versus growth, it was found that most companies were classified as value companies (and therefore undervalued) prior to the repurchase of shares. These results seemed to indicate that companies were generally repurchasing shares to signal undervaluation and that the information-signalling hypothesis may therefore hold true for share repurchases by companies in selected JSE-listed sectors.

In this chapter, the short-term (or traditional information-signalling hypothesis) as well as the long-term market reaction (or underreaction hypothesis) of share repurchases by companies in selected JSE-listed sectors were tested. Results were reported on open market and specific share repurchase activity in total, as well as in respect of each type of share repurchase (i.e. open market share repurchase; *pro rata* offers; the repurchase of treasury shares by the holding company; and other specific offers). As was stated in Chapter 3 in the literature review, it was expected that open market share repurchases and *pro rata* offers would follow current theoretical thinking on open market share repurchases and *pro rata* tender offers, respectively (as they are similar in type to these global repurchase types). It was only in respect of the short-term market reaction where a lower abnormal return was expected for open market share repurchases, owing to the three per cent announcement rule which may have resulted in the announcement of shares which were actually repurchased in the previous year(s) / month(s) and on the previous day. The repurchase of treasury shares (which is a unique South African share repurchase type) was not expected to show

positive abnormal returns, because these repurchases were probably motivated by reasons other than the information-signalling motive.

7.2 DATA COLLECTION

The data collection methods on identifying and quantifying the share repurchases of the companies in selected JSE-listed sectors included in this study were described in Chapter 4 on data collection. The data collection methods ensured that only announcements which led to actual repurchases were included in the population. In Chapter 3 in the literature review, it was found that announcements which led to actual repurchases showed higher excess returns than announcements which did not lead to actual repurchases (Lie, 2005; Yook, 2010). The population of the study comprised companies in selected JSE-listed sectors for the reporting periods including 1 July 1999 to the 2009 year-ends of those. Studies on market reaction could therefore be performed for a maximum of four years subsequent to the announcement date (similar to the Ikenberry *et al.* (1995) study in which the underreaction theory was first reported).

The research sample for this chapter comprised companies included in the population of this study which had announced share repurchases via SENS during the target period.

In this chapter the market reaction subsequent to the announcements of share repurchases were tested. The announcement dates of the SENS announcements in respect of the share repurchases reflected the event date of the study. In line with the methodologies applied by Caudill *et al.* (2006) and Guay and Harford (2000), only one event per repurchase type per annum was included in the study of the market reaction subsequent to the share repurchase announcements. If a company announced more than one transaction in respect of a repurchase type in a reporting period, only the first transaction per repurchase type was included.

The interpretation of the event date for the purpose of this study related to the JSE Listings Requirements (as stipulated in Sections 11.27 and 11.25) pertaining to the type of repurchase (JSE, 2007). Open market share repurchases are required to be announced via SENS once three per cent (based on number of shares per type of share) has cumulatively been repurchased. Specific share repurchases are required to be announced once the terms of the arrangement have been agreed upon. The event date for open market share repurchases therefore reflected the date when the actual repurchase was announced. This announcement date may refer to shares repurchased in the previous year(s) / month(s) and on the previous day, depending on how the rule was interpreted and when the limit was reached. The event date for all specific share repurchases (i.e. *pro rata* offers, the repurchase of treasury shares by holding companies; and other specific offers) reflected the date on which the intention to repurchase was announced.

It was found that 95 companies announced their share repurchases via SENS during the target period. The initial search comprised 212 SENS announcements. Missing values for certain data

requirements led to a final sample of 92 companies which made 204 SENS announcements. Details on the 204 SENS announcements are disclosed in Annexure B.

7.3 RESEARCH METHODOLOGY

7.3.1 Short-term and long-term event methodology

An event study methodology was applied to test the short- and long-term market reaction subsequent to share repurchase announcements. A standard methodology for event studies has been established over time (Bhana, 1998; Bowman, 1983; Brown & Warner, 1980; Madura & Akhigbe, 1995) and it was broadly applied in this study, with some differences as discussed below. The same methodology was initially applied for the short-term and long-term event studies.

An important consideration for event studies, and particularly those with long event windows, is the choice of benchmark against which abnormal returns are estimated (Lyon, Barber & Tsai, 1999: 165). Many event studies use a market- or single-parameter capital asset pricing model (CAPM) as the benchmark, but this has been shown to be inadequate. In particular, the CAPM fails to account for expected returns on the basis of company size, as well as growth versus value (Fama & French, 1992; 1993; 1995; 1996; 1998) and, in the South African context, a further consideration is resource versus non-resource shares (Van Rensburg 2001; Van Rensburg & Robertson 2003a, 2003b). A 12-parameter style model to estimate benchmark returns was therefore used in this study. Following Mordant and Muller (2003), Mutooni and Muller (2007), and Ward and Muller (2010), 12 control portfolios of shares representing the cross-sectional factors of size, growth / value and resources / non-resources were created, as explained in Table 7.1. The cross-sectional factors were established as follows:

- The size of a company was measured by its market capitalisation. All the companies listed on the JSE and included in the FTSE / JSE All Share Index (usually about 160 companies) were ranked in descending order of market capitalisation. The 40 shares with the largest market capitalisation represented the large capitalisation control portfolio. Shares with a market capitalisation ranking from 41 to 100 represented the medium capitalisation control portfolio, and the remaining 60 shares formed the small capitalisation control portfolio.
- A company was classified as a growth or a value company in terms of its P/E ratio. The P/E ratios were calculated and ranked, after which the median was determined. All companies with P/E ratios above the median were classified as growth and the remainder as value.
- The broad JSE sector groupings were used as criteria to decide whether shares represented a resource share or not. All mining and non-mining resource shares were classified as resources, while the rest of shares in the market were classified as non-resource shares.

The database for the control portfolio comprised every share ever listed on the JSE over the study period. Each share listed on the JSE was placed into *one* of 12 control portfolios, on the basis of its characteristics (small capitalisation (S), medium capitalisation (M), large capitalisation (L), value i.e. low P/E ratio (V), growth i.e. high P/E ratio (G), resources (R), non-resources (N)). For example, the shares of Sasol Ltd. would classify as Large, Resource and Value (or Growth) depending on whether their P/E ratio was below or above the median P/E ratio at the start of a particular quarter. The control portfolios were rebalanced for every quarter to ensure that changes in share characteristics (P/E ratios, market capitalisations, new listings and delistings, etc.) were closely tracked over time. Delisted shares were included up to the delisting date, after which the share price returns of the delisted companies were assumed to be zero until the end of the quarter. The delisted shares were excluded from the following quarter's rebalancing of control portfolios. Similarly, the share price returns of newly listed shares were included in the following quarter, when the control portfolios were rebalanced.

Table 7.1: Control portfolios

Control portfolio	Large, medium or small size	Value or growth company	Resources or non-resources company
SGN	Small	Growth	Non-resources
SGR	Small	Growth	Resources
SVN	Small	Value	Non-resources
SVR	Small	Value	Resources
MGN	Medium	Growth	Non-resources
MGR	Medium	Growth	Resources
MVN	Medium	Value	Non-resources
MVR	Medium	Value	Resources
LGN	Large	Growth	Non-resources
LGR	Large	Growth	Resources
LVN	Large	Value	Non-resources
LVR	Large	Value	Resources

Source: Ward & Muller, 2010: 30.

Following Ward and Muller (2010), the 12 beta coefficients for each share in the event sample were calculated by regressing each share's monthly logistic (log) function share price return over the preceding 48-month period against the monthly log returns of each of the 12 control portfolios for the matching period. Dividends were included in the estimation of daily log returns, and share splits, delistings and spin-offs were managed appropriately. An alpha coefficient was also obtained for each share from the regression equation and included in the estimation of expected returns, after adjusting for daily intervals. Alpha and beta parameters for each share in the sample were recalculated on a rolling monthly basis using prior data (i.e. no look-ahead bias).

The control portfolio model estimated the expected return of share i in period t as the sum of the sensitivity of share i to the returns on the 12 control portfolios plus the estimated daily alpha using out-of-sample (or prior) data. This was summarised in Equation 7.1:

$$E(R_{it}) = \alpha_{i,t} + \beta_{i,1}SGN_t + \beta_{i,2}SGR_t + \beta_{i,3}SVN_t + \beta_{i,4}SVR_t + \beta_{i,5}MGN_t + \beta_{i,6}MGR_t + \beta_{i,7}MVN_t + \beta_{i,8}MVR_t + \beta_{i,9}LGN_t + \beta_{i,10}LGR_t + \beta_{i,11}LVN_t + \beta_{i,12}LVR_t \dots \dots \dots (7.1)$$

where:

- $E(R_{it})$ = the expected return of share i on day t ,
 $\alpha_{i,t}$ = the alpha intercept term of share i on day t ,
 $\beta_{i,1} \dots \beta_{i,12}$ = the beta coefficients on each control portfolio return; and
 $SGN_t \dots LVR_t$ = the log-function share price returns on each of the 12 control portfolios on day t .

The daily abnormal returns (ARs) were calculated in terms of Equation 7.2, and then averaged across the sample for the event analysis.

$$AR_{it} = R_{it} - E(R_{it}) \dots \dots \dots (7.2)$$

where:

- AR_{it} = the abnormal return of share i in period t ;
 $E(R_{it})$ = the expected return of share i in period t determined in terms of Equation 7.1; and
 R_{it} = actual return of share i in period t .

The performance was calculated over an extended period by accumulating the average ARs to obtain the cumulative abnormal return (CAR) for each share, over the event window period. The event date was defined as the first announcement date of the repurchase type, and this was denoted as t_0 . The four-year event window was defined as 60 trading days prior to the event date to 1 000 trading days after the event date and denoted as t_{-60} to $t_{1\,000}$. The results were presented graphically by plotting the cumulative abnormal returns (CARs) for companies over the event window. CARs commence at t_0 (i.e. the CARs were accumulated from the announcement date and the CARs from t_0 backwards to t_{-60} were effectively subtracted).

7.3.2 Long-term buy-and-hold methodology

A CARs approach does not represent a realistic investment strategy. The present study therefore also applied a buy-and-hold strategy to test the outperformance on a portfolio basis. The style-based methodology of Muller and Ward (2013) was used to compile the portfolios. A monthly calendar-time portfolio approach, as advocated by Fama (1998), was applied. An equally-weighted buy-and-hold investment in all repurchasing companies beginning in the month following the announcement was assumed. The return (including any dividends) for each of the shares in the share repurchase portfolio was calculated on a monthly basis. The value of the portfolio was then calculated from a base of 1.0. At the last day of each month the value of the portfolio was retained. At the beginning of each month the portfolio was rebalanced so that the portfolio was equally weighted. A 15 month holding period, which was found to be the optimal holding period when applying the style-based methodology to the dataset, was applied. This process was repeated each month, accumulating the value of the portfolio until 31 December 2009.

Buy-and-hold abnormal returns (BHARs) were calculated each month by comparing the value of the portfolio (of repurchasing companies) to a benchmark portfolio value. The benchmark portfolio included all JSE-listed shares other than shares listed in the Basic Materials and Financials sectors. A two-factor model (based on 16 characteristics, i.e. four size quartiles and four value / growth quartiles) was applied and a buy-and-hold approach was used to calculate a benchmark portfolio return for each of the 16 characteristics. Methods similar to those described under the CARs control portfolio approach were applied to determine the size quartiles (based on market capitalisation) and the value / growth quartiles (based on P/E ratios). The benchmark portfolio return for each month was compiled by mapping each share in the portfolio (of repurchasing companies) to a matching benchmark portfolio return, then extracting this matching portfolio return and finally calculating the monthly mean of all the matching portfolio returns to create the monthly benchmark return. The benchmark portfolio value was calculated as described above in respect of the share repurchase portfolio.

7.3.3 Hypothesis testing

Brown and Warner (1980, 1985) presented the most commonly used parametric tests to measure significance on ARs from event studies. McWilliams and McWilliams (2000) presented an aggregated z-test for CARs, provided these are normally distributed. Sanger and McConnell (1986), Cowan and Sergeant (1996) and Corrado (1989) all offered appropriate non-parametric tests.

In the present study a bootstrapping process was used to test ARs and CARs for significance (Noreen, 1989). Using the daily ARs on each of the shares in the sample, Monte Carlo-type bootstrap distributions of CARs were constructed. This was done by selecting random dates, for each company, from the period before and after the actual event date (excluding the observations in the event window itself) and calculating the CARs respectively. The random date generation process was repeated 100 times to generate a suite of distributions for the event window. From this data significance levels were determined. The ARs over the event window could then also be tested for significance. This method of significance testing is superior to the t-test in that no assumption was made of normality.

A Monte Carlo-type bootstrap distribution method was also used to test the returns of the share repurchase portfolio (compiled under the buy-and-hold approach) for significance. This was done by compiling 16 portfolios (compiled under the buy-and-hold approach) representing the size and value / growth characteristics of the share repurchase portfolio on a monthly basis. The size and value / growth ranges of the share repurchase portfolio were used to randomly compile the 16 portfolios on a monthly basis. From this data significance levels were determined.

7.4 RESULTS

7.4.1 Descriptive statistics

In Chapter 5 on share repurchases versus dividends, it was reported that 115 of the 227 companies in selected JSE-listed sectors repurchased shares during the target period (i.e. 1999 to 2009). The final sample for the event studies tests comprised 92 repurchasing companies which made 204 share repurchase announcements via SENS during the target period. These announcements comprised the following repurchase types: 123 open market share repurchases; 15 *pro rata* offers; 28 repurchases of treasury shares by the holding company; and 38 other specific offers.

Details on the 204 SENS announcements are disclosed in Annexure B.

Table 7.2 demonstrates that relatively small sample sizes occurred in some of the event categories.

Table 7.2: Descriptive statistics on share repurchase announcements

Type	Event type	Number of observations	Average market capitalisation (Rm)	Maximum market capitalisation (Rm)	Minimum market capitalisation (Rm)	Observations representing infrequent events (i.e. ≤ 3 events by company during target period)	Observations representing frequent events (i.e. > 3 events by company during target period)	Median based on P/E ratio
1	Open market repurchases	123	9 991	239 966	23	65	58	8.8
2	<i>Pro rata</i> repurchases	15	8 026	39 211	83	10	5	9.8
3	Repurchase of treasury shares by holding company	28	19 903	188 534	23	10	18	11.4
4	Other specific offers	38	7 297	186 595	8	24	14	9.2
	Total	204				109	95	

To ensure that the results were not affected by spurious outliers, the abnormal returns were trimmed so as to exclude any daily ARs greater than 20 per cent or less than -20 per cent. Initially, the CARs for the full sample of events were examined across the event window from t_{-60} to t_{1000} , applying different weights to each observation: firstly equal weights; secondly weighted by the value of the share repurchase as a percentage of market capitalisation; and thirdly weighted by the value of the share repurchase as a percentage of market capitalisation, but with a maximum of 50 per cent weight for any observation. The results are shown in Figure 7.1 below.

Figure 7.1 shows that, in general, the CARs were similar irrespective of the weighting methodology. For the data weighted by the value of the repurchase as a percentage of market

capitalisation (green and blue lines), there was evidence of influence by outliers, particularly in the first 100 days of the event window. The red line shows the equal weighted CARs, which were smoother, and therefore the equal weights are used for the rest of the analysis.

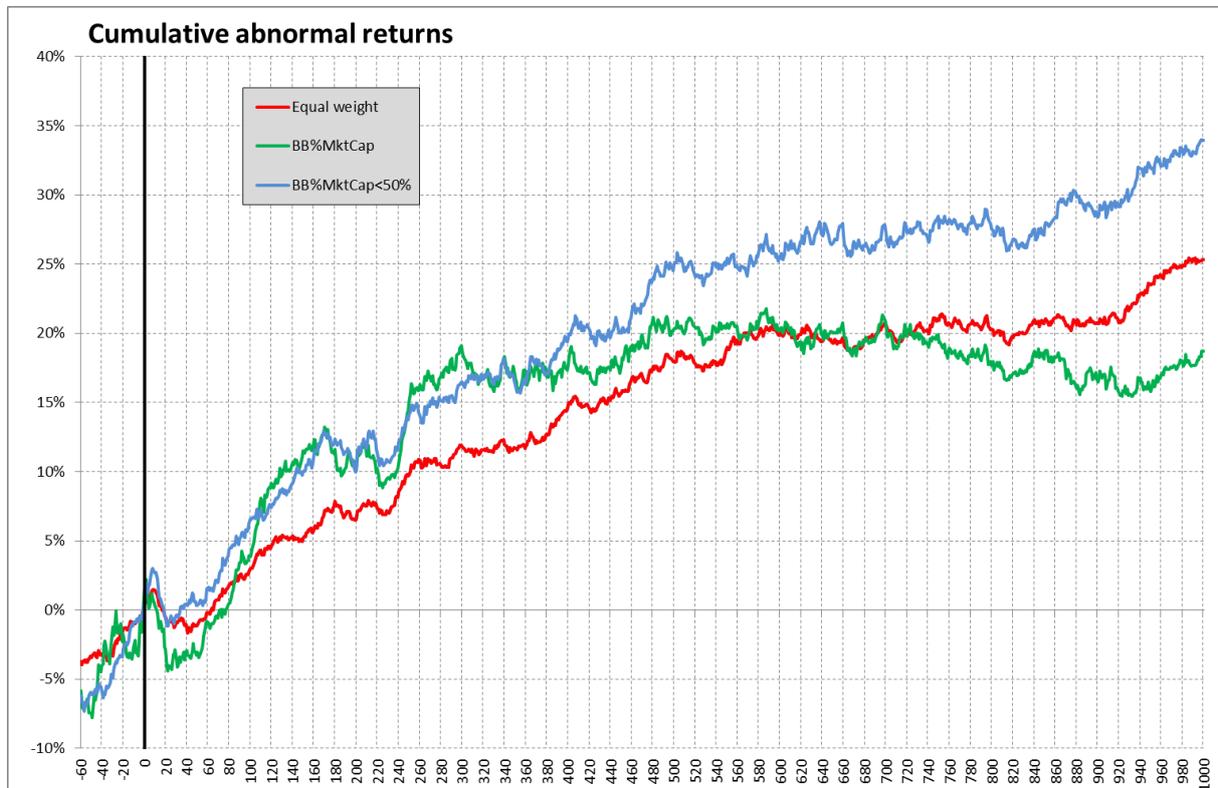


Figure 7.1: CARs for the full sample of share repurchase announcements, with different weights applied to observations

7.4.2 Short-term returns

Hypothesis 2 in respect of the short-term market reaction research was: The traditional information-signalling hypothesis postulates that there is a small positive initial market reaction to share repurchase announcements. This reaction is more evident for *pro rata* offers than for open market share repurchases.

In Figure 7.2 the event window was reduced to day t_{-60} until day t_{60} to be able to observe the movement around the event date t_0 in detail.

It was observed that the CARs for the group of specific share repurchases increased by 10 per cent from about day t_{-35} to zero on day t_0 . After the event, for the next 60 days, these CARs remained relatively stable around and below zero, except on about t_2 when a small spike of about one per cent was observed.

The pre-event CARs for the open market share repurchases increased during the 60 days prior to the event by about two per cent to about zero on day t_0 . The CARs for the open market share repurchase group fluctuated around zero for the 60 days after the event. It was only for about 10

days after the event (from about day t_5 to day t_{15}) that a small positive excess return of about one per cent was observed.

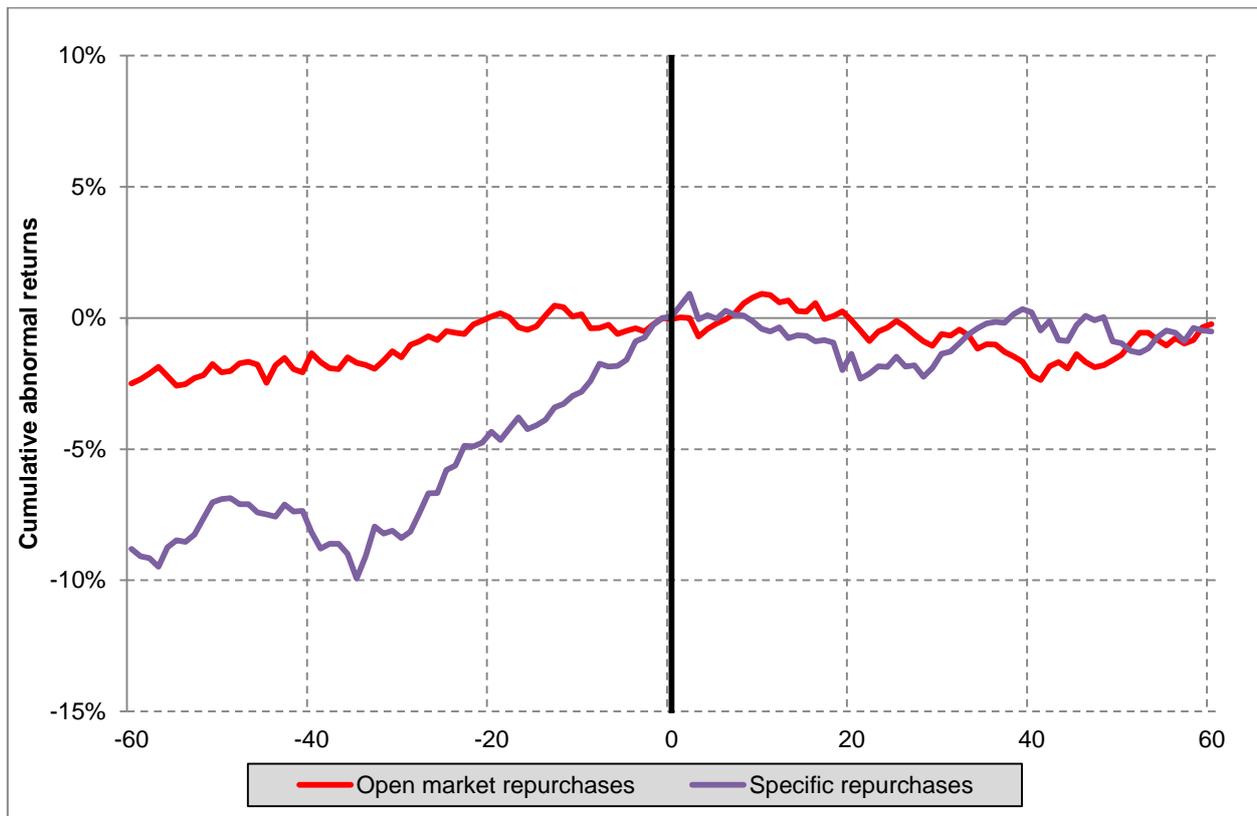


Figure 7.2: Short-term CARs for open market repurchases and specific repurchases

In Figure 7.3 the specific share repurchases were split into the three types of repurchases (i.e. *pro rata* offers; the repurchase of treasury shares by the holding company; and other specific offers) and compared to open market share repurchases. In the 60 days prior to the event, the CARs of *pro rata* offers decreased from day t_{-60} to about -5 per cent on day t_{-30} , and it then increased to about two per cent on day t_0 . As from day t_0 to day t_{30} the CARs of the *pro rata* group decreased to about -2 per cent; and from day t_{20} to day t_{60} an increase to about four per cent was observed. The repurchase of treasury shares by the holding company showed an increase of about five per cent from day t_{-60} to about zero on day t_0 ; and from day t_0 to day t_{60} the return was approximately one per cent. Other specific offers showed an increase of about 15 per cent from day t_{-60} to about zero on day t_0 ; and from day t_0 to day t_{60} the return was approximately zero.

From Figure 7.3 it may be observed that the results of open market share repurchases and the repurchase of treasury shares by the holding company were fairly similar in the pre- and post-announcement period. Other specific offers showed larger negative CARs (as opposed to the other repurchase types) in the pre-announcement period, but in the post-announcement period the CARs of the other specific offers were also similar to that of the open market share repurchases

and the repurchase of treasury shares by the holding company. The *pro rata* offer share repurchase type was the only share repurchase type with positive pre-announcement CARs (from about day t_{-60} to about day t_{-50} , and again from about day t_{-2} to day t_0) and showed the highest positive CARs in the post-announcement period (reaching a maximum of about 4% on about day t_{55}) when compared to other share repurchase types.

Figures 7.2 and 7.3 also indicate that the market was not efficient. The bulk of the returns occurred before t_0 . The event (announcement) therefore conveyed new information to the market which was not previously taken into account in the pricing of the shares by the market.

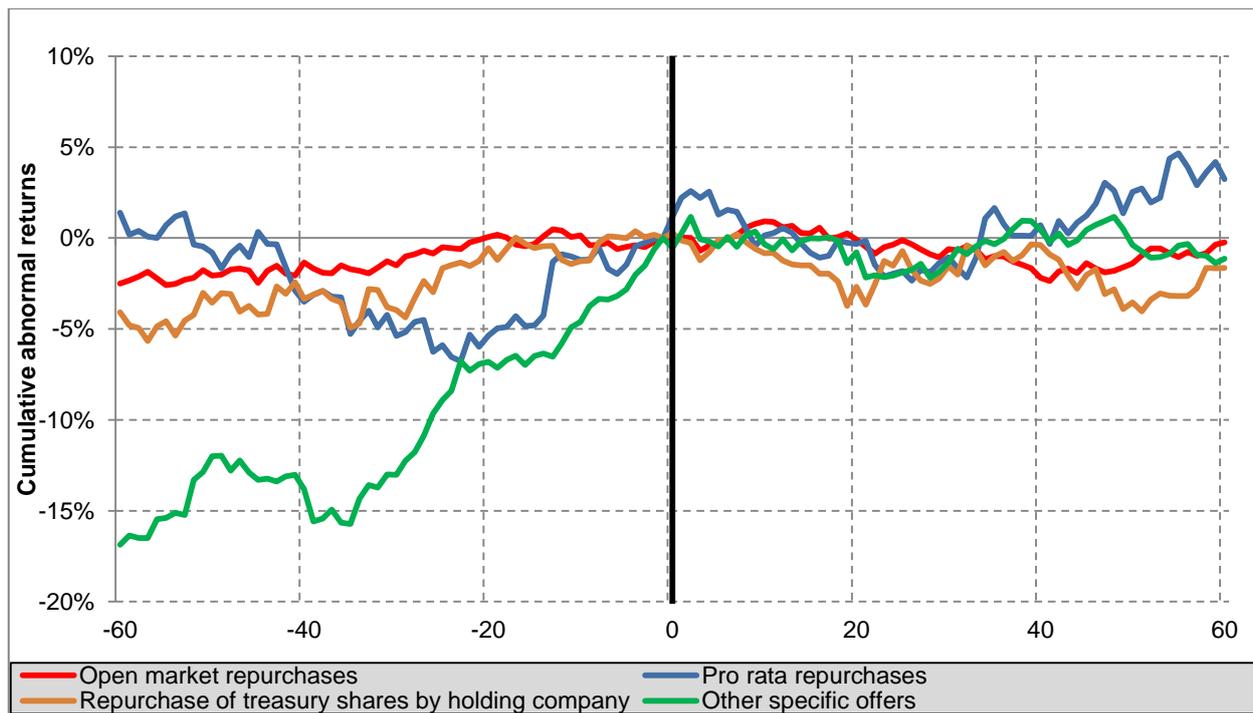


Figure 7.3: Short-term CARs for open market repurchases and three types of specific repurchases

Hypothesis 2 was not rejected, because open market share repurchases showed very small CARs subsequent to the event and the *pro rata* offers showed higher positive CARs than open market share repurchases from day t_0 to about day t_{10} and then again from day t_{37} to day t_{60} .

7.4.3 Long-term returns based on CARs

7.4.3.1 Total long-term returns

Hypothesis 3 in respect of the long-term market reaction was: The underreaction hypothesis postulates that the long-term market reaction exceeds the initial positive market reaction to open market share repurchase announcements. This reaction is particularly evident in value companies.

Figure 7.4 shows the long-term CARs of open market share repurchases and specific share repurchases. The CARs for open market share repurchases increased to about 40 per cent after about t_{640} before stabilising. The CARs for specific repurchases increased to about 15 per cent after about 500 trading days from the event before stabilising.

As was stated under methodology in 7.3.1 above, the same methodology was initially applied in the short- and long-term event studies. The results of Figure 7.4 therefore include the same results which are reported in Figure 7.2 and Figure 7.3 in respect of the first 120 days of the event window.

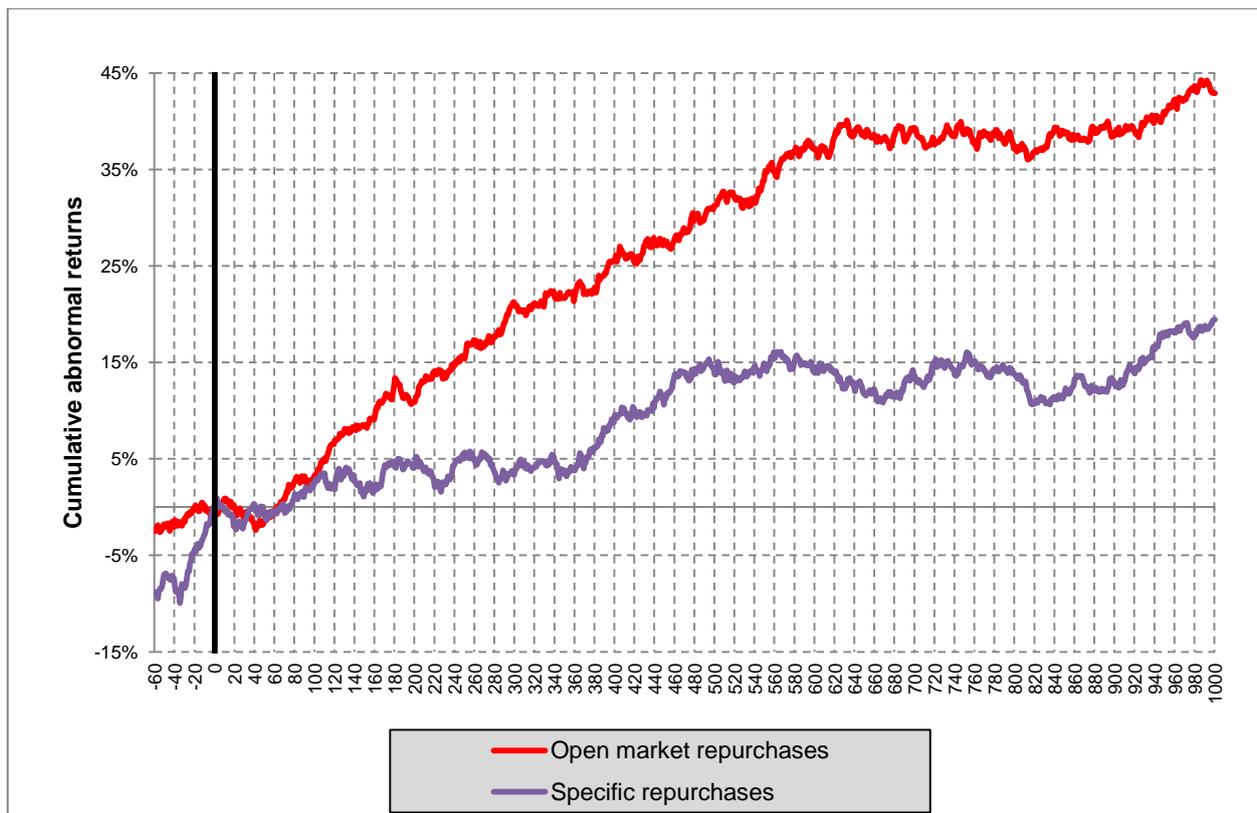


Figure 7.4: Long-term CARs for open market repurchases and specific repurchases

In Figure 7.5 the CARs of specific share repurchases are split into the three types of repurchases (i.e. *pro rata* offers; the repurchase of treasury shares by the holding company; and other specific offers) and are compared to the CARs of open market share repurchases. The CARs on *pro rata* offers were negative for most of the post-announcement period and stabilised at about -28 per cent on day t_{780} . The repurchase of treasury shares by the holding company showed CARs of approximately zero until day t_{440} after which CARs gradually increased to about 30 per cent at day t_{960} . Other specific offers showed a steady increase as from day t_0 to about 30 per cent at about day t_{480} before stabilising.

It could therefore be concluded that share repurchases showed greater returns based on the underreaction theory (i.e. over the long term) as opposed to their short-term returns; and that the open market share repurchase type outperformed the specific share repurchase type (in total and for all categories) over the longer term. The *pro rata* specific repurchase type, which is similar to a global type of *pro rata* fixed price tender offer, did not show a positive long-term return – in line with current theoretical thinking.

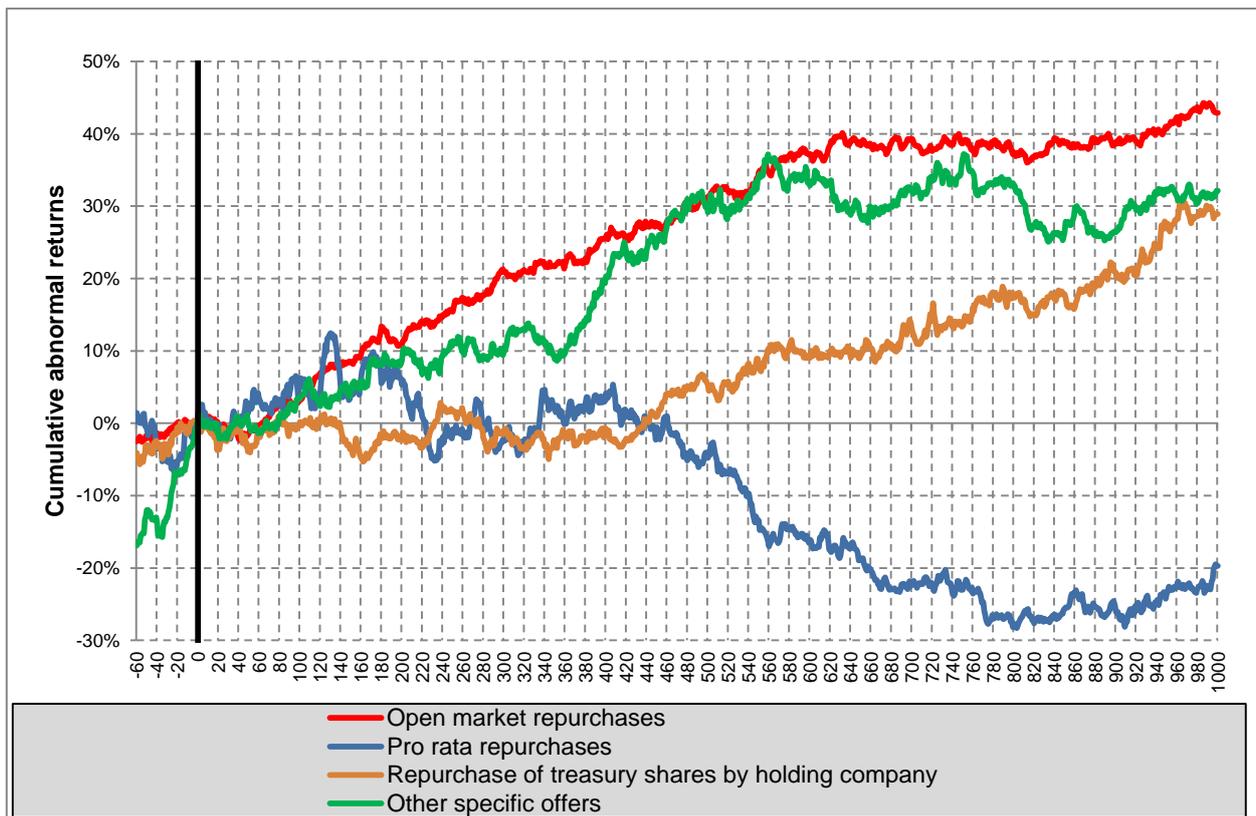


Figure 7.5: Long-term CARs for open market repurchases and three types of specific repurchases

As the CARs are generally stable after about three years (approximately 760 trading days), the post-event window is reduced to 760 days for the remainder of the analysis. It was only in respect of the repurchase of treasury shares by the holding company category where an increase from about 15 per cent to about 30 per cent was observed over the remainder of the event window.

7.4.3.2 Value versus growth

Figure 7.6 shows that the CARs for value shares (measured based on P/E ratios) outperformed the CARs for growth shares. Maximum CARs of about 40 per cent were observed at day t_{580} , which represented an outperformance of about 26 per cent when compared to growth portfolios. The CARs for growth shares were also positive, but lower than the CARs for value shares.

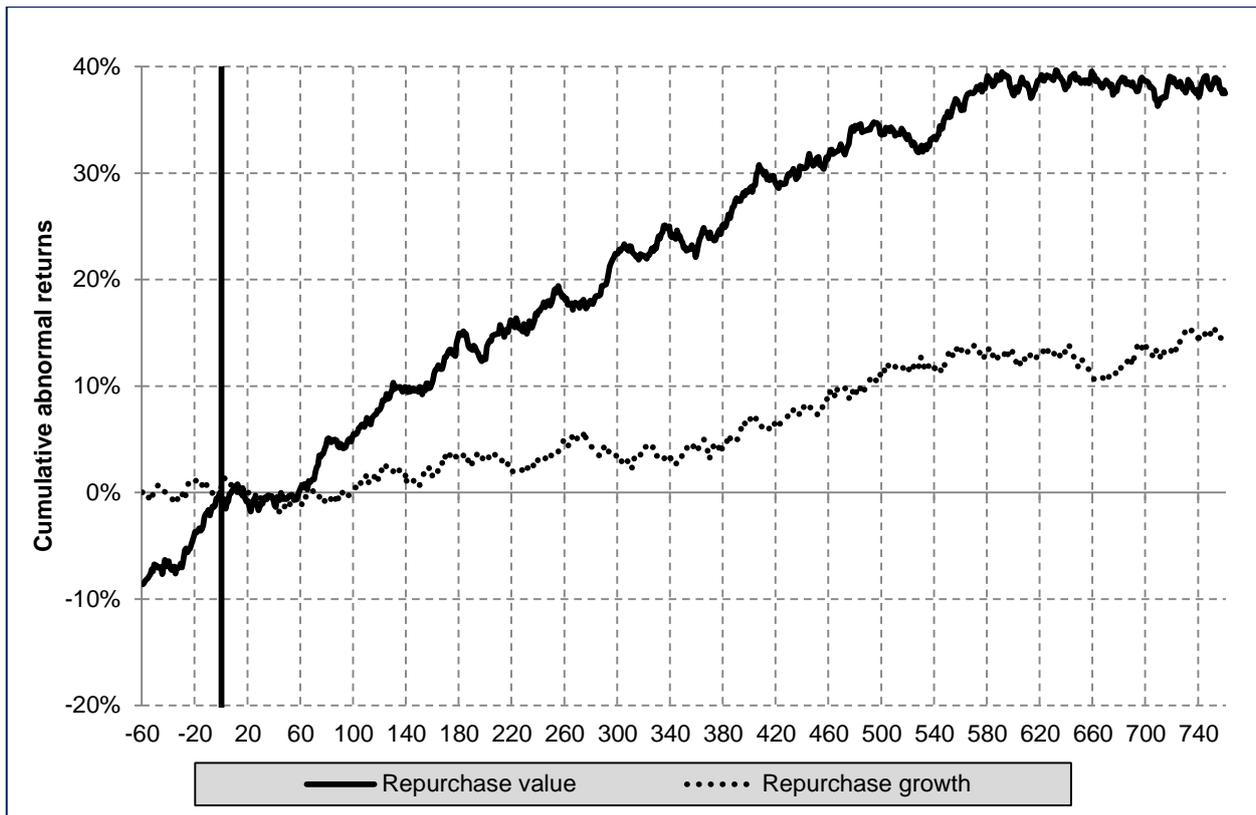


Figure 7.6: CARs for repurchases based on value and growth portfolios

In Figure 7.7 the specific share repurchases are split into the three types of repurchases (i.e. *pro rata* offers; the repurchase of treasury shares by the holding company; and other specific offers) and compared to open market share repurchases. For all types of share repurchases, except for the repurchase of treasury shares by the holding company, the value companies outperformed the growth companies. The results in respect of the repurchase of treasury shares by the holding company confirmed the expectation that this share repurchase type was not motivated by the information-signalling theory.

The highest CARs values were observed for value companies conducting open market share repurchases (with a maximum value of about 50% at day t_{680}), followed by value companies conducting other specific offers (with a maximum value of about 40% at day t_{700}). Value companies entering into *pro rata* offers showed positive CARs until about day t_{550} , then decreased to about -10 per cent at about day t_{660} , and subsequently increased to about -5 per cent. The growth portfolios for all repurchase types, except for *pro rata* offers, showed positive CARs (but lower values than the value portfolios).

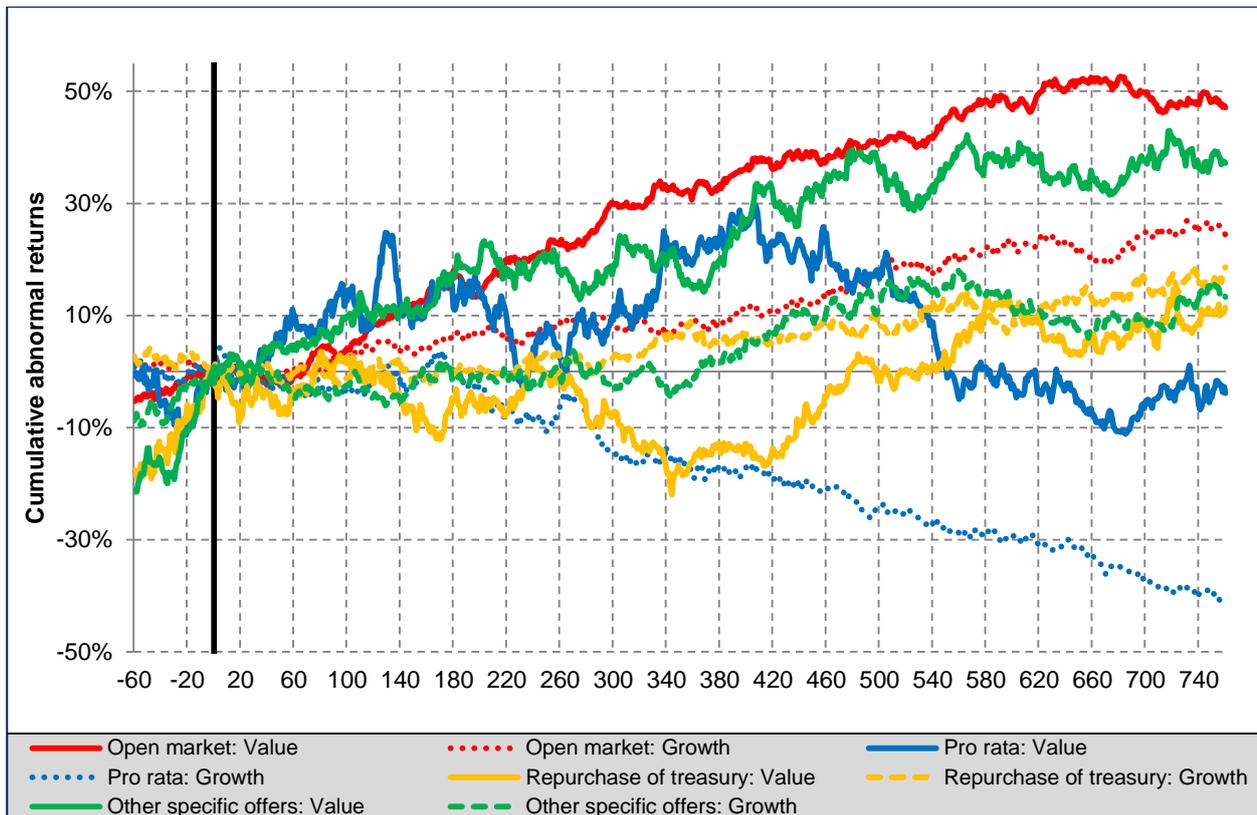


Figure 7.7: CARs for open market repurchases and three types of specific repurchases based on value and growth portfolios

Hypothesis 3 was therefore not rejected. Open market share repurchases showed excess returns of about 40 per cent after about four years after the share repurchase announcements. These excess returns were particularly evident in value companies, showing excess returns of about 50 per cent after about four years after the share repurchase announcements. Growth companies showed excess returns of about 28 per cent after about four years after the share repurchase announcements.

Pro rata offers were the only share repurchase type which did not experience excess returns over the long term – and supported current theoretical thinking.

Based on value versus growth companies, the underreaction theory was true for all share repurchase types except for the repurchase of treasury shares – but this result was expected, as the repurchase of treasury shares was not motivated by undervaluation prior to repurchase.

In addition to Hypothesis 3 in respect of the underreaction theory, the data were also tested to ascertain whether the results were driven by small companies (as was reported by Ikenberry *et al.* (1995)) and whether the frequency of repurchases affected the results (Yook (2010) found that infrequent share repurchases outperformed share repurchases by companies repurchasing frequently).

7.4.3.3 Large versus small companies

To test whether small companies outperformed larger companies over the long term, the sample was split into two groups (i.e. small companies and large companies) based on the median market capitalisation at their respective event dates. From Figure 7.8 it may be observed that small companies repurchasing shares outperformed large companies.

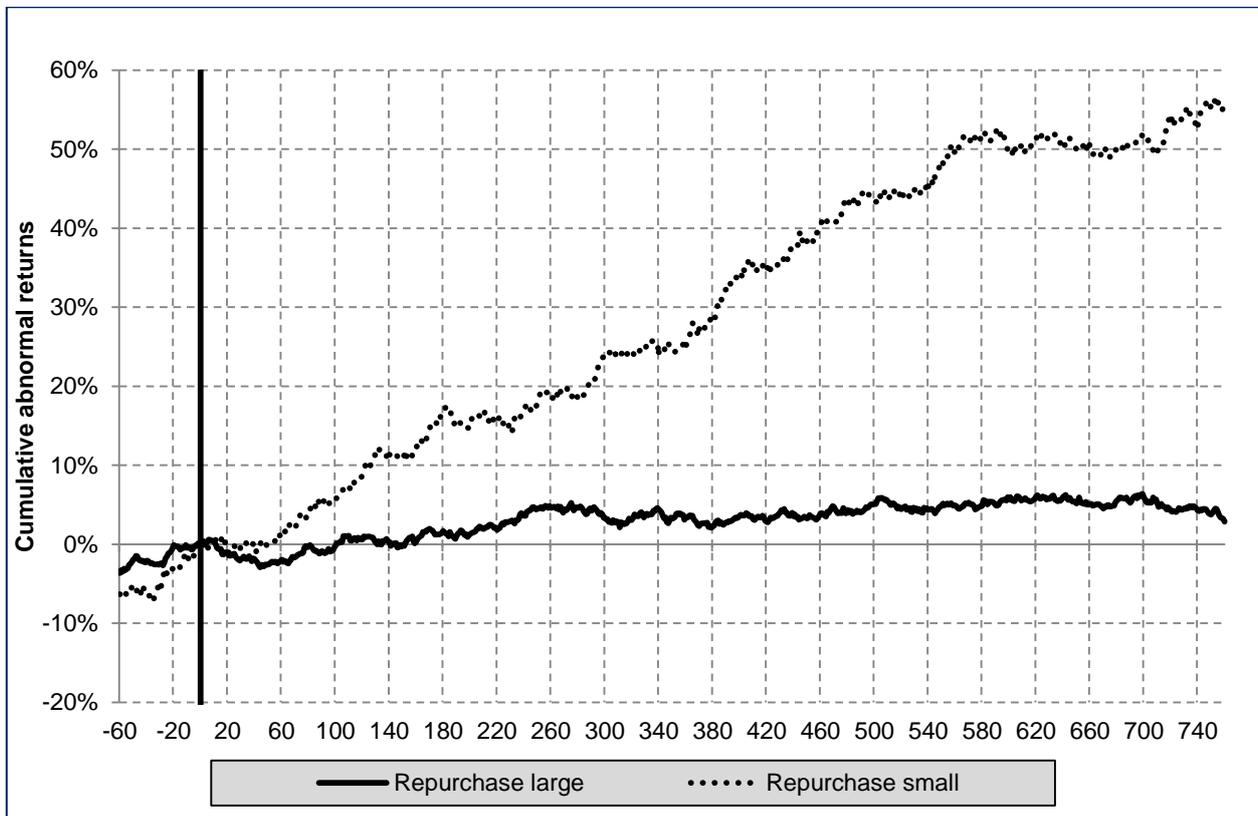


Figure 7.8: CARs for repurchases based on large and small companies

7.4.3.4 Frequent versus infrequent repurchases

To test whether infrequent repurchases outperformed frequent repurchases the sample was split into companies which had three or fewer repurchase announcements in the sample period (n=109) and those with more than three repurchase announcements in the sample period (n=95). This distinction between frequent and infrequent was made based on the fact that the maximum number of reporting periods in which companies repurchased shares during the target period of this study, was eight (as reported in Chapter 5 on share repurchases versus dividends).

From Figure 7.9 it demonstrates that there was no difference in performance for share repurchases when separated in these two categories. Companies which infrequently repurchase shares therefore did not show higher returns than companies which repurchase frequently.

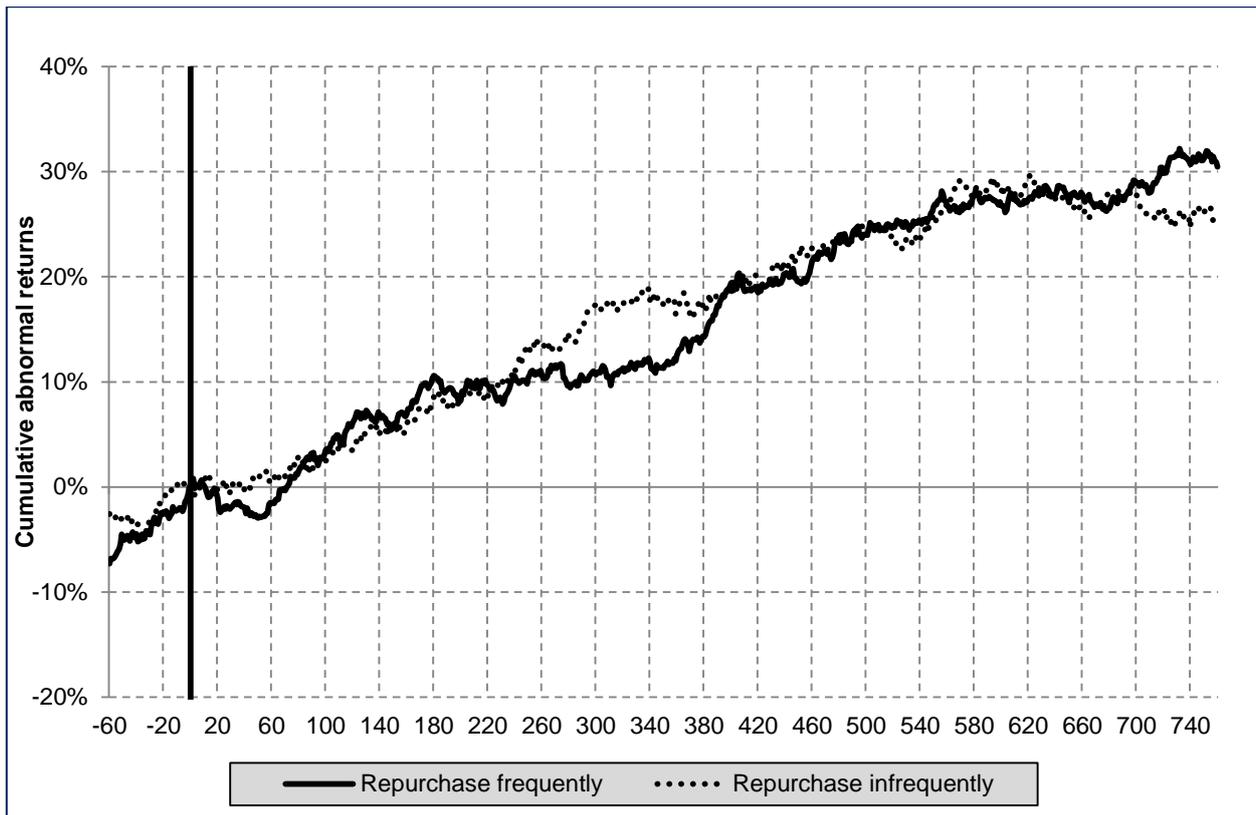


Figure 7.9: CARs for repurchases based on frequency of payout

7.4.4 Significance test results of ARs and CARs

In Table 7.3 the significance test results for all share repurchase types are shown, at various intervals prior and subsequent to the event date. As discussed in section 7.3.3 a Monte Carlo-type bootstrapping process was used to test for significance of the CARs. In Table 7.3 the first two rows show the average ARs and standard error of the ARs per repurchase category respectively, while row three represents the actual CARs of the observations of the study. The fourth row represents the p value results from the Monte Carlo-type bootstrapping process. Figures in shaded typeface indicate the actual CARs which were significant (based on p values) at the one, five and 10 per cent level respectively when compared to the suite of distributions generated in the Monte Carlo-type bootstrapping process.

The CARs of all share repurchase types were significant at day t_{760} . At day t_{60} the CARs of all share repurchase types, except for the *pro rata* offers, were significant. Around the event date, at day t_1 and day t_2 , the CARs for *pro rata* offers were significant; and for day t_2 the CARs for open market share repurchases and CARs for the repurchase of treasury shares by the holding company were significant. It was only in respect of open market share repurchases and other specific offers that pre-announcement CARs, namely at day t_{-60} , were significant.

The observed results of this study pertaining to the long-term market reaction subsequent to the announcement in respect of all the share repurchase types can therefore be reported on the basis of significance (at the 5% level – except for *pro rata* offers which were significant at the 1% level).

Table 7.3: ARs, CARs and significance test results from the Monte Carlo bootstrap distributions

Category		t ₋₆₀	t ₋₂	t ₋₁	t ₀	t ₁	t ₂	t ₆₀	t ₇₆₀
1. Open market	Average AR (%)	0.16	0.23	0.50	-0.04	0.06	-0.01	0.12	-0.35
	Standard error of AR (%)	0.39	0.36	0.27	0.35	0.35	0.29	0.29	0.27
	Actual CAR (%)	-2.50***	-0.23	0.00	-0.04	0.01	0.00**	-0.24*	37.58**
	P value of CAR	0.00	0.18		0.49	0.47	0.01	0.06	0.01
2. <i>Pro rata</i> offers	Average AR (%)	-1.23	0.05	-0.43	1.15	1.05	0.35	-0.91	-1.27
	Standard error of AR (%)	1.40	0.48	0.72	1.12	0.95	0.55	0.62	0.50
	Actual CAR (%)	0.02	-0.05	0.00	1.16	2.22**	2.58**	3.24	-23.57***
	P value of CAR	0.31	0.49		0.14	0.04	0.04	0.47	0.00
3. Repurchase of treasury shares by holding company	Average AR (%)	-0.70	-0.18	0.53	0.27	-0.41	-0.13	0.02	1.12
	Standard error of AR (%)	0.74	0.57	0.59	0.85	0.67	0.37	0.61	0.51
	Actual CAR (%)	-2.59	0.36	0.00	0.28	-0.14	-0.28***	-1.22**	15.38**
	P value of CAR	0.28	0.27		0.31	0.35	0.00	0.03	0.03
4. Other specific offers	Average AR (%)	0.45	0.63	-0.67	-0.54	0.82	0.90	0.26	-0.22
	Standard error of AR (%)	0.83	0.65	0.59	0.92	0.74	0.63	0.58	0.34
	Actual CAR (%)	-16.87***	-0.63	0.00	-0.54	0.26	1.16	-1.13*	34.58**
	P value of CAR	0.00	0.13		0.19	0.32	0.20	0.09	0.01

*** p value less than 0,01

** p value less than 0,05

* p value less than 0,10

7.4.5 Long-term returns based on a buy-and hold strategy

A long-term buy-and-hold strategy was applied to test whether repurchasing companies (in total) outperformed the market during the target period of this study. Table 7.4 shows the unitised share repurchase portfolio value (column a), as well as the unitised two-factor benchmark portfolio value (column b) as at the end of each of the ten years during the target period of this study in which share repurchases were executed. The unitised BHAR (column c) represents the unitised share repurchase portfolio value divided by the unitised two-factor benchmark portfolio value as at the end of each year (the “price-relative”) - which is akin to the excess return of an investor who holds the shares in the share repurchase portfolio over those of the benchmark portfolio (Muller & Ward, 2013: 4).

This study found that the share repurchase portfolio outperformed the benchmark portfolio (based on the two-factor model) when applying a buy-and-hold strategy. In column e of Table 7.4 the BHAR is calculated as a compound annual growth rate based on the “price-relative” (column c)

and shows that the BHARs after one / two / three / four / five years were 28,00 / 33,42 / 26,41 / 23,68 / 23,90 per cent respectively. After ten years the BHAR was 11,83 per cent.

A Monte Carlo-type bootstrapping process (as discussed in section 7.3.3) was used to test the returns of the share repurchase portfolio for significance. It was found that the buy-and-hold returns of the share repurchase portfolio differed significantly (at the 1% significance level) from the suite of distributions generated in the Monte Carlo-type bootstrapping process during all periods, except for year one, covered in this study.

Although the methodology of the CARs approach and the BHARs approach differs, both approaches showed that companies which repurchased shares outperformed the market subsequent to the share repurchase announcement. A long-term information-signalling effect was therefore observed.

Table 7.4 Long-term returns based on a buy-and-hold strategy

	Unitised portfolio value			Compound annual growth rate		P value
	Share repurchase portfolio	Two-factor benchmark portfolio	Unitised BHAR	Share repurchase portfolio	BHAR	
	a	b	c	% d	% e	
Year 1 (2000)	0.97	0.76	1.28	-3.00	28.00	0.46
Year 2 (2001)	1.32	0.74	1.78	14.89***	33.42	0.00
Year 3 (2002)	1.66	0.82	2.02	18.04***	26.41	0.00
Year 4 (2003)	2.48	1.06	2.34	25.49***	23.68	0.00
Year 5 (2004)	4.29	1.47	2.92	33.81***	23.90	0.00
Year 6 (2005)	6.24	2.14	2.92	35.68***	19.55	0.00
Year 7 (2006)	8.56	3.24	2.64	35.90***	14.88	0.00
Year 8 (2007)	9.23	4.03	2.29	32.02***	10.91	0.00
Year 9 (2008)	8.14	2.84	2.87	26.24***	12.43	0.00
Year 10 (2009)	10.85	3.55	3.06	26.92***	11.83	0.00

*** p value less than 0,01

Figure 7.10 plots the cumulative index (unitised portfolio value) of each portfolio to visually compare the results. Three portfolios are shown, namely: the share repurchase portfolio (the blue line); the two-factor benchmark (the orange line); as well as a market capitalisation weighted All Share Index benchmark (the black line). The red and grey lines represent the “price-relative” (unitised BHAR) when using the two-factor portfolio and the All Share Index portfolio as benchmarks respectively. The blue, orange and red lines in Figure 7.10 represent columns a to c respectively of Table 7.4. The slope of the “price-relative” (the red and grey lines respectively) reveals those time periods over which the share repurchase portfolio outperformed the benchmark portfolio. In periods when the slope of the “price-relative” is upwards, the share repurchase portfolio

is outperforming, and vice versa. If the slope of the “price-relative” is flat, then there is no difference between the performances of the portfolios over this period.

The red line in Figure 7.10 shows that the share repurchase portfolio outperformed the benchmark portfolio (based on the two-factor model) during most of the periods of this study. The red line shows an upward slope until about December 2005 and again as from December 2007 to mid-2009. As from about December 2005 to about December 2007 the downward slope of the red line indicates that the growth in the two-factor benchmark exceeded the growth of the share repurchase portfolio during this period.

An investment (weighted based on market capitalisation) in companies included in the All Share Index is also plotted in Figure 7.10 and compared to the share repurchase portfolio. The grey line shows that it was only as from about June 2002 that the share repurchase portfolio outperformed the All Share Index investment. As from about June 2002 to about December 2007 the outperformance of the share repurchase portfolio compared to the All Share Index investment follows the trend of the share repurchase portfolio compared to the two-factor benchmark (the red line), as described above. In the period December 2007 to about June 2008 the growth in the All Share Index investment exceeded the growth of the share repurchase portfolio, but as from June 2008 to about June 2009 the share repurchase portfolio outperformed the All Share Index investment.

Figure 7.10 confirms that the share repurchase portfolio differed from an investment in companies included in the All Share Index. Repurchasing companies outperformed the two-factor benchmark portfolio and the portfolio based on companies included in the All Share Index during most of the reporting periods included in this study.

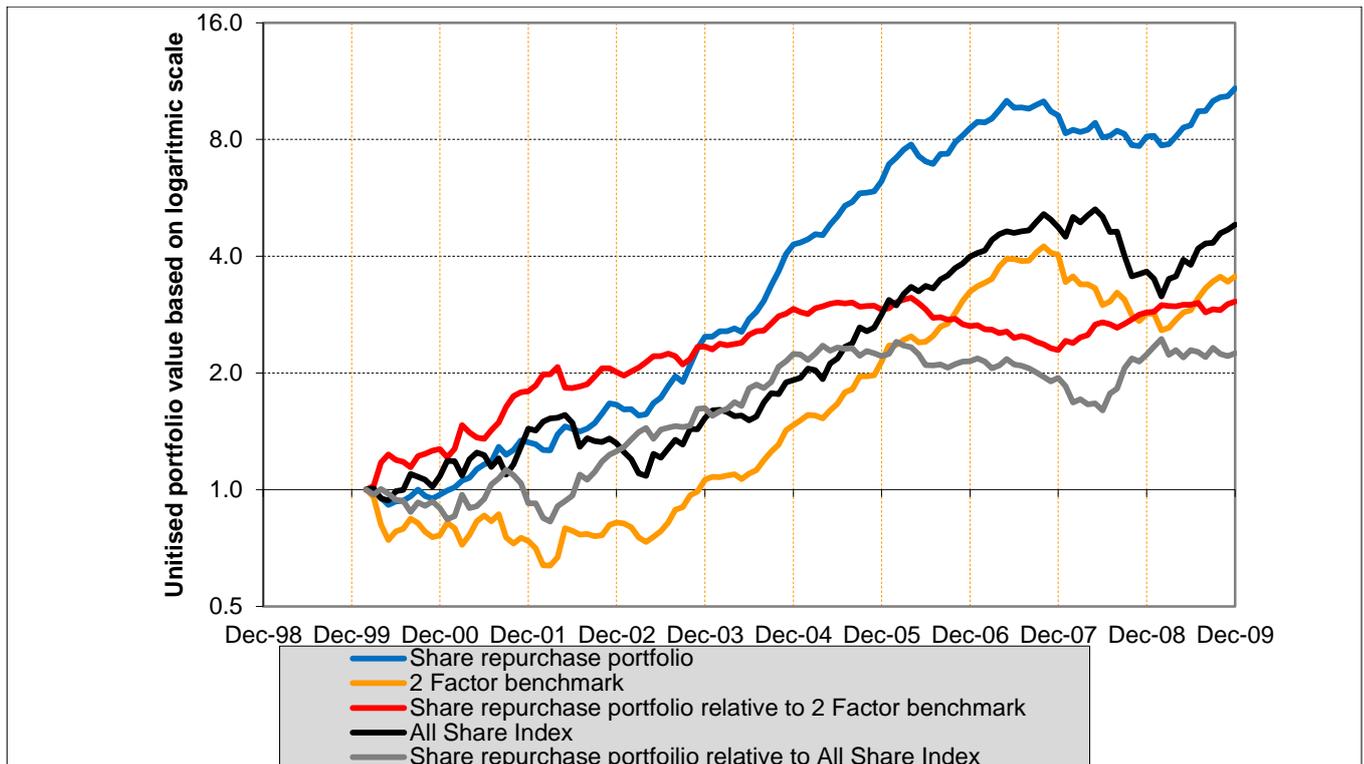


Figure 7.10: Growth in share repurchase portfolio compared to benchmark portfolio

7.5 CONCLUSION

This chapter addressed Research questions 3 and 4 of the study and built on the results obtained from the previous chapter (where it was tested whether companies which repurchased shares were classified as value or growth companies).

In the previous chapter it was found that most companies were generally classified as value companies prior to the repurchase of shares. The value classification of companies prior to the repurchase of shares most probably indicated that the motivation for executing the share repurchase was to signal that the company was undervalued prior to the share repurchase announcement (i.e. the information-signalling hypothesis). Positive excess returns subsequent to share repurchase announcements would however confirm that the information-signalling hypothesis was the motivation for the share repurchases by companies in selected JSE-listed sectors.

In this chapter the short-term (or traditional information-signalling hypothesis) as well as the long-term market reaction (or underreaction hypothesis) of share repurchases by companies in selected JSE-listed sectors were therefore tested to ascertain whether information-signalling was the motivation for the share repurchases.

Research question 3 (and the resultant Hypothesis 2) addressed the short-term market reaction to share repurchase announcements. Hypothesis 2 is: The traditional information-signalling

hypothesis postulates that there is a small positive initial market reaction to share repurchase announcements. This reaction is more evident for *pro rata* offers than for open market share repurchases.

Hypothesis 2 was not rejected. The results showed that CARs subsequent to the share repurchase announcement fluctuated around zero for most of the share repurchase types. The CARs of the *pro rata* offers showed the highest excess return subsequent to the announcement, reaching a maximum of about four per cent on about day t_{55} .

Global short-term event studies (Comment & Jarrell, 1991; Lakonishok & Vermaelen, 1990; Vermaelen, 1981) reported a small excess return subsequent to open market share repurchase announcements of about three per cent. The CARs around zero which were reported in this study confirmed the expectation that open market CARs by companies in selected JSE-listed sectors could be lower than the results of the global studies owing to the JSE three per cent announcement rule which resulted in announcements representing actual share repurchases which could have been affected in the prior year(s) / month(s) and on the previous day (depending on how the rule was interpreted and when the limit was reached).

Research question 4 (and the resultant Hypothesis 3) addressed the long-term market reaction to share repurchase announcements. Hypothesis 3 is: The underreaction hypothesis postulates that the long-term market reaction exceeds the initial positive market reaction to open market share repurchase announcements. This reaction is particularly evident in value companies.

Hypothesis 3 was not rejected. Maximum CARs of about 40 per cent were reported for open market share repurchase announcements in total and maximum CARs of about 50 per cent when based on value portfolios (and growth portfolios showed positive CARs of about 28%) after about four years subsequent to the share repurchase announcements.

When applying a buy-and-hold methodology positive BHARs were obtained during all ten years covered in the present study. A portfolio based on all companies which entered into share repurchases (irrespective of the type of repurchase) outperformed a two-factor benchmark portfolio over the period covered in this study. The compounded average BHAR growth rate after two / three / four years were 33,42 / 26,41 / 23,68 per cent respectively. After ten years the compounded average BHAR growth rate was 11,83 per cent.

The results of the present study supported the findings of global and local research on the underreaction hypothesis in respect of open market share repurchases (namely that open market share repurchases have a long-term information-signalling effect). The results on *pro rata* offers support the current theoretical thinking in respect of the traditional and underreaction theory (namely that *pro rata* offers have initial, but not long-term, information-signalling effects). The results in respect of the repurchase of treasury shares by the holding company were expected and supported the findings in Chapter 5 on share repurchases versus dividends which stated that these

transactions were most probably not motivated by the information-signalling hypothesis. No prior local studies have been conducted on the market reaction to specific share repurchases.

The results of this chapter indicated that open market share repurchases were motivated by the information-signalling theory. These results therefore highlight the benefit of investing in companies which repurchased shares via the open market, especially if those companies were classified as value companies prior to the repurchase. Small companies were found to show higher CARs than large companies, but the frequency of share repurchase announcements did not affect the reported results.

Although the South African share repurchase environment (mainly in respect of the 3% announcement rule on open market share repurchases) led to not all share repurchases being included when testing the short- and long-term market reaction to share repurchase announcements, the results of this chapter indicated that the South African share repurchase experience did mirror most aspects of the current theoretical thinking on the information-signalling motivation for share repurchases.

In the next chapter an empirical model of choice is developed to ascertain what the main determinants of choice were when a company had to decide between the following three payout methods: open market share repurchases; *pro rata* offers; and special dividends. These three payout methods represent distributions of excess cash made to all shareholders as a group. Two share repurchase types, namely other specific offers and the repurchase of treasury shares by the holding company, were excluded from the payout choice, because they represent payouts to specifically identified shareholders and therefore the motivations for these payouts differ from payouts made to all shareholders as a group. The development of the empirical model of choice incorporated all the results of the research on companies in selected JSE-listed sectors contained in the chapters prior to Chapter 8 on the determinants of payouts.

CHAPTER 8

DETERMINANTS OF PAYOUTS

8.1 INTRODUCTION

This chapter builds on the results of the previous chapters and aims to develop an empirical model of choice between three alternative mechanisms for distributing cash by companies in selected JSE-listed sectors to shareholders, namely: a *pro rata* offer; an open market share repurchase; and a special dividend.

In Chapter 3, the literature review revealed that the research by Caudill *et al.* (2006), on listed US companies for the period 1986 to 1990, constituted the most comprehensive global study on the determinants of choice between different payout methods. The methodology of Caudill *et al.* (2006) is applied in the present study.

The Caudill *et al.* (2006) study included four alternative mechanisms for distributing cash to shareholders (namely a fixed price tender offer; a Dutch auction self-tender offer; an open market share repurchase; and a special dividend). These four payout methods represented once-off (or infrequent) distributions of excess cash to all shareholders as a group and therefore excluded private offers to shareholders and also odd lot offers (Caudill *et al.*, 2006: 35). As discussed in Chapter 2 on the South African regulatory environment, the comparable South African payout methods to shareholders as a group are *pro rata* offers (which compare to a type of fixed price tender offer), open market (or general) share repurchases and special dividends.

Caudill *et al.* (2006: 46-47) found that companies discriminated between payout methods and, consistent with prior global studies, they ascertained that the significant factors across all four payout choices were ownership structure, current payout level, the size of the distribution, and share price performance prior to the announcement date. Caudill *et al.* (2006) found that companies with a low degree of diversity in shareholder valuations (namely larger companies, with high institutional ownership and a large number of shareholders) tended to select open market share repurchases, while companies with a high degree of diversity in shareholder valuations (namely small companies, with low institutional ownership and a small number of shareholders) chose a special dividend. Companies already paying high dividends were found more likely to issue a special dividend than enter into an open market share repurchase. Increases in distribution size affected the payment of a special dividend the most, but had a negative relationship with open market share repurchases. A company with poor share price performance prior to the announcement was found to be more likely to choose a fixed price tender offer or an open market share repurchase, while a special dividend was found to follow strong performance.

In the literature review in Chapter 3, the following hypothesis (Hypothesis 4), based on the results of the Caudill *et al.* (2006) study, was formulated on the determinants of choice between different payout methods: Ownership structure, current payout level, the size of the distribution, and the share price performance prior to the announcement date are the significant determinants of a company's choice between alternative payout methods.

In applying the model on the determinants of choice for companies in selected JSE-listed sectors, the present study will make the necessary adjustments to the research methodology and data definitions which were applied by Caudill *et al.* (2006) to reflect the South African regulatory environment. The latest literature on share repurchase motivations, as discussed in Chapter 3 in the literature review, will also be incorporated.

8.2 RESEARCH SAMPLE

The population of this study comprised 227 companies in selected JSE-listed sectors. In Chapter 5 on share repurchases versus dividends, it was found that 115 of the 227 companies repurchased shares during the reporting periods including 1 July 1999 to the 2009 year-ends of the companies. A total of 103 companies conducted open market share repurchases; 15 conducted *pro rata* offers; and 37 companies paid special dividends during the target period.

In line with the methodology of Caudill *et al.* (2006), those *pro rata* offers, open market share repurchases and special dividend payments which were announced via SENS were used when compiling the sample on the model of choice, and only one announcement per payout type per reporting period per company was considered (Caudill *et al.*, 2006: 48; Guay & Harford, 2000: 391). In Chapter 5 on share repurchases versus dividends, it was found that only 58,72 per cent of open market share repurchases (in value) was announced via SENS, while nearly all *pro rata* offers were announced via SENS.

It was found that 95 of the 227 companies in selected JSE-listed sectors entered into either announced *pro rata* offers, announced open market share repurchases or special dividend payments for the reporting periods including 1 July 1999 to the 2009 year-ends of the companies. The initial search resulted in 216 observations comprising 15 *pro rata* offers; 125 open market share repurchases and 76 special dividend announcements. Missing values for some variables used in the analysis led to a final sample of 205 observations comprising 15 *pro rata* offers; 120 open market share repurchases; and 70 special dividend announcements. A total of 94 companies were involved in the 205 observations.

8.3 DATA COLLECTION

8.3.1 Identification of independent variables

The Caudill *et al.* (2006) study identified 10 independent variables which may determine a company's choice between once-off payout methods, based on prior theoretical work. These variables were:

- Company size (LSIZE);
- Institutional ownership (INSTOWN);
- Number of shareholders (SHRHOLD);
- Officers' and directors' ownership (OWNER);
- Level of debt (DEBT);
- Dividend yield (DIVYLD);
- Distribution size (DSIZE);
- Company undervaluation (MISVAL);
- Takeover defence (TD); and
- Prior share price performance (PRIOR).

The expected relationship between the independent variables and the distribution choices of the Caudill *et al.* (2006) study were discussed in section 3.2.3.2 of the literature review in Chapter 3.

The data definitions of the independent variables which were applied in the Caudill *et al.* (2006) study required adjustments to reflect the South African regulatory environment and the nature of the data which are publicly available in South Africa. The South African interpretation of the definitions used by Caudill *et al.* (2006) was mainly necessary for the following reasons:

- a) The daily number of issued shares which was available in South African financial data sources only referred to number of issued company shares. The daily number of issued group shares (i.e. company shares less treasury shares) was not available. The LSIZE, DSIZE (in respect of *pro rata* offers, open market share repurchases and special dividends), MISVAL and DIVYLD variables could have resulted in different values if the daily number of group shares was available.
- b) The three per cent announcement rule on open market share repurchases resulted in SENS announcements of open market share repurchases which may have occurred in the year(s) / month(s) / week(s) and day preceding the SENS announcement date. The number of issued company shares at the end of the reporting period prior to the announcement date was used when calculating the DSIZE variable (in respect of open market share repurchases) to obtain a more realistic value.

- c) The following data requirements, as defined by Caudill *et al.* (2006), were not available in the South African financial data sources:
- The number of shares held by officers (other than directors) was not available and therefore only directors were included in the OWNER variable;
 - The present value of actual future earnings discounted at the company's estimated cost of capital was not available. The market-to-book ratio was used for the MISVAL variable. Market-to-book ratios are generally applied to distinguish between value and growth companies. Value companies tend to be undervalued (and growth companies tend to be overvalued) (Ikenberry *et al.*, 1995: 198); and
 - The number of institutional investors was not available and therefore the number of public shareholders was used when calculating the INSTOWN variable.

Table 8.1 summarises the South African interpretation of the definition of each independent variable as opposed to the definitions which were applied in the Caudill *et al.* (2006) study.

Table 8.1: Application of data definitions of independent variables in the South African regulatory environment

No.	Variables	Caudill <i>et al.</i> definition	Caudill <i>et al.</i> application	Present study application
1	LSIZE	Natural log of company's ordinary share market capitalisation	Natural log of market price five days prior to announcement x issued shares on that date	Natural log of market price five days prior to announcement x issued shares (held by company) on that date
2	INSTOWN	Ratio of shares held by institutional investors to total issued shares	Ratio of shares held by institutional investors to total issued shares at the end of reporting period prior to the announcement date	Ratio of shares held by public shareholders to total issued shares (held by company) at the end of reporting period prior to the announcement date
3	SHRHOLD	Natural log of the number of shareholders	Natural log of the number of shareholders at the end of reporting period prior to the announcement date	Natural log of the number of shareholders (of the company) at the end of reporting period prior to the announcement date
4	OWNER	Ratio of shares held by officers and directors to total issued shares	Ratio of shares held by officers and directors to total issued shares at the end of reporting period prior to the announcement date	Ratio of shares held by directors to total issued shares (held by company) at the end of reporting period prior to the announcement date
5	DEBT	Ratio of long-term debt to total assets	Ratio of long-term debt to total assets at the end of reporting period prior to the announcement date	Ratio of long-term debt to total assets at the end of reporting period prior to the announcement date
6	DIVYLD	The ratio of regular ordinary dividend to the market capitalisation of ordinary shares	Ratio of regular ordinary dividend to the market capitalisation of ordinary shares at the end of reporting period prior to the announcement date	Ratio of regular ordinary dividend to the market capitalisation of the company at the end of reporting period prior to the announcement date

7	DSIZE	Relative size of distribution. For repurchases: shares sought as a percentage of total issued shares. For special dividends: amount paid as a percentage of ordinary market capitalisation five days prior to the announcement	For repurchases: number of shares sought ÷ issued shares on announcement date For special dividends: dollar amount of special dividend ÷ market capitalisation five days prior to the announcement date	For <i>pro rata</i> repurchases: number of shares bought ÷ issued company shares on announcement date For open market repurchases: number of shares bought ÷ issued company shares at the end of reporting period prior to the announcement date For special dividends: rand amount of special dividend ÷ market capitalisation of company five days prior to the announcement date
8	MISVAL	The difference between the current share price and the present value of actual future earnings discounted at the company's estimated cost of capital	The difference between the current share price and the present value of actual future earnings discounted at the company's estimated cost of capital	Market capitalisation of the company ÷ book value of equity calculated at the end of reporting period prior to the announcement date
9	TD	Dummy variable that takes the value of one for companies facing a takeover threat, otherwise zero	Examine <i>Wall Street Journal</i> for 60 days prior to announcement date for evidence of actual or potential takeover	Examine SENS announcements for 60 days prior to announcement date for evidence of actual or potential takeover
10	PRIOR	CARs earned during a 50-day period ending 10 days prior to the announcement	CARs earned during a 50-day period ending 10 days prior to the announcement date	CARs earned during a 50-day period ending 10 days prior to the announcement date

Based on the review of other researchers' research results in the literature review in Chapter 3, an additional variable was identified, namely share options held by directors (which will be named the OPTION variable). Fenn and Liang (2001) found a positive relationship between share repurchases and management share options, and a negative relationship between dividends and management share options. This relationship will also be tested in the present study. This brings to 11 the number of independent variables applicable to the present study.

8.3.2 Data on dependent variable

There are three payout methods to be tested in the model of choice statistics, namely *pro rata* offers; open market share repurchases; and special dividends. These payout methods represent one dependent variable (i.e. the payment method selected in each observation or event) with three levels (which refer to the three payment methods). The data collection methods of identifying and quantifying share repurchases and dividends were described in Chapter 4 on data collection.

8.3.3 Data on independent variables

The manner in which data requirements for the 11 independent variables (namely LSIZE, INSTOWN, SHRHOLD, OWNER, DEBT, DIVYLD, DSIZE, MISVAL, TD, PRIOR and OPTION) were met are described in the following sections.

8.3.3.1 LSIZE

The market capitalisation of each company's ordinary shares five days prior to the announcement was captured from the McGregor BFA database (product called Price Data) and the natural logarithm thereof was then calculated.

8.3.3.2 INSTOWN

The proportion of shares held by public investors at the end of the reporting period prior to the announcement was captured from the shareholder spread (or shareholder analysis) section in the annual report. Some companies did not disclose a shareholder spread prior to 2002 (as disclosure was not obligatory in terms of the JSE Listings Requirements at that stage). Data requirements for years with missing data were met by capturing the shares held by public investors from the first shareholder spread subsequently disclosed by the company.

8.3.3.3 SHRHOLD

The number of shareholders at the end of the reporting period prior to the announcement was captured from the shareholder spread section in the annual report. For companies which did not disclose a shareholder spread prior to 2002, data requirements for years with missing data were met by capturing the number of shareholders from the first shareholder spread subsequently disclosed by the company. The natural logarithm of the number of shareholders was then calculated.

8.3.3.4 OWNER

The proportion of shares held by directors at the end of the reporting period prior to the announcement was calculated by adding the beneficial and non-beneficial shareholding of directors, as obtained from the McGregor BFA database (product called Financial Statements), and dividing this total by the number of issued company shares at the end of the reporting period prior to the announcement (as obtained from the McGregor BFA database: product called Price Data).

The disclosure of director holdings in the shareholder spread section of the annual report could not be used as these disclosures were not comprehensively nor consistently reported in the shareholder spread.

8.3.3.5 DEBT

The ratio of long-term debt to total assets was obtained by capturing total non-current liabilities and total assets from the McGregor BFA database (product called Financial Statements).

8.3.3.6 DIVYLD

The dividend yield at the end of the reporting period prior to the announcement was calculated by dividing the regular dividends paid from profits in the reporting period prior to the announcement by the market capitalisation at the end of the reporting period prior to the announcement. The calculation of the dividend payments was described in Chapter 4 on data collection. The market capitalisation at the end of the reporting period prior to the announcement was obtained from the McGregor BFA database (product called Price Data).

8.3.3.7 DSIZE

The distribution size for *pro rata* offers was calculated by dividing the number of shares bought by the number of issued shares on the announcement date. The number of shares bought was captured from the SENS announcement, as obtained from the McGregor BFA database (product called News). The number of issued shares on the announcement date was obtained from the McGregor BFA database (product called Price Data).

The distribution size for open market share repurchases was calculated by dividing the number of shares bought by the number of issued shares at the end of the reporting period prior to the announcement date. The number of shares bought was captured from the SENS announcement, as obtained from the McGregor BFA database (product called News). The number of issued shares at the end of the reporting period prior to the announcement date was obtained from the McGregor BFA database (product called Price Data).

The distribution size for special dividends was calculated by dividing the rand amount of special dividends paid by the market capitalisation of the company five days prior to the announcement date. The rand amount of special dividends paid was calculated as described in Chapter 4 on data collection. The market capitalisation of the company five days prior to the announcement date was obtained from the McGregor BFA database (product called Price Data).

It needs to be acknowledged that Caudill *et al.* (2006) calculated the DSIZE variable in terms of share repurchases based on number of shares sought (as opposed to number of shares bought, which is used in the present study), because their open market observations were based on announcements to repurchase – and not announcements of actual repurchases.

8.3.3.8 MISVAL

The degree to which a company's shares were undervalued was measured by the market-to-book ratio of the company at the end of the reporting period prior to the announcement date. The market capitalisation (as obtained from McGregor BFA: product called Price Data) was divided by the ordinary shareholders' interest (as obtained from McGregor BFA: product called Financial Statements) to obtain the market-to-book ratio. Market-to-book ratios are usually applied to distinguish between value companies (which tend to be undervalued) and growth companies (which tend to be overvalued). A low (high) market-to-book ratio is associated with a value (growth) company.

8.3.3.9 TD

To ascertain whether a potential takeover threat existed, the SENS announcements for the 60 days prior to the announcement date needed to be examined for evidence of any discussion regarding either an actual or potential takeover. This method proved to be inconclusive and did not lead to any positive results. The main reason for the inconclusive results was that open market share repurchase announcements – owing to the three per cent announcement rule – may have occurred in the year(s) / month(s) / week(s) and day preceding the announcement date and the 60 days prior search was therefore not feasible. Reliable data for the TD variable could therefore not be obtained.

8.3.3.10 PRIOR

The pre-announcement share performance was calculated as the CARs earned by the company's shares during a 50-day period beginning 60 days and ending 10 days before the announcement. The methodology described in Chapter 7 on short-term and long-term market reaction was applied to obtain the CARs from day t_{-60} to day t_{-10} .

8.3.3.11 OPTION

The share options held by directors were identified as an additional independent variable in the present study. To ascertain the ratio of share options held by directors at the end of the reporting period prior to the announcement date, data on the number of share options held by directors, as well as the number of issued shares (including share options held by directors), were required. Reliable data could not be obtained on share options held by directors: annual report disclosures were found to be incomprehensive; and the McGregor BFA database (product called Director Search) of remuneration types per company on options per director per reporting period did not always agree with annual report disclosures.

The data requirements on all of the 11 independent variables which were identified for the purpose of the present study were not met. Reliable data could not be obtained on the TD (i.e. takeover defence) and OPTION (i.e. options held by directors) variables. This study therefore included nine independent variables (namely LSIZE, INSTOWN, SHRHOLD, OWNER, DEBT, DIVYLD, DSIZE, MISVAL and PRIOR).

8.3.4 Expected relationship between dependent and independent variables

8.3.4.1 Predictions of the study

The empirical testable predictions of the Caudill *et al.* (2006) study were based on prior theoretical work of other researchers and could therefore be used as a starting point to enable predictions for the present study. A summary of the expected relationship between the dependent and independent variables which emerged from global studies (Caudill *et al.*, 2006: 33, 35) was as follows:

- Shareholder heterogeneity:
 - Companies with a high degree of diversity in shareholder valuations: Small companies (based on the LSIZE variable) with low institutional ownership (based on the INSTOWN variable) and a small number of shareholders (based on the SHRHOLD variable) were expected to select a fixed price tender offer or a special dividend.
 - Companies with a low degree of diversity in shareholder valuations: Large companies (based on the LSIZE variable) with high institutional ownership (based on the INSTOWN variable) and a large number of shareholders (based on the SHRHOLD variable) were expected to select either a Dutch auction self-tender offer or an open market share repurchase.
- Agency cost: Companies with high (low) officer and director ownership (based on the OWNER variable) and high (low) debt levels (based on the DEBT variable) were less (more) likely to choose an open market share repurchase.
- History of dividend payment (based on the DIVYLD variable): Companies already paying a high regular dividend were more likely to distribute excess cash to shareholders via a special dividend.
- Size of distribution (based on the DSIZE variable): Companies tended to choose a special dividend for small payouts, while large payouts were more likely to be self-tender offers, followed by open market share repurchases.
- Level of company undervaluation prior to the announcement (based on the MISVAL variable): Companies experiencing a high degree of undervaluation were expected to prefer

a fixed price tender offer over an open market share repurchase to send a reliable signal to the market of the true value of their shares.

- Share performance prior to distribution (based on the PRIOR variable): Companies with poor pre-announcement share performance were more likely to choose a *pro rata* offer over an open market share repurchase.

The results of the previous chapters of the present study did not support all the expected relationships between the dependent and independent variables which emerged from global studies. In respect of the independent variables affecting shareholder heterogeneity, company undervaluation and share performance prior to the announcement, the expected relationship between the dependent and independent variables of the present study were affected in the ways described below.

Shareholder heterogeneity

In Chapter 5 on share repurchases versus dividends, the results on the trends of share repurchase activity of companies in selected JSE-listed sectors showed (in Figure 5.6) that smaller companies repurchased shares more frequently (based on number of companies per reporting period), but that share repurchase value was dominated by a few large capitalisation companies (as may be observed in Figure 5.5). These results affect the predictions on the LSIZE variable. In the South African context it was expected that smaller companies would choose share repurchases, but a distinction between *pro rata* and open market share repurchases based on market capitalisation was not reported in Chapter 5. It was also expected that the SHRHOLD variable would follow the trend of the LSIZE variable (as was the case in global studies), namely that smaller companies also had a smaller number of shareholders. It was therefore predicted that companies with a smaller number of shareholders would prefer share repurchases to special dividends as opposed to the current theoretical thinking that the smallest companies would pay special dividends or repurchase shares via fixed price tender offers (which are similar in type to South African *pro rata* offers).

The INSTOWN variable of the present study was based on number of public (and not number of institutional) shareholders and this calculation method could affect the results in respect of large companies which had a large number of shares held by institutional investors. Public shareholding of more than 10 per cent by any person is classified as a non-public shareholding in terms of the JSE Listings Requirements, as was discussed in section 2.2.3.2 of Chapter 2, on the South African regulatory environment. Large companies could therefore have low levels of public shareholding in the South African context. Most of the companies in selected JSE-listed sectors repurchasing shares were found to be smaller companies (as discussed above) and therefore the effect of large institutional investors on the INSTOWN variable was not expected to be material.

Level of company undervaluation prior to the announcement

In Chapter 6 dealing with value versus growth, it was found that companies in selected JSE-listed sectors which repurchased shares were usually classified as value companies (which are generally undervalued). These results support the expected relationship between share repurchases and undervaluation which emerged from global studies.

Share performance prior to distribution

In Chapter 7 on the short-term and long-term market reaction, it was observed (in Figure 7.3) that the CARs for *pro rata* offers were lower prior to the announcement than the CARs for open market share repurchases. These results support the expected relationship between open market share repurchases, as well as tender offers, and share performance prior to the distribution which emerged from global studies.

The expected relationship between the dependent and independent variables of the present study were therefore as follows:

- Shareholder heterogeneity:
 - Companies with a high degree of diversity in shareholder valuations: Small companies (based on the LSIZE variable) with a small number of shareholders (based on the SHRHOLD variable) were expected to select open market share repurchases and *pro rata* offers. Companies with low public ownership (based on the INSTOWN variable) were expected to select a special dividend and a *pro rata* offer.
 - Companies with a low degree of diversity in shareholder valuations: Larger companies (based on the LSIZE variable) with a large number of shareholders (based on the SHRHOLD variable) were expected to select special dividends. Companies with high public ownership (based on the INSTOWN variable) were expected to select an open market share repurchase.
- Agency cost (based on the OWNER and DEBT variables): Companies with high (low) director ownership levels and companies with high (low) debt levels were less (more) likely to choose an open market share repurchase.
- History of dividend payment (based on the DIVYLD variable): Companies already paying a high, regular dividend were more likely to distribute excess cash to shareholders via a special dividend.
- Size of distribution (based on the DSIZE variable): Companies tended to choose a special dividend for small payouts, while large payouts were more likely to be *pro rata* offers, followed by open market share repurchases.

- Level of undervaluation prior to the announcement (based on the MISVAL variable): *Pro rata* offers and open market share repurchases were selected by companies which were classified as value shares (therefore generally undervalued) prior to the announcement of the share repurchase. Companies experiencing a lower degree of undervaluation were expected to prefer a special dividend. *Pro rata* offers and open market share repurchases were therefore expected to be selected by companies with market-to-book ratios which were lower than the market-to-book ratios of companies selecting special dividends.
- Share performance prior to distribution (based on the PRIOR variable): Companies with poor pre-announcement share performance were more likely to choose a *pro rata* offer over an open market share repurchase.

8.3.4.2 Hypothesis of the model of choice

Incorporating the relevant independent variables, the hypothesis of the model of choice is: Ownership structure (based on the INSTOWN and SHRHOLD variables); current payout level (based on the DIVYLD variable); the size of the distribution (based on the DSIZE variable); and the share price performance prior to the announcement date (based on the PRIOR variable) are the significant determinants of a company's choice between alternative payout methods.

8.4 RESEARCH METHODOLOGY

Caudill *et al.* (2006) applied a multinomial logit (MNL) model to examine the factors that influence a company's choice between four payout methods (namely a fixed price tender offer; a Dutch auction self-tender offer; an open market share repurchase; and a special dividend). Caudill *et al.* (2006) also adjusted the MNL estimates for the choice-based sampling method used to collect the data. The adjustment was needed because the open market share repurchases dominated the population during the sampling period and would have led to potential errors as a result of over sampling (Caudill *et al.*, 2006: 30; Greene, 2003: 673). Initially 692 open market share repurchases were identified. After the adjustment to open market share repurchases, the final sample comprised 46 fixed price tender offers, 60 Dutch auction self-tender offers, 135 special dividend announcements and 182 open market share repurchase announcements. The final sample of the Caudill *et al.* (2006: 38) study therefore comprised 423 observations which occurred over a five-year period (i.e. January 1986 to December 1990).

The present study initially aimed to apply a MNL model, as was done by Caudill *et al.* (2006). It was however evident that the data elements of the present study differed from those of the Caudill *et al.* (2006) study. The present study examined the factors which influence a company's choice between three payout methods (namely a *pro rata* offer, an open market share repurchase, and a special dividend). The final sample comprised 15 *pro rata* offers, 120 open market share repurchases and 70 special dividend announcements. The final sample for the model of choice

tests of this study therefore comprised 205 observations which occurred over an eleven-year period (namely reporting periods including 1 July 1999 to the 2009 year-ends of the companies). No adjustments to the sample of this study were needed, because there was no over sampling applicable. The *pro rata* offer payout method had only 15 observations which represented a mere 7,32 per cent of the sample. The *pro rata* repurchase method was therefore not selected often in the target period and the ability of statistical tests to identify statistically significant differences in respect thereof was therefore affected. Owing to the low number of observations during the target period, the *pro rata* offer payment method was not included in the model of choice statistics (or multivariate statistics). The *pro rata* offer payment method is however included in the univariate statistics (or initial statistical work).

There was only one dependent variable with two levels (namely open market share repurchases and special dividends) which had to be compared in the model of choice statistics, and a MNL model (which is applicable to a dependent variable with three or more levels) was therefore not applied in the present study. A logistic regression model was applied owing to the binary nature of the dependent variable.

Binomial or binary logistic regression is used to refer to the problem in which the dependent variable (Y) is binary (dichotomous), meaning that there are two available outcomes (namely a yes or a no, or either a 1 or a 0). Logistic regression is, like ordinary least squares (OLS) regression, an approach for prediction. There is an important difference between a quantitative model (as with OLS) and that of a qualitative model (as with binary variables). When using OLS, the object is to estimate the expected value (or mean), given the values of the regressors (X). However, when the model is qualitative, the object is to find the probability of an event (Gujarati, 2003: 580).

In this study the choice between an open market share repurchase and paying a special dividend was studied. The response variable (or the regressand or Y) could only take two variables, namely open market or special dividend: say, 1 if the choice was open market share repurchase and 0 if the choice was a special dividend.

The results in respect of the determinants of choice of this study were reported on the basis of the odds ratio. If the average odds ratio is plotted on the Y axis and the regressors (X) are plotted on the X axis, a S-shaped curve is obtained, because the average odds ratio fluctuates between 0 and 1. The logistic or logit function was therefore used to transform the S-shaped curve into an approximately straight line and to change the range on the Y axis from 0 to 1 to a range of $-\infty$ to $+\infty$. The logit function is defined as the natural logarithm (ln) of the odds (1) of choosing an open market share repurchase. This was summarised in Equation 8.1:

$$Z_i = \ln\left(\frac{P}{1-P}\right) \dots \dots \dots (8.1)$$

where:

Z_i = the log odds that the choice will be open market share repurchase for observation i ;

P = the probability of choosing the open market share repurchase; and
 $(1 - P)$ = the probability that the open market share repurchase will not be chosen (or the probability that the special dividend will be chosen).

In respect of the nine independent variables of this study, the logit function was summarised in Equation 8.2:

$$Z_i = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + u_i \dots\dots\dots (8.2)$$

where:

Z_i = the log odds that the choice will be open market share repurchase for observation i ;
 a = the intercept;
 $b_1 \dots b_9$ = the slopes which are measured as the change in Z_i for one unit change in X ;
 $X_1 \dots X_9$ = the nine independent variables of the present study; and
 u_i = the stochastic error term.

If b_i is positive, it means that if the value of the regressor X increases, the odds that the regressand (Y) equals one increases. If b_i is negative, the odds that the regressand (Y) equals one decreases if the value of the regressor X increases.

The logit function can therefore be summarised in Equation 8.3 (based on the odds of choosing open market) (Bewick, Cheek & Ball, 2005: 113):

$$\frac{P}{(1-P)} = e^{(a+\sum b_i x_i)} \dots\dots\dots (8.3)$$

The logit function can also be summarised in Equation 8.4 (based on the probability of choosing open market) (Bewick *et al.*, 2005: 113):

$$P = \frac{e^{(a+\sum b_i x_i)}}{1+e^{(a+\sum b_i x_i)}} \dots\dots\dots (8.4)$$

In the present study confidence intervals were constructed and used to determine whether or not the association between the two payment choices (namely open market share repurchase and special dividend) was statistically significant. The confidence interval was calculated on the natural log scale and then converted back to the original scale (by using the exponential function). The confidence interval on the natural log scale comprised the natural log of the odds ratio plus / minus 1,96 multiplied by the standard error of the natural log of the odds ratio. A large confidence interval indicates a low level of precision of the odds ratio (and a low confidence interval indicates a higher precision). A 95 per cent confidence interval which does not contain the value 1,00 indicates a statistically significant association at the five per cent level (Szumilas, 2010: 227).

The Wald chi-square statistics were used to test the significance of each of the coefficients of the nine regressors (X). Each Wald statistic was compared with a chi-square distribution with one degree of freedom (Bewick *et al.*, 2005: 114). The Wald statistic was summarised in Equation 8.5:

$$\left(\frac{\text{Coefficient of individual regressor}}{\text{Standard error of individual regressor}} \right)^2 \dots\dots\dots (8.5)$$

All statistical work for this chapter was conducted via the Statistica software package. Initial (or univariate) statistical procedures (namely analysis of variance (ANOVA), Levene tests, Kruskal-Wallis tests, normal probability plots, least significant difference (LSD) tests and bootstrapping) were conducted on the three payout methods. Final results are reported in the model of choice (or multivariate) statistics in section 8.5.3, where only two alternative payout methods are compared (namely open market share repurchases and special dividends).

8.5 RESULTS

8.5.1 Number of observations

The final sample of announcements of payouts comprised 15 *pro rata* offers, 120 open market share repurchases and 70 special dividend announcements. A total of 94 companies were involved in the 205 observations. The 205 observations were applied in the univariate statistics reported in section 8.5.2.

The multivariate statistics on two payout methods (namely open market share repurchases and special dividends) comprised 190 observations: 120 open market share repurchases and 70 special dividend announcements. A total of 90 companies were involved in the 190 observations. Appendix C contains the details of the 190 observations. The results of the multivariate statistics are reported in section 8.5.3.

8.5.2 ANOVA

The means and medians of each of the nine independent variables in respect of each of the payout methods are reported in Table 8.2 and Table 8.3 reports the results of the ANOVA. The application of an ANOVA assumes normality and homogeneity of variances.

Normal probability plots were inspected for each of the nine independent variables of this study. It was found that only the DSIZE variable needed adjustment for outliers. A DSIZE (winsorised) variable was therefore calculated on the basis of a robust method of calculating the standard deviation (namely the median absolute deviation (MAD) method) and mean (by using the Huber 1,5 method) and replacing each of the outliers with a value representing three times the calculated standard deviation plus the calculated mean. The DSIZE (winsorised) variable is referred to as the DSIZE variable in this study.

The Levene test was conducted to ascertain whether the assumption of homogeneity of variances was met. For p values less than 0,05 the assumption was not met. Table 8.3 shows the results of the Levene test for homogeneity of variances. The null hypothesis tested was that the variances

between the three payout methods were the same. The p value of the Levene test in respect of six of the nine variables was greater than 0,05 and the OWNER, DEBT and DSIZE variables resulted in a p value less than 0,05. The null hypothesis was therefore not rejected for six of the nine variables (which meant that the variance of these variables did not differ significantly), while the null hypothesis was rejected for the OWNER, DEBT and DSIZE variables (which meant that the variance of these variables did differ significantly).

An ANOVA was performed to investigate possible mean differences between the three payout methods for each of the nine independent variables. The null hypothesis tested was that the means of all three payout methods are equal. Table 8.3 shows that the results for the INSTOWN and DSIZE variables were significant (namely less than the significance level of 0,05), which indicated that the null hypothesis was rejected for the INSTOWN and DSIZE variables and hence the means of at least one of the three payout groups were statistically different from the others.

A Kruskal-Wallis test was performed on all nine independent variables to confirm the F value of the ANOVA, especially in respect of those variables where the homogeneity of variances assumption was not met. The Kruskal-Wallis test is a non-parametric test which does not assume normality of the populations. The Kruskal-Wallis test confirmed the p values of the ANOVA in respect of all variables, except for the OWNER variable.

A post hoc test (the Fisher LSD test) was performed to compare the payout methods in pairs to ascertain which of the payout methods, as identified in the ANOVA, differed from the other payout methods. The post hoc test was therefore performed on the two independent variables, INSTOWN and DSIZE, for which the F test of the ANOVA indicated that the mean of at least one of the three payout groups differed significantly from the others. The Fisher LSD test showed that it was only open market share repurchases and special dividends that differed significantly with respect of the INSTOWN variable; and the DSIZE variable showed that all three payout methods differed from the others. No statistically significant difference was found between open market share repurchases and *pro rata* offers or between special dividends and *pro rata* offers in respect of the INSTOWN variable. Although the p values of the ANOVA for variables other than INSTOWN and DSIZE variables did not indicate that the mean of at least one of the three payout groups differed significantly from the others, the post hoc tests showed that there were differences for the LSIZE variable irrespective of the fact that the p value for the F test was higher than 0,05. The differences between the mean LSIZE values were statistically significant only at the 10 per cent level.

Bootstrapping procedures were also performed on variables for which the Levene test showed that the assumption of homogeneity of variances was not met and for which the Kruskal-Wallis test results differed from the results of the F test. Bootstrapping procedures were therefore performed on the OWNER and DSIZE variables. The bootstrapping results of the OWNER variable confirmed the results of the F test (namely that there were no differences in the means of the three groups).

The bootstrapping results of the DSIZE variable indicated a significant difference between open market share repurchases and both specific dividends and *pro rata* offers. This concurred with the Fisher LSD results. However no significant difference was found between special dividends and *pro rata* offers, which was contrary to the significant finding from the Fisher LSD test. This non-significant result could have been influenced by the relative small sample size of *pro rata* offers.

Based on the low number of *pro rata* offers observations it was concluded that *pro rata* offers should not be included as a separate payout method when applying the model of choice statistics.

Table 8.2: Means and medians of independent variables

Independent variable	Open market repurchase	Special dividend	<i>Pro rata</i> offer
LSIZE			
mean	20.65	21.37	21.29
median	20.52	21.37	20.49
INSTOWN			
mean	65.35	48.84	57.52
median	64.50	43.66	55.10
SHRHOLD			
mean	7.56	7.79	7.83
median	7.39	7.15	7.79
OWNER			
mean	14.13	12.31	23.21
median	6.11	0.58	7.89
DEBT			
mean	10.34	12.65	12.74
median	8.57	5.43	10.86
DIVYLD			
mean	2.68	2.89	1.75
median	2.50	2.82	0.76
DSIZE			
mean	4.01	6.39	8.48
median	3.21	5.37	8.72
MISVAL			
mean	1.99	2.38	1.92
median	1.71	1.74	1.74
PRIOR			
mean	0.91	-0.49	0.54
median	1.15	0.03	-1.48

Table 8.3: Analysis of variance results

Independent variable	F value (ANOVA)	P value of F test (ANOVA)	P value of Levene test	P value of the Kruskal-Wallis test
LSIZE	2.60	0.08	0.10	0.06
INSTOWN	9.40	<0.01**	0.73	<0.01**
SHRHOLD	0.71	0.50	0.06	0.50
OWNER	2.01	0.14	0.01**	<0.01**
DEBT	0.62	0.34	0.04**	0.45
DIVYLD	1.20	0.30	0.10	0.21
DSIZE	18.51	<0.01**	0.00**	<0.01**
MISVAL	1.29	0.28	0.13	0.56
PRIOR	0.08	0.92	0.46	0.89

** p value less than 0,05

8.5.3 Model of choice

8.5.3.1 Results of model of choice

The dataset which was applied in the logistic regression model comprised 190 observations: 120 open market share repurchases and 70 special dividend payouts. The dataset which was used for the model of choice statistics appears in Appendix C.

The model comprised a two-level dependent variable (namely open market share repurchases and special dividends) and nine independent variables (as defined in sections 8.3.1 to 8.3.3 and Table 8.1). The nine independent variables were tested for correlation between subsequent events per entity (namely autocorrelation) and linear relationship between independent variables (namely multicollinearity). Autocorrelation was not expected as about 43 per cent of the companies only had observations in one reporting period, while about a further 20 per cent of the companies had observations in only two reporting periods. The results of the Durbin-Watson statistics were all approximately equal to 1,60. A further statistical test, the GEE analysis, however confirmed the results of the logistical regression model and did not result in an improvement of the Durbin-Watson statistic. Multicollinearity was however found between two of the independent variables, i.e. LSIZE and SHRHOLD. The redundancy of independent variables (RIV) statistics showed tolerance values of less than 0,3 for the LSIZE and SHRHOLD variables. When reporting the results of the logistic regression model, three separate analyses were therefore made: an analysis including all nine independent variables; an analysis excluding the LSIZE variable; and an analysis excluding the SHRHOLD variable.

Table 8.4 summarises the results of the logistic regression model based on all nine independent variables. Table 8.5 excludes the LSIZE variable and Table 8.6 excludes the SHRHOLD variable.

The results of the logistical regression model based on all nine variables (as given in Table 8.4) showed that the estimate for the INSTOWN and DSIZE variables were statistically significant at the

0,1 per cent level ($p < 0,001$) and the estimate for the LSIZE variable was statistically significant at the five per cent level ($p < 0,05$). The estimate for the MISVAL variable was statistically significant at the 10 per cent level ($p < 0,1$).

The Wald statistic showed that the estimate of the INSTOWN and DSIZE variables differed significantly from zero. Companies with higher levels of public ownership (based on the INSTOWN variable) tended to prefer open market share repurchases over special dividend payouts. If the public ownership increased with one unit (namely an increase of one percentage point in the ratio held by public investors), the odds of choosing open market share repurchases over special dividends increased by 1,038. The larger the distribution (based on the DSIZE variable), the less likely the company was to select the open market share repurchase method. If the distribution size increased with one unit (namely an increase of one percentage point in the relative size of the distribution), the odds of choosing open market share repurchases over special dividends decreased by 1,28 ($=1/0,784$).

The Wald statistic showed that the estimate of the LSIZE variable differed significantly from zero. Larger companies tended to prefer special dividends over open market share repurchases. If the log of the company size increased with one unit (namely an increase of one log in the log of company size), the odds of choosing open market share repurchases over special dividends decreased by 1,44 ($=1/0,695$).

The Wald statistic showed that the estimate of the MISVAL variable differed significantly from zero. Companies with lower degrees of undervaluation tended to prefer special dividend payouts over open market share repurchases. If the tendency to be less undervalued increased with one unit (namely an increase of one percentage point in the market-to-book ratio), the odds of choosing open market share repurchases over special dividends decreased by 1,23 ($=1/0,815$).

Table 8.4: Results of logistical regression based on all nine variables

Variable	Parameter estimate	Standard error	Wald statistic	p value	Odds ratio (95% confidence interval)
LSIZE	-0.364**	0.168	4.700	0.030	0.695(0.500-0.966)
INSTOWN	0.037***	0.009	18.213	0.000	1.038(1.020-1.056)
SHRHOLD	0.007	0.247	0.001	0.976	1.008(0.621-1.634)
OWNER	0.010	0.012	0.697	0.404	1.010(0.986-1.034)
DEBT	-0.006	0.012	0.305	0.581	0.994(0.971-1.017)
DIVYLD	-0.081	0.077	1.133	0.287	0.922(0.793-1.071)
DSIZE	-0.244***	0.060	16.374	0.000	0.784(0.697-0.882)
MISVAL	-0.204*	0.117	3.042	0.081	0.815(0.648-1.026)
PRIOR	0.002	0.008	0.060	0.807	1.002(0.986-1.019)

*** p value less than 0,01

** p value less than 0,05

* p value less than 0,10

The results of the logistical regression model excluding the LSIZE variable (as given in Table 8.5) showed that the estimate for the INSTOWN and DSIZE variables were statistically significant at the 0,1 per cent level ($p < 0,001$). The estimate for the SHRHOLD and MISVAL variables were statistically significant at the five per cent level ($p < 0,05$).

The Wald statistic showed that the estimate of the INSTOWN and DSIZE variables differed significantly from zero. Companies with higher levels of public ownership (based on the INSTOWN variable) tended to prefer open market share repurchases over special dividend payouts. If the public ownership increased with one unit (namely an increase of one percentage point in the ratio held by public investors), the odds of choosing open market share repurchases over special dividends increased by 1,037. The larger the distribution (based on the DSIZE variable), the less likely the company was to select the open market share repurchase method. If the distribution size increased with one unit (namely an increase of one percentage point in the relative size of the distribution), the odds of choosing open market share repurchases over special dividends decreased by 1,27 ($=1/0,787$).

The Wald statistic showed that the estimate of the SHRHOLD and MISVAL variables differed significantly from zero. Companies with more shareholders (based on the SHRHOLD variable) tended to prefer special dividend payouts over open market share repurchases. If the log of number of shareholders increased with one unit (namely an increase of one log in the log of number of shareholders), the odds of choosing open market share repurchases over special dividends decreased by 1,50 ($=1/0,667$). Based on the MISVAL variable, companies with lower degrees of undervaluation tended to prefer special dividend payouts over open market share repurchases. If the tendency to be less undervalued increased with one unit (namely an increase of one percentage point in the market-to-book ratio), the odds of choosing open market share repurchases over special dividends decreased by 1,32 ($=1/0,755$).

**Table 8.5: Results of logistical regression based on eight variables
(i.e. excluding LSIZE)**

Variable	Parameter estimate	Standard error	Wald statistic	p value	Odds ratio (95% confidence interval)
INSTOWN	0.036***	0.009	17.768	0.000	1.037(1.020-1.055)
SHRHOLD	-0.405**	0.163	6.138	0.013	0.667(0.484-0.919)
OWNER	0.008	0.012	0.497	0.481	1.008(0.986-1.031)
DEBT	-0.009	0.011	0.547	0.459	0.992(0.969-1.014)
DIVYLD	-0.106	0.072	2.163	0.141	0.900(0.781-1.036)
DSIZE	-0.240***	0.058	17.387	0.000	0.787(0.703-0.881)
MISVAL	-0.281**	0.114	6.076	0.014	0.755(0.604-0.944)
PRIOR	-0.002	0.007	0.052	0.819	0.998(0.983-1.014)

*** p value less than 0,01

** p value less than 0,05

The results of the logistical regression model excluding the SHRHOLD variable (as given in Table 8.6) resulted in the estimate for the INSTOWN and DSIZE variables as statistically significant at the 0,1 per cent level and the estimate for the LSIZE variable as statistically significant at the one per cent level. The estimate for the MISVAL variable was statistically significant at the 10 per cent level ($p < 0,1$).

The Wald statistic showed that the estimate of the LSIZE, INSTOWN and DSIZE variables differed significantly from zero. Larger companies (based on the LSIZE variable) tended to prefer special dividend payouts over open market share repurchases. If the log of company size increased with one unit (namely an increase of one log in the log of company size), the odds of choosing open market share repurchases over special dividends decreased by 1,43 ($=1/0,698$). Companies with higher levels of public ownership (based on the INSTOWN variable) tended to prefer open market share repurchases over special dividend payouts. If the public ownership increased with one unit (namely an increase of one percentage point in the ratio held by public investors), the odds of choosing open market share repurchases over special dividends increased by 1,038. The larger the distribution (based on the DSIZE variable), the less likely the company was to select the open market share repurchase method. If the distribution size increased with one unit, (namely an increase of one percentage point in the relative size of the distribution) the odds of choosing open market share repurchases over special dividends decreased by 1,28 ($=1/0,784$).

The Wald statistic showed that the estimate of the MISVAL variable differed significantly from zero. Companies with lower degrees of undervaluation tended to prefer special dividend payouts over open market share repurchases. If the tendency to be less undervalued increased with one unit (namely an increase of one percentage point in the market-to-book ratio), the odds of choosing open market share repurchases over special dividends decreased by 1,23 ($=1/0,815$).

**Table 8.6: Results of logistical regression based on eight variables
(i.e. excluding SHRHOLD)**

Variable	Parameter estimate	Standard error	Wald statistic	p value	Odds ratio (95% confidence interval)
LSIZE	-0.360***	0.111	10.616	0.001	0.698(0.562-0.866)
INSTOWN	0.037***	0.009	18.499	0.000	1.038(1.021-1.056)
OWNER	0.010	0.012	0.748	0.387	1.010(0.987-1.033)
DEBT	-0.006	0.012	0.308	0.579	0.994(0.971-1.016)
DIVYLD	-0.082	0.076	1.153	0.283	0.921(0.794-1.070)
DSIZE	-0.244***	0.060	16.480	0.000	0.784(0.697-0.882)
MISVAL	-0.204*	0.117	3.069	0.080	0.815(0.649-1.025)
PRIOR	0.002	0.008	0.059	0.808	1.002(0.986-1.018)

*** p value less than 0,01

* p value less than 0,10

8.5.3.2 Summary of results of model of choice statistics

The results of the logistic regression model were reported in three separate tables owing to the multicollinearity found between the LSIZE and SHRHOLD variables. Table 8.4 reports the results based on all nine independent variables; and Table 8.5 and Table 8.6 respectively exclude the LSIZE and SHRHOLD variables from the dataset. Irrespective of the independent variables included in the logistic regression model, the estimate for the INSTOWN and DSIZE variables were found to be statistically significant at the 0,1 per cent level. The results of the logistic regression model excluding the LSIZE variable also showed the estimate for the SHRHOLD and MISVAL variables as statistically significant at the five per cent level. The estimate for the LSIZE variable was found to be statistically significant at the one per cent level in the dataset excluding the SHRHOLD variable; and statistically significant at the five per cent level in the dataset based on all nine independent variables. The estimate for the MISVAL variable was found to be statistically significant at the five per cent level in the datasets excluding the LSIZE variable and statistically significant at the 10 per cent level in the datasets excluding the SHRHOLD variable as well as in the dataset based on all nine independent variables.

The observed results therefore showed that the significant factors affecting a company's choice when deciding between an open market share repurchase and a special dividend were the ownership structure (based on the INSTOWN variable) and the size of the distribution (based on the DSIZE variable). Depending on which independent variables were included in the dataset (owing to multicollinearity) further support was obtained for the ownership structure factor (based on the LSIZE and SHRHOLD variables) and an additional factor, namely the level of company undervaluation (based on the MISVAL variable), was also identified.

It was found that companies with a low degree of diversity in shareholder valuations (based on a high level of public ownership) tended to select open market share repurchases. Companies with a low degree of diversity in shareholder valuations (based on a larger company size and larger number of shareholders) however tended to select special dividends. Increases in the distribution size had a negative relationship with the choice of open market share repurchases (and a positive relationship with special dividends). Larger distributions were therefore associated with special dividends rather than with open market share repurchases. Higher levels of market-to-book ratios (therefore a decrease in the probability of a value classification) had a negative relationship with the choice of open market share repurchases and a positive relationship with the choice of special dividends. Companies with lower degrees of undervaluation therefore preferred to select special dividends and companies with higher degrees of undervaluation preferred to select open market share repurchases.

The results of the logistic regression model compared as follows to the expected relationship between the dependent and independent variables of the study (as discussed in section 8.3.4.1):

- Shareholder heterogeneity: The positive relationship which was found between the level of public ownership (based on the INSTOWN variable) and the choice of open market share repurchases supported the prediction of the study. The negative relationship which was found when comparing company size (based on the LSIZE variable) and number of shareholders (based on the SHRHOLD variable) to the probability of the choice of an open market share repurchase supported the prediction that smaller companies tended to repurchase shares.
- Size of distribution: The negative relationship between the size of the distribution (based on the DSIZE variable) and the choice of open market share repurchases did not support the prediction of the study. It was predicted that special dividends were chosen for small distributions. The results showed that the choice of special dividends were more sensitive to increases in the distribution size.
- Level of company undervaluation: The negative relationship between lower degrees of undervaluation, based on the MISVAL variable, and the choice of open market share repurchases supported the prediction of the study. It was predicted that companies with lower market-to-book ratios (therefore companies with a value classification – which tended to be undervalued) would select open market share repurchases and that companies with higher market-to-book ratios would prefer special dividends.

8.5.3.3 Results reported in the Caudill *et al.* (2006) study

The results of the Caudill *et al.* (2006) study supported all the expected relationships between the dependent and independent variables which emerged from global studies, except in respect of the size of the distribution (based on the DSIZE variable). Their study predicted that special dividend payments would be the preferred payout method for the smallest distributions. The results of their study did not support the prediction on the size of the distribution, because the choice of special dividends showed the highest positive relationship to increases in the size of the distribution. The predictions of Caudill *et al.* (2006) were based on the results of prior global studies. Caudill *et al.* (2006) therefore contributed to global theory by stating that the choice of special dividends were not associated with the smallest distributions.

8.5.3.4 Results of the hypothesis tested

Hypothesis 4 was based on the Caudill *et al.* (2006) study and stated: Ownership structure (based on the INSTOWN and SHRHOLD variables); current payout level (based on the DIVYLD variable); the size of the distribution (based the DSIZE variable); and the share price performance prior to the announcement date (based on the PRIOR variable) are the significant determinants of a company's choice between alternative payout methods.

The results of the present study supported the hypothesis in respect of the ownership structure (based on the INSTOWN and SHRHOLD variables) and the size of the distribution (based on the DSIZE variable). The study did not support the hypothesis in respect of the current payout level (based on the DIVYLD variable) and the share price performance prior to the announcement date (based on the PRIOR variable) – these were found not to be significant factors affecting the payout methods of companies in selected JSE-listed sectors. The study however reported two independent variables (namely LSIZE and MISVAL) as significant in the South African share repurchase environment, whereas these variables were found not to be statistically significant in the Caudill *et al.* (2006) study.

The significant factors which were identified in the present study did not fully support current theoretical thinking on share repurchases and special dividends. Although variables on heterogeneity of shareholders (namely the INSTOWN and SHRHOLD) were significant determinants in the present study, as was the case globally, the relationship between the choice of the dependent variable and the SHRHOLD variable did not support the current theoretical thinking. Current theoretical thinking on the SHRHOLD variable reported that companies with a larger number of shareholders generally chose to repurchase shares in the open market, while the present study found that companies with smaller numbers of shareholders generally chose to repurchase shares in the open market. The results of the INSTOWN variable, although based on public shareholders, did support current theoretical thinking that companies with high levels of institutional ownership generally chose to repurchase shares in the open market. The variable on the size of the distribution (DSIZE) was found to be a significant determinant in the present study, as was the case globally, but did not support the current theoretical thinking that special dividends were chosen for the smallest distributions. The Caudill *et al.* (2006) study, however, provided empirical evidence which is in line with the results of the present study, namely that special dividends were chosen for the largest distributions.

The LSIZE variable (also explaining the heterogeneity of shareholders) was a significant determinant in the present study, but was not found to be a global significant determinant. The relationship between the choice of the dependent variable and the LSIZE variable did not support current theoretical thinking: the present study found that smaller companies generally selected to repurchase shares in the open market, as opposed to current theoretical thinking reporting that larger companies generally selected to repurchase shares in the open market. The MISVAL variable was a significant determinant in the present study, but was not found to be a global significant determinant. The relationship between the choice of the dependent variable and the MISVAL variable, although based on market-to-book ratios, supported the current theoretical thinking that companies repurchasing shares were generally more undervalued than companies paying special dividends.

8.6 CONCLUSION

The purpose of this chapter was to ascertain what the significant factors were when companies in selected JSE-listed sectors had a choice between three payout methods, namely a *pro rata* offer, an open market share repurchase and a special dividend. The *pro rata* offer payout method had only 15 observations during the target period and was excluded from the dataset based on its low occurrence during the target period.

The final sample for the model of choice statistics comprised 190 observations: 120 open market share repurchases and 70 special dividend payments. A logistic regression model was applied to test the relationship between the nine independent variables (namely LSIZE, INSTOWN, SHRHOLD, OWNER, DEBT, DIVYLD, DSIZE, MISVAL and PRIOR) and the choice of the two payment methods (namely open market share repurchases and special dividends).

The hypothesis tested was: Ownership structure (based on the INSTOWN and SHRHOLD variables); current payout level (based on the DIVYLD variable); the size of the distribution (based on the DSIZE variable); and the share price performance prior to the announcement date (based on the PRIOR variable) are the significant determinants of a company's choice between alternative payout methods.

The results reported by the writer in the previous chapters showed that the South African regulatory environment differs from that of other countries. In this chapter these differences necessitated certain adjustments to the data definitions to be applied in the model of choice and also led to adjustments to the predictions of the study when compared to global studies.

The main constraints which affected the compilation of the dataset of the model of choice statistics comprised the three per cent announcement rule on open market share repurchases (which affected the event date of the open market observations and the calculation of the DSIZE variable); the number of group shares not being available on a daily basis (which affected the calculation of the LSIZE, DSIZE, DIVYLD and MISVAL variables); and the inconsistent and incomplete disclosures in the shareholder spread section of the annual report (which resulted in the INSTOWN variable only including public shareholders and the OWNER variable including director, but not officer, holdings).

The findings reported by the writer in previous chapters led to the prediction that companies in selected JSE-listed sectors repurchasing shares in the open market were generally smaller companies (as opposed to current theoretical thinking indicating that larger companies tended to repurchase shares in the open market).

The present study found ownership structure (based on the LSIZE, INSTOWN and SHRHOLD variables); size of distribution (based on the DSIZE variable); and level of company undervaluation (based on the MISVAL variable) as the significant factors which affected the choice of payout method of companies in selected JSE-listed sectors. The LSIZE, SHRHOLD and MISVAL

variables were significant when either the LSIZE or SHRHOLD variable was omitted from the logistic regression model (owing to multicollinearity between the LSIZE and SHRHOLD variables). The INSTOWN and DSIZE variables were significant irrespective of which independent variables were included in the logistic regression model.

The results of this chapter supported all the expected relationships between the dependent and independent variables of this study, except in respect of the DSIZE. The results of the DSIZE variable did however support the results of the study by Caudill *et al.* (2006) on determinants of choice in US companies.

The results of this chapter supported certain aspects of current theoretical thinking on the significant determinants of choice between payout methods and the relationship between dependent and independent variables (namely shareholder heterogeneity based on number of public investors, as well as the distribution size). Certain aspects of current theoretical thinking on the significant determinants of choice between payout methods were supported, but the reported relationship between dependent and independent variables did not support current theoretical thinking (namely in respect of shareholder heterogeneity based on the number of shareholders). Determinants were also reported which were not significant determinants in global studies on the determinants of choice between payout methods, but the reported relationship between dependent and independent variables did support current theoretical thinking (namely in respect of company undervaluation prior to the payout transaction(s)). Other determinants were also reported which were not significant determinants in global studies on the determinants of choice between payout methods, but showed relationships between independent and dependent variables which did not support current theoretical thinking (namely shareholder heterogeneity based on company size).

The unique South African regulatory environment most probably contributed to the South African experience not fully mirroring current theoretical thinking on the determinants of choice between payout methods.

CHAPTER 9

SUMMARY AND CONCLUSION

9.1 SUMMARY OF RESEARCH PROBLEM

The extent of share repurchase activity, the motivations for share repurchases and the main determinants affecting the choice between payout methods have been extensively researched globally. Share repurchases were allowed in South Africa as from 1 July 1999 and are a relatively new concept when compared to many other jurisdictions (e.g. the US, UK, Canada, Germany, etc.).

Limited research has been conducted on share repurchases by JSE-listed companies. Some key questions in respect of share repurchases in South Africa therefore remained unresolved. The purpose of this study was to document the extent of share repurchases in South Africa and to test whether empirical evidence and current theoretical thinking also applied in this country.

The research problem of the study was: Does the South African share repurchase experience mirror empirical evidence and current theoretical thinking?

The research problem was addressed by testing propositions and hypotheses in respect of four research questions. The results obtained were applied in developing a model on the main determinants of choice for one-time cash distributions by companies in selected JSE-listed sectors.

The research was conducted on companies listed on the Main Board of the JSE for the reporting periods including 1 July 1999 to the 2009 year-ends of the companies. Companies listed in the Basic Materials and Financials sectors, as well as companies which did not have their primary listing on the JSE, were excluded. A total of 227 companies was included in the study.

The target period of the study enabled the writer to conduct long-term event studies (on the information-signalling motivations for share repurchases) over, at least, a four-year period – similar to the Ikenberry *et al.* (1995) study in which the underreaction hypothesis was first reported. Share repurchases conducted in 2009 reporting periods could therefore be tested over the four years ending in 2013.

The results of the study will equip stakeholders of the South African share repurchase environment with useful information on the extent of share repurchase activity, the motivations for share repurchases and the main determinants affecting the choice between payout methods. The study will conclude whether the South African regulatory environment mirrors the repurchase environments of developed countries and whether regulatory changes are needed to improve and align the South African repurchase environment.

9.2 SHARE REPURCHASE ACTIVITY

Research question 1 was: To what extent do share repurchases take place when compared to other types of cash distributions?

In the South African regulatory environment there are four types of repurchasing entities; four types of share repurchases; and three types of dividend payments. Insufficient data on one of the repurchasing entities (namely consolidated share trusts) were disclosed in companies' annual reports and via SENS, and hence the repurchase of holding company shares by consolidated share trusts was not included in the dataset of the study. Only three repurchasing entities were therefore reported.

The three types of repurchasing entities are: the holding company repurchasing its own shares; the holding company repurchasing treasury shares held by subsidiaries; and subsidiaries repurchasing shares in the holding company. The four types of share repurchases comprise open market (or general) share repurchases and three types of specific share repurchases (namely repurchases by the holding company of treasury shares held by subsidiaries; *pro rata* offers; and other specific offers). The three types of dividend payments are: dividends paid from profits; dividends paid from share premium; and special dividends.

It was found that 115 (or 50,66%) of the 227 companies (included in the population of this study) repurchased shares during the target period. A total of 178 (or 78,41%) of the 227 companies paid dividends during the target period. Share repurchase transactions occurred only since the 2000 reporting periods of the companies included in the study and therefore share repurchase and dividend activity was compared over the period 2000 to 2009 (based on reporting periods).

In total about R384 billion was spent on share repurchases and dividends during the target period, of which about R137 billion (or 35,64%) was spent on share repurchases and about R247 billion (or 64,36%) on dividend payments. About R43 billion was spent on treasury share repurchases by the holding companies. The cash effect of share repurchases and dividends excluding the repurchase of treasury shares by the holding company (namely the cash effect for the group) was therefore about R341 billion. Based on the cash effect for the group, share repurchases therefore represented about R94 billion (or 27,55%) and dividends about R247 billion (or 72,45%).

The share repurchasing entities represented the following percentages of the total share repurchase value (and based on share repurchase value excluding the repurchase of treasury shares by the holding company – namely the cash effect of share repurchases for the group): 28,36 per cent (and 41,31% based on the cash effect of share repurchases for the group) for the holding company repurchasing its own shares; 31,35 per cent for the holding company repurchasing treasury shares held by subsidiaries; and 40,29 per cent (and 58,69% based on the cash effect of share repurchases for the group) for subsidiaries repurchasing shares in the holding company.

The share repurchase types represented the following percentages of the total share repurchase value (and based on the cash effect of share repurchases for the group): 42,56 per cent (and 62,00% based on the cash effect of share repurchases for the group) for open market share repurchases; 31,35 per cent for repurchases by the company of treasury shares held by subsidiaries; 7,39 per cent (and 10,76% based on the cash effect of share repurchases for the group) for *pro rata* offers; and 18,70 per cent (and 27,24% based on the cash effect of share repurchases for the group) for other specific offers.

The dividend types represented the following percentages of the total dividend payments: 75,39 per cent for dividends paid from profits; 11,21 per cent for dividends paid from share premium; and 13,40 per cent for special dividends.

It was found that companies which paid dividends every year and regularly repurchased shares comprised 9,69 per cent of the number of companies and 46,92 per cent of total payout. Companies which paid dividends (but not every year) and irregularly repurchased shares comprised 35,68 per cent of the number of companies and 45,84 per cent of total payout. Companies paying dividends and repurchasing shares over the target period therefore comprised 45,37 per cent of the number of companies and 92,76 per cent of total payout. Companies paying only dividends comprised 33,04 per cent of the number of companies and only 7,20 per cent of total payout. Companies that only repurchased shares comprised 5,29 per cent of the number of companies and only 0,04 per cent of total payout. The number of companies which did not pay dividends nor made share repurchases comprised 16,30 per cent of the total number of companies. A small group of companies (i.e. 9,69%), which always paid dividends and regularly repurchased shares, therefore contributed most to the total payout (i.e. 46,92%) over the target period.

The results supported all seven propositions which were formulated in respect of Research question 1, and were as follows for companies in selected JSE-listed sectors for reporting periods including 1 July 1999 to the 2009 year-ends of the companies, namely:

1. Share repurchase value shows a general upward trend.
2. Share repurchase value increases more rapidly than dividend payments.
3. Share repurchase value does not exceed dividend payments.
4. The open market share repurchase method is not the outright favourite share repurchase method.
5. Special dividend payment value (based on total dividends paid) decreases over time.
6. The JSE share repurchase announcement structure leads to announcements not representing comprehensive data on share repurchase activities.
7. Share repurchases by subsidiaries (and therefore also the repurchase of treasury shares by the holding company) represent a significant part of share repurchase activities.

9.3 MOTIVATIONS FOR SHARE REPURCHASES

Research questions 2, 3 and 4 addressed the information-signalling hypothesis, which is the most frequently stated motivation for share repurchases. Two hypotheses underlie the information-signalling hypothesis: the traditional information-signalling hypothesis (where the short-term market reaction is measured) and the underreaction hypothesis (where the long-term market reaction is measured).

In Research question 2 it was tested whether companies in selected JSE-listed sectors were classified as value or growth companies prior to the repurchase of shares and in Research questions 3 and 4 the traditional information-signalling hypothesis and underreaction hypothesis were addressed respectively.

Research question 2 was: Which companies tended to repurchase shares – value companies or growth companies? Hypothesis 1 was that shares are generally repurchased when management views the company to be a value company.

Hypothesis 1 was not rejected. It was found that companies in selected JSE-listed sectors were generally classified as value companies prior to the repurchase of shares. Value versus growth was tested on the basis of market-to-book ratios and P/E ratios (compared to means and medians). A statistically significant difference was found between the percentage of value companies which repurchased shares and the percentage of value companies which did not repurchase shares when the calculation was based on P/E ratios compared to means and medians.

Research question 3 was: What was the initial market reaction to share repurchase announcements? Hypothesis 2 was that the traditional information-signalling hypothesis postulates that there is a small positive initial market reaction to share repurchase announcements. This reaction was more evident for *pro rata* offers than for open market share repurchases.

Hypothesis 2 was not rejected. The results showed that CARs subsequent to the share repurchase announcement fluctuated around zero for most of the share repurchase types. The CARs of the *pro rata* offers showed the highest excess return subsequent to the announcement, reaching a maximum of about four per cent around day t_{55} .

Research question 4 was: What was the long-term market reaction to share repurchase announcements? Hypothesis 3 was that the underreaction hypothesis postulates that the long-term market reaction exceeds the initial positive market reaction to open market share repurchase announcements. This reaction was particularly evident in value companies.

Hypothesis 3 was not rejected. CARs on open market share repurchases reached a maximum of 40 per cent after about four years and, when based on value portfolios, maximum CARs of about 50 per cent were reported (and maximum CARs of about 28% when based on growth portfolios).

The CARs for *pro rata* offers were negative since around day t_{460} and reached about -28 per cent on around day t_{780} and supported current theoretical thinking (namely that *pro rata* offers did not possess a signalling effect). The CARs for the repurchase of treasury shares by the holding company reached a maximum of 40 per cent after about four years, but when based on value portfolios the CARs for the growth portfolios exceeded the CARs for the value portfolios – indicating that the repurchase of treasury shares by the holding company was not motivated by the information-signalling hypothesis.

When applying a buy-and-hold methodology the results of the CARs approach was supported. Companies repurchasing shares outperformed the market (based on a two-factor benchmark portfolio, as well as a benchmark portfolio comprising shares included in the All Share Index) over the target period of this study.

9.4 DETERMINANTS OF PAYOUTS

Hypothesis 4 was: Ownership structure (based on the INSTOWN and SHRHOLD variables); current payout level (based on the DIVYLD variable); the size of the distribution (based on the DSIZE variable); and the share price performance prior to the announcement date (based on the PRIOR variable) are the significant determinants of a company's choice between alternative payout methods.

Hypothesis 4 was not rejected for three (namely the INSTOWN, SHRHOLD and DSIZE variables) of the five variables of the hypothesis. It was found that ownership structure (based on the LSIZE, INSTOWN and SHRHOLD variables); the size of the distribution (based on the DSIZE variable); and the level of company undervaluation (based on the MISVAL variable) were the significant factors which affected a JSE-listed company's choice between open market share repurchases and special dividends.

It was found that companies with a low degree of diversity in shareholder valuations (based on a high level of public ownership) tended to select open market share repurchases. Companies with a low degree of diversity in shareholder valuations (based on a large company size and large number of shareholders) however tended to select special dividends rather than open market share repurchases. Increases in the distribution size had a negative relationship with the choice of open market share repurchases (and a positive relationship with the choice of special dividends). Larger distributions were therefore associated with special dividends rather than with open market share repurchases. Lower degrees of undervaluation had a negative relationship with the choice of open market share repurchases and a positive relationship with the choice of special dividends. Companies with a stronger value classification (therefore a higher degree of undervaluation) therefore tended to select an open market share repurchase and companies with a weaker value classification (therefore a lower degree of undervaluation) therefore tended to select a special dividend.

9.5 CONTRIBUTION OF THE STUDY

9.5.1 Introductory comments

This is the first study to compile a comprehensive database on share repurchases by companies in selected JSE-listed sectors. It is also the first study testing the information-signalling hypothesis on all types of share repurchases entered into by companies in selected JSE-listed sectors, and the first study to develop a model on the main determinants of choice when a JSE-listed company has a choice between open market share repurchases and special dividends.

The results of this study showed that share repurchases are a popular means for companies in selected JSE-listed sectors to distribute excess cash to shareholders. It also showed that investors could have benefitted over the long term when investing in companies which repurchased shares in the open market (especially if those companies were classified as value companies prior to the repurchase). The study also found that there were distinctive characteristics pertaining to companies selecting to repurchase shares in the open market as opposed to companies paying special dividends.

Although South Africa is a developing country, the results of the study showed that the South African share repurchase experience did mirror certain empirical evidence and current theoretical thinking observed in developed countries. The South African regulatory environment was however found to differ from most developed countries and a lack of compliance with the South African regulatory environment was identified. The unique regulatory environment as well as inconsistent and incomplete reporting on South African share repurchases affected the methodologies which had to be applied in the study, as well as the comparability of the results to those of developed countries.

The discussion below firstly addresses the South African experiences which were found to mirror empirical evidence and current theoretical thinking on share repurchases. Secondly, the aspects which were found to be unique to the South African regulatory environment (and their effect on the comparability of the results with those of other countries and also their impact on the methodologies applied in the present study) are discussed.

9.5.2 Support for empirical evidence and current theoretical thinking

9.5.2.1 The extent of share repurchase activity

Share repurchases were allowed in South Africa as from 1 July 1999 and became popular from 2005. In other jurisdictions share repurchases have been popular since the 1980s (e.g. in the US) and the 1990s (e.g. in the EU). In the US, share repurchases have exceeded dividend payments since 2005 (Dittmar, 2008). In the EU, share repurchases accounted for half of the total cash payouts in 2005 (Von Eije & Megginson, 2008).

The present study found, for the first 11 years since share repurchases have been allowed in South Africa, that certain empirical evidence was mirrored in South Africa. Share repurchase value did show a general upward trend (in the results of Proposition 1); share repurchase value did increase more rapidly than dividend payments (in the results of Proposition 2); and special dividend payment value did decrease over time (in the results of Proposition 5). It was also found that the South African share repurchase and dividend behaviour mirrored the empirical evidence of US companies, as reported by Skinner (2008), who found that a small group of companies which always paid dividends and regularly repurchased shares contributed to most of the total payout.

Share repurchases by companies in selected JSE-listed sectors did not exceed dividend payments during the target period (in the results of Proposition 3). South African share repurchase value compared to dividend payment value did not yet mirror behaviour in the US, but mirrored the empirical evidence of jurisdictions where share repurchases started later than in the US (e.g. the EU).

9.5.2.2 *The motivation for share repurchase activities*

The results of the present study (in respect of Hypotheses 1) on whether value companies generally repurchased shares mirrored the current theoretical thinking. Companies repurchasing shares were found to be generally classified as value companies.

The results of the present study (in respect of Hypotheses 2 and 3) on whether open market share repurchases were motivated by the information-signalling hypothesis mirrored the current theoretical thinking in respect of the traditional information-signalling hypothesis and the underreaction hypothesis.

The results on the information-signalling hypothesis (reported in Hypotheses 2 and 3) in respect of *pro rata* offers also mirrored the current theoretical thinking on the information-signalling effect of *pro rata*-type tender offers.

9.5.3 Unique aspects pertaining to the South African regulatory environment

9.5.3.1 *JSE Listings Requirements*

Share repurchase announcement rules of the JSE

According to the JSE Listings Requirements, open market share repurchases must be announced via SENS once a company has cumulatively acquired three per cent of the issued shares (of that class, as at the date of the general meeting resolution) and each three per cent thereafter. Many sponsors advised their clients that this rule should be interpreted as a three per cent limit per reporting period (Crotty, 2012b; 2012f). Share repurchases below the three per cent limit per reporting period were therefore not announced by these companies. Depending on when the three

per cent limit was reached and how the three per cent rule was interpreted, the announcement could have referred to shares which were actually repurchased in the previous year(s) / month(s) / week(s) and on the previous day.

In most other countries all actual share repurchases were announced either on a daily, weekly, monthly or quarterly basis and comprehensive share repurchase data were therefore available on a more regular and accurate actual-time basis.

The present study found (in the results of Proposition 6) that the South African announcement rules on open market share repurchases resulted in announcements not representing comprehensive share repurchase data. South African share repurchase announcements could therefore not be used as the main source to compile share repurchase data. In the present study annual report disclosures were the main source to compile share repurchase data.

The three per cent rule on open market share repurchases impacted on the informational value of share repurchases to the market, because the market did not know about share repurchases not meeting the three per cent threshold and, in respect of share repurchases that were announced under the three per cent rule, the announcement could have been in respect of shares repurchased in the previous year(s) or month(s) or week(s) and on the previous day. The comparability of the results of the present study based on announced open market share repurchases (as reported in the studies testing the information-signalling hypothesis and in the model on the determinants of choice) was therefore affected.

Disclosure in the shareholder spread

The study found that the Listings Requirements pertaining to the disclosures in the shareholder spread (or shareholder analysis) were not clearly specified and that companies applied these requirements inconsistently. The comparability of the results of the model on the determinants of choice was affected by these inconsistencies, specifically in respect of the OWNER and INSTOWN variables. In the present study the OWNER variable only included directors (and not directors and officials) and the INSTOWN variable only included public shareholders (and not institutional shareholders).

Monitoring of compliance to the JSE Listings Requirements

The study found that the three per cent announcement rule on open market share repurchases was interpreted either as a cumulative threshold or as a threshold per annum; that the shareholder spread disclosures in annual reports were inconsistent; and that many companies did not always report the repurchase of treasury shares by holding companies via SENS and circulars (as stipulated by the JSE Listings Requirements). It seems that the JSE does not adequately monitor compliance to the JSE Listings Requirements.

9.5.3.2 Treasury shares

IFRS defines treasury shares as own equity instruments which are reacquired by an entity or by other entities in the consolidated group and stipulates that these shares should be deducted from equity. This definition is in alignment with the UK regulatory environment, where the IASB that issues IFRS is situated.

In South Africa own equity instruments reacquired by an entity are cancelled from issued share capital (and re-instated as authorised share capital). Subsidiaries may also acquire a maximum of 10 per cent (in total) of the shares in their holding company and these repurchases by subsidiaries are not cancelled from issued share capital, but represent treasury shares. In South Africa share trusts may also repurchase shares in the holding company. According to the South African application of the definition, treasury shares therefore comprise shares repurchased by subsidiaries and by consolidated trusts. The number of issued company shares and the number of issued group shares may differ in South Africa, because the treasury shares need to be deducted from the number of company shares in the consolidated annual report.

Most global jurisdictions do not require own shares acquired to be cancelled (e.g. in the US and the UK), and do not allow subsidiaries to repurchase shares (e.g. in the UK, Canada and Australia). In jurisdictions like the UK, Canada and Australia the number of company and number of group shares do not differ.

The South African definition of treasury shares not only complicates the disclosure on share capital, but also the calculation of ratios based on number of issued shares (e.g. the market capitalisation and NAV per share ratios). Furthermore, the JSE only reports the daily number of company shares (and not the number of group shares). It was found that disclosures on share capital in annual reports were inconsistent (Wesson & Hamman, 2011); that most companies involved in share repurchases disclosed overstated market capitalisation in their annual reports (because they based the figure on number of company shares); that the JSE also calculated market capitalisation based on the number of company shares instead of on number of group shares; and that companies applied different numbers of issued shares when calculating and disclosing market capitalisation as opposed to NAV per share (Bester *et al.*, 2008; Vermeulen & Yaffar, 2014).

Owing to the JSE only reporting the number of company shares, certain data elements which were applied in the model on the determinants of payouts in the present study (namely the LSIZE, DSIZE, DIVYLD and MISVAL variables) were based on number of company (and not number of group) shares.

In the South African regulatory environment there were tax benefits on repurchasing shares through subsidiaries which affected the motives for share repurchases during the target period. Share repurchases by subsidiaries were not liable for STC during the target period (in contrast with

own shares repurchased, which were liable for STC), which may have motivated companies rather to repurchase shares through a subsidiary than directly. The limit on number of shares which may be held by subsidiaries (namely 10%) may also have influenced the holding company to repurchase treasury shares held by subsidiaries when the 10 per cent limit was nearly reached, to make way for new repurchases by the subsidiaries. The repurchase of treasury shares by the holding company was only liable for STC as from 1 October 2007.

It was found that the most frequently stated reason disclosed by holding companies when repurchasing treasury shares from their subsidiaries was that the 10 per cent limit which may be held by subsidiaries was nearly reached (Wesson & Hamman, 2012). The stated motivation however did not represent the real motivation, because the underlying reason why the subsidiary (and not the holding company) initially repurchased the shares was not disclosed. The repurchase of treasury shares by the holding company could have been motivated by the related tax benefit. It was however found that the repurchase of treasury shares still occurred subsequent to 1 October 2007, irrespective of the negative STC implication thereof (Wesson & Hamman, 2012). The results of Hypothesis 3 on the underreaction hypothesis showed that the repurchase of treasury shares by the holding company was not motivated by the information-signalling motive.

In the present study it was found (in the results of Proposition 7) that share repurchases by subsidiaries and also the repurchase of treasury shares by the holding company represented a significant part of South African share repurchase activities during the target period. The comparability of studies on the motivations for South African share repurchases to studies conducted in countries where share repurchases by subsidiaries were not allowed was therefore affected.

9.5.3.3 The popularity of open market repurchases

In the present study (in the results of Proposition 4), it was found that the open market share repurchase type was not the outright favourite share repurchase method for JSE-listed companies during the target period. Global research found that open market share repurchases represented over 93 per cent of total share repurchase value in the US from 1996 to 2004 (Banyi *et al.*, 2008), and in Europe open market share repurchases represented between 90 and 95 per cent of the total share repurchase value in 1997 (Fairchild & Zang, 2005). Global studies on share repurchases were therefore mainly based on open market share repurchases.

In the present study it was found that share repurchases by subsidiaries were the most popular type of share repurchase entity, and that the repurchase by the holding company of treasury shares held by subsidiaries was the most popular specific share repurchase method. By allowing subsidiaries to repurchase shares, the South African share repurchase experience, including the motivations for share repurchases, was therefore affected.

9.5.3.4 Determinants of payouts

In the present study, the development of a model of choice between open market share repurchases, *pro rata* offers and special dividends was based on the methodology which was applied in a US study by Caudill *et al.* (2006). These authors identified 10 independent variables which may affect a company's choice of payout method, based on the results of prior global studies. In the present study an eleventh variable (namely share options held by directors) was identified, based on research results from more recent studies.

In the present study the *pro rata* offer share repurchase type had only 15 observations during the target period. Owing to the low occurrence thereof, the *pro rata* share repurchase method was not included in the final dataset of the model of choice. The final sample included 190 observations comprising 120 announced open market share repurchases and 70 special dividend announcements. A logistic regression model was applied to test the relationship between the independent variables and the choice of payment method.

The data definitions of Caudill *et al.* (2006) in respect of many variables required adjustments owing to data constraints in the South African regulatory environment (mainly resulting from the daily number of group shares not being available; the effect of the 3% announcement rule on the interpretation of the actual repurchase date; and shareholder spread disclosures leading to data constraints for certain types of shareholders). The variables which were affected were: LSIZE, INSTOWN, OWNER, DIVYLD, DSIZE and MISVAL. No reliable data could be obtained for two independent variables (namely takeover defence and share options held by directors) and therefore a total of nine independent variables were included in the dataset.

The expected relationship between the independent variables and the choice of payment method of the present study differed from the expectations based on global research owing to the unique South African repurchasing environment. In respect of the company size (LSIZE) and number of shareholders (SHRHOLD) variables, it was expected that smaller companies with lower number of shareholders would prefer share repurchases – as opposed to global research stating that larger companies with larger number of shareholders preferred open market share repurchases.

This study found that ownership structure (based on the LSIZE, INSTOWN and SHRHOLD variables); the size of the distribution (based on the DSIZE variable); and the level of company undervaluation (based on the MISVAL variable) were the significant factors which affected a JSE-listed company's choice between open market share repurchases and special dividends.

The results from testing Hypothesis 4 highlighted that, although certain results supported current theoretical thinking, the unique South African regulatory environment affected the comparability of the results from the present study with the results from developed countries.

9.5.3.5 Tax legislation

South African share repurchases did not necessarily have a tax advantage over dividends, as was the case globally, over the target period. A withholding tax on dividends, and not STC, is applicable in most other countries. In South Africa STC was levied on dividends and share repurchases – and the tax effect was usually similar over the target period, except for the share capital repayment and share premium repayment in respect of share repurchases which did not attract STC. During the target period of the study, share repurchases by subsidiaries were not liable for STC and the repurchase of treasury shares by the holding company only attracted STC as from 1 October 2007. Subsequent to the target period of the study, STC was replaced by a withholding tax, generally resembling the global tax treatment during the target period.

9.6 EDUCATIONAL ROLE

The South African regulatory environment pertaining to share repurchases differs from the share repurchase environments in other countries. The major differences are the fact that all share repurchases are not reported via SENS and that subsidiaries may repurchase shares in the holding company (and have a tax benefit over share repurchases by the holding company itself). Furthermore, the stipulations of IFRS and the JSE Listings Requirements pertaining to share repurchases are not always clear and hence are applied inconsistently by companies in annual report disclosures. Compliance to the JSE Listings Requirements does not seem to be adequately monitored.

The South African share repurchase environment therefore exhibits many characteristics that may be considered typical of a developing economy's financial systems and cannot be viewed as fully comparable to the share repurchase environments of developed countries (e.g. the US and the UK).

The aim of the educational role of the present study was to emphasise the awareness of the lack of publicly available information on share repurchase activity and the inconsistent disclosure thereof in annual reports. Articles were published in popular and academic journals during the research process for this study. These publications led to a series of newspaper articles on the subject (written by Crotty) and contributed to the persuasion of the JSE to amend the JSE Listings Requirements on the disclosure of share repurchases in annual reports. These requirements were contained in Section 8.63 and were effective as from 14 January 2013 (JSE, 2013). Although these amendments will lead to improved disclosure of share repurchases by the holding company and its subsidiaries, all aspects were not addressed in the amendment. The declaration of share repurchases by share trusts; the drawing of a distinction between the different types of repurchases; and the provision of the repurchase price per repurchase entity and repurchase type were not stipulated as requirements.

The writer aims to continue this educational role by addressing in forthcoming publications the issues pertaining to the three per cent announcement rule; subsidiary repurchases; and the lack of monitoring by the JSE. The South African regulatory environment needs to be aligned with those of developed countries.

9.7 AREAS FOR FUTURE RESEARCH

The major limitation for studies on share repurchases by JSE-listed companies is the fact that comprehensive share repurchase data is not readily available. The database which has been compiled in the present study must be expanded to extend beyond the research period of the present study and also the sectors researched (Basic Materials and Financials must be included) to ascertain the share repurchase experience over a longer research period and in a wider research area.

The implication of the amended JSE Listings Requirements (effective from 14 January 2013) on share repurchase disclosure and the impact thereof on the calculation of ratios based on number of issued shares needs to be researched. The effect of the amendments to the Income Tax Act and Companies Act, effective after the target period of this study, on share repurchases and dividend payment behaviour also needs to be researched.

The impact of share options held by directors as a potential motivation for share repurchases also needs to be addressed in future research, provided that reliable data on share options can be obtained. The free cash flow motivation for share repurchases should also be researched. Alternative methods to distinguish between value and growth companies conducting share repurchases also warrant future research.

Share repurchase activity in South Africa is still a relatively new concept, but has become a popular method for JSE-listed companies to distribute excess cash. In the present study it was found that certain aspects of the South African share repurchase experience mirror empirical evidence and current theoretical thinking. The South African regulatory environment was however found to possess characteristics of a developing economy's financial systems which contributed to South Africa not fully mirroring empirical evidence and current theoretical thinking. The unique South African share repurchase environment renders future research on share repurchase activities critical to equip all stakeholders to make informed decisions.

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ANNEXURE A: COMPANIES INCLUDED IN THE STUDY

No.	Company name	Re-purchased shares	Paid dividends	Rand value of shares repurchased	Rand value of dividends paid
1	AdaptIT Holdings Ltd	1	1	8 288 742	28 113 442
2	Adcorp Holdings Ltd	1	1	62 632 790	411 675 000
3	Admiral Leisure World Ltd	0	0	0	0
4	ADvTECH Ltd	1	1	7 598 000	266 466 000
5	AFGRI Ltd	1	1	211 242 000	2 246 510 000
6	African and Overseas Enterprises Ltd	0	1	0	28 125 846
7	African Media Entertainment Ltd	0	1	0	34 824 000
8	Afrimat Ltd	1	1	2 721 990	37 453 400
9	AfroCentric Investment Corporation Ltd	0	1	0	17 708 000
10	Afrox Healthcare Ltd	0	1	0	404 506 000
11	AG Industries Ltd	1	1	6 534 000	76 680 000
12	Alex White Holdings Ltd	0	1	0	725 000
13	Alliance Pharmaceuticals Ltd	0	1	0	15 637 000
14	Allied Electronics Corporation Ltd	1	1	188 857 000	764 509 000
15	Allied Technologies Ltd	1	1	426 000 000	1 740 069 000
16	Amalgamated Appliances Holdings Ltd	1	1	4 791 960	143 077 000
17	Amalgamated Beverage Industries Ltd	0	1	0	1 229 950 000
18	Amalgamated Electronic Corporation Ltd	1	1	5 717 167	8 570 000
19	Aspen Pharmicare Holdings Ltd	1	1	2 395 976 000	955 561 000
20	Astral Foods Ltd	1	1	583 750 667	1 381 391 000
21	Astrapak Ltd	1	1	81 392 884	123 484 000
22	Austro Group Ltd	0	1	0	8 628 000
23	Aveng Ltd	1	1	4 204 357 873	2 161 100 000
24	AVI Ltd	1	1	1 688 300 000	2 184 200 000
25	Avis Southern Africa Ltd	0	1	0	129 941 000
26	Awethu Breweries Ltd	0	0	0	0
27	Barloworld Ltd	1	1	4 199 000 000	8 039 000 000
28	Basil Read Holdings Ltd	0	1	0	154 008 000
29	Bearing Man Ltd	0	1	0	96 960 000
30	Bell Equipment Ltd	0	1	0	100 128 000
33	Bowler Metcalf Ltd	1	1	34 539 000	109 727 000
32	Brandcorp Holdings Ltd	1	1	143 278 000	103 060 000
33	Bridgestone Firestone Maxiprest Ltd	0	1	0	51 731 000
34	Buildmax Ltd	0	1	0	1 045 000
35	Burlington Industries Ltd	0	0	0	0
36	Business Connexion Group Ltd	1	1	981 828 244	2 092 880 654
37	Capevin Investments Ltd	0	1	0	714 203 000
38	Cargo Carriers Ltd	0	1	0	26 200 000
39	Cashbuild Ltd	1	1	2 452 000	248 583 000
40	Caxton and CTP Publishers and Printers Ltd	1	1	480 151 000	1 382 557 000
41	Caxton Publishers and Printers Ltd	0	1	0	100 990 000

42	Ceramic Industries Ltd	0	1	0	373 083 000
43	Chester Investment Holdings Ltd	1	0	19 837 000	0
44	Cipla Medpro South Africa Ltd	0	0	0	0
45	City Lodge Hotels Ltd	0	1	0	728 414 000
46	Clicks Group Ltd	1	1	2 853 527 000	965 129 000
47	Comair Ltd	0	1	0	205 800 000
48	Combined Motor Holdings Ltd	0	1	0	422 316 000
49	Command Holdings Ltd	0	0	0	0
50	Compu-Clearing Outsourcing Ltd	1	1	18 209 000	44 893 000
51	Concor Ltd	0	1	0	14 820 000
52	Connection Group Holdings Ltd	1	1	36 745 000	5 751 000
53	Control Instruments Group Ltd	1	1	55 548 000	43 208 000
54	ConvergeNet Holdings Ltd	1	0	3 280 000	0
55	Country Bird Holdings Ltd	0	1	0	28 813 294
56	Crookes Brothers Ltd	0	1	0	147 498 000
57	CS Computer Services Holdings Ltd	0	0	0	0
58	Cullinan Holdings Ltd	1	1	2 500 000	43 085 000
59	Daewoo Electronics SA Ltd	0	0	0	0
60	Datacentrix Holdings Ltd	0	1	0	215 657 000
61	Delta EMD Ltd	0	1	0	1 820 726 000
62	Digicore Holdings Ltd	1	1	23 422 000	133 320 000
63	Distell Group Ltd	0	1	0	2 333 226 000
64	Distribution and Warehousing Network Ltd	1	1	72 861 396	160 558 000
65	DNA Supply Chain Investments Ltd	1	0	14 388 504	0
66	Dorbyl Ltd	1	1	21 027 000	1 535 108 000
67	Edgars Consolidated Stores Ltd	1	1	501 952 234	1 901 247 000
68	ELB Group Ltd	1	1	690 000	296 727 000
69	Electronic Media Network Ltd	1	1	81 809 000	386 529 000
70	ElementOne Ltd	0	1	0	415 700 000
71	Elexir Technology Holdings Ltd	0	0	0	0
72	Ellerine Holdings Ltd	1	1	43 600 000	691 793 000
73	Emergent Properties Ltd	0	0	0	0
74	Energy Africa Ltd	0	0	0	0
75	EnviroServ Holdings Ltd	1	1	13 920 000	134 958 000
76	EOH Holdings Ltd	1	1	31 666 000	62 499 000
77	Esorfranki Ltd	0	1	0	64 183 000
78	Excellerate Holdings Ltd	1	1	12 550 000	6 961 000
79	Famous Brands Ltd	0	1	0	203 831 000
80	Faritec Holdings Ltd	1	0	13 984 000	0
81	Fashion Africa Ltd	0	0	0	0
82	Forim Holdings Ltd	0	1	0	1 500 000
83	Fortune Beverages Ltd	0	1	0	12 166 000
84	Foschini Ltd	1	1	860 981 675	3 149 245 000
85	GIJIMA AST GROUP Ltd	1	1	12 274 000	48 821 000
86	Global Technology Ltd	0	0	0	0
87	Global Village Holdings Ltd	1	1	5 856 000	1 880 000
88	Glodina Holdings Ltd	0	0	0	0
89	Gold Reef Resorts Ltd	1	1	43 854 000	895 507 000

90	Grindrod Ltd	1	1	1 035 626 014	2 311 292 000
91	Grintek Ltd	1	1	54 751 000	91 380 000
92	Group Five Ltd	1	1	0	414 862 000
93	Gubb and Inggs Ltd	0	1	0	2 032 000
94	Heritage Collection Holdings Ltd	1	1	1	1 778 000
95	HomeChoice Holdings Ltd	0	0	0	0
96	Howden Africa Holdings Ltd	0	1	0	322 592 000
97	Hudaco Industries Ltd	1	1	21 456 000	636 271 000
98	Hunt Leuchars & Hepburn Holdings Ltd	0	1	0	51 769 000
99	Idion Technology Holdings Ltd	0	0	0	0
100	IFA Hotels & Resorts Ltd	1	0	385 001	0
101	Illiad Africa Ltd	1	1	246 206 000	349 581 000
102	Illovo Sugar Ltd	0	1	0	1 824 800 000
103	Imperial Holdings Ltd	1	1	4 530 000 000	5 506 000 000
104	Inmins Ltd	1	1	5 416 000	11 922 000
105	Intertrading Ltd	0	1	0	10 500 000
106	Intervid Ltd	0	1	0	314 635
107	Invicta Holdings Ltd	1	1	270 595 000	458 506 000
108	IST Group Ltd	1	1	13 555 000	22 391 509
109	Italtile Ltd	0	1	0	570 704 000
110	Jasco Electronics Holdings Ltd	1	1	1 650 000	54 573 000
111	JD Group Ltd	1	1	352 000 000	3 023 000 000
112	Kagiso Media Ltd	0	1	0	747 996 000
113	Kairos Industrial Holdings Ltd	1	0	6 627 909	0
114	KAP International Holdings Ltd	0	1	0	130 000 000
115	KayDav Group Ltd	1	0	17 849 261	0
116	Kelly Group Ltd	1	1	26 916 209	66 000 000
117	King Consolidated Holdings Ltd	0	0	0	0
118	LA Group Ltd	1	1	79 443 306	27 754 000
119	Lewis Group Ltd	1	1	566 200 000	1 086 000 000
120	Malbak Ltd	1	1	160 000 000	175 000 000
121	Masonite (Africa) Ltd	0	1	0	57 489 000
122	Massmart Holdings Ltd	1	1	255 574 228	3 434 700 000
123	Mathomo Group Ltd	0	0	0	0
124	Maxtec Ltd	0	0	0	0
125	MB Technologies Ltd	0	0	0	0
126	McCarthy Ltd	0	0	0	0
127	Medi-Clinic Corporation Ltd	1	1	146 041 000	3 093 229 000
128	Metair Investments Ltd	1	1	29 937 000	356 783 000
129	Metje and Ziegler Ltd	0	1	0	1 297 000
130	Metro Cash and Carry Ltd	0	1	0	88 815 000
131	Metrofile Holdings Ltd	1	0	65 917 000	0
132	MICROmega Holdings Ltd	1	1	15 109 000	5 317 287
133	Midas Ltd	0	1	0	22 705 000
134	Millionair Charter Ltd	0	0	0	0
135	Mobile Industries Ltd	0	1	0	281 488 000
136	Mr Price Group Ltd	0	1	0	1 250 169 000
137	MTN Group Ltd	1	1	21 226 000 000	10 556 000 000

138	Murray & Roberts Holdings Ltd	1	1	59 000 000	2 271 400 000
139	Mustek Ltd	1	1	108 699 000	328 302 000
140	Mvelaphanda Group Ltd	1	1	484 908 000	766 281 000
141	Namibian Fishing Industries Ltd	0	1	0	7 016 000
142	Namibian Sea Products Ltd	0	0	0	0
143	Nampak Ltd	1	1	1 265 200 000	4 772 700 000
144	Nando's Group Holdings Ltd	0	0	0	0
145	Naspers Ltd	0	1	0	2 245 340 385
146	National Chick Ltd	0	1	0	4 432 000
147	Net 1 Applied Technology Holdings Ltd	0	1	0	25 681 000
148	Netcare Ltd	1	1	8 959 900 000	3 310 500 000
149	New Africa Investments Ltd	0	1	0	1 628 448 000
150	Nictus Ltd	0	1	0	11 625 000
151	Ninian and Lester Holdings Ltd	0	1	0	29 810 000
152	Nu-World Holdings Ltd	0	1	0	131 921 000
153	Oceana Group Ltd	1	1	89 107 000	887 956 000
154	OSI Holdings Ltd	0	0	0	0
155	Ozz Ltd	1	1	57 880 000	61 861 000
156	Pals Holdings Ltd	0	1	0	13 422 000
157	Paracon Holdings Ltd	1	1	168 143 000	166 008 000
158	Pasdec Resources SA Ltd	0	1	0	1 397 000
159	Pepkor Ltd	0	1	0	321 807 000
160	Phumelela Gaming and Leisure Ltd	1	1	21 770 000	212 455 000
161	Pick n Pay Holdings Ltd	1	1	51 700 000	2 075 100 000
162	Pick n Pay Stores Ltd	1	1	1 035 003 439	3 914 000 000
163	Pinnacle Technology Holdings Ltd	1	1	48 432 000	41 197 000
164	Pretoria Portland Cement Company Ltd	1	1	753 000 000	8 414 100 000
165	Primedia Ltd	1	1	78 625 220	371 548 000
166	Primeserv Group Ltd	1	1	14 559 827	13 202 000
167	Prism Holdings Ltd	1	0	22 000 000	0
168	Profurn Ltd	1	1	270 210 450	25 747 000
169	Rainbow Chicken Ltd	0	1	0	885 189 000
170	Raubex Group Ltd	0	1	0	225 766 319
171	Relyant Retail Ltd	0	1	0	3 639 000
172	Remgro Ltd	1	1	11 138 000 000	19 728 000 000
173	Reunert Ltd	1	1	757 300 000	4 459 300 000
174	Rex Trueform Clothing Company Ltd	0	1	0	46 445 900
175	SacOIL Holdings Ltd	0	0	0	0
176	SAIL Group Ltd	1	0	198 000	0
177	Sanyati Holdings Ltd	0	0	0	0
178	Sasani Ltd	1	0	3 818 000	0
179	Sasol Ltd	1	1	37 904 300 000	44 784 000 000
180	Sea Kay Holdings Ltd	0	0	0	0
181	Searidel Investment Corporation Ltd	1	1	284 900 000	116 131 000
182	SecureData Holdings Ltd	1	1	29 989 696	47 578 000
183	Servest Holdings Ltd	0	0	0	0
184	Set Point Ltd	1	1	840 000	45 957 000
185	Shawcell Telecommunications Ltd	0	0	0	0

186	Shoprite Holdings Ltd	1	1	838 294 126	3 180 520 000
187	South Ocean Holdings Ltd	0	1	0	51 797 000
188	Sovereign Food Investments Ltd	1	1	232 000	61 588 000
189	Spescom Ltd	0	0	0	0
190	Spur Corporation Ltd	1	1	40 529 000	328 484 000
191	Square One Solutions Group Ltd	0	0	0	0
192	Steinhoff International Holdings Ltd	1	1	833 106 339	2 592 491 000
193	Sun International (SA) Ltd	0	1	0	65 551 000
194	Sun International Ltd	1	1	3 064 862 976	1 730 640 000
195	Super Group Ltd	1	1	311 998 927	940 248 000
196	Sweets from Heaven Holdings Ltd	0	0	0	0
197	Telkom SA Ltd	1	1	6 557 030 425	20 313 000 000
198	Terexko Ltd	0	1	0	1 496 000
199	The Bidvest Group Ltd	1	1	3 984 826 532	7 677 448 000
200	The Cementation Company (Africa) Ltd	0	0	0	0
201	The Don Group Ltd	0	0	0	0
202	The House of Busby Ltd	1	1	62 251 430	37 467 000
203	The Laser Group Ltd	1	0	3 583 000	0
204	The Spar Group Ltd	0	1	0	1 694 027 000
205	Tiger Brands Ltd	1	1	1 145 900 000	7 322 900 000
206	Tiger Wheels Ltd	1	1	72 617 448	158 284 000
207	Tongaat Hulett Ltd	0	1	0	2 891 000 000
208	Tourism Investment Corporation Ltd	1	1	89 701 768	529 375 000
209	Tradehold Ltd	0	1	0	11 097 000
210	Transpaco Ltd	1	1	62 285 183	49 528 000
211	Trencor Ltd	0	1	0	613 598 000
212	Truworths International Ltd	1	1	2 550 385 000	2 958 592 000
213	UCS Group Ltd	1	1	79 745 000	122 990 000
214	United Service Technologies Ltd	0	1	0	33 841 000
215	Unitrans Ltd	1	1	190 729 000	454 405 000
216	Universal Industries Corporation Ltd	1	1	22 928 000	40 967 000
217	Vaalauto Ltd	0	0	0	0
218	Vaaltrucar Ltd	0	0	0	0
219	Value Group Ltd	1	1	89 299 000	53 138 000
220	Venters Leisure and Commercial Trailers Ltd	0	0	0	0
221	Verimark Holdings Ltd	0	1	0	30 282 167
222	Wesco Investments Ltd	0	1	0	3 408 655 000
223	Wetherlys Investment Holdings Ltd	0	1	0	28 177 000
224	Wilson Bayly Holmes - Ovcon Ltd	0	1	0	499 924 000
225	Winhold Ltd	0	1	0	51 722 000
226	Woolworths Holdings Ltd	1	1	3 677 377 919	4 591 600 000
227	Zarara Energy Ltd	1	1	10 199 000	68 734 000
	Total	115	178	136 886 511 758	247 148 767 838

ANNEXURE B: COMPANIES ANNOUNCING SHARE REPURCHASES VIA SENS

No.	Company name	Open market	Pro rata	Repurchase treasury	Other specific	SENS date
1	AdaptIT Holdings Ltd	1				2004-10-06
	AdaptIT Holdings Ltd	1				2007-05-02
	AdaptIT Holdings Ltd	1				2008-10-06
2	Adcorp Holdings Ltd	1				2001-09-04
	Adcorp Holdings Ltd			1		2003-06-18
3	AFGRI Ltd	1				2000-02-15
	AFGRI Ltd	1				2002-05-31
4	Allied Electronics Corporation Ltd		1			2001-08-02
5	Allied Technologies Ltd				1	2004-05-20
6	Aspen Pharmacare Holdings Ltd				1	2001-03-30
	Aspen Pharmacare Holdings Ltd				1	2004-06-24
7	Astral Foods Ltd	1				2005-08-29
	Astral Foods Ltd	1				2006-06-01
	Astral Foods Ltd	1				2006-12-11
8	Astrapak Ltd	1				2007-08-14
9	Aveng Ltd	1				2000-06-07
	Aveng Ltd		1			2008-02-05
10	AVI Ltd	1				2000-11-24
	AVI Ltd		1			2001-02-22
	AVI Ltd			1		2005-01-14
	AVI Ltd	1				2008-03-12
11	Barloworld Ltd	1				2000-03-06
	Barloworld Ltd			1		2006-01-26
	Barloworld Ltd	1				2006-06-20
12	Brandcorp Holdings Ltd	1				2000-05-26
	Brandcorp Holdings Ltd	1				2000-10-17
	Brandcorp Holdings Ltd				1	2002-04-23
	Brandcorp Holdings Ltd	1				2003-10-01
13	Cashbuild Ltd	1				2003-02-12
14	Chester Investment Holdings Ltd				1	2000-06-30
	Chester Investment Holdings Ltd	1				2000-10-27
15	Clicks Group Ltd	1				2004-07-19
	Clicks Group Ltd	1				2004-12-03
	Clicks Group Ltd			1		2006-05-17
	Clicks Group Ltd	1				2006-11-15
	Clicks Group Ltd			1		2007-08-06
	Clicks Group Ltd	1				2007-11-27
	Clicks Group Ltd			1		2009-02-04
	Clicks Group Ltd	1				2009-08-20
16	Compu-Clearing Outsourcing Ltd	1				2000-06-23
	Compu-Clearing Outsourcing Ltd	1				2001-07-02
	Compu-Clearing Outsourcing Ltd	1				2002-10-11

	Compu-Clearing Outsourcing Ltd			1		2002-10-11
17	Connection Group Holdings Ltd	1				2003-05-20
	Connection Group Holdings Ltd			1		2004-03-16
18	Control Instruments Group Ltd				1	2002-12-06
	Control Instruments Group Ltd				1	2003-01-06
	Control Instruments Group Ltd			1		2006-08-23
19	Digicore Holdings Ltd	1				2003-05-14
	Digicore Holdings Ltd		1			2004-03-05
	Digicore Holdings Ltd	1				2004-06-14
20	Distribution and Warehousing Network Ltd				1	2001-09-04
	Distribution and Warehousing Network Ltd	1				2002-10-25
	Distribution and Warehousing Network Ltd	1				2004-05-18
21	DNA Supply Chain Investments Ltd				1	2002-12-12
22	Edgars Consolidated Stores Ltd	1				2002-02-19
	Edgars Consolidated Stores Ltd	1				2003-01-28
23	Electronic Media Network Ltd				1	2001-10-05
24	Ellerine Holdings Ltd	1				2003-05-30
25	EnviroServ Holdings Ltd	1				2000-11-24
26	EOH Holdings Ltd	1				2001-06-06
27	Excellerate Holdings Ltd	1				2005-01-04
28	Faritec Holdings Ltd	1				2001-06-05
	Faritec Holdings Ltd	1				2002-03-22
29	Foschini Ltd	1				2001-07-25
	Foschini Ltd	1				2002-07-04
	Foschini Ltd	1				2007-09-18
30	Global Village Holdings Ltd				1	2003-08-15
31	Gold Reef Resorts Ltd		1			2003-02-03
32	Grindrod Ltd	1				2001-04-11
	Grindrod Ltd			1		2001-10-11
	Grindrod Ltd	1				2002-04-24
	Grindrod Ltd			1		2002-04-24
	Grindrod Ltd				1	2003-11-13
	Grindrod Ltd	1				2006-06-22
33	Grintek Ltd		1			2002-05-03
34	Heritage Collection Holdings Ltd				1	2006-03-24
35	Hudaco Industries Ltd	1				2000-08-17
36	Iliad Africa Ltd	1				2000-11-16
	Iliad Africa Ltd	1				2001-06-06
	Iliad Africa Ltd	1				2002-03-18
	Iliad Africa Ltd	1				2005-06-29
	Iliad Africa Ltd	1				2008-05-26
37	Imperial Holdings Ltd	1				2002-03-07
	Imperial Holdings Ltd	1				2003-09-11
	Imperial Holdings Ltd		1			2005-04-05
38	Inmins Ltd	1				2003-05-12
39	Invicta Ltd	1				2000-12-12

	Invicta Ltd	1				2001-08-27
	Invicta Ltd				1	2003-05-27
	Invicta Ltd	1				2004-07-07
40	IST Group Ltd	1				2001-11-26
41	JD Group Ltd	1				2008-07-29
42	Kairos Industrial Holdings Ltd		1			2005-02-15
43	KayDav Group Ltd	1				2009-09-23
44	Kelly Group Ltd	1				2008-07-17
45	LA Group Ltd	1				2000-10-26
	LA Group Ltd	1				2002-08-02
	LA Group Ltd				1	2002-08-02
	LA Group Ltd				1	2004-06-10
46	Lewis Group Ltd	1				2006-03-20
	Lewis Group Ltd	1				2006-07-28
	Lewis Group Ltd	1				2007-09-17
47	Malbak Ltd	1				2000-07-20
48	Metrofile Holdings Ltd			1		2006-11-29
49	MICROmega Holdings Ltd				1	2003-07-22
50	MTN Group Ltd				1	2008-12-15
51	Murray & Roberts Holdings Ltd				1	2000-12-29
52	Mustek Ltd	1				2002-05-08
	Mustek Ltd	1				2002-07-09
	Mustek Ltd		1			2003-02-11
53	Mvelephanda Group Ltd	1				2007-08-02
54	Netcare Ltd				1	2001-02-12
	Netcare Ltd				1	2002-11-28
	Netcare Ltd			1		2006-03-23
	Netcare Ltd			1		2008-12-30
	Netcare Ltd				1	2008-12-30
55	Oceana Group Ltd				1	2006-12-21
	Oceana Group Ltd				1	2007-11-09
56	Ozz Ltd	1				2000-06-22
	Ozz Ltd				1	2000-12-18
57	Paracon Holdings Ltd				1	2001-07-26
	Paracon Holdings Ltd				1	2001-11-14
	Paracon Holdings Ltd	1				2003-06-02
	Paracon Holdings Ltd	1				2006-07-12
	Paracon Holdings Ltd			1		2008-08-20
	Paracon Holdings Ltd				1	2008-08-20
58	Phumelela Gaming and Leisure Ltd	1				2008-09-29
59	Pick n Pay Stores Ltd				1	2002-05-28
	Pick n Pay Stores Ltd	1				2002-12-18
	Pick n Pay Stores Ltd			1		2002-12-18
60	Pinnacle Technology Holdings Ltd	1				2005-06-09
61	Pretoria Portland Cement Company Ltd	1				2008-05-07
62	Primedia Ltd	1				2000-03-24
63	Primeserv Group Ltd	1				2000-12-11
	Primeserv Group Ltd	1				2002-03-27

	Primeserv Group Ltd			1		2002-03-27
	Primeserv Group Ltd	1				2002-12-09
64	Prism Holdings Ltd		1			2005-02-02
65	Profurn Ltd	1				2000-06-19
66	Remgro Ltd	1				2005-07-20
	Remgro Ltd			1		2006-02-08
67	Reunert Ltd	1				2000-12-18
	Reunert Ltd		1			2004-06-29
	Reunert Ltd			1		2007-02-06
68	Sasani Ltd	1				2002-11-21
69	Sasol Ltd	1				2000-06-01
	Sasol Ltd	1				2000-10-05
	Sasol Ltd			1		2006-09-07
	Sasol Ltd	1				2007-05-04
	Sasol Ltd	1				2007-10-05
	Sasol Ltd	1				2008-09-22
	Sasol Ltd			1		2008-10-30
70	Searidel Investment Corporation Ltd				1	2005-11-07
71	SecureData Holdings Ltd	1				2005-10-19
72	Set Point Ltd				1	2001-10-10
73	Shoprite Holdings Ltd				1	2001-10-04
74	Spur Corporation Ltd	1				2002-12-12
	Spur Corporation Ltd				1	2004-12-22
75	Steinhoff International Holdings Ltd	1				2008-06-24
76	Sun International Ltd		1			2007-06-06
77	Super Group Ltd	1				2001-01-19
	Super Group Ltd	1				2001-04-03
78	Telkom SA Ltd	1				2004-09-13
	Telkom SA Ltd	1				2006-07-17
	Telkom SA Ltd	1				2008-02-20
79	The Bidvest Group Ltd	1				2003-03-27
	The Bidvest Group Ltd				1	2006-09-26
	The Bidvest Group Ltd		1			2008-03-03
80	The House of Busby Ltd	1				2002-03-27
	The House of Busby Ltd	1				2004-11-19
	The House of Busby Ltd			1		2005-05-06
81	The Laser Group Ltd	1				2000-07-24
	The Laser Group Ltd	1				2002-09-03
82	Tiger Brands Ltd	1				2005-02-10
83	Tiger Wheels Ltd			1		2006-11-03
84	Tourism Investment Corporation Ltd	1				2002-04-19
85	Transpaco Ltd				1	2000-12-07
	Transpaco Ltd	1				2003-05-12
	Transpaco Ltd			1		2005-05-03
	Transpaco Ltd		1			2005-08-25
86	Truworths International Ltd	1				2002-02-21
	Truworths International Ltd	1				2003-04-03
	Truworths International Ltd	1				2004-05-03

	Truworthis International Ltd	1				2005-10-10
	Truworthis International Ltd			1		2007-02-21
	Truworthis International Ltd	1				2007-06-08
	Truworthis International Ltd	1				2008-10-21
87	UCS Group Ltd	1				2001-06-28
	UCS Group Ltd	1				2002-02-12
	UCS Group Ltd	1				2003-01-13
	UCS Group Ltd				1	2003-02-27
	UCS Group Ltd				1	2009-06-01
88	Unitrans Ltd	1				2005-12-15
89	Universal Industries Corporation Ltd	1				2008-06-27
90	Value Group Ltd	1				2008-02-21
	Value Group Ltd	1				2008-03-25
	Value Group Ltd			1		2008-06-27
91	Woolworths Holdings Ltd	1				2002-06-21
	Woolworths Holdings Ltd	1				2002-10-31
	Woolworths Holdings Ltd		1			2005-01-21
	Woolworths Holdings Ltd			1		2005-01-21
	Woolworths Holdings Ltd			1		2008-07-25
92	Zarara Energy Ltd				1	2002-12-13
	Total	123	15	28	38	

ANNEXURE C:

DATASET ON TWO-LEVEL DEPENDENT VARIABLE FOR DETERMINANTS OF CHOICE STATISTICS

No.	Company name	Dependent variable		SENS date	Independent variables								
		Open market	Special dividends		LSIZE	INSTOWN	SHRHOLD	OWNER	DEBT	DIVYLD	DSIZE	MISVAL	PRIOR
1	Adapt IT Holdings Ltd	1		2004-10-06	17.28	65.00	5.57	23.28	0.00	11.81	1.41	1.77	-53.13
2	Adapt IT Holdings Ltd	1		2007-05-02	17.93	61.00	6.08	23.44	0.00	5.55	0.93	3.13	-15.60
3	Adapt IT Holdings Ltd	1		2008-10-06	17.74	66.00	6.12	34.26	0.00	6.92	1.86	2.19	-8.97
4	Adcorp Holdings Ltd	1		2001-09-04	20.24	55.62	6.65	5.32	2.63	1.25	2.93	2.71	7.46
5	AFGRI Ltd	1		2000-02-15	21.02	84.82	8.51	1.37	27.81	0.00	4.38	0.91	-11.94
6	AFGRI Ltd		1	2001-04-02	21.34	84.82	8.27	0.96	1.78	0.00	8.60	1.62	5.94
7	AFGRI Ltd	1		2002-05-31	21.37	84.82	8.46	1.06	3.25	4.49	3.44	1.14	18.75
8	AFGRI Ltd		1	2004-12-15	21.61	85.03	8.58	0.28	2.27	5.79	12.95	1.67	-8.30
9	AFGRI Ltd		1	2008-09-16	21.39	84.92	8.47	0.03	3.51	8.65	1.54	1.67	-25.54
10	African Media Entertainment Ltd		1	2007-10-23	19.50	70.30	6.70	0.00	2.47	0.00	5.88	3.12	-15.64
11	African Media Entertainment Ltd		1	2009-03-20	19.06	48.00	6.65	0.00	1.40	0.00	9.09	4.59	27.76
12	AfroCentric Investment Corporation Ltd		1	2005-09-29	16.28	20.00	6.30	0.18	23.72	0.00	150.71	0.61	-105.62
13	Afrox Healthcare Ltd		1	1999-08-26	19.05	12.38	6.74	26.38	5.59	5.72	3.73	0.50	-16.71
14	Allied Tecnologies Ltd		1	2001-04-23	21.59	46.47	5.80	32.66	0.52	2.80	0.88	3.68	-3.69
15	Allied Tecnologies Ltd		1	2002-10-08	21.54	46.47	7.35	32.66	3.23	3.92	2.31	2.34	-18.87
16	Allied Tecnologies Ltd		1	2006-09-28	22.51	39.00	7.90	0.09	1.31	3.36	1.78	3.24	-1.68
17	Astral Foods Ltd	1		2005-08-29	21.90	85.21	8.25	0.32	14.62	4.58	4.10	2.37	0.37
18	Astral Foods Ltd	1		2006-06-01	22.14	93.53	8.28	0.72	13.62	3.75	3.39	3.49	-5.42
19	Astral Foods Ltd	1		2006-12-11	22.23	88.32	8.38	0.92	14.82	5.55	2.73	3.47	3.86
20	Astrapak Ltd	1		2007-08-14	21.26	84.30	7.34	1.93	17.34	1.85	3.30	2.72	3.47
21	Aveng Ltd	1		2000-06-07	21.40	79.04	7.67	0.00	12.33	0.00	4.92	1.36	2.79
22	Aveng Ltd		1	2008-09-08	24.04	98.47	8.87	0.00	2.58	1.46	2.09	2.20	-11.69
23	AVI Ltd	1		2000-11-24	21.69	92.80	7.45	2.22	9.45	4.74	3.29	0.89	26.76
24	AVI Ltd	1		2008-03-12	22.44	91.30	8.30	0.36	19.34	3.07	3.03	2.52	20.16

25	Barloworld Ltd	1		2000-03-06	23.06	30.80	8.98	0.47	17.21	4.38	3.01	0.98	4.78
26	Barloworld Ltd		1	2002-11-14	23.26	90.36	10.04	0.36	19.30	3.99	1.69	1.13	-18.00
27	Barloworld Ltd	1		2006-06-20	23.87	91.11	9.85	0.40	26.17	3.39	2.77	2.19	-1.94
28	Barloworld Ltd		1	2007-03-08	24.29	99.38	9.88	0.57	23.53	4.07	2.87	1.90	4.26
29	Brandcorp Holdings Ltd	1		2000-05-26	18.37	51.65	6.66	16.53	0.24	0.00	7.63	0.23	44.34
30	Brandcorp Holdings Ltd	1		2000-10-17	18.71	51.65	6.59	17.77	0.19	4.17	2.97	0.47	31.95
31	Brandcorp Holdings Ltd	1		2003-10-01	19.41	51.65	6.71	34.61	12.14	5.00	2.73	1.22	-0.12
32	Business Connexion Group Ltd		1	2005-08-16	21.16	72.45	9.09	0.02	16.51	0.00	2.88	1.12	6.55
33	Business Connexion Group Ltd		1	2008-08-26	20.90	85.22	8.66	0.00	4.97	2.80	13.19	0.99	48.22
34	Cashbuild Ltd	1		2003-02-12	19.18	73.70	7.23	10.93	0.08	5.52	2.72	1.06	13.54
35	Ceramic Industries Ltd		1	2005-09-13	21.51	32.60	6.67	60.04	7.68	1.47	2.08	1.61	10.75
36	Chester Investment Holdings Ltd	1		2000-10-27	18.24	68.40	7.31	29.66	0.00	0.00	9.89	0.59	27.55
37	Clicks Group Ltd	1		2004-07-19	21.70	97.10	8.53	1.18	12.39	1.86	3.04	1.48	16.12
38	Clicks Group Ltd	1		2004-12-03	21.98	94.00	8.34	1.16	8.89	3.55	3.80	2.03	6.46
39	Clicks Group Ltd	1		2006-11-15	22.09	97.70	8.26	0.08	12.35	1.86	3.89	2.31	6.34
40	Clicks Group Ltd	1		2007-11-27	22.44	96.70	8.21	0.08	12.32	0.71	3.29	3.95	8.51
41	Clicks Group Ltd	1		2009-08-20	22.50	89.40	8.13	0.12	16.75	0.50	3.75	4.25	-3.61
42	Combined Motor Holdings Ltd		1	2007-02-14	21.45	22.50	6.69	73.93	6.45	1.78	7.23	4.56	-14.08
43	Compu-Clearing Outsourcing Ltd	1		2000-06-23	17.90	16.00	5.83	40.24	4.87	0.00	3.13	6.21	-73.40
44	Compu-Clearing Outsourcing Ltd	1		2001-07-02	17.76	16.00	5.93	39.49	5.17	1.66	3.69	2.14	-58.24
45	Compu-Clearing Outsourcing Ltd	1		2002-10-11	17.85	23.50	5.87	41.97	13.40	1.85	3.09	2.09	4.81
46	Compu-Clearing Outsourcing Ltd		1	2004-09-23	17.73	12.30	5.64	47.26	7.36	4.00	8.00	1.73	-31.94
47	Connection Group Holdings Ltd	1		2003-05-20	18.53	73.50	8.03	9.10	0.00	0.00	1.60	1.66	11.67
48	Crookes Brothers Ltd		1	2000-02-24	18.45	89.80	5.85	4.81	8.34	0.00	34.88	0.45	31.13
49	Datacentrix Holdings Ltd		1	2006-04-19	20.18	23.00	6.82	13.77	7.84	3.59	5.65	2.11	-13.98
50	Delta EMD Ltd		1	2005-11-10	21.39	14.20	7.10	0.55	3.13	4.65	15.19	1.86	-20.95
51	Delta EMD Ltd		1	2006-02-23	21.30	19.30	7.13	0.22	5.06	3.20	38.78	0.99	-19.39
52	Delta EMD Ltd		1	2008-10-24	20.00	28.30	6.66	0.18	26.28	0.00	10.15	1.06	14.50

53	Delta EMD Ltd		1	2009-05-04	19.84	28.60	6.59	0.18	18.15	0.00	23.81	0.74	4.02
54	Digicore Holdings Ltd	1		2003-05-14	17.91	33.00	6.85	33.93	0.23	0.00	3.57	0.59	31.92
55	Digicore Holdings Ltd	1		2004-06-14	18.74	29.50	6.78	32.27	3.42	0.00	3.13	0.50	2.77
56	Digicore Holdings Ltd		1	2004-09-07	19.00	30.50	6.72	33.14	2.40	3.27	5.62	1.21	16.59
57	Distribution and Warehousing Network Ltd	1		2002-10-25	18.27	51.94	7.17	4.00	3.39	0.00	3.83	0.99	11.61
58	Distribution and Warehousing Network Ltd	1		2004-05-18	19.62	51.94	7.04	6.33	9.22	0.00	4.00	1.80	-6.50
59	Dorbyl Ltd		1	2002-08-02	20.39	58.60	6.54	0.07	20.05	7.78	1.33	0.74	24.59
60	Dorbyl Ltd		1	2003-11-17	20.00	57.20	6.90	0.39	17.46	8.15	6.80	0.79	-21.32
61	Dorbyl Ltd		1	2005-08-05	21.02	56.80	7.17	0.39	6.76	2.83	65.93	1.37	7.09
62	Edgars Consolidated Stores Ltd	1		2002-02-19	21.04	55.34	7.57	0.07	8.83	6.31	5.50	0.52	25.12
63	Edgars Consolidated Stores Ltd	1		2003-01-28	21.94	55.34	8.06	0.08	8.60	4.15	10.00	0.60	22.69
64	ELB Group Ltd		1	2002-05-16	19.40	52.90	6.90	22.30	2.03	4.02	69.01	0.87	10.23
65	Ellerine Holdings Ltd	1		2003-05-30	21.12	99.36	7.44	0.22	18.55	4.99	3.00	0.74	-2.99
66	EnviroServ Holdings Ltd	1		2000-11-24	18.92	73.85	6.77	16.19	54.91	7.81	3.58	0.65	62.56
67	EOH Holdings Ltd	1		2001-06-06	17.63	31.00	5.87	55.90	11.84	0.00	3.09	4.13	-52.31
68	Excellerate Holdings Ltd	1		2005-01-04	18.68	56.59	6.22	8.57	11.85	0.00	3.00	0.58	0.87
69	Faritec Holdings Ltd	1		2001-06-05	17.81	64.00	5.73	34.19	0.00	0.00	4.74	2.11	-58.36
70	Faritec Holdings Ltd	1		2002-03-22	18.64	62.70	6.14	33.39	0.39	0.00	5.72	0.72	108.39
71	Foschini Ltd	1		2001-07-25	21.28	95.28	6.96	0.18	21.05	6.65	3.10	0.65	17.79
72	Foschini Ltd	1		2002-07-04	21.46	83.70	7.71	5.89	20.26	3.00	2.92	0.92	6.54
73	Foschini Ltd	1		2007-09-18	23.30	79.60	8.58	6.87	20.69	3.47	3.18	4.35	-3.19
74	Gold Reef Resorts Ltd		1	2008-03-17	22.78	21.65	7.42	83.23	32.38	1.54	1.24	4.03	-4.72
75	Grindrod Ltd	1		2002-04-24	19.64	34.10	5.97	22.69	33.84	4.71	8.49	0.78	27.38
76	Grindrod Ltd	1		2006-06-22	22.40	73.00	9.19	24.37	19.88	3.51	3.05	3.04	-27.99
77	Howden Africa Holdings Ltd		1	2004-02-13	18.53	44.36	6.17	0.13	0.00	2.00	27.65	0.83	24.18
78	Howden Africa Holdings Ltd		1	2006-05-29	19.76	44.36	6.44	0.28	5.27	2.04	25.54	1.85	-13.33
79	Howden Africa Holdings Ltd		1	2008-06-05	20.49	44.36	6.47	0.28	10.38	0.00	8.30	7.84	-9.90
80	Hudaco Industries Ltd	1		2000-08-17	19.39	61.10	6.59	2.15	8.96	0.00	6.73	0.91	-16.34
81	Hudaco Industries Ltd		1	2007-07-03	21.71	86.90	7.47	1.06	0.52	2.81	4.09	2.40	11.49
82	Iliad Africa Ltd	1		2000-11-16	17.70	83.85	6.17	31.02	2.51	13.85	3.57	0.95	-9.96
83	Iliad Africa Ltd	1		2001-06-06	17.93	83.85	6.14	26.18	0.77	7.83	3.46	0.72	-17.65

84	Iliad Africa Ltd	1		2002-03-18	18.13	83.85	6.58	25.72	0.46	5.87	8.81	0.94	-4.75
85	Iliad Africa Ltd	1		2005-06-29	21.15	85.84	8.45	9.28	0.23	1.85	3.03	3.10	-25.71
86	Iliad Africa Ltd	1		2008-05-26	21.13	99.10	8.27	0.89	3.66	0.00	4.07	2.31	-4.10
87	Imperial Holdings Ltd	1		2002-03-07	23.05	89.50	7.76	5.10	16.29	0.00	3.40	2.06	-6.54
88	Imperial Holdings Ltd	1		2003-09-11	23.25	87.94	8.80	5.14	23.05	0.00	3.05	1.42	-2.66
89	Inmins Ltd	1		2003-05-12	17.53	44.28	6.49	3.19	2.04	9.03	5.01	0.69	-13.10
90	Invicta Holdings Ltd	1		2000-12-12	19.16	51.21	6.74	39.78	0.06	8.44	7.30	0.81	-11.86
91	Invicta Holdings Ltd	1		2001-08-27	19.36	51.21	6.62	44.58	1.90	7.89	4.53	0.90	-9.14
92	Invicta Holdings Ltd	1		2004-07-07	20.34	24.27	6.85	63.33	1.20	5.81	4.57	1.94	-2.52
93	IST Group Ltd	1		2001-11-26	18.38	21.00	6.88	5.18	4.42	0.00	8.43	0.79	8.41
94	Italtile Ltd		1	2004-08-04	21.21	15.50	6.13	63.29	1.15	1.94	1.60	2.90	12.88
95	Italtile Ltd		1	2005-08-15	21.79	16.60	6.37	63.83	1.17	1.42	2.14	3.93	13.01
96	JD Group Ltd	1		2008-07-29	22.41	97.40	8.53	1.92	15.42	6.11	3.01	2.20	-5.72
97	Kagiso Media Ltd		1	2003-03-04	19.92	28.10	6.17	10.95	0.00	7.63	11.49	2.55	-10.19
98	KayDav Group Ltd	1		2009-09-23	18.45	23.00	5.20	14.34	4.89	0.00	15.24	0.56	32.20
99	Kelly Group Ltd	1		2008-07-17	20.34	81.90	6.94	12.66	23.11	0.00	3.11	4.99	-4.54
100	LA Group Ltd	1		2000-10-26	18.45	41.71	5.98	28.69	14.96	0.00	1.55	2.68	-30.23
101	LA Group Ltd	1		2002-08-02	18.63	41.71	6.29	22.74	2.67	4.55	5.94	0.40	-23.11
102	Lewis Group Ltd	1		2006-03-20	22.42	45.99	7.89	0.01	3.30	1.82	3.36	1.63	12.52
103	Lewis Group Ltd	1		2006-07-28	22.29	94.82	7.75	0.25	5.82	2.63	3.00	2.67	-4.13
104	Lewis Group Ltd	1		2007-09-17	22.53	90.84	7.48	0.25	4.72	3.69	3.00	2.71	2.59
105	Malbak Ltd	1		2000-07-20	21.17	39.80	8.49	12.89	6.25	4.13	3.35	1.16	-13.88
106	Masonite (Africa) Ltd		1	2007-12-21	19.47	20.46	5.95	0.06	23.29	2.52	8.80	0.74	1.38
107	Masonite (Africa) Ltd		1	2009-11-27	19.45	21.45	6.03	0.06	19.77	0.00	5.10	0.45	-5.10
108	Medi-Clinic Corporation Ltd		1	2005-10-04	22.60	46.55	8.18	0.60	4.29	0.00	24.28	2.02	6.39
109	Mustek Ltd	1		2002-05-08	19.66	57.00	7.39	23.93	1.06	0.00	7.32	0.57	-5.97
110	Mustek Ltd	1		2002-07-09	19.73	77.80	7.39	22.62	13.77	0.00	6.01	1.01	-5.26
111	New Africa Investments Ltd		1	2001-03-29	21.66	28.50	8.81	26.51	150.36	0.00	0.06	0.80	3.02
112	New Africa Investments Ltd		1	2004-07-27	18.70	28.50	8.40	15.40	1.83	0.00	0.12	0.78	46.75
113	New Africa Investments Ltd		1	2006-05-03	18.69	14.20	8.38	12.80	0.00	0.00	0.83	0.55	-56.74
114	Ozz Ltd	1		2000-06-22	19.48	58.00	7.07	17.18	1.25	6.62	5.10	0.94	14.77
115	Paracon Holdings Ltd	1		2003-06-02	18.82	36.30	7.87	19.30	0.06	0.00	2.98	1.35	13.58
116	Paracon Holdings Ltd	1		2006-07-12	20.15	36.30	7.04	9.23	0.00	0.00	3.20	2.24	-6.67
117	Phumelela gaming and	1		2008-09-29	20.48	39.64	6.60	11.44	1.09	4.62	1.31	3.10	-44.28

	Leisure Ltd												
118	Pick n Pay Stores Ltd	1		2002-12-18	22.56	36.80	8.51	25.40	13.05	3.54	3.07	3.83	-11.73
119	Pinnacle Technology Holdings Ltd	1		2005-06-09	18.58	75.10	6.99	24.85	4.58	0.00	3.63	0.34	-16.10
120	Pretoria Portland Cement Company Ltd		1	2001-11-08	21.99	28.00	6.47	0.05	20.99	5.47	7.54	1.62	11.44
121	Pretoria Portland Cement Company Ltd		1	2002-11-07	22.23	28.00	7.96	0.05	23.15	6.09	7.12	1.81	-3.15
122	Pretoria Portland Cement Company Ltd		1	2003-11-06	22.64	28.00	8.07	0.05	21.54	4.56	5.12	2.85	-1.36
123	Pretoria Portland Cement Company Ltd		1	2004-11-04	23.11	28.00	8.46	0.05	19.55	3.98	6.95	4.16	3.51
124	Pretoria Portland Cement Company Ltd		1	2005-11-09	23.52	27.90	8.93	0.05	17.97	3.30	2.61	7.80	14.39
125	Pretoria Portland Cement Company Ltd		1	2006-11-08	23.75	27.92	9.19	0.05	10.83	3.36	2.00	8.49	-11.63
126	Pretoria Portland Cement Company Ltd		1	2007-10-30	23.93	99.82	10.52	0.18	9.34	3.27	1.27	10.38	-8.89
127	Pretoria Portland Cement Company Ltd	1		2008-05-07	23.79	99.82	10.52	0.18	9.34	3.27	2.77	10.38	5.75
128	Primeserv Group Ltd	1		2000-12-11	17.66	62.00	6.46	16.45	1.19	3.27	4.73	0.68	-58.12
129	Primeserv Group Ltd	1		2002-03-27	17.15	48.60	6.30	33.09	1.31	0.00	5.47	0.54	6.33
130	Primeserv Group Ltd	1		2002-12-09	17.14	47.40	6.74	15.36	0.98	0.00	5.07	0.50	-26.77
131	Profurn Ltd	1		2000-06-19	22.26	92.10	8.95	3.28	8.53	0.32	5.94	4.52	-16.69
132	Remgro Ltd		1	2002-06-19	24.23	99.37	9.75	0.63	1.08	3.05	1.56	1.27	5.14
133	Remgro Ltd		1	2004-06-23	24.29	95.06	10.15	0.69	2.48	3.89	2.94	1.18	-1.57
134	Remgro Ltd	1		2005-07-20	24.70	92.25	10.22	0.57	2.80	3.43	3.49	1.31	6.54
135	Remgro Ltd		1	2005-07-27	24.74	92.25	10.22	0.57	2.80	3.43	5.62	1.31	4.67
136	Remgro Ltd		1	2006-06-23	24.82	98.20	10.34	0.74	3.22	2.63	3.21	1.75	2.13
137	Reunert Ltd		1	1999-09-27	21.08	60.30	8.99	0.15	0.44	7.44	35.84	1.09	-3.83
138	Reunert Ltd	1		2000-12-18	21.67	60.30	8.30	0.50	0.42	5.15	3.04	2.83	15.34
139	Reunert Ltd		1	2006-09-01	23.33	73.90	9.49	0.58	4.01	4.05	2.88	5.63	3.16
140	Sasani Ltd	1		2002-11-21	17.35	37.71	7.02	21.58	8.72	0.00	7.61	0.21	12.47
141	Sasol Ltd	1		2000-06-01	24.06	90.50	9.62	0.00	19.96	0.00	3.00	1.72	10.37
142	Sasol Ltd	1		2000-10-05	24.27	90.50	9.49	0.06	17.36	3.71	3.02	1.66	20.22
143	Sasol Ltd	1		2007-05-04	25.75	90.70	10.60	0.08	35.33	2.14	1.10	3.59	-24.96

144	Sasol Ltd	1		2007-10-05	25.96	97.00	10.66	0.10	35.40	2.77	3.10	2.71	19.46
145	Sasol Ltd	1		2008-09-22	26.10	88.70	10.87	0.06	29.15	1.96	1.64	4.02	11.78
146	SecureData Holdings Ltd		1	2003-09-16	18.86	60.00	6.40	17.24	43.38	1.63	2.94	3.18	41.08
147	SecureData Holdings Ltd		1	2004-09-14	19.23	60.00	6.83	14.73	0.00	1.94	2.85	3.54	17.44
148	SecureData Holdings Ltd		1	2005-09-19	19.44	60.80	7.08	14.47	0.00	2.46	2.09	4.63	-3.43
149	SecureData Holdings Ltd	1		2005-10-19	19.36	60.80	7.08	14.47	0.00	2.46	6.06	4.63	-14.94
150	SecureData Holdings Ltd		1	2006-10-02	19.38	64.90	6.81	10.89	9.55	3.27	0.83	4.90	-7.68
151	Spur Corporation Ltd	1		2002-12-12	19.56	67.60	6.99	9.08	0.00	0.00	3.09	2.22	-4.20
152	Steinhoff International Holdings Ltd	1		2008-06-24	23.89	83.87	9.19	15.59	24.15	0.00	3.21	1.95	-4.80
153	Super Group Ltd	1		2001-01-19	21.57	83.50	8.79	5.19	21.32	0.59	3.11	3.27	0.72
154	Super Group Ltd	1		2001-04-03	21.66	83.50	8.63	4.97	18.87	2.62	3.05	2.17	54.39
155	Telkom SA Ltd		1	2003-11-24	24.19	31.00	11.56	6.00	43.38	0.00	1.56	0.88	18.74
156	Telkom SA Ltd	1		2004-09-13	24.48	28.69	11.58	3.00	35.33	0.00	4.00	1.99	-3.42
157	Telkom SA Ltd		1	2005-06-06	24.85	42.96	11.41	0.00	28.39	1.02	4.51	2.23	-24.61
158	Telkom SA Ltd		1	2006-06-05	25.08	41.43	11.39	0.00	27.91	2.54	2.79	3.00	-17.01
159	Telkom SA Ltd	1		2006-07-17	24.94	41.43	11.39	0.00	27.91	2.54	3.10	3.00	3.16
160	Telkom SA Ltd		1	2007-06-13	25.27	51.07	11.34	0.00	18.63	3.07	2.84	2.79	-1.33
161	Telkom SA Ltd	1		2008-02-20	24.98	51.07	11.34	0.00	18.63	3.07	3.14	2.79	-3.04
162	The Bidvest Group Ltd	1		2003-03-27	23.27	81.30	9.45	3.89	5.24	1.87	2.98	2.57	5.05
163	The House of Busby Ltd	1		2002-03-27	18.07	57.19	5.62	27.09	0.01	8.84	8.49	0.37	32.89
164	The House of Busby Ltd	1		2004-11-19	19.11	47.00	6.05	49.02	0.00	1.82	15.23	0.68	26.75
165	The Laser Group Ltd	1		2000-07-24	17.65	45.66	6.57	1.80	22.25	0.00	5.47	0.78	-64.79
166	The Laser Group Ltd	1		2002-09-03	17.97	47.42	6.68	11.28	8.14	0.00	1.84	0.51	8.92
167	Tiger Brands Ltd	1		2005-02-10	23.53	98.21	9.30	0.23	21.23	3.16	3.03	4.08	5.92
168	Tourism Investment Corporation Ltd	1		2002-04-19	20.55	25.80	7.01	2.80	1.40	0.00	3.19	1.74	38.22
169	Tourism Investment Corporation Ltd		1	2003-08-14	21.15	25.80	7.76	0.67	1.39	4.82	16.30	2.49	13.23
170	Transpaco Ltd	1		2003-05-12	18.35	39.36	5.51	35.75	12.33	0.00	6.17	0.32	38.87
171	Truworths International Ltd	1		2002-02-21	21.43	44.38	7.55	0.82	13.16	2.31	1.28	2.65	-6.32
172	Truworths International Ltd	1		2003-04-03	21.75	94.63	7.78	1.33	11.58	2.75	1.72	2.62	3.11
173	Truworths International Ltd	1		2004-05-03	22.32	94.92	6.58	1.57	8.51	3.54	2.92	2.59	5.73
174	Truworths International Ltd	1		2005-10-10	22.99	89.90	8.53	1.67	5.75	3.37	2.94	4.70	-2.11

ANNEXURE D: AMENDED JSE LISTINGS REQUIREMENT

Repurchased equity securities

Section 8 Financial information

Minimum contents of annual financial statements

(n) Repurchased equity securities:

Details must be disclosed in respect of the repurchase by an issuer of its own equity securities or a purchase by a subsidiary of equity securities in its holding company (in accordance with section 48 of the Act) during the period under review.

In respect of the above repurchase of equity securities by the issuer and/or subsidiary, the following should be disclosed:

- (1) the total number of equity securities repurchased;
- (2) in relation to the total number, the number of equity securities -
 - (i) held as treasury securities by a subsidiary of the issuer;
 - (ii) which have reverted to authorised but unissued equity securities of the issuer in accordance with section 35(5) of the Act;
- (3) the average price paid for the repurchased equity securities, calculated by dividing the total amount paid by the number of repurchased equity securities.