

ECONOMIC VALUE ADDED (EVA): THE ESSENCE TO CREATING REAL WEALTH?



by

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DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and has not previously in its entirety or in any part been submitted at any university for a degree

ABSTRACT

Basic corporate finance and microeconomic theory indicate that the primary financial directive of any firm ought to be to maximise the wealth of the shareholders. This objective benefits all stakeholders and, also ensures that scarce resources are allocated, managed and re-deployed as efficiently as possible for the benefit of all.

An appropriate performance measure gauges how management strategy affects shareholder value as measured by the risk-adjusted return on the invested capital. The effectiveness of this given strategy must incorporate the required rate of return on invested capital, accurately measure the amount of capital used by the company, and correlate highly with the risk-adjusted rate of return earned by shareholders. Economic Value Added (EVA) is considered an appropriate measure and is a way of measuring a company's net operating profit after tax and after deducting the cost of capital.

In this study the EVA concept is considered from a financial management perspective. Several elements and advantages of the concept are discussed. The additional tasks required of management in this process are highlighted. It was found that one of the major challenges facing EVA implementation is changing traditional methods of financial reporting. In the theoretical study the major elements of EVA, in particular the advantages of the financial measurement, are discussed.

Against this background an empirical investigation was carried out. The results of which provide an insight into the understanding and practical implementation of EVA by three large retail groups within South Africa.

In conclusion to this study, the approach of EVA as a financial management system is the key to creating wealth based on the results of the practical and theoretical investigation.

DEDICATION

This thesis is dedicated in the memory of my Grandfather,
J.A.S. Louw

A WORD OF THANKS

Prof I.J Lambrechts for his sound advice

My Grandmother, my parents, and Lynne Harris for their continuous support and encouragement

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Chapter 1

Introduction

1.1 Background to the Study

“It is easy to forget why senior management’s most important job must be to maximise its firm’s current market value. If nothing else, a greater value rewards the shareholders that after all, are the owners of the enterprise. But, most important of all, society at large benefits too. A quest for value directs scarce resources to their most promising uses and most productive users.”

(Stewart, G.B. 1991:1)

Basic corporate finance and microeconomic theory indicate that the primary financial directive of any firm ought to be to maximise the wealth of the shareholders. This objective does not attempt to only serve the interests of the owners of the large companies, but it also ensures that scarce resources are allocated, managed and re-deployed as efficiently as possible for the benefit of all. The confusion surrounding the basic precept is that it is not widely appreciated that maximising shareholders’ wealth is not the same as maximising the company’s total value. The difference is that shareholder wealth is maximised only by maximising the difference between the firm’s total value and the total capital that investors have committed to it.

If the above principle is accepted, that is, that the main financial objective of any company is to maximise shareholder wealth and Net Present Value (NPV) is the decision-making tool best suited to guide actions and strategies, then Economic Value

Added (EVA) plays a key role in illustrating how the energies of operating people can be directed most effectively to maximising NPV. In essence, EVA is an estimate of a company's true economic profit.

EVA examines the correlation between shareholder wealth and the use of a performance measure. An appropriate performance measure gauges how management strategy affects shareholder value as measured by the risk-adjusted return on the invested capital. The effectiveness of this given strategy must incorporate the required rate of return on invested capital, accurately measure the amount of capital used by the company, and correlate highly with the risk-adjusted rate of return earned by the shareholders.

The more effectively resources are deployed and managed the more robust economic growth. Any financial performance used in managerial compensation must be correlated highly with the changes in shareholder wealth and should not be subject to all of the 'noise' inherent in a company's stock price. This dichotomy is the fundamental tension a good performance measure must resolve. Stewart (1991) recommended that managers should rather aim at maximising EVA instead of focusing on maximising the companies' profits.

Research has shown that stock prices track EVA far more closely than they track earnings per share (EPS) or operating margins. The reason for this could be that EVA shows what investors are really concerned about – the net cash return on their capital – rather than some other type of performance viewed through the distorted lens of accounting rules. This can be illustrated by the following example: IBM's cash flow per share increased between 1984 and 1989, but the EVA of the company during that period gave a more realistic indication of what was really happening (Tully, S. 1993:44).

Stewart also advocated the use of EVA for:

“Setting goals, evaluating performance, determining bonuses, communicating with investors, and for capital budgeting and valuations of all sorts” (Stewart, G.B. 1991:4).

EVA is the only performance measure that is entirely consistent with the standard capital budgeting rule: Accept all positive and reject all negative NPV. EPS, on the other hand, will increase so long as new capital projects earn anything more than the after tax cost of borrowing, which is hardly an acceptable return. Furthermore, the main benefit of EVA is that it accounts for the opportunity cost of the capital used by a firm and the calculations used will show that EVA essentially focuses on the profitable use of the capital.

EVA is both a measure of value and a measure of performance, these will be the central issues, which this thesis will address and will constantly question. EVA is the only measure that can link forward-looking valuation and capital budgeting procedures with the manner in which performance subsequently can be evaluated.

As a point of departure, it should be borne in mind that Stern and Stewart advocate no one particular definition of EVA and it is accepted that for any one company, the definition of EVA that is implemented is highly customised with the aim of striking a practical balance between simplicity and precision (Stewart, G.B. 1991:86).

1.2 Objectives of the Study

The objectives of the study are divided into two categories.

1.2.1 Primary Objective

The primary objective of this study is to determine whether EVA is indeed both a measure of performance and a measure of value. Determining this will answer the central question arising: EVA- Is this the essence to creating real wealth? In deriving this answer an empirical investigation was carried out involving three retail companies which have implemented the financial management system. The empirical investigation provided insight into the practical application of the theoretical framework and aids answering the arising question.

1.2.2 Secondary Objectives

According to Stewart (1994), one of EVA's most powerful properties is its strong link to a company's stock price. The validity of this statement will be researched by looking at past research covering this topic and forms the secondary objective of the study. The research on this topic is limited but sufficient for the purpose of this study.

1.3 Scope of the Study

The retailing industry has experienced a 'roller-coaster' ride over the past few years. Interest rates soared in 1998 and this severely hampered sales in the sector. However, interest rates have now declined. The Johannesburg Stock Exchange (JSE) Retail Index gained almost 50% in February and March in 1999 as investors took positions in consumer stocks expected to benefit from the decrease in interest rates. The index has also outperformed the JSE All Share index for the year so far.

In the Eighties, many retailers established competitive advantages by granting unsecured credit to customers, gaining exponential growth in market share and turnover. However, in recent years credit facilities have become common and consumers are aware of their debt burden. Today consumers are more concerned with value-for-money than credit facilities. The rules to success in a fiercely competitive industry have seen a number of changes. Retailers today must invest heavily in information technology (IT) to improve efficiencies, cut costs and build long-term relationships with high value customers. No longer can retailers compete on product and price alone. Rivals match their every move. Despite the turmoil in the industry, a number of companies have produced good earnings by rationalising, repositioning or taking other action to strengthen their groups position. As a result of this fierce competition, the retail industry more than any other industry is focused on increasing its EVA. As a result of the industry's desire to increase EVA, a trend has emerged which has seen the rise of retail stocks on the Johannesburg Stock Exchange (JSE) as well as a rise within the Stern Stewart Top 200 index (See Appendix A). This study concerns itself with companies within the Stern Stewart Top 200 companies in South Africa and focuses on companies which have performed well despite tough trading conditions in recent years.

This study was limited to three major retail companies. Two of these companies have fully implemented the EVA financial management system. The third company has implemented the system in such a manner that only the highest management levels are involved with it and has been analysed for a comparison basis. The companies include: JD Group Limited and New Clicks Limited who have implemented the financial management system and Wooltru Limited. Wooltru Limited has an EVA financial management system implemented within the organisation, however the system is only understood and used in the top management levels. These companies were chosen because they all represent a new generation of management. Their management defies the traditional paradigms and they all have aggressive strategies to increase market-share in the increasingly competitive retail industry of South Africa today.

Interviews were held with members from each company to determine how the EVA financial management system has been implemented. The results obtained from each company were recorded and then compared to each other.

1.4 Methodology

The study made use of both primary and secondary sources of information.

1.4.1 Secondary Sources

A study was conducted of South African and international literature, both published and unpublished, on all the possible aspects pertaining to EVA. This was done by means of an examination of books, articles, documents, research works, publications and other relevant literature. A large percentage of the material examined was of international origin. The literature study was done to obtain insight concerning the present stage of research and application, both nationally and internationally, of the subject of the study.

1.4.2 Empirical Research

An empirical study was conducted to examine the present situation of application and /knowledge of the EVA financial management system within the companies of New Clicks Limited; JD Group Limited; and Wooltru Limited (refer to section 1.3). The information was gathered by means of personal interviews with senior management (usually the financial managers) of those organisations. A questionnaire was constructed and used to obtain the empirical data in a logical and efficient manner. Full use was made

of the literature study to develop a questionnaire, which would be most effective for the purpose of this study.

1.5 Structure of the Study

The Structure of presentation consists of the following chapters:

Chapter 1: Introduction

This chapter serves as an introduction to the study. It comprises of the background to the study, as well as the objectives of the study, scope of the study, methodology and structure of the presentation.

Chapter 2: EVA Background and Analysis

This chapter discusses the background of EVA. The history and background evolving EVA is elaborated on. The definition encompassing EVA is discussed. The advantages of the EVA performance measurement system are explained. The problems associated with using the EVA performance measurement are mentioned as well as possible solutions. Implementing the EVA system can result in a number of challenges arising. A strategy for overcoming the problems associated with implementation of the financial management system is also included.

Chapter 3: The EVA Calculation

This chapter presents an analysis on the elements involving the calculation of EVA. The necessary adjustments that must be made to a company's financial statements to correctly calculate this managerial performance measure are discussed with the aid of numerical examples. The aim of this chapter is to provide insight into the exact process of correctly calculating a company's EVA. This is done by including a comprehensive example showing the various steps in calculating it. The uses of EVA in the corporate world is also mentioned.

Chapter 4: EVA: The Essence of a Good Financial Performance Measure

This chapter sets out to determine that EVA is a good performance measure and that all the elements of a good performance measure are indeed encapsulated in it. The chapter measures EVA up against some of the more traditional financial performance measures and provides insight into why traditional measures of performance such as Residual Income (RI), earnings, earnings growth, EPS and dividends should be abandoned and why EVA is in fact better than this traditional financial performance measure.

Chapter 5: The EVA Incentive Plan

The EVA incentive reward plans forms part of the important uses of the EVA system. This chapter discusses these elements as well as the factors encompassing an EVA incentive plan.

Chapter 6: EVA's correlation with stock prices

EVA and the company's share price are rumoured to bear a strong relationship to each other. This chapter seeks to investigate the exact relationship by means of investigating past empirical research.

Chapter 7: Market Value Added (MVA) and comparison with EVA

This chapter sets out to define the concept Market Value Added (MVA). The emphasis of the chapter is to illustrate the connection/relationship between EVA and MVA. A section including the validity of these two performance measures is also included.

Chapter 8: Findings of an empirical investigation of the present understanding and application of the EVA financial management system by three selected large retail companies in South Africa.

The aim of this chapter is to report on the findings of the empirical investigation. It provides meaningful insight into the understanding and application of the EVA financial management system within the retail companies of New Clicks Limited and JD Group Limited who have fully implemented the system, and Wooltru Limited who has implemented the system at top management levels only, is compared to these two companies.

Chapter 8: Conclusions and Recommendations

This final chapter includes the summary, conclusions and recommendations of the study.



1.6 Summary

EVA is about looking at the value created by the company instead of just the profits. The organisation that fails to take this relatively new performance measure into account could be destroying shareholder wealth without even realising it. This study serves as an introduction to EVA management in selected large retail groups within South Africa and provides insight as to what exactly EVA entails.

Chapter 2

EVA Background and Analysis

2.1 Introduction

Economic Value Added (EVA) has received unprecedented levels of publicity in recent years. *Fortune* magazine has called it “today’s hottest financial idea and getting hotter,” (Tully, S. 1993) and the *Harvard Business Review*, has described EVA as a vital measure of the total factor productivity, one that reflects all the dimensions by which management can increase value.

In this chapter, the history and background involving EVA is elaborated on. The definition encompassing EVA is presented. The advantages of the EVA performance measurement system are brought to attention. Furthermore, the problems associated with using the EVA performance measurement are mentioned as well as possible solutions. Implementing the EVA system can result in a number of challenges arising. A section explaining the steps of becoming an EVA company is mentioned.

This chapter intends to explain exactly how EVA has developed and evolved showing, that EVA truly is, “the real key to creating wealth.”

2.2 History and Background

EVA represents a genuine revolution in management. It is a revolution because EVA is a new and fundamentally better answer to the age-old problem of how to align the interests

of agents with principles, of how to bind managers and employees to the will of the shareholders.

EVA has become a widely used tool for assessing organisational and managerial performance. In excess of 300 companies including many multi-national companies, on every continent (except Antarctica), with revenues approaching a trillion dollars a year, have implemented Stern Stewart's EVA framework for financial management and incentive compensation. EVA, in turn, has helped the managers of these companies create hundreds of billions of dollars in shareholder wealth (Ehrbar, A. 1998:5).

Managers who run their businesses according to the precepts of EVA have hugely increased the value of their companies (Tully, S. 1999:99). Investors who know about EVA, and know which companies are employing it, have grown rich. Multi-national companies such as Coca-Cola, AT&T, South African Breweries (SAB), Quaker Oats, and Herman Miller, have been exceptionally strong performers since these corporations made the switch to EVA, far outpacing the overall market and other companies in their industry (Ehrbar, A. 1998:8).

Roberto Goizueta, former CEO of Coca-Cola, credited the concept of EVA with boosting Coca-Cola market value from \$4.3 billion in 1981 to \$180 billion in 1997. The result of Coca-Cola's EVA implementation has resulted in Coca-Cola's EVA surging an average of 27% annually for the early 1990's (Tully, S. 1993:39).

EVA is helping to reshape South African business as the country moves out from under the stifling blanket of trade embargoes and relearns how to compete in the global market. New Zealand is using EVA to invigorate its state-owned enterprises. Even the United States Postal Service is using EVA to improve efficiency and service and to motivate the largest civilian labour force in the world. EVA has gained broad acceptance in the academic community and the business press, and it is changing the way that Wall Street chooses stocks. Some of Wall Street's most prominent firms, including Goldman Sachs and Credit Suisse First Boston, have adopted EVA as a principle tool for valuing

companies, and many others in the United States, Europe, Asia and Latin America are following their lead (Ehrbar, A. 1998:68).

Oppenheimer Capital, a capital and mutual fund with an exceptionally good track record (which manages 26 billion US Dollars), has a special affinity for EVA companies.

According to Eugene Vessel, senior vice president of Openheimer Capital, “We like to invest in companies that use EVA. Making higher returns is how we look at the world.”

Oppenheimer has earned 17% annually on average over the past decade, well above the S&P 500. The California Public Employee Retirement System (CalPERS), the leader in the shareholder activism movement, is now using poor EVA performance to identify the list of “focus” companies it selects each year as those most in need of governance reform (Blair, A. 1997:43).

EVA resonates with so many constituencies because it entails much more than a fleeting emphasis on a single aspect of corporate performance. It is a rediscovery of the most fundamental elements of business management that brings a lasting change in a company’s priorities, systems and culture. EVA has been proven to work virtually everywhere because it is the right approach for all companies in all times and in all environments. It is the practical application of both modern financial theory and classical economics to the problems of running a business, an application that provides the most effective framework for corporate decision making in a period of remarkable change.

Using the EVA framework is a fundamental way of measuring and managing corporate performance.

2.3 The EVA Definition

The term EVA was coined (and trademarked) in the mid 1980’s by Joel Stern and Bennett Stewart, founders of Stern Stewart & Co., a United States consulting firm.

EVA is similar to conventional measures of profit but with two important differences: It considers the cost of capital, and it is not constrained by the generally accepted accounting principles (GAAP) that govern corporate financial reporting.

At its most basic, EVA, is a measure of corporate performance that differs from most others by including a charge against profit for the cost of all the capital a company employs. It is the financial performance measure that comes closer than any other to capturing the true economic profit of an enterprise. It will increase if the operating profits can be made to grow without tying up any more capital, if new capital can be invested in projects that will earn more than the full cost of capital and if the capital can be diverted or liquidated from business activities that do not provide adequate returns.

On the other hand, it will be reduced if management uses funds on projects that earn less than the cost of capital or reject projects that are likely to earn more than the cost of capital. In this instance, it can be said that the most important reason for adopting EVA is that it is the only measure to tie directly to intrinsic market value. For example, the cost of new capital employed to finance the project is explicitly subtracted in the very calculation of it. Therefore, projecting and discounting EVA for an entire company automatically sums the NPV of the firm's past and projected capital investment projects. The sum accounts for the company's market value premium to capital employed. This means that a company for which the projected EVA discounts to R 100 million and which currently employs R 500 million of capital, has an intrinsic market value of R 600 million. This relation tells us that if its EVA is expected to be positive, a company has added value to the out-of-pocket cost of resources drawn into the firm; if EVA is projected to be negative, value has been destroyed. This facet will be discussed in more detail later in the chapter.

EVA corrects the distortions caused by GAAP. Therefore, the user of EVA can abandon any accounting principles that are viewed as distorting the measurement of wealth creation. It is much more than just a measure of the performance. It is the framework for

the complete financial management and incentive compensation system that can guide every decision a company makes and that can help them produce greater wealth for shareholders, customers and themselves.

The capital charge in EVA is what economists call an opportunity cost. It is the return that investors could expect to get by putting their money in a portfolio of other stocks and bonds and comparable risk, and that they forego by owning the securities of the company in question. The capital charge embodies the fundamental precept, dating all the way back to Adam Smith, that a business has to produce a minimum, competitive return on *all* the capital invested in it. This cost of capital, or required rate of return, applies to equity as well as debt. Just as lenders demand their interest payments, shareholders insist on getting at least a minimum acceptable rate of return on the money they have at risk.

The capital charge is the most distinctive and important aspect of EVA. Under conventional accounting methods, most companies appear profitable but many in fact are not. Drucker (1998) explains the above example with the following viewpoint: "EVA is based on something we have known for a long time. What we call profits, the money left to service the equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at an economic loss. Never mind that it pays taxes as if it had a genuine profit. The enterprise still returns less to the economy than it devours in resources; until then it does not create wealth, it destroys it." EVA corrects this error by explicitly recognising that when managers employ capital they must pay for it, just as if it were a wage. Many corporate managers have forgotten this basic principle because they have been conditioned to focus on the conventional accounting profits, which include a deduction for interest payments on debt but have no provision at all for the cost of the equity capital.

Viewed another way, EVA is profit the way shareholders measure it. By taking all capital costs into account, including the cost of equity, it shows the monetary (rand) amount of wealth a business has created or destroyed in each reporting period. If the shareholders expect a 10% return on their investment, they "make money" only to the extent that their

share of after-tax operating profits exceeds 10% of equity capital. Everything before that is just building up to the minimum acceptable compensation for investing in a risky enterprise.

Another factor of concern is that most managers concentrate on operating profits, which do not even have a charge for debt. True profits do not begin until the cost of the capital, like all other costs, has been covered. EVA is a measure of those true profits.

Arithmetically, it is after-tax operating profits minus the appropriate capital charge for both debt and equity. What remains is the monetary amount by which profits in any given period exceed or fall short of the cost of capital used to produce those profits. This is the amount that economists refer to as residual income, which means exactly what it implies: It is the residue left over after *all* costs have been covered. Economists refer to this as economic profit or economic rent. Financiers call it economic value added.

This is the highly simplified description of EVA, however, the actual calculation is somewhat more complicated. It first requires a number of decisions (which will be discussed in chapter 3) about how to properly measure operating profits, how to measure capital, and how to determine the cost of capital.

Stern Stewart Management Service uses the following equation to calculate EVA in its 1,000-company database:

$$\text{EVA} = (r - c^*) \times \text{capital};$$

Where:

r = rate of return; and

c* = cost of capital, or the weighted average cost of capital

Then:

$$\text{EVA} = (r \times \text{capital}) - (c^* \times \text{capital});$$

$$\text{EVA} = \text{Nopat} - c^* \times \text{capital}; \text{ and}$$

$$\text{EVA} = \text{operating profits} - \text{a capital charge}$$

The equation illustrates the importance of the spread between return on capital and the cost of capital in determining EVA. EVA also separates cash-based operating costs from capital costs in order to allow management to identify the value drivers in the firm.

2.4 Advantages of EVA

Most companies use an array of measures to express financial goals and objectives. Strategic plans often are based on growth in revenues or market share. Companies may evaluate individual products or lines of business on basis of gross margins or cash flow. Business units may be evaluated in terms of return on assets or against a budgeted profit level.

Finance departments usually analyse capital investments in terms of NPV, but weigh prospective acquisitions against the likely contribution to earnings growth. Bonuses for line managers and business-unit heads are typically negotiated annually and are based on a profit plan. The result of the inconsistent standards, goals, and terminology usually is incohesive planning, operating strategy, and decision making.

EVA eliminates this confusion by using a single financial measure that links all decision making with a common focus: How do we improve EVA?

It is marked by Stern Stewart & Co. as an accounting-based performance measure which yields the same discounted present values as free cash flow, thereby retaining the focus of accounting profit on matching of costs and revenues without losing value-relevance. The present value of a stream of future cash flows can be re-written as current book value plus the present value of future residual incomes.

EVA is a concept that can be implemented in virtually every type of company, public and private, from banks to heavy manufacturers and even government agencies. The calculation can be performed at any corporate level or any profit centre within an organisation. Consequently, the value added of an individual division, product line or even an individual customer can be calculated to determine whether shareholder value is being created or destroyed within the organisation. EVA can be enhanced if earnings can be increased more rapidly than invested capital (i.e. by making profitable investments) or if activities destroying value can be discontinued.

It was developed to help managers incorporate two basic principles of finance into their decision making. The first is that the primary financial objective of any company should be to maximise the wealth of its shareholders. The second is that the value of a company depends on the extent to which investors expect future profits to exceed or fall short of the cost of capital. A sustained increase in EVA will bring an increase in the market value of a company¹. This approach has proved effective in virtually all types of organisations, from emerging growth companies to turnarounds. This is because the level of EVA is not what really matters. Current performance already is reflected in share prices. It is the continuous improvement in EVA that brings continuous increases in shareholder wealth.

EVA has the advantage of being conceptually simple and easy to explain to non-financial managers, since it starts with familiar operating profits and deducts a charge for the capital invested in the company as a whole, in a business unit, or even in a single plant, office or assembly line. By assessing a charge for using capital, EVA makes managers care about managing assets as well as income, and helps them assess the tradeoffs between the two. This broader, more complete view of the economics of a business can make dramatic differences.

Figures for earnings and invested capital used to calculate EVA will generally not be those appearing in the financial statements as EVA focuses on economic earnings and

¹ This is known as Market Value Added (MVA), and will be discussed and illustrated in Chapter 5.

economic capital rather than accounting earnings and capital. Because of the accounting convention of prudence, costs which are incurred from long term benefit of the organisation are often treated as current period expenses. Examples included research and development (R & D) costs, employee training and market development costs. In the calculation of EVA, items such as these are capitalised and amortised over the economic life, resulting in an adjustment to both the earnings and invested capital figures.

Following the above section, EVA is innovative in three ways. First, because it is not bound by GAAP, its users are willing to make whatever adjustments are needed to produce more economically valid numbers. Secondly, proponents have been pushing companies to bring EVA into lower levels of the organisation on the assumption that all employees, not just senior managers, must undertake their tasks with the overriding goal of creating shareholder value. Thirdly, EVA offers a means of measurement and communicating performance that can be used in the capital markets, for capital investment appraisal, and in the evaluation and compensation of managerial performance.

Stern Stewart's argument for EVA rests on two propositions:

- 1 ' Maximising the present value of EVA amounts to exactly the same thing as maximising intrinsic market value' (Stewart, G.B. 1991:174).
2. EVA 'connects forward looking valuation procedures with the subsequent evaluation of performance. No other measure can do that' (Stewart, G.B. 1991:177).

EVA is the only financial management system that provides a common language for employees across all operating and staff functions and allows all management decisions to be modelled, monitored, communicated and compensated in a single and consistent way – always in terms of the value added to shareholder investment which in essence is the central issue of any financial performance measurement.

2.5 Problems Associated with EVA

Despite EVA's advantages as a performance measure, there is only one shortcoming to its use. Unlike growth rates or rates of return, it is more difficult to compare amongst companies or business units of different sizes. But this deficiency is easily rectified. EVA can be standardised to reflect a common level of capital employed.

To illustrate, assume a number of companies have their Rand results scaled to the assumption that each company started with R100 of capital 5 years ago, that is at the beginning of the 1994 fiscal year. Below (Table 2.1) are the results of one such company, Mandela Investments Ltd.

Table 2.1 Mandela Investments Ltd.

<u>Scaled to Beginning Capital</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
1 Sales	R487.5	643.6	907.0	1,215.5	1,572.7
2 Sales growth	37.2%	32.0%	40.9%	34.0%	34.7%
3 Capital	R143.0	179.9	237.2	321.5	398.6
4 NOPAT r	24.2%	21.5%	23.2%	24.8%	25.2%
5. WACC c*	13.6%	12.9%	11.0%	11.7%	12.6%
6. Spread r-c*	10.6%	8.7%	12.3%	13.1%	12.6%
7. x Beginning Capital	R100.0	R143.0	R179.9	R237.2	R321.5
8. EVA	R10.6	R12.4	R22.1	R31.1	R40.7

In each year standardised EVA is computed by taking the spread between the year's rate of return and cost of capital and multiplying it by the standardised capital outstanding at

the beginning of the year. Thus, the standardised EVA in the first year of the analysis (1994), will always be equal to the spread between that year's r (NOPAT/beginning capital) and c^* (weighted average cost of capital) times R100.

$$\begin{aligned}\text{Standardised 1994 EVA} &= 1994 (r - c^*) \times R100 \\ &= (24.2\% - 13.6\%) \times R100 \\ &= R10.6\% \times R100 \\ &= R10.6\end{aligned}$$

So for the first year of the 5-year historical record, standardised EVA measures just the spread of the rate of return versus the cost of capital. This is no more revealing than $r - c^*$. But in subsequent years standardised EVA will increase if there is an improvement in the rate of return on capital versus the cost of capital, if new capital is invested productively or if capital is withdrawn from uneconomic activities.

Mandela Investment Ltd. standardised EVA grew to R40.7 by 1998, a change of R30.1 over the four years.

$$\begin{aligned}\text{Standardised 1998 EVA} &= 1998 (r - c^*) \times 1998 \text{ standardised capital} \\ &= (25.2\% - 12.6\%) \times R321.5 \\ &= 12.6\% \times R321.5 \\ &= R40.7\end{aligned}$$

Shortcomings and distinctions show up more clearly when EVA is standardised in this way. Therefore, the level of standardised EVA by the end of an historical period of, say 5 years and the change in getting there are measures that can be used to evaluate the performance of companies within an industry.

2.6 Challenges facing the EVA framework

A question that arises is why have traditional accounting measures remained in place and often taken at face value? The answer to this question is as follows: accounting measures are easily understood. Most measures are comprised of readily available statistics (especially for public companies). Secondly, accounting measures are familiar to senior management and thirdly, the majority of today's back-office data systems already track monthly and quarterly accounting data. It is relatively simple to adapt incentive programs to the existing systems because of this. Fourthly, it is the general perception that stock exchanges base stock recommendations on quarterly EPS.

Implementing the financial measurement system of EVA often results in a number of challenges arising. To implement EVA properly, it must be kept simple and accountable. To make it simple, EVA must become the focal point for managing the business. Concentrating on EVA is what it takes to unite and clarify decision making. The following section gives a detailed definition of a customised EVA.

The implementation process consists of the following steps. The first, and most crucial, of an EVA engagement is to develop a commitment to EVA amongst senior managers. This includes a thorough grounding in both the theory and the practicalities underlying EVA. This allows for a proper illustration of the concepts to improve performance governance and value.

The second step is to work with a cross-functional team of staff and line executives to reach a customised definition of EVA that strikes a practical balance between simplicity and precision – one that meets the company's information needs, existing accounting data, organisation and management. For successful EVA implementation accountability is crucial. This is best achieved by paying managers for increasing EVA via the special bonus plan (outlined in chapter 4). Each compensation plan must be carefully fitted to a company's business and its individual culture in order to optimally balance the tradeoffs

between strong incentives, the risk of losing good people, and costs. Only then will managers think and act like owners because they are paid like owners and will have the incentive to use the EVA reporting, planning, and capital budgeting machinery instead of working around it. At this point, the appropriate cost of capital is also determined. The point of this is to inextricably fix together performance measurement, decision making, and compensation via EVA.

Before implementation can commence, an optimal structure of EVA centres must be determined. EVA centres are units and sub-units for which EVA will be measured and managed on an ongoing basis. The consolidated company is the ultimate EVA centre, and the aim is to increase EVA at that level as much as possible. According to Ehrbar (1998), separating a company into cascading layers of EVA centres improves the line of sight of its managers and forges a closer link between decision and outcome and between pay and performance.

At this stage the appropriate “centre” for which individual EVA’s will be calculated on an ongoing basis is catalogued. EVA Drivers analysis, which is a set of diagnostic tools that traces the creation of EVA to individual financial and non-financial performance variables and helps managers throughout the company to appreciate how they can influence value, is also implemented. To measure EVA in a way that encourages continuous improvement and teamwork between interfacing units such as manufacturing and marketing is incredibly challenging. Most companies get the interfaces wrong. One reason for this is that cost accounting dogma creates perverse incentives for manufacturing and other internal sourcing centres. Such units are typically allowed to recover only their costs through the charges they pass onto downstream revenue-generating units, and to break even. There is little incentive for them to aggressively pursue efficiencies, because any cost reductions are simply passed to downstream entities. By establishing a formula for sharing efficiency gains, new transfer pricing methods are becoming available to rescue internal sourcing units from the purgatory of cost recovery treatment and transform them into legitimate EVA centres.

Possessing a skeleton on which to work the EVA system, the next decision is to determine an optimal way to measure EVA. This requires a number of accounting adjustments (as discussed in section 3.4) to accurately determine the economic costs incurred during a specific financial period.

It is vital to train all company employees in the basics of EVA so they will know how it is defined, what it means, and how their day-to-day decisions affect shareholder value. To facilitate this learning, Stern Stewart & Co. have developed The EVA Game™, a computer simulation that vividly demonstrates the difference between EVA analysis and conventional accounting-based decisions. According to Stern Stewart & Co., line managers are trained, who in turn train the people reporting to them. They find that “learning from the boss” is much more effective than training from the finance staff or outside consultants.

2.7 Practical Applications of EVA

Companies of all sizes are using EVA as the centrepiece of a financial management system that encompasses planning and budgeting, capital investment decisions, acquisitions and divestitures, the setting of goals and objectives, internal and external communications and, most important of all, incentive compensation.

EVA is not just for public companies. Many middle-market companies implement EVA as well as public companies with significant family or management ownership. Even though closely held companies do not have the stock market as a means to reflect value added or destroyed accurately, they are no less motivated to enhance shareholder value. After all, they must fund growth through internally generated funds or debt. Improving EVA helps ensure that financing sources will be adequate to grow.

Middle-market companies generally have fewer lines of business and a sharper focus than larger companies. Stern Stewart & Co. has developed a middle-market implementation process which is elaborated on in the section to follow.

2.8 A Strategy for overcoming the Implementation Process

For the EVA financial management system to work effectively it needs to be implemented correctly. This is one of the biggest challenges facing companies wishing to implement it. To follow is a table that proposes a five-step checklist for successful implementation of EVA:

Step 1: Establish buy-in at the board and top management levels.

Step 2: Set up a steering committee that will make the major strategic decisions on the EVA program (subject to board approval).

Step 3: The Steering committee formulates a strategy.

What functions will be tied to EVA?

Compensation

Strategic planning

Operating Budgets

Capital budgets

Investor relations

How far down the hierarchy will EVA be calculated?

Management compensation

Who will be covered?

How will the bonus plan work?

Relation to non-financial measures

Step 4: The steering committee appoints a working committee to the strategy.

Step 5: Set up a training program.

(source: www.sternstewart.com)

2.9 Summary

This chapter serves as an introduction to the concept of EVA. It indicates that the concept of EVA developed by Stern Stewart & Co. has received great praise and acceptance from the business press as well as from hundreds of companies and a number of multi-national companies throughout the world. It represents a genuine revolution in management because it is a new and fundamentally better answer to the age-old problem of how to align the interests of agents with principles, of how to bind managers and employees to the will of the shareholders.

EVA is similar to conventional measures of profit but with two important differences: It considers the cost of capital, and it is not constrained by GAAP which governs corporate financial reporting and it adjusts the valuations of GAAP. Therefore, the user of EVA can abandon any accounting principles that are viewed as distorting the measurement of wealth creation. It is the framework for the complete financial management and incentive compensation system that can guide every decision a company makes and that can help produce greater wealth for shareholders, customers and themselves.

Many companies are using an array of measures to express financial goals and objectives. EVA eliminates this confusion by using a single financial measure that links all decision making with a common focus. It is a concept that can be implemented in virtually every type of company, public and private, from banks to heavy manufacturers and even government agencies.

Despite EVA's advantages as a performance measure, there is only one shortcoming to its use. Unlike growth rates of return, it is more difficult to compare companies or business units of different sizes. This deficiency is easily rectified. EVA can be standardised to reflect a common level of capital employed.

A number of challenges exist with regard to implementing the EVA financial management system. Traditional accounting measures have remained in place and are often taken at face value. The reason for this is that accounting measures are easily understood, they are familiar to senior management, the majority of back-office data systems already track monthly and quarterly accounting data, and it is the general perception that stock exchanges base stock recommendations on quarterly EPS.

To implement EVA properly, it must be kept simple and accountable. To make it simple, it must become the focal point for managing the business. Concentrating on EVA is what it takes to unite and clarify decision making.

For successful implementation of the EVA financial management system, a framework consisting of five steps needs to be followed and adhered to. Following these steps eases the resistance experienced when new systems are implemented and results in a more efficient financial management system.

Chapter 3

The EVA Calculation

3.1 Introduction

This chapter presents an analysis on the elements involving the calculation of EVA. The necessary adjustments that must be made to correctly calculate this financial performance measure are discussed with the aid of numerical examples.

A number of adjustments need to be made to a company's GAAP financial statements when calculating EVA. These adjustments are referred to as EVA-tailored GAAP and are discussed in some detail.

A comprehensive example showing the various steps in accurately calculating EVA is presented. The uses of EVA in the corporate world are also mentioned.

3.2 Calculating EVA

To expand on the equation presented in chapter 2 (section 2.3), in calculating EVA, one evaluates the annual performance of management by comparing the firm's net operating profit less adjusted tax (NOPLAT) derived from the income statement to the firm's total cost of capital including the cost of equity (rental charge for the use of the firm's assets) in rand terms, derived from the balance sheet. In this analysis, if the firm's NOPLAT during a specific period (normally a financial year) exceeds its monetary (rand) cost of capital, it has a positive EVA for the year and has added value for its stockholders. In

contrast, if the EVA is negative, the firm has not earned enough during the year to cover its cost of capital and the value of the firm has declined. Notably, NOPLAT indicates what the firm has earned for all capital suppliers and the monetary (rand) cost of capital is what all the capital suppliers required – including the firm’s equity holders.

The following summarises the major calculations:

EVA =

(A) Adjusted Operating Profits before Tax

Minus (B) Cash Operating Tax

Equals (C) Net Operating Profits Less Adjusted Tax (NOPLAT)

Minus (D) The Monetary Cost of Capital

Equals EVA

In turn, these items are calculated as follows:

Operating Profit (after depreciation and amortisation)

Add: Implied Interest on Operating Leases

Add: Goodwill Amortisation

Equals (A) Adjusted Operating Profits before Tax

Income Tax Adjustment

Income Tax Provision

Less: Increase in Deferred Taxes and Creditors for taxation

= Cash Tax Payable

Add: Tax Benefit of Interest Expense

Less: Tax on Non-Operating Income

Less: Tax Effect of Unusual Items

Add: Tax on Non- Operating Items

Equals (B) Cash Operating Taxes

(A) minus (B) equals: (C) Net Operating Profits Less Adjusted Tax (NOPLAT)

Capital Equals: Net Working Capital (current assets less non-interest bearing liabilities)

Plus: Other Assets

Plus: Goodwill

Plus: Present Value of Operating Leases

Equals: Capital

Weighted Average Cost of Capital (WACC)

= (Book Value of Debt/Total Book Value). (Market Cost of Debt)(1- Tax Rate)

+ (Book Value of Equity/Total Book Value). (Cost of Equity)

Note: Cost of Equity is based on the market value

(D) Monetary/Rand Cost of Capital = Capital x WACC

(E) Economic Value-Added (EVA) = **(C)** Net Operating Profits Less Adjusted Taxes (NOPLAT) - **(D)** Rand Cost of Capital

3.3 Explanatory Adjustments to the EVA Calculation

3.3.1 Interest Expense

Interest expense is treated as a non-operating expense in the EVA evaluation. It is removed from the NOPAT calculation since the interest is related to financing activities and therefore shown in the cost of capital. Interest income is generally included in NOPAT because it is offset by a charge on the cash on the balance sheet that generates the interest. Separating operating decisions from the financing decisions avoids the tendency many companies have to confuse the two. By focusing on operating profits and operating investments, we avoid the risk of evaluating an operation on how it is financed. Although interest on debt is excluded from NOPAT to ensure that NOPAT reflects only operating performance, the financing benefit of interest is recognised by EVA. The tax benefit gained from interest paid is reflected as a reduction in the Cost of Capital (Stern, J., Stewart, G., and Chew, D. 1995:34).

3.3.2 Provisions and Subjective Reserves – Bad Debt

EVA uses gross accounts receivable and recognises only actual write-downs due to defaults not accrued bad debt expense. The adjustment for this is presented as follows:

Net Income	25 500
+ Increase in Doubtful Debt Provision	3 000
<hr/>	
= NOPAT	28 500
Capital Employed	155 000
Doubtful Debt Provision	23 000
<hr/>	
= CAPITAL	178 000

In doing this adjustment, the actual write-downs of receivables correlates with what is in NOPAT. At the same time, gross receivables is used to calculate the capital charge (Stewart, G..B. 1995: 117).

3.3.3 Goodwill Adjustment

This adjustment is best explained using the following numerical example:

After buying a new business, a business is left with R45 million in goodwill, which will be amortised over 15 years, at R3 million per year. Amortisation of goodwill is not incorporated for EVA calculations. Therefore, the adjustment is as follows:

Net Income	25 500
+ Goodwill Amortisation	3 000
= NOPAT	28 500

Capital Employed	155 000
+ Cum. Goodwill Amortisation	9 000
= CAPITAL	164 000

In doing this adjustment, the amount of Goodwill in capital will always equal R45 million, because as the net book value goes down as a result of the amortisation, the Cumulative Goodwill Amortisation grows to offset it (Stewart, G.B 1995:118).

3.3.4 Asset Disposal

Consider the following scenario:

- A company's business is not that of trading in *fixed assets*.

- As a result, allowing the effects of spikes on the sale of fixed assets to affect NOPAT would distort the measure of sustainable improvements in operating profit from one period to another.
- Managers should not be discouraged from disposing of an asset when it is in the interest of the firm to do so. Therefore, gains and losses on disposal of fixed assets are treated as capital allocation decisions.

This is best explained using the following numerical example:

The asset disposal at a loss is an unusual item, so the impact of it is capitalised.

Assume an asset has a book value of 60 000 and is sold for 20 000. This results in a loss of R40 000 that is normally expensed in the income statement. Assume a 30% tax-rate.

Add back loss on Disposal to NOPAT	40 000
Add Cumulative After-Tax Loss to Capital (70% of 40 000)	28 000

Therefore, the cash brought in as a result of the sale is the amount that we reduce capital by ($R60\,000 - R28\,000 = R32\,000$): the R20 000 that we sold the asset for and the R12 000 in tax that we avoided paying due to the loss, i.e. a total of R32 000.

This treatment of gains and losses on disposals is Stern and Stewart's most radical departure from GAAP. It should not be mistaken for the practice of simply taking such items directly to reserves, thereby excluding them from profit. For Stern and Stewart, the focus is on the entity's total 'invested capital' and not on the corresponding component assets. This is a radical departure from GAAP (Stern, J., Stewart, G., and Chew, D. 1995:39).

3.3.5 Extraordinary Items

Extraordinary items, such as plant close downs and restructuring costs that occur on a once-off basis, and that are expected to yield benefits in the future, are treated not as an operating expense in the current period, but rather as an investment (or disinvestment) in the business. The adjustment is similar to the Loss on Disposal example above, except that the Losses on Disposal are included in calculating operating profit in the Income Statement, whereas Extraordinary Losses are generally shown 'below the line'. Assume a tax-rate of 30%.

Exclude Extraordinary Loss from NOPBT	40 000
Add Cumulative After-Tax X-Items to Capital (70% of 40 000)	28 000

3.4 EVA-tailored GAAP: adjustments to the GAAP financial Statements

If GAAP distorts the measurement of capital or operating income, it can be adjusted as necessary. Most of the adjustments are in the form of "equity equivalents." Equity equivalent reserves gross up the standard accounting book value for a common equity to its economic book value (Stewart, G.B. 1991:17).

The logic behind "equity equivalent" adjustments is that when companies apply GAAP, certain items are charged to income, which artificially – and misleadingly – reduce stated capital. Unless these charges are restored to equity, capital charges will be understated, and operating income will be misstated. In computing the rate of return, equity equivalents are added to capital and the period-to-period change is taken into NOPAT. These adjustments turn capital into a more accurate measure of the base upon which investors expect their returns to accrue and make NOPAT a more realistic measure of the actual cash yield generated for investors from recurring business activities.

Therefore, accounting conventions (GAAP) do not define the true economics of a business. The rationale for making the adjustments is to (Ehrbar, A. 1998:164):

- Better reflect value creation and motivate the right value creating behaviour.
- Separate operating from non-operating and financing items.
- Extend the matching of revenues and expenses.
- Minimise the opportunities for management to manipulate reported performance.

A number of EVA adjustment guidelines are presented by Stern Stewart & Co. These are summarised as follows (Stewart, G.B. 1994:72):

Materiality: Is the adjustment financially significant, or will it be in future?

Motivational Impact: Does the adjustment encourage behaviour which will enhance EVA and highlight accountability?

Data Availability: Is the necessary information available in a cost efficient manner?

Understandable: Can managers understand the nature of the adjustment with reasonable levels of training?

EVA adjustments fall into four general categories. These categories are listed with descriptions that follow:

1. Accrual to Cash: GAAP accounting misstates cash flow. EVA is an economic measure, and seeks to emphasise actual cash events. Reserves are established to conservatively estimate the net value of assets, or to establish provisions that estimate future costs. Changing from the accrual basis is appropriate where these contingencies are established pro rata and serve as a performance buffer. Converting performance to a cash basis is better correlated with performance and less susceptible to gaming.

Examples: Bad debt provision, inventory provisions, sundry accruals and provisions

2. Cash to Economic: Accounting conservatism treats many investments as current expenses. EVA views them as investments in the future, and accounts for them as a capital cost rather than a current period expense. This treatment does not discourage

such value-adding investment when it may adversely impact current earnings. It also improves the matching of expenses with subsequent economic benefits.

Examples: Start-up costs, R&D, advertising, goodwill, economic depreciation

3. Non-recurring Events: EVA is a tool that measures sustainable improvement in economic profitability. Non-recurring events distort period performance. They are therefore capitalised for EVA purposes. The impact of unusual items is typically treated as an investment, normally permanent, in the business, rather than as a period expense. This converts the performance measurement from recognising successful efforts to recognising its full cost. The cash value of the events is captured, but without profit peaks and valleys distorting the period to period results.

Examples: Restructuring charges, gains on losses on asset disposals

4. Non-operating Items: EVA is a tool to assist operating managers, and therefore does not include non-operating items. They are either not necessary for the on-going operation of the business, or are non-operating by virtue of being financing related items. Investment and operating decisions must be evaluated and managed independently of financing decisions. Non-operating items include amounts in capital and operating profit which are not involved in the normal course of business and for which either unusual or strategic circumstances would make measurement on an EVA basis undesirable. This explains the reason why in the calculation of NOPLAT within the calculation of EVA, a combination of Operating Profits and Cash Flow is used.

Examples: Marketable securities, excess cash, income from non-operating investments, interest expense.

A possible 160 adjustments exist. These include adjustments to: LIFO Reserve, Discontinued Operations, Post-Retirement Benefits, Interest Expense, Goodwill, Gain/Loss on Asset Sale, Accrued Wages, Product Liability /Reserve, Dividends Payable, Investment Income, Restructuring, Off-Balance Sheet Commitments, Operating Taxes, Strategic Investments, Construction-In-Progress, Warranty Reserve, R&D Expense,

Operating Leases, Employee Training, Sales Return, Joint Ventures, Marketing and Advertising, and Quality Programs (Stewart, G.B. 1991:119).

The potential number of adjustments is practically limitless. But most companies that use EVA make between five and fifteen adjustments for fear that the evaluation and reward system based on EVA would become impossibly complicated (Stewart, G.B. 1991:120). Stern and Stewart's approach is to work with the gain of conventional accounting practise. Their 'tailoring' of GAAP is intended to discourage managers from behaving short sighted.

3.5 The EVA Calculation – Comprehensive Example

Given: The Income Statement and Balance Sheet of Tea-Time (see below)

Aim: To calculate Tea-Time's EVA

Assume:

- Tax Rate is 30%
- R&D has a useful life of five years
- All extra-ordinary items are taxed at the full marginal rate

Income Statement	1999
Net Sales	2600
Cost of Goods Sold	-1000
<hr/>	
Gross Profit	1600
Operating Expenses	-739

Selling, General & Admin	-139
Research & Development	-100
Depreciation	-50
(Gain)/Loss on Sale of Fixed Asset	-400
Sundry	-50
Operating Profit	861
Restructuring Charge	-400
Net Interest Expense	-52
Interest Income	8
Interest Expense	-60
Profit/(Loss) Before Interest & Tax	409
Provision for Taxes	-123
Current	-23
Deferred	-100
Profit After Taxes	286

Balance Sheet - Employment of Capital **1999** **1998**

Operating Cash	296	80
Marketable Securities	-	-
Net Stock	1000	700
Gross Stock	1200	800
Provision For Obsolescence	-200	-100
Net Debtors	250	160
Gross Debtors	300	200
Provision For Doubtful Debts	-50	-40
Current Assets	1 546	940
Creditors	500	600
Tax Payable	50	40
Accrued Expenses	50	40
Short Term Debt	50	100

Current Liabilities	650	780
Net Current Assets	896	160
Fixed Assets	350	900
Gross Fixed Assets	750	1800
Accumulated Depreciation	-400	-900
Net Assets / Employment of Capital	1 246	1060

Balance Sheet – Capital Employed	1999	1998
Ordinary Share Capital	80	80
Non-Distributable Reserves	80	80
Retained Earnings	736	650
Opening Balance	650	250
Profit per Income Statement	286	500
Goodwill	-200	-100
Shareholders' Funds	896	810
Deferred Taxes	150	50
Long-Term Debt	200	200
Capital Employed	1 246	1 060

NOPAT is calculated by adjusting accounting profit. Therefore NOPAT is:

- Current period measure of sustainable operating profit, from permanent operating capital.
- The after-tax cash operating profit, net of depreciation, as if the company were debt free.

- Calculated from an income statement, with the assistance of a balance sheet, cash flow statement and footnote information to make economic adjustments.

Capital is calculated by adjusting the Balance Sheet. Therefore capital is defined as:

- A historical, economic measure of shareholder capital invested and under management's control.
- The sum of net working capital, net fixed assets, other assets, capitalised charges and capitalised unusual losses.
- The sum of debt, equity and their equivalents (alternatively)
- Calculated from basic balance sheet information, with some economic adjustments.

EVA Calculation

NOPAT	1999
Net Sales	2 600
Cost of Goods Sold	1 000
Gross Profit	<u>1 600</u>

Selling, General & Admin	139	
Research & Development	20	
(R&D has a useful life of 5 years: $100 \div 5$)		
Depreciation	50	(See Income Statement)
(Gain)/Loss on Sale of Fixed Asset	-	
(Increase) in Prov. For Obsolescent Stock	-100	
(Increase) in Prov. For Doubtful Debts	-10	
Sundry	50	

Operating Expenses	<u>149</u>
Operating Profit	<u>1 451</u>

Restructuring Charge	-
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Net Interest Expense 8

Interest Income	8
Interest Expense	-

NOPBT(Net Operating Profit Before Tax) 1 459

Cash Operating Taxes 305

NOPAT (Net Operating Profit After Tax) 1 154

Cash Operating Taxes 1999

Provision. For Taxation 123

- Increase in Deferred Taxation per B/S 100

+ Tax Benefit of Interest Expense 18 (60 × 0.3)

+ Tax Benefit for R&D Expense 24 (80 × 0.3)

+ Tax Benefit from Extra-Ordinary items 240 (comprises a structuring charge of 400 and a loss on disposal of 400 therefore: 800 × 0.3)

Cash Operating Taxes 305

Capital Statement 1999 1998

Operating cash 296 80

Marketable Securities - -

Net Stock 1 000 700

Prov. For Obsolescence 200 100

+ Gross Stock 1 200 800

Net Debtors 250 160

+ Prov. For Doubtful Debts 50 40

Gross Debtors 300 200

Gross Current Assets 1 796 1 080

Creditors 500 600

Tax Payable	50	40
Accrued Expenses	50	40
Short Term Debt	-	-
<hr/>		
NIBCLs(Non-Interest Bearing Current Liabilities)	600	680
<hr/>		
Net Gross Current Assets	1 196	400
Gross Fixed Assets	750	1 800
-Accumulated Depreciation	400	900
<hr/>		
Net Fixed Assets	350	900
Cumulative Goodwill w/o	30	100
Cum. Extra-ordinary Items After Tax ²	560	-
Net Research & Development	56	-
<hr/>		
Capital	2 462	1 400
<hr/>		

Therefor:

NOPAT 1 154

1998 Ending Capital 1 400

1999 Ending Capital 2 462

1999 Average Capital 1 931

× Cost of Capital 20%

Capital Charge 386

EVA (1154 – 386) 768

or

² Comprises a restructuring charge of 400 and a loss on disposal of 400, all after tax

NOPAT/Average Capital	60%
- Cost of Capital	20%
<hr/>	
= Spread	40%
× 1999 Average Capital	1 931
EVA	768

Note: According to Stern Stewart & Co. South African companies have an average cost of capital of 18% for the year 1999 (Stern Stewart & Co. South Africa).

3.6 Uses of EVA

The calculation of EVA can be performed at any corporate level or any profit centre within an organisation. Consequently, the EVA of an individual division, product line or even an individual customer can be calculated to determine whether shareholder value is being created or destroyed within the organisation.

3.7 Summary

This chapter explains the mechanics behind the calculation of determining whether a company has added value or destroyed value over a specific period (usually a financial year). EVA is a company's after tax profits from operations minus the cost of capital employed to produce those profits. What makes EVA so revealing is that it takes into

account a factor that no other conventional measures includes: the cost of the operations capital – not just the cost of debt but the cost of equity capital as well.

A number of adjustments need to be addressed to correctly calculate EVA. Interest expense is treated as a non-operating expense in the EVA calculation. It is removed from the NOPAT calculation since the interest is related to financing activities and therefore shown in the cost of capital. Interest income is generally included in NOPAT because it is offset by a charge on the cash on the balance sheet that generates the interest. EVA uses gross accounts receivable and recognises only actual write-downs due to defaults not accrued bad debt expense. In doing an adjustment for this, the actual write-downs of receivables correlates with what is in NOPAT. At the same time gross receivables is used to calculate the capital charge. Amortisation of goodwill is not incorporated for EVA calculations. Stern and Stewart's most radical departure from GAAP is the treatment of gains and losses on disposals. For Stern and Stewart, the focus is on the entity's total 'invested capital' and not on the corresponding component assets. This is a radical departure from GAAP. Extraordinary items, such as plant close downs and restructuring costs that occur on a once-off basis, and that are expected to yield benefits in the future, are treated not as an operating expense in the current period, but rather as an investment (or disinvestment) in the business. The EVA framework needs to make a number of adjustments to the GAAP financial statements. These adjustments fall into four general categories. The categories include: 1) Accrual to cash which involves bad debt provision, inventory provisions, sundry accruals and provisions. 2) Cash to economic which involves start-up costs, R&D, advertising, goodwill, and economic depreciation. 3) Non-recurring events which involves restructuring charges, and gains on losses on asset disposals. 4) Non-operating items which involves marketable securities, excess cash, income from non-operating investments, and interest expense. The potential number of adjustments is practically limitless but most companies that use EVA make between five and fifteen adjustments.

A comprehensive example is included which numerically shows all the adjustments made to calculate EVA correctly. The example assumes a 20% cost of capital which seems to

be extremely high however, the average cost of capital for South African companies is 18% in the year 1999 (Stern Stewart & Co. South Africa).

The EVA framework can be used in just about all companies at all levels.

Chapter 4

EVA: The Essence of a Good Financial Performance Measure

4.1 Introduction

What exactly does a good financial performance measure entail and does EVA fulfil all the conditions of such a performance measure? This chapter sets out to determine that EVA is a good performance measure and that all the elements of a good financial performance measure are indeed encapsulated in it.

The chapter measures EVA up against some of the more traditional financial performance measures to determine that it is in fact better than these financial measures.

4.2 What is a Good Performance Measure

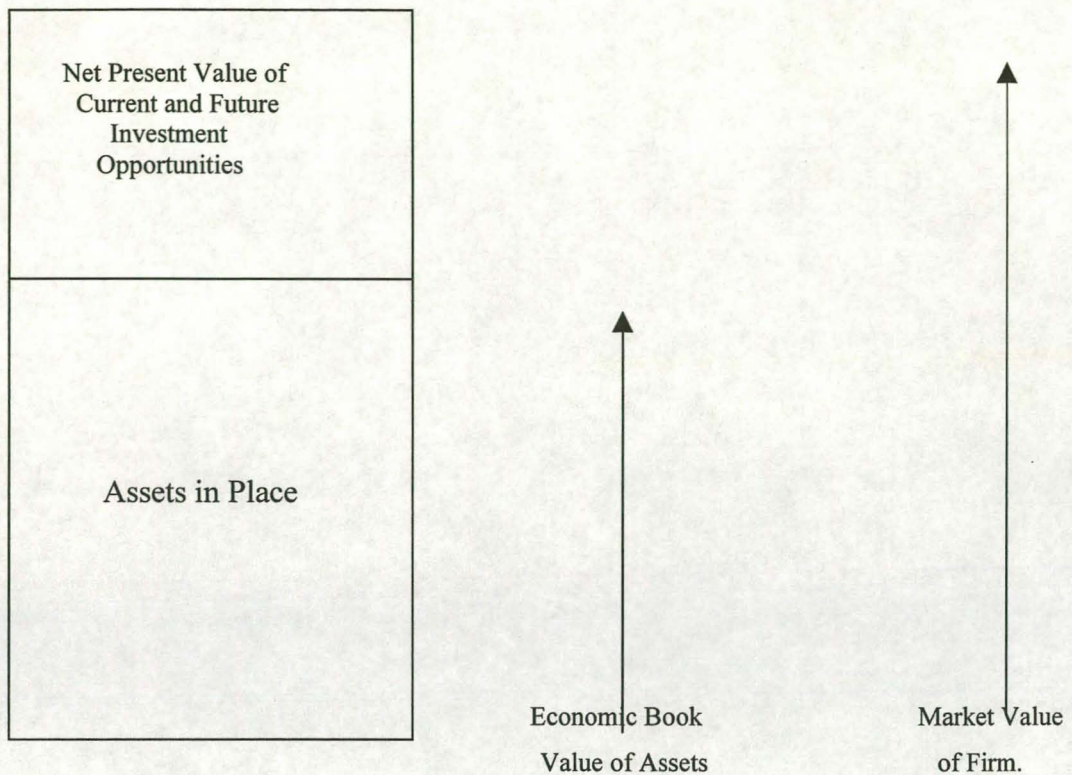
EVA is a company's profits (NOPAT) minus the opportunity cost (capital charge). This amount that is left over is basically what counts and is referred to as EVA. This section presents an analysis of the ability of EVA to predict abnormal return (what is left over) and of the contemporaneous correlation between EVA and abnormal return.

4.2.1 Strategy, Value, and the choice of Performance Measure

An appropriate performance measure to gauge the effectiveness of a given strategy must, incorporate the required rate of return on invested capital, accurately measure the amount of capital used by the company and correlate the risk-adjusted rate of return earned by shareholders. EVA incorporates all these elements.

4.2.2 Invested Capital, Strategy and Value

Figure 4.1 (to follow) illustrates the components of firm value. The most transparent component of a firm's value is its physical assets in place: plant and equipment, real estate, and working capital. Another component is the net present value of the firm's current and future investment opportunities. This component value is less tangible than its physical assets, is driven significantly by the firm's strategy and is sizeable for many firms. The total value of the firm is the sum of these two components of value. The question is how to determine these values?

Figure 4.1. The Components of Value**Table 4.1. Market-Value-Based Balance Sheet****Assets**

Market value of assets

Total Market Value of Assets

Liabilities and Net Worth

Market value of debt (including leases)

Market value of equity

Total market value of debt and equity

The market value of assets can either be above or below the economic book value of assets in place. This follows that if the firm executes a poor strategy in the opinion of the market or it does not possess the human resources needed to implement a good strategy successfully, the market will lower the value of the firm's assets, perhaps below the economic book value of the assets in place.

4.2.3 Capital Invested in the Firm

A good financial performance measure should ask how well a firm has generated operating profits, given the amount of capital invested to produce those profits. The idea is that the company's financiers are free to liquidate their investment in the company and invest the liberated capital elsewhere. Financiers must therefore earn at least the opportunity cost of capital on the invested capital. This condition implies that the cost of capital must be subtracted from operating profits to gauge the company's financial performance.

For that very reason EVA defines net operating profit after tax (NOPAT) and subtracts a capital charge for the economic book value of assets in place (which is the measure of the capital provided to the firm by its financiers), but this amount does not truly represent the capital used to generate the operating profit since the capital commitment of the company's financiers is represented by the total market value of the company and not simply the economic book value of the assets in place. Therefore, for the company to create a true 'operating' surplus in a given period, its operating profit at the end of the period must exceed a capital charge based on the total market value of the capital used at the beginning of the period. It is this 'investment' in the company in any given period, which constitutes the capital that the company has used to produce its profits.

4.2.4 Operating versus Trading-Based performance

Measures of shareholder wealth creation focus on the firm's stock price performance and seek to determine how much shareholders increase their wealth from one period to the next based on the dividends they receive and the appreciation in the firm's stock price. This type of measure of shareholder wealth creation is called a trading-based measure of performance. These trading-based performance measures assess how well an investor

would have done if he had purchased a share of stock at the beginning of the period and sold it at the end.

In contrast, EVA focuses on the firm's operating performance from the standpoint of its financiers. An operating measure of current performance focuses solely on the performance of the firm in a given period; a trading based measure of performance captures revisions in the market's beliefs about the firm's entire future stream of operating performances. If stock markets are efficient and we examine a sufficiently long term horizon, these two measures will converge. Performance is usually assessed over shorter horizons therefore any operating measure of performance will diverge somewhat from a trading-based measure of performance. In practice a trading-based performance measure is not used for compensating all managers, particularly those at lower levels of the organisation, whose decisions have less impact on the stock price. However, a measure of performance which is a 'barometer' of shareholder wealth creation against which we can judge efficiency of any operating performance measures is desired.

Shareholders earn a return on investment in two ways: through dividends and through capital gains. Over any period of time, t , the shareholder return for firm j can be specified as:

$$R_{j,t} = \frac{D_{j,t} + (P_{j,t} - P_{j,t-1})}{P_{j,t-1}}$$

Where $D_{j,t}$ is the dividends paid during this period $t-1$ to t and $P_{j,t}$ is the price of the shares at the end of period t .

A number of factors influence $R_{j,t}$, most notably, the risk of investment, the interest rates prevailing in the capital markets (particularly important in countries like South Africa which has high and changeable interest rates), and the expertise of the firm's managers.

The capital asset pricing model (CAPM) captures the first two factors by specifying that the expected rate of return on a stock investment is:

$$E(R_{j,t}) = R_{ft} + \beta_j [E(R_{mt}) - R_{ft}]$$

Where:

R_{ft} = the risk-free bond yield at time t

β_j = firm j 's beta, a measure of the firm's systematic risk

$E(R_{mt}) - R_{ft}$ = the expected equity market risk premium, usually taken as the long-run, average realised return on the market in excess of risk free bond returns

The CAPM therefore helps to determine the abnormal return firm j earned in period t . The question is: What operating measure of performance correlates highly with this measure of shareholder wealth creation? The answer is EVA because it is fundamentally better than traditional performance measures.

4.3 EVA as opposed to Residual Income (RI)

Various new methods of value-based management for measuring corporate value added have recently been advocated for measuring both corporate and divisional performance. Such methods are generally based on comparisons between corporate market value and corporate accounting book value and on residual income (RI) measure. RI equals annual accounting profits minus an interest charge on the book value of assets. This appears almost identical to the definition of EVA and raises the question as to whether EVA is simply another name for RI. There are however, some important differences. In general,

RI does not adjust accounting earnings or accounting assets in calculating the level of RI generated by an organisation during a given time span.

RI, which was first used earlier this century by General Motors, is basically EVA, in an old-fashioned guise. Therefore, EVA is a variant of RI however, EVA corrects the criticisms of RI (Birchard, B. 1994:32).

The following example highlights the difference between residual income and EVA using just one adjustment for research expenses:

Example

The following results relate to Stellenbosch Ltd. For the year ended 31/12/1998

Profit and loss account for the year ended 31/12/1998

R'000

Turnover	5 000
Gross Profit	3 000
Operating Profit	1 500
Interest	(200)
Net Profit before Taxation	1 300
Taxation (at 36 %)	(600)
Net Profit after Taxation	700
Dividends	300
Retained Earnings	400
Cost of Capital	10%

Balance Sheet Extract

Fixed assets	1 500
Current assets	300

Current liabilities	(200)
	<u>1 600</u>

Calculation of RI **R'000**

Net profit after taxation before interest	828
(700 + [200 – 0.36(200)])	
Cost of Capital (1600 × 10%)	160
Residual income (828-160)	668

Calculation of EVA **R'000**

Net Profit after taxation	700
Adjustment for interest after taxation	128
Adjustment for research and development	450 (see Note 1)
Adjusted profits	1 278

Net Capital Employed

- per balance sheet	1 600
Adjusted for research and development	450 (see Note 1)
Restated capital employed	2 050
Cost of capital (2050 × 10%)	205
EVA (1278 – 205)	1073

Note 1: Included in operating profit is a charge for research costs of R500 000. These research costs have been written off immediately, however other development costs have been deferred and are written off over 10 years.

This company (Stellenbosch Ltd) has generated an EVA of R1 073 000 and residual income of R668 000.

Criticisms of residual income were of two sorts. Firstly, charging interest on fixed investment is not likely to enhance the quality of production decisions since investment outlays are sunk costs. Moreover, in the presence of capital rationing, pushing major investment decisions down the organisational hierarchy can result in loss of value through the neglect of interactions. EVA enthusiasts tackle this criticism of residual income, arguing that many modern companies have grown too large to be managed centrally. They propose empowering managers in a way that turns them into quasi-owners (see chapter 5). Therefore, charging interest on sunk costs is seen to be a positive feature of residual income. Owners cannot escape the cost of earlier capital commitments, and so managers must not be allowed to either. This is an important attraction of EVA.

A second, long-standing criticism of reward systems based on the residual income of a single period is that they can result in short sighted behaviour. There is the danger that the failure of the accounting system to reflect economic reality (including the non-recognition of certain important assets) might cause the business to run without proper regard to the long-term.

It has long been recognised that economic value ultimately depends on future cash flows. This does not mean that periodic free cash flow is a satisfactory measure of operating performance. Negative free cash flow could result from a high level of investment in profitable projects, the recent record of cellular telephone companies providing an example.

4.4 Earnings Per Share (EPS)

The myth that increasing earnings or EPS is an appropriate indicator of the firm's performance, must be abandoned. Many senior executives believe that the market wants earnings, and wants them now, despite the fact that little convincing evidence exists to

substantiate this claim. Expenses that should be deducted to save taxes are deferred. Valuable acquisitions are avoided if a large amount of goodwill must be amortised. Worst of all, hefty earnings growth is sustained by over investing in mature and expensive businesses.

What the market really wants is not earnings now, but rather **value** now. EPS is such a popular measure of corporate performance that it warrants further attention.

Consider an acquisition in which a company selling for a high P/E multiple buys a firm selling for a low P/E ratio by exchanging shares. Because fewer of the high P/E shares are needed to retire all the outstanding low P/E shares, the buyer's EPS will always increase. Many think that is good news for the buyer's shareholders, yet it will happen even if the combination produces no synergies.

To determine how inappropriate a preoccupation with EPS is, reverse the transaction so that now the low P/E firm buys the high multiple company through a share exchange. This time the buyer's EPS must always decrease and a greater number of low multiple shares will have to be issued to retire all the high multiple ones. Many think such EPS dilution signals bad news for the buying company's shareholders and advise that it be avoided at all cost.

However, regardless of which company buys or which company sells, the merged company will be the same, with the same assets, prospects, risks, earnings, and value. The transaction can not be desirable if it is consummated in one direction but not the other and that is exactly what accounting EPS suggests.

Consider the following example. Assuming that two companies each currently earn R1 a share and have 1 000 shares outstanding, and that one firm sells for 20 times earnings while the other sells at 10 times its earnings, the facts are presented below in table 4.2.

Table 4.2 The EPS Acquisition Fallacy

	Mbeki*	Leon [^]	Mbeki Buys	Leon Buys
			Leon	Mbeki
No. shares	1000	1000	1500*	3000 [^]
Total Earnings	R1000	R1 000	R2 000	R2000
Total Value	R20 000	R10 000	R30 000	R30 000
Share Price	R20.00	R10.00	R20.00	R10.00
EPS	R1.00	R1.00	R1.33	R0.66
P/E ratio	20	10	15	15

*Mbeki must issue 500 shares at R20 to retire all 1 000 of Leon's R10 shares.

[^]Leon must issue 2 000 shares at R10 to retire all 1 000 of Mbeki's R20 shares

To make the example simple, assume that there are no synergies and that the buyers pay precisely market price for the seller's shares. With fair value paid for value acquired, a proponent of the economic model would expect the acquirer's stock price to remain constant. Yet, when Mbeki buys Leon, EPS increases to R1.33; and when Leon buy, Mbeki EPS falls to R0.66. Preoccupied with EPS, accounting enthusiasts may see a good deal and a bad deal when in fact the two transactions are the same: Leon-Mbeki is just Mbeki-Leon with a two-for-one stock split.

EPS does not matter because, in the wake of an acquisition, a company's P/E multiple will change to reflect a deterioration or improvement in the overall quality of its earnings. In the above example, no matter which firm buys and which firm sells, the combined P/E multiple of 15 (the consolidated value of R30 000 divided by the consolidated earnings of R2 000). Put simply Mbeki's 20 P/E must fall, and Leon's 10 P/E must rise. Mbeki must give up part of its P/E multiple to acquire relatively more current earnings from Leon, and Leon must surrender part of its current earnings to purchase Mbeki's more promising

future growth prospects and a higher multiple. P/E counters EPS, therefore rendering it a meaningless measure for the acquisition's merits.

In the economic model, what is important is the exchange of value, and not the exchange of earnings which is so popular with the accounting fraternity. The exchange of value is exactly what EVA concentrates on.

4.5 Spin-Offs

A spin-off is a pro-rata distribution of the shares of a subsidiary unit to the shareholders of the parent. It is the reverse of a stock-for-stock acquisition, and is prone to the similar accounting errors as EPS. However, instead of acquiring a lower-multiple company to boost EPS, the accounting fraternity recommends spinning one off to increase the parent company's P/E multiple.

Refer again to the example presented in figure 4.2. Suppose Mbeki did acquire Leon to form Mbeki-Leon Ltd., a company that sells for a P/E multiple of 15, an even ratio of Mbeki's 20 multiple and Leon's 10 multiple. The question now is, why not spin-off Leon to leave behind a company that sells for Mbeki's P/E of 20. The increase in P/E cannot by itself benefit Mbeki-Leon's shareholders. They are still stuck with their pro rata share of the low-multiple business after it is spun off. The spin-off merely takes Leon's earnings from Mbeki-Leon into a separate company where they are capitalised at Leon's multiple of 10.

The increase in multiple that attaches to Mbeki's earnings is offset by the diminished multiple the market places on Leon's share of the consolidated profits. According to Stewart (1991), spin-offs can have a number of positive implications but, the merits of a spin-off and other financial restructurings simply cannot be judged by the accounting

model of value. EVA on the other hand is able to gauge the implications of spin-offs more accurately than the traditional accounting model of value.

4.6 Earnings and Earnings Growth

Earnings is a misleading measure of corporate performance because, they are diminished by accounting entries which have nothing to do with recurring cash flow. To make realistic judgements of performance and value, accounting statements must be recast from the liquidation perspective of a lender to the going-concern perspective of shareholders. The balance sheet must be reinterpreted as the cash invested in the capital account and not as the value of “assets.” To do this, all of the investments a company makes in R&D, along with accounting provisions that ‘hide-away’ cash from operations (for deferred tax reserve, warranty reserve, bad debt reserve, inventory obsolescence reserve, and deferred income reserve), must be taken out of earnings and put back into equity capital.

Earnings growth is also a misleading indicator of performance. Although companies that sell for the highest stock price multiples are generally growing, rapid growth is no guarantee of a high multiple.

To illustrate this fact, consider two companies, A and B. They have the same earnings and are expected to grow at the same rate. Therefore, both companies should trade for the same price and P/E multiple because they are identical.

Suppose now that A must invest more capital than B to sustain its growth. In this case, B will demand a higher share price and P/E multiple because it earns a higher rate of return on the new capital it invests. A merely spends its way to the growth that B achieves through a more efficient use of capital.

In summary, rapid growth can be a misleading indicator of added value because it can be generated simply by pouring capital into a business. Earning an acceptable rate of return is essential to creating value. Growth adds to value only when it is accompanied by an adequate rate of return. If returns are low, growth actually reduces value which, as mentioned a number of times is the primary objective of any corporation.

4.7 Dividends

That EVA should not have a direct relation with total shareholder return is consistent with the longstanding academic assertion first formulated by Nobel laureates Merton Miller and Franco Modigliani in a 1961 paper, 'that dividends do not matter'. Assume that a company pays a dividend. How does this affect MVA, the measure of shareholder wealth? The answer is that it does not. The book value of the firm's equity falls by the reduction in retained earnings triggered by the dividend payment. The value of the company's shares falls by the amount of the dividend, once the shares go "ex-dividend" (otherwise there would be arbitrage profits). As the academic theory asserts, shareholders cannot become wealthier by receiving a dividend if it means that they must end up holding a share worth less than otherwise in the amount of the dividend. Stewart (1994) argues that as long as management focuses actions and strategies on increasing the present value of EVA, the wealth of the shareholders will be maximised, and the rate of return will take care of itself.

In a world of daily market measurement, paying dividends is rather an admission of failure to find attractive investment opportunities to use all available cash. Companies are traditionally valued for what they do, not what they do not do. By paying dividends, management has less money available to fund growth.

If management chooses to raise debt or equity to replace the dividend, then current shareholders' interests are diminished by introducing new claims on future cash flow. Such a policy makes a company incur transactions costs for unnecessary financings.

Companies that have attractive investment opportunities should forego dividends and will be doing investors a favour by investing in cash at a return that is higher than the investor can achieve by investing in equally risky alternatives. It is rather the company's ability to pay dividends that is critical to the creation of value, and the actual payment of dividends is unimportant.

4.7.1 The Evidence on Dividends

Definitive academic research is needed to decisively answer the question of dividends as an important corporate measure of performance.

A study done by Professors Fischer Black and Myron Scholes (1979), tested whether the total returns achieved during the period 1936 to 1966 from 25 carefully constructed portfolios depended upon the dividend yield or dividend payout ratios of the underlying stocks (Black, F.; Scholes, M. 1979:1). Their analysis revealed that the return to investors was explained by the level of risk and was not at all affected by how the return was divided between dividends and capital gains. They found that within a given risk category, some stocks paid no dividends, some paid modest dividends, and some paid a lot of dividends, but **all** experienced the same rate of return over a period of time (Black, F.; Scholes, M. 1979:21).

Black and Scholes (1979) concluded that investors will do best by assuming that dividends do not matter and by ignoring both payout and yield in choosing their stocks (i.e., they should worry about risk, diversification, taxes, and value, but not dividends per se). Their advice to corporate managers is no less important than it is to investors: Do not formulate dividend policy in an attempt to influence shareholders' returns. Instead, set

dividend policy in the context of the company's own investment needs and financing options, and then carefully explain to investors (Black, F.; Scholes, M. 1979:22).

4.8 Summary

What constitutes superior managerial performance in any particular period is a complex matter. This chapter has provided an overview into the understanding of what indeed a good performance measure entails. The chapter further revealed that EVA is indeed the essence of a good performance measure. EVA measures more important financial elements and can tell management more than other performance measures.

Despite the enthusiasm with which many companies have embraced EVA, it is not a new idea. EVA is basically a variant of Residual Income, however Residual Income is criticised for a number of reasons, whereas EVA corrects these earlier criticisms launched at Residual Income.

EPS, Earnings, and earnings growth are misleading measures of corporate performance. EPS at best measures only the quantity of earnings, but the quality of earnings reflected in the P/E multiple is also important. Earnings are diminished by accounting entries that have nothing to do with recurring cash flow, and are charged with such value-building capital outlays as R&D, all in an attempt to win over lenders' desire to assess liquidation. Quick earnings growth can be manufactured by pouring capital into substandard projects, however, earning an adequate rate of return is far more important than growing quickly.

Paying dividends does not enhance the total return received by investors over a period of time. But, paying dividends may deprive worthwhile projects of capital or may force the company to incur unnecessary transaction costs. Because top decision-makers in a company are unwilling to cut dividends, dividends become an additional and unnecessary

fixed cost of running the business. If interest rates rise, so will shareholders' expectations of what constitutes a reasonable reward for risks they are taking with their capital.

Chapter 5

The EVA Incentive Plan

5.1 Introduction

An important aspect of many managers' jobs is making investment decisions that will affect cash flows in multiple future periods. Since managerial income is typically based on accounting income, managers can generally affect their future compensation by altering investment levels. The question that arises in this context is whether managers' private incentives to choose investment levels result in efficient investment levels from the perspective of shareholders. Therefore, the objective of incentive reward systems is to encourage optimal corporate investment selection by divisional managers and to encourage them to act as if they were independent owners of their divisions sharing a proportion of all losses and all profits. EVA incentive reward plans form part of the important uses of the EVA system. These elements are discussed in the preceding chapter as well as the factors encompassing an EVA incentive plan.

5.2 Motivation for incentive systems

Shareholder activism has reached unprecedented levels and has led to increased pressure on firms to maximise shareholder value consistently. The basic idea is that if managers are offered compensation contracts that are tied to shareholder wealth changes, their

incentives will be better aligned with those of shareholders than is the case for other types of contracts (Delves, D. 1999: 61).

5.3 Factors Encompassing an EVA Incentive Plan

An economic value incentive can be a powerful tool or just fancy pay. EVA measures more important financial elements and can tell management more than other performance measures. EVA has tremendous potential to drive performance. The way in which a company incorporates EVA into an incentive plan and the degree to which it takes the characteristics of its people – both senior management and lower level workers – into account is critical.

To instil both the sense of urgency and long-term perspective of an owner, cash bonus plans that cause managers to think like and act like owners because they are paid like owners are designed. Basing incentive compensation on improvements on EVA is the source of the greatest power in the EVA system. Under an EVA bonus plan, the only way managers can make more money for themselves is by creating even greater value for shareholders. This makes it possible to have bonus plans with no upside limits.

By fixing manager's share on EVA in advance and not changing it in the light of subsequent performance, the managers will be given a tremendous personal incentive to devise and execute extremely aggressive plans. In this case, just achieving planned performance levels can produce extraordinary bonuses for them; performance in relation to the plan itself is not used in any way to determine their reward.

The absence of bonus caps is made possible by holding back part of the bonus earned in very good years and making it subject to loss if EVA subsequently falls. This "banking" feature, genuinely having something at risk, is what transforms managers into owners.

Therefore if bonuses drive the budgets, instead of the other way around, better and altogether more aggressive plans and performance are likely to be forthcoming from the key operating people.

Decentralising decision making along with incentives has become all the more imperative as the pace of new market development and the fragmentation of markets have accelerated and as computing power has proliferated. Recognising these trends, the new financial model emphasises management by motivation and not by mandate, by empowerment and not by punishment (Brossy, R., Balkcom, J.E. 1994:18).

From the above it can be deduced that a truly effective incentive system is one that solidly aligns the financial interests of employees with that of the shareholders, improves motivation and morale, and creates an atmosphere in which managers constantly strive to create more wealth. It is an incentive system that makes managers think like and act like owners of the portions of the business they influence most directly.

To see why EVA bonus plans are so much more effective than anything else in use today, it is important to understand the dynamics of incentives and the reasons why conventional plans fail. Compensation plans typically have four key objectives:

1. To align management and shareholder interests by giving managers the motivation to choose strategies and make operating decisions that maximise shareholder wealth.
2. To provide sufficient leverage, as measured by variability of potential rewards, to motivate managers to work long hours, take risks, and make unpleasant decisions.
3. To limit retention risk, or the risk that valued managers will 'bolt' for a better offer.
4. To keep shareholder costs at a reasonable level.

Where do conventional incentive plans go wrong? The most obvious failure is in alignment. Using the wrong performance measure in the bonus plan guarantees that a

company will learn the incorrect managerial behaviour and company performance will leave much to be desired for (Finegan, P.T. 1989:29). The latest incentive compensation survey by the Conference Board shows that the vast majority of corporations base their bonus payments to top corporate management on achieving targeted levels of earnings, earnings per share, operating profits, return on equity (ROE), or return on assets (ROA) (Ehrbar, A. 1998:97). Bonuses for business-unit managers are usually determined by the performance of the business unit itself, measured in either after-tax earnings or operating profits, with some additional weighting for overall corporate results. The alignment in these plans is feeble because, among other things earnings make no provision for the opportunity cost of equity capital and the impact of balance sheet management on the true bottom line, with the result that some actions that increase accounting earnings actually destroy shareholder wealth.

EVA bonus plans do just the opposite. By using EVA as the measure of performance, they solidly align the goals with the creation of shareholder wealth. An unlimited upside potential gives the managers a continuous incentive for continuous improvement, an uncapped monetary motivation to identify and successfully carry out actions that create additional wealth. Another essential feature of these bonus plans is that targets for EVA improvement are automatically reset by a formula. The combination of the 'bonus' bank and the automatic resetting of target improvements has the effect of extending a manager's planning horizon and encouraging him to evaluate investments in terms of their impact on EVA, and bonuses, not just this year but in future years as well.

These features work well together to create two characteristics of EVA bonus plans that are crucial to their effectiveness as a corporate governance mechanism: Managers know that the only way they can make themselves better off is by creating more wealth for the shareholders and they also know that they will share in any wealth they do create.

According to Stewart (1991:7) most compensation consultants miss this point and fear that unlimited bonuses could result in unacceptably high shareholder costs. What they miss is that extraordinary bonuses come only with extraordinary increase in EVA and as a result, correspondingly high returns to shareholders.

The essential goals of the EVA bonus system, which build on the four fundamental compensation objectives previously discussed, are:

- To link performance incentives more closely to increases in shareholder wealth.
- To provide a single focus for operations management, capital budgeting, planning, performance measurement, and incentive compensation.
- To promote a culture of high performance and ownership by management, in which managers take the initiative to create value.

The key elements in Stern and Stewart's EVA bonus plans solve those problems associated with conventional bonus plans. Those elements are listed below and will be briefly discussed (Stewart, G.B. 1991:225):

- Pay for increasing EVA
- No thresholds or caps
- A target bonus
- A bonus bank
- Performance target set by formula instead of negotiations

5.4 Remuneration linked to increasing EVA

This is the most reliable way to link the size of the bonus to the amount of wealth that management creates for shareholders, and is a precondition for making managers think and act like owners. To raise EVA, managers will cut wasteful costs and raise profit without raising any more capital. They will convert non-productive assets to cash that can be reinvested or distributed to shareholders. They will invest capital to fuel profitable growth and they will select financial strategies that minimise the cost of capital. Managers are remunerated with an unlimited share of EVA improvements but bonuses can also be negative.

5.4.1 The Target bonus

A target bonus is a competitive bonus based on peer company compensation practises. An EVA target bonus is larger than a conventional target bonus for two reasons. Firstly, real incentives require more leverage. Most companies put too much of a manager's compensation in the fixed portion of the pay package and too little in the variable portion. Secondly, EVA target bonuses should be higher because the potential for negative bonuses makes EVA plans inherently riskier.

5.4.2 The Bonus bank

There are several variations as how the bonus bank works, but the intent is always to filter bonus swings and to defer the impact until it can be ascertained that the bonuses are associated with permanent changes in shareholder wealth.

The bonus bank performs a number of vital functions. Firstly, it ensures that managers collect bonuses for only sustained improvements in EVA. Bonus banking is also the principal mechanism for lengthening the planning horizons of managers, since they know that ensuring short-term performance will not do them any good if it harms longer-term results.

Banking smoothes out bonus payments in that manager's build up bank balances in good years and draw down on them in poor years. Finally the bonus bank acts as a set of "golden handcuffs" for highly successful managers because any uncollected bank balance is forfeited if a manger resigns or is bought over by other companies.

5.4.3 Performance targets set by a formula

Managers earn their target bonus when the rand increase in EVA is equal to expected improvement. This is similar to the performance target in conventional plans, but with two crucial differences. Firstly, the annual amount of expected improvement typically is present for periods for five years or so instead of being negotiated annually. Secondly, the base to which expected improvement is added is automatically reset up or down each year in line with actual experience.

The simplest bonus formula states that the EVA target is the EVA generated in the prior year. This means that if EVA is just maintained at its current level, the managers will earn a target bonus award each year. This is not unreasonable because EVA may not be growing even though the business is. Sales, earnings, and assets may all be expanding, but profit is expanding just fast enough to provide investors with the total return they are seeking on any new capital they put into the business, and that is not bad. If EVA rises, managers will qualify for an exceptionally good bonus. By doing so they also force the EVA target to be reset that much higher for the next year without argument or debate. Even with this simple formula the only way that managers can continuously qualify for exceptional bonus would be to continuously increase EVA.

What every company wants is a culture of continuous improvement, responsibility, and accountability. Enlightened companies today also want all of their employees to feel involved, to be creative, and to welcome change. In other words, they want to instil an ownership culture that eliminates the need to constantly control behaviour from above. To achieve that, every company needs an incentive system that clearly, objectively, predictably, and continuously rewards managers for creating shareholder wealth and penalises them for destroying it. That is exactly what EVA bonus plans do.

5.5 Summary

EVA has tremendous potential to drive performance. The way in which a company incorporates EVA into an incentive plan and the degree to which it takes the characteristics of its people, both senior management and lower level workers, into account is critical. Seeking ways to make their incentive plans more effective, compensation professionals today are considering the EVA framework because it works. A key feature of this incentive approach is the emphasis on empowering managers by allowing them to run their divisions as separate business enterprises.

What every company wants is a culture of continuous improvement, responsibility, and accountability. Companies today also want all of their employees to feel involved, to be creative, and to welcome change. In other words, they want to instil an ownership culture that eliminates the need to constantly control behaviour from above. To achieve that, every company needs an incentive system that clearly, objectively, predictably, and continuously rewards managers for creating shareholder wealth and penalises them for destroying it. This is exactly what EVA incentive plans do.

Chapter 6

EVA's Correlation with Stock Prices

6.1 Introduction

EVA and the company's share price are reported to bear a relationship to each other. This chapter investigates the exact relationship as proclaimed by past empirical research.

6.2 EVA's correlation with Stock Prices Investigated

Since value is a primary concern to investors, proponents claim that EVA is the only performance measure that ties directly to a stock's intrinsic value (Stewart, G.B. 1991). It has been asserted that stock prices and EVA show a remarkable tendency to move up and down together. As commented by the Chief Financial Officer (CFO) of AT&T's long distance unit, "We calculated our EVA back to 1984 and found an almost perfect correlation with stock price" (Tully, S. 1993:40-41). This section provides insight into the exact correlation with the aid of past empirical research and forms as the secondary objectives of the study.

The relation between corporate financial performance and stock price performance is a confusing proposition. For example, EVA does not directly tie to total shareholder

returns. The reason being that EVA ties to a more important measure, shareholder wealth, which is related to shareholder returns.

The dual concepts of maximising shareholders' wealth and using net present value as a principal planning and decision tool are fundamental. Internal rates of return, or IRR are often introduced in corporate finance as a useful adjunct to the NPV rule. IRRs indicate whether a project is worthwhile, in that an IRR above the cost of capital is a positive NPV project, and an IRR less than the cost of capital is associated with a negative NPV project. Therefore, operating managers often find it convenient to calculate a project's IRR as an indication of its merit that is easily communicated and compared with the IRRs of other projects. Therefore, shareholder wealth is maximised when NPV, and hence the present value of EVA, is maximised.

MVA effectively measures the stock market's estimate of the NPV of a firm's past and expected capital investment projects. Theoretically, a firm's MVA at a given point in time is equal to the discounted present value of the yearly EVA it is expected to generate. Studies show that a company that has a positive EVA year after year will see its MVA rise. Conversely, a persistently negative EVA will lead to a lowered MVA because the market will have no confidence that the company can produce a good return on its invested capital. As a result companies can appear in completely different positions in the respective rankings for EVA and MVA.

The question that needs addressing at this stage is: How do EVA and MVA relate with stock performance – a well established market measure of performance.

EVA is related to MVA, in that a growing EVA will be rewarded by the market. But the two measures do not move in random, for share prices reflect expectations rather than present circumstances alone. When there is an increase in MVA, the market in effect is anticipating future increases in EVA.

A study in the U.S consisting of 241 large companies was performed by Lehn and Makhija (1996). Data was collected on EVA and MVA that Stern Stewart & Co. had

published in various sources for four years: 1987, 1988, 1992, and 1993. For each firm, six performance measures for each of the four years was computed. These six performance measures consisted of: three accounting rates of return (ROA, ROE, and ROS); stock returns; and EVA and MVA, both expressed as returns on equity value. Using the relation of a measure with the stock returns as a test of the effectiveness of the measure, the study found that all six measures are positively correlated with stock returns. The study deduced that, even though not by a large difference, the correlation of EVA with stock returns is higher than the correlation of any other five measures with stock returns, providing the EVA with an edge as a performance measure (Lehn, K.; Makhija, A.K. 1996:38).

However, further research done by Chen and Dodd (1997) asked the question; whether the correlation between a company's EVA and stock return was as perfect as claimed by EVA advocates (Chen, S.; Dodd, J.L. 1997:318).

A sample selection of 566 firms was taken from the Stern Stewart 1 000 database that had complete data for the time frame 1983-1992. The 1992 Stern Stewart Performance 1 000 is an EVA database compiled by Stern Stewart Management Service.

Table 6.1: Association of Stock Return with EVA Variables

A: Correlation's:

	1	2	3	4	5	.
1. Return (stock return)	14.82					
2. EVAPS (EVA per share)	0.449*					
3. STDEVA (Change of EVA)	0.275*	0.017				
4. ROC (return on capital)	0.491*	0.371*	0.258*			
5. SPREAD (ROC × Cost of capital)	0.511*	0.386*	0.255*	0.976*		
6. GROWTH (capital growth)	0.419*	0.260*	-0.064	0.476*	0.463*	

* $p < 0.01$

B: Regression 1

<u>Variables</u>	<u>Coefficient</u>	<u>t-Value</u>	<u>p-Value</u>	<u>VIF</u>
EVAPS	0.584	8.33	0.0000	1.2
STDEVA	0.027	6.71	0.0000	1.1
SPREAD	0.315	5.44	0.0000	1.6
GROWTH	0.251	6.83	0.0000	1.3

$R^2 = 0.415$

$R^2_a = 0.411$

$F = 99.56$

$p = 0.0000$

VIF= Variance Inflation Factor**C: Coefficients of Partial Determination**

$r^2_{EVAPS} = 0.110$

$r^2_{STDEVA} = 0.074$

$r^2_{SPREAD} = 0.050$

$r^2_{growth} = 0.077$

Source: Chen, S.; Dodd, J.L. 1997. Journal of Managerial Issues. Vol 9. Issue 3.

Table 6.1 shows the relationship between stock return and the EVA variables. The correlation's in Panel A reveal a significant association of stock return with all of the EVA variables, suggesting that the EVA metrics yield information perceived important by the stock market, a rightful claim by EVA proponents. However, different from implications of past reports, the relationship between RETURN and the EVA measures is far from perfect. A correlation of 0.449 between RETURN and EVAPS indicates that increasing EVA alone is not all that matters in the marketplace since only 20% of the variation in stock return can be explained by the measure. While an individual company may find a better link between EVA and stock return, or even a nearly perfect one claimed by EVA advocates, the proposition cannot be generalised to a large cross-sectional sample (Chen, S.; Dodd, J.L. 1997:325).

Not only are the EVA variables associated with stock return, most of them are also interrelated at a level of significance less than 1%. To further explore the association of

stock return with EVA variables, a regression was estimated in Panel B. Due to the nearly perfect correlation between SPREAD and ROC, only SPREAD is included in the model. Substituting ROC for SPREAD results in a qualitatively identical model as the one presented in Panel B. This is true for all the regressions containing the variable SPREAD. The four independent variables represent different dimensions of an EVA system, with EVAPS measuring the level of, STDEVA the change of, and SPREAD and GROWTH the principal drivers of EVA performance (Chen, S.; Dodd, J.L. 1997:325).

The F-statistic (99.56), p-value (0.0000), and R^2 (0.415) suggest that the model is highly significant with 41.5% of the variation in stock return explained by the four EVA variables. Although R^2 is not as high as past EVA stories imply, it suffices to demonstrate the importance of the EVA metrics in such a large cross-sectional study. Examination of the variance inflation factor (VIF), residual plot, and normality plot reveals no serious violations of regression assumptions (Chen, S.; Dodd, J.L. 1997:326).

From the above results the following observations were made by Chen and Dodd (1997). Firstly, consistent with the correlations in Panel A of table 4.1, all four independent EVA variables are highly significant in explaining stock return. Collectively they provide a better explanation of stock performance than any single variable. Since the four variables capture different aspects of EVA performance, it was concluded that the use of an EVA system, rather than any single EVA measure, should contribute significantly more towards explaining a company's stock return (Chen, S.; Dodd, J.L. 1997:326).

Secondly, the relative importance of each EVA variable was assessed by comparing the coefficients of partial determination in Panel C of Table 4.1. Given the other three variables already in the model, adding EVAPS reduces unexplained variation in stock return by 11.01%, which is the largest incremental contribution amongst the four variables. Increasing EVA over time (STDEVA) and managing capital growth (GROWTH) contribute similarly as suggested by the coefficients (7.44% and 7.67%). Relatively SPREAD is less important in the model with a partial r equal to 5.01% (Chen, S.; Dodd, J.L. 1997:326-327).

Therefore, even with the EVA variables, over 50% of the variation in the stock return cannot be explained by the model (Chen, S.; Dodd, J.L. 1997:327). This suggests that companies should lower their expectations of results from implementation of an EVA system. Although improving EVA measures will likely lead to a better stock return, the payoff may not be as dramatic as promised by EVA supporters.

According to Chen and Dodd (1997), even if EVA is a superior measure vis-à-vis simple accounting earnings, it does not necessarily lead to the conclusion that it is the single best internal performance measure that drives stock price (Chen, S.; Dodd, J.L. 1997:320). Stock prices can be quite volatile and reflect market psychology rather than the impact of management decisions. In addition, not every company is publicly traded, nor is every stock actively traded. Many years of stock market research seem to suggest no single determination on which one can rely to profitably predict the market (Foster, G. 1986).

6.3 Summary

It has been asserted that stock-prices and EVA show a remarkable tendency to move up and down together. But studies reviewed for the purpose of this chapter reveal conflicting results, and Chen and Dodd (1997) claim that although improving EVA measures will likely lead to a better stock return, the payoff may not be as desirable as promised by EVA supporters.

Chapter 7

Market Value Added (MVA) and comparison with EVA

7.1 Introduction

This chapter sets out to define the concept Market Value Added (MVA). The emphasis of is to illustrate the connection/relationship between EVA and MVA. A section including the validity of these two performance measures is also included.

7.2 Market Value Added (MVA) defined

EVA and the company's share price bear a strong relationship to each other. Stern and Stewart defines a measure of the stock market's assessment of a company: Market Value Added (MVA). The following paragraph encapsulates the definition of MVA:

“Measured as the difference between market value and capital employed, MVA is the stock market's assessment of how much cumulative value the firm has created or destroyed for its shareholders.” (Finance Week 200, March 18-24, 1993:28).

In this sense, capital not only encompasses what accountants define as shareholders' equity but also a number of items that either represents an investment by the firm on the shareholders' behalf, or equity equivalents that are exposed to the same residual risks as the claimants. Goodwill is an example of the former case as the purchase price of acquisitions of on-going concerns represents funds invested by managers on behalf of

shareholders. Reserves for loan losses are examples of the latter case. These reserves represent funds that have been set aside from retained earnings for expected future losses, thus managers are required to earn a return on this form of capital.

Capital represents investments required to support 'rainy days', or losses that are both expected and unexpected. Several other adjustments are also made to shareholders' equity to determine the amount of capital invested in the business.

In contrast to EVA, which generally is an evaluation of internal performance, MVA, is the best assessment of the external performance of a company or rather, how the market evaluated the firm's performance in terms of the market value of debt and market value of equity compared to the capital invested in the firm. MVA provides a more accurate view of a company's profitability and prospects that can be derived from the record of its share prices or per-share earnings. Therefore, it objectively measures how well management is performing its task of maximising shareholder wealth.

A prime component of computing a company's MVA is its share prices, which is why cyclical swings in an industry can be a significant determinant of MVA.

7.2.1 How is MVA calculated?

Firstly, all capital a company took in over its span of existence is identified including equity and debt offerings, bank loans, and retained earnings, and the amounts are added up. Then, some "adjustments" are made to capitalise certain past expenditures, like R&D spending as an investment in future earnings. This adjusted capital amount is compared to a firm's total market value, which is the current value of a company's stock and debt to get MVA or the difference between what the investors can take out (total market value) and the amount that investors put in (invested capital).

Following the above description, MVA is calculated as follows:

$$\text{Market Value Added (MVA)} = [(\text{shares outstanding} \times \text{stock price}) + \text{Market Value of Preferred Stock} + \text{Market Value of Debt}] - \text{Total Capital in Balance Sheet}$$

Market value of the firm is the sum of the book value of debt and the market value of equity, while total capital supplied is the sum of the book values of debt and equity. Put another way, MVA is the difference between the resources provided by the lenders and shareholders to the business (cash-in) and the market value, which could be realised for the business (cash-out). Therefore MVA is the company's accumulative economic value added over a period of time.

The example below shows the MVA calculation in practice:

Calculation of Market Value Added (MVA):

	Share Price	# Shares	
Market:	R25.00	50 000	R1 250 000 Equity Market Value
Market:	R40.00	10 000	R 400 000 Preference Market Value
Market Value of Debt	-	-	R 300 000 Debt Market Value
Book Value:	R11.10	50 000	R 555 000 Economic book value*

*Sum of Total Capital in Balance Sheet

Therefore the MVA is: R1 350 000 – R555 000 = R795 000

The book value of debt is used in the calculation of total market value for the following reasons (Gapenski, L.C. 1996:56):

- The purpose of the analysis is to assess the addition to shareholders wealth;
- Determining the market value of most corporate debt issues is difficult because they are not actively traded;

- Debt market values are usually relatively close to book value; and
- The market value of an organisation's debt is more closely tied to interest rate movements than managerial actions that influence shareholder wealth. Essentially, the assumption is made that the market value of debt equals its book value.

The relationship between MVA and EVA is reflected by the fact that EVA deals with the crucial ingredient in financial performance which is the extent to which the return on capital exceeds or lags the cost of capital in any given period. The excess or shortfall is multiplied by the capital available, which produces the EVA figure.

The increased interest in EVA, MVA, and related performance measures reflects a heightened awareness by corporate managers that their task is indeed to create value for shareholders. Corporate managers have had a legal duty to maximise shareholder value since the advent of the corporate form in the 1800's. In recent years, various market mechanisms have evolved to discipline managers who stray from this goal in favour of other goals such as maximisation of size, earnings, earnings growth, earnings per share, and market share.

Although MVA is the best measure of wealth creation, it cannot be used as a measure of operating performance for units of the firm below the level of listed consolidated entity, nor can it be used for privately used firms. This makes MVA impractical to use as period to period measure of performance for the firm's managers.

7.2.2 MVA Illustrated

To illustrate MVA as a measure of financial performance, the following example considers the performance of two organisations.

Organisation ABC and Organisation XYZ. In 1998, Organisation ABC's total market value was R15.8 billion, while investors had supplied R9.4 billion in capital. Therefore ABC's MVA was R15.8 billion - R9.4 billion = R6.4 billion. The R6.4 billion represents the difference between the funds, including retained earnings that ABC's investors put into the corporation since its founding and the cash value they could get by selling the business. By maximising this spread, management maximises the wealth of the organisation's equity investors in relation to other uses of their capital.

While the managers of ABC have done an excellent job of maximising the wealth of their shareholders, XYZ's managers have not done so well. In 1998, XYZ's total market value was R4 billion. However, its investors had supplied it with R4.1 billion of capital, so XYZ's MVA was negative R100 million.

Therefore XYZ's shareholders were left with only R0.98 of equity value for every rand they put up, whereas ABC had turned R1.00 of shareholder investment into R1.68 of wealth.

7.2.3 MVA and Net Present Value (NPV)

There is a direct link between MVA and the NPV capital budgeting rule. NPV measures the amount that a project can be expected to add to (or subtract from) MVA. For example, an organisation might retain R10 million in earnings for investment in a project for which the market projects the present future cash flows to be R8 million. Investment in the project may cause the total market value of the organisation to be R8 million greater than if the earnings had been paid out as dividends, yet shareholders' wealth will have been reduced by R2 million. This loss occurs because shareholders did not have the opportunity to invest the R10 million in alternative investments that would have a present market value of at least R10 million. With R10 million added to the capital invested in

the organisation but only R8 million added to its total market value, the organisation's MVA would fall by R2 million, registering the erosion in shareholder wealth. Moreover, the project would have a NPV of negative R2 million.

By the following NPV rule (i.e., accepting only projects that have positive NPV's), managers can avoid investing in projects that are forecast to generate negative MVA's. However, after the investment is made, there is no guarantee that a positive MVA will ensue. Organisations with high MVA's, such as organisation ABC, have done a very good job of connecting with high-NPV projects, which produced their high MVA's.

Therefore MVA, whether for the entire firm or just a single capital investment project, equals the present value of the future EVA's. Viewed in this way, one can see that firms use EVA/MVA to evaluate capital investment proposals because these measurement tools will yield the same answer as NPV. This means the same terminology that companies use to communicate with shareholders can also be used internally for decision-making.

7.2.4 Is bigger better?– the concern of MVA

A MVA ranking recently measured the largest US financial institutions on the difference between their stock market capitalisation and the amount of capital invested by shareholders (Shih, A.; Kantor, C. 1998:21).

JP Morgan, the 7th largest financial institution with \$262 billion in assets only ranked 22nd in terms of shareholder wealth creation. In contrast, American International Group ranked 9th in terms of asset size and number one in terms of market value (\$76 billion), yet it created the most wealth for its shareholders with \$39 billion in MVA (Shih, A.; Kantor, C. 1998:22).

Typically companies that create shareholder wealth over time have consistently earned a return in excess of their cost of capital. While MVA measures cumulative performance, EVA provides a period to period report of a firm's success. However, MVA and EVA reflect two sides of the same coin, measuring shareholder value creation either from a balance sheet or stock standpoint (MVA) or from a periodic or flow standpoint (EVA). Is the company worth more than what the shareholders have historically invested in the firm (measured by MVA)? Has the firm generated after-tax earnings in excess of the minimum amount for which shareholders should have been compensated by investing in companies of similar risk (measured by EVA)?

A question that is often raised is why shareholders and managers should be concerned about MVA? Firms can always increase their market value by investing additional capital, as long as the capital invested earns a positive return, even though the return may not be sufficient to compensate shareholders for the risks assumed. By taking the difference between the market value of the firm and the amount of capital that shareholders have historically invested into the firm, MVA captures the extent of wealth creation.

For comparability, the standardised MVA measure, MVA divided by invested capital, is used to adjust for differences in the capital base when evaluating the shareholder wealth creation performance of different financial institutions.

7.3 Wealth Created on the Johannesburg Stock Exchange (JSE)

One of the surest indicators that EVA has moved from financial innovation to accepted practice is the rate at which the world's premier "buy" and "sell" side money managers and investment banks are adopting EVA as the basis for evaluating businesses and as a

primary evaluation tool. A growing number of international (Morgan Stanley, CS First Boston, Goldman Sachs, etc.) and South African local stockbroking firms are turning to EVA as an evaluation tool that helps cut through the 'misleading' information set out in South African GAAP to get unique insights into value creation and destruction.

A look at the bottom ten MVA performers (see Appendix A) will show a number of new entrants specifically Anglovaal Ltd at 191 (1997 position was 21), Anglovaal Industries at 193 (1997 position was 33), De Beers at 196 (1997 position was 40) and Minorco at 197 (1997 position was 40).

Absolute rank is not everything. Anglo American lost R21bn of MVA in moving down from number 1 in 1997 to number 2 in 1998 and Sasol lost R6.5bn of MVA in going from number 5 to number 8. Minorco had a double decline in share price and 48% increase in capital. The top five losers by value lost R74bn in MVA.

1997 was a good year for US markets and a disaster for Asian markets. What happened to South Africa? Three trends emerge. Firstly, aggregate MVA, i.e. the sum of the MVA's of all 200 companies, is down from R314bn in 1997's ranking to R152bn in 1998's ranking. This is the first time that there has been a decline in aggregate MVA since the FW/ Stern Stewart Performance 200 ranking was first published. The year on year increase in the all share index was only 2.6% in 1998, but the gold index dropped by 43%. Commodity stocks were negatively effected with the decline in commodity prices, resulting in wiping out large amounts of MVA.

The second trend is the decline in the breakeven point (the point at which MVA is equal to zero), which occurs at position number 120 in 1998 (Cashbuild), against position number 149 (MacPhail) in 1997. This means that only 60% of companies created wealth in 1998 versus 75% in 1997 and 80% in the 1996 ranking (www.sternstewart.com/). The explanation for this decline is linked to the prevailing high rates of interest in South Africa. Value is a function of corporate returns and the required rate of return. The higher the required rate of return, the higher the corporate returns needed to deliver the same

value. The single biggest driver of the required rate of return is the prevailing yield on long term government bonds. With the yield on the R150 currently around 13%, it means that the average cost of equity using the weighted average cost of capital (WACC) is about 19%. This is an extremely high return that projects/investments must yield. It is interesting to note that the break-even point in South Africa has declined further and the break-even point is now at position 86 (Fralex Ltd.) according to the 1999 ratings devised by Stern Stewart & Co. This means that only 43% of the top 200 quoted companies created wealth in 1999.

The high interest rates are crowding out private sector investment. How does this compare to other countries? In the US, the premium on long dated government bonds over the inflation rate is around 3.8%. In South Africa it is a 7% premium, taking the inflation rate at 6%. The additional 3% point premium is the country risk in 1998 (www.sternstewart.com) that global investors perceive and this does not attract the necessary foreign investor sentiment needed in South Africa. However, the South African market does also have a number of attractions.

Since the beginning of 1994 the financial and industrial index of the South African market has grown at a compound annual rate of 14%, however, the Rand has declined against the dollar at about 9% per annum. Given that stock market returns are measured globally in US dollars, this means that South Africa is offering global investors an annual return of 5%. This is compared to the 30% returns earned on the New York Stock Exchange.

The third trend is the rise of the technology stocks. Dimension Data moved into the top ten MVA performers at number 3 (1997 position was 14), as did Persetel Q-Data at number 10 (13). Looking at the top 5 winners in absolute increase, Bidvest came out top with an increase in MVA of R4.8bn and Dimension Data second with an increase of R3.6bn, followed by Pepkor at R1.93bn, ABI at R1.85bn and New Africa Investments Ltd at R1.77bn. moving up the ranks is also not everything. Altech was the top rank climber going from number 175 to number 65, a gain of 113 positions due to a 180%

increase in share price. More revealing though is to look at the 5-year change in MVA, which shows a decline of R311m.

Because the rankings reflect performance at a specific instant, it is more revealing to look at the five-year trends in MVA and EVA, and relative movements and positions of companies.

Looking at trends counters the effects of market-wide factors, which affect share prices, and therefore the MVA of most companies. The five year winners on MVA increase are South Africa Breweries at R14bn, Sasol at R13.8bn, Anglo American at R9.8bn, Dimension Data at R9bn and Bidvest at R6.7bn. It is important to note that Anglo's five year performance is despite its big slump in 1997.

The five year losers on MVA losses are De Beers at R7.5bn, Sappi at R6.8bn, Minorco at R6.8bn, Engen at R4.9bn and Gencor at R4.6bn (www.sternstewart.com/). The Gencor result must be interpreted in the context of the separate listing of Billiton and the Gold Fields merger.

The MVA rankings show conclusively that size is not everything. Out of the top ten companies ranked by Total Capital, five are in the Top ten ranked by MVA (Anglo, Sasol, Billiton, SAB, Rembrandt) and four in the bottom ten (De Beers, Minorco, AMIC, Sappi). Size does not guarantee wealth creation, but nor does it constrain it. Dimension Data at number 3 on the MVA rank (1998) has tied up only R2.4bn of investor capital. Employing capital efficiently is important, but capital intensity comparisons are more relevant within an industry than between industries.

An increasing number of South African companies have adopted innovative programmes to increase their EVA's in order to maximise returns to shareholders and boost their MVA's. They have absorbed the point that Roberta Goizuetta, CEO of Coca-Cola crisply put to the US magazine Fortune in 1994: "you only get richer if you invest money at a

higher return than the cost of that money to you. Everybody knows that – but many seem to forget it.”

7.4 How Valid are MVA and EVA?

A financial performance measure is only effective if it leads managers on an on-going basis to consistently make correct decisions, i.e. invest in businesses that create value, and divest of those that destroy it.

7.4.1 The Case for EVA and MVA

EVA is a superior measure of performance because it charges management for using capital at an appropriate risk-adjusted rate and it eliminates financial and accounting distortions to the extent it is practical to do so. Besides being a superior measure of performance, EVA is also a superior measure of value. The final link in the chain of reasoning that provides the conceptual basis for EVA is this all important relation: the NPV of a project, strategy, or acquisition candidate, and what amounts to the same thing, the contribution to the MVA of the company, is by definition equal to the present value of the EVA it can be expected to generate in the future (Stewart, G.B. 1994:74).

The advantage of MVA is that it measures the cumulative value added or lost since the inception of the company. As a measure of the shareholders' cumulative return, it is unaffected by the particular historical period in which the market first recognised that value would be created or destroyed.

MVA is a measure that captures the dynamics of corporate performance. It is the difference between cash in (what investors have contributed) and cash out (what they

could sell their claims for on any particular day). It represents the stock market's assessment as of a particular time of the net present value of all the company's past and projected capital projects. It reflects how successful a company has invested capital in the past and how successful it is likely to be at investing new capital in the future.

The problem with MVA (and NPV) is that it is a "stock" or "wealth" measure; it is not a "flow". As mentioned, before it measures the total amount of wealth that is expected to be created from undertaking an investment or activity, not performance. Managerial performance is evaluated over periods of time. Because NPV and MVA are equivalent, and MVA is the present value of future EVAs, EVA becomes the means by which the stock measure of MVA (or NPV) is converted into a flow.

EVA in contrast, is not a measure of wealth creation. EVA is a measure of the amount by which profits exceed or fall short of the cost of capital in any period. Although, EVA does not measure wealth directly, it is an invaluable guide for management because it correlates better than any other measures with changes in MVA. Unlike traditional valuation measures, the EVA methodology explicitly examines the three fundamental principles of value creation: cash flow, risk, and the sustainability of returns.

Therefore, a company's EVA is the fuel that fires up its MVA. EVA, because it is defined to be operating profits net of a capital charge, implicitly subtracts the cost of existing capital and new capital investment when it is projected and discounted to a present value. What is left over from the operating cash flow is the net present value of all capital projects, past and future. EVA is the internal measure, which leads to the external consequence of building a premium (or discount) into the market value of the company.

Furthermore, Stern Stewart & Co., contends that EVA is the sole measurement that can be correlated with a firm's stock price. However this is disputed by a study conducted by Chen and Dodd (1997)(see section 5.4).

The level of EVA per se is not what really matters. What counts most is the changes in EVA. Continuous increases are rewarded with increases in MVA, while declining EVA is punished with declining MVA. Therefore, it can be deduced that EVA and MVA are corresponding internal and external measures of performance.

7.4.2 Criticisms of EVA and MVA

EVA does not account for real options (growth opportunities) inherent in the investment decision. The market value of a firm's securities reflects the market's perception of the value of those growth opportunities. EVA does not reflect this information, therefore, when using EVA to analyse the performance of a company, it must be kept in mind that focusing on year-to-year changes in EVA will be better for firms with substantial assets in place in mature industries with few growth opportunities. For firms with fewer assets in place and substantial growth opportunities, however, year-to-year changes in EVA are less likely to explain changes in firm value. This problem can be avoided by refocusing the firm on the present value of expected future EVA instead of year-to-year changes in EVA. However, doing this eliminates the simplicity of EVA (a primary reason for using EVA instead of NPV).

To capture the growth opportunities inherent in companies, managers also should focus on MVA. Because MVA is calculated using the market value of the firm's securities, it reflects the market's expectations of future opportunities of the firm. Using both EVA and MVA to evaluate performance allows companies to account for both the year-to-year and long term changes in value.

The empirical research of academics to date has been limited, and the results have been inconclusive. In a study of 241 firms over the period of 1987–1993, Kenneth Lehn and Anil Makhija (1996) found “that EVA and MVA are significantly positively correlated with stock price performance attesting to their effectiveness as performance measures.” (Lehn, K.; Makhija, A.K. 1996: 34-38). The James Dodd and Shimin Chen (1996) study

of 566 companies for the years 1983 –1992 showed (see chapter 6) that stock returns were correlated with EVA, but “the alignment is not nearly as perfect as suggested by recent articles” these authors also observed that residual income (RI) explained about the same variation as EVA and, therefore, similar stock returns will result from performance measurement systems using EVA and RI performance measurements. Therefore the adjustments to operating income necessary to calculate EVA may not pass a prudent cost-benefit analysis.

Relating an operation’s profit to its capital is not as innovative as EVA advocates believe it to be. It has long been a standing practice of performance measurement in management accounting.

7.4.3 The Three Dimensions of Financial Innovation Acceptability

Three dimensions of understanding are necessary before a financial innovation such as EVA can be termed acceptable.

The **first dimension** is the conceptual level among serious academic scholars who assert both its theoretical and empirical validity. The point for the academic is whether the innovation is a variant of existing practice, a mere fad or a verifiable breakthrough with lasting value.

The **second dimension** is the innovation’s practical applicability: does the concept work in the real world, is it limited to non-cyclical manufacturing firms or is it uniformly applicable across the business spectrum?

The **third dimension** is its acceptance by money managers and investment analysts as a tool for measuring performance and for making actual buy and sell decisions for client portfolios.

The question is therefore whether EVA fulfils these criteria. The answer is yes. The reason for its acceptance is that EVA and the ultimate criterion in accounting and finance, net present value (NPV), offer identical answers to value analysis, but EVA offers the added advantage of having a memory and therefore making it a contemporaneous, period-by-period measure of performance.

7.4.4 Other Performance Measures

Although this thesis concentrates solely on EVA, other performance measures do exist, such as NPV, Cash flow return on investment (CFROI), TRS (total returns to shareholders) and RI, to name just a few. CFROI is a rate of return measure calculated by dividing inflation-adjusted cash flow from the investment by the inflation-adjusted amount of cash investment. While CFROI does adjust for inflation, it fails to account for risk and the appropriate required return on the project. In a sense, CFROI is similar to the internal rate of return (IRR), therefore it measures the investment's return as opposed to the wealth created or destroyed by the investment.

EVA comes closest in theory and construct to NPV. The information requirements for both techniques are literally the same. For both techniques you need an appropriate risk-adjusted cost of capital. To determine the NPV of an investment decision, you need estimates of expected future cash flow. Similarly, to determine the economic value of the decision, you need the present value of the expected future EVAs that are based on expected future cash flows of the firm. Therefore, the NPV of an asset is simply the present value of the expected future EVA from the asset and the notion of increasing or maximising EVA each year is consistent with the goal of shareholder wealth maximising.

EVA will generally yield the same value as discounted future cash flow (FCF), but is fundamentally better because it clearly connects forward-looking valuation procedures with subsequent evaluations of performance. No other measure can do that.

7.5 Summary

While EVA is an evaluation of the companies internal performance, MVA is the best assessment of the external performance of a company. MVA is a significant summary assessment of corporate performance, one that shows how successful a company has been in allocating, managing, and re-deploying scarce resources to maximise the NPV of the enterprise and the wealth of its shareholders.

According to the 1999 ratings devised by Stern Stewart & Co. South Africa only 43% of companies in the Stern Stewart Top 200 ~~created wealth in 1999~~. However, an increasing number of South Africa companies have adopted innovative programmes to increase their EVA's in order to maximise returns to shareholders and boost their MVA's.

Continuous increases in EVA are rewarded with increases in MVA, while declining EVA is punished with declining MVA. Collectively, the results drawn from the study of this chapter suggest that EVA and MVA are effective performance measures that contain information about the quality of strategic decisions and serve as signals of strategic change.

Chapter 8

Findings of an empirical investigation of the present understanding and application of EVA by three selected large retail companies within South Africa

8.1 Introduction

This chapter describes how three selected large retail companies within South Africa, understand the concept of EVA and how these enterprises apply the EVA financial management system in their organisations. This information was obtained by means of an empirical investigation through personal interviews with senior managers (usually the financial managers) of these organisations. These interviews were conducted by means of a structured questionnaire based on the previous chapters. (See Appendix C for an example of the questionnaire). A pre-test of the questionnaire was done with Investec Bank Limited. The questionnaire was modified as a result of this interview. A total of three retail companies were chosen. These included; New Clicks Holdings Limited and the JD Group Limited who have fully implemented the EVA financial management system throughout the respective organisations and, Wooltru Limited who has implemented the management system at top management levels only.

This chapter provides background on each company included in the study. The EVA and MVA of the various retailers, as calculated in the Stern Stewart Top 200 Companies (See Appendix B) is also reported on. To facilitate the analysis of the questionnaire the chapter is divided into a further five main sections. The first section deals with the general EVA orientation within the chosen retail groups. The second section deals with performance related issues. This section provides insight as to what measures of financial performance the companies included in the study are using. The third section deals with managerial issues and seeks to establish how the EVA financial management system aids decision-

making. The fourth section deals with compensation incentive issues within these various companies. The fifth section deals with analysing the 'EVA-culture' within the groups concerned. The chapter is closed with a summary of the main findings of the empirical investigation.

8.2 Company Profile

This section provides an overview of all three retail groups included in the study.

8.2.1 JD Group

The JD Group is a mass consumer financier. It is South Africa's leading furniture and appliance retailer, operating through five chains that cover the spectrum of consumer needs. These chains include; Russells, Joshua Doore, Electric Express, Bradlows and Score/Price 'n Pride. The group is a global company and as of 1 July 1999, owns a 10% equity stake in a small chain of stores operating in Poland. It is listed on the Johannesburg Stock Exchange (JSE) in the Retail sector.

While each chain has its own identity, merchandise range and market profile, they all concentrate on offering customers a wide range of value for money, quality furniture, appliances and home entertainment and consumer finance products supported by a high level of personal service. The JD Group serves the mass market through 678 stores in urban and rural areas across Southern Africa, generating annual revenues in excess of R2,4 billion (1999), and an annual cash inflow of some R3 billion (1999) from trading activities.

The group is ranked 7th in the retail sector according to total market capitalisation on the JSE. It has a market capitalisation of R4 368 million. For the financial year of 1999 the group had a pre-tax profit of R345 million and a net profit of R278 million. In 1999 it had

an earnings per share (EPS) of 204 cents which was an increase of 21.8% on 1998 figures. The dividend per share (DPS) in 1999 was 62 cents. return on assets (ROA) was 13.9% and return on equity (ROE) was 19.1%. The gearing ratio for 1999 is 31.8%.

The JD Group is ranked number 28 on the Stern Stewart 200 Top Performance Companies for the year of 1999 (See Appendix B). It has increased its position from the 1998 ranking where it was positioned number 33. The company has destroyed wealth over the past year and has an EVA of negative R28 million for the year of 1998 (EVA figures for 1999 were not available at the time of writing and the 1999 ranking is therefore dependant on 1998 EVA results – see Appendix B). The company has an MVA of R1 235 million. The market value of the company is R3 286 million and total capital employed in the group amounts to R2 051 million. It has a profit index average (over the past 5 years) of 0.8. The group's beginning capital was R1 804 million. The company's NOPAT was R324 million for the year of 1998. For the financial year of 1998, the group's cost of capital was 19.5% and the corresponding return on capital was 17.9%. Furthermore, the 5-year average return on capital is 19.2% and the 5-year average actual capital growth of the company is 24.3%. The 5-year change in EVA and MVA is not available as the group only has returns reported using the EVA system for 4 years.

8.2.3 New Clicks Holdings Limited

New Clicks Holdings Limited, is an investment holding company. It is made up of businesses operating in the discount retailing of healthcare, beauty, home-ware and recorded music merchandise on a cash basis. The company is listed on the JSE, and its trading operations are currently spread throughout Southern Africa and Australia. The group has its origins in the Clicks chain.

New Clicks Holdings consists of six divisions comprising of 536 stores. The trading brands, or retail chains, of Clicks, Diskom and Priceline operate in the health, home and beauty market, Musica and the Compact Disc Warehouse make up the music retail

division, and the corporate services division provides a range of shared specialist support services to the trading division.

New Clicks is ranked 11th in the retail sector on the JSE according to total market capitalisation and has a corresponding market capitalisation of R2 289.8 million. The group had a turnover in the 1998 financial year of R2 342.2 million and a pre-tax profit of R120.2 million. Furthermore, the company reported a R96.3 million net profit in 1998. The Group reported an EPS of 34 cents and a DPS of 11 cents for 1998. The ROA was 10.5% and the ROE was 17.8% for the financial year ending September 1998.

New Clicks Holdings Limited is positioned at number 30 on the Stern Stewart Top 200 performance companies for the year of 1999 (See Appendix B). This is a significant increase from position number 48 in 1998. The Group's EVA for 1998 is R24 million (figures for 1999 not available at the time of writing and therefore the ranking for 1999 is based on 1998 EVA results – see Appendix B) and the 5-year change in EVA is R16 million. The MVA of the company for 1998 is R1 063 million and the 5-year MVA change is R445 million. The market value of the company is R1 753 million and the total capital employed in the company is R690 million. The group has a profit index (5-year average) of 1.1. The company's beginning capital was R479 million. The NOPAT of the firm in 1998 was R119 million. In 1998 the cost of capital for the Group was measured at 19.8% and the return on capital for that year was measured as 24.8%. The 5-year return on capital is 21.3% and, the 5-year average actual capital growth of the group is 31.0%.

8.2.3 Wooltru Limited

Wooltru is a leading retail and wholesale group, based in South Africa, invested in retail and retail related companies which operate 1,144 stores; trade through 39 franchised stores; trade through 491 outlets with 457 members through its buying group, Shield; and have invested in 93 stores in Zimbabwe through a minority investment in an associated company.

These stores are mainly in South Africa, but also in Swaziland, Lesotho, Botswana, Zimbabwe, Namibia, Kenya, Bahrain, Dubai, Mauritius, Australia, New Zealand, Singapore and the United States of America.

28 919 staff are employed in its trading divisions, as well as its property, finance and technology companies. Wooltru Limited consists of: Woolworths, Truworths International, Massmart, CNA, Affinity Logic, Topics, Wooltru Properties, and Wooltru Finance.

Wooltru is ranked 3rd in the retail sector of the JSE according to total market capitalisation with, a corresponding market capitalisation of R5 187.1 million. In 1998 the Group had a turnover of R13.6 billion and a pre-tax profit of R1.2 billion. The net profit for the same year was R291.4 million. The company had an EPS in 1998 of 74 cents and a DPS of 199 cents. ROA for 1998 was 18% and ROE was 23.2%.

Wooltru Limited is ranked number 29 according to the Stern Stewart Top 200 companies for 1999 (See Appendix B). This position is a significant decrease of the 1998 position of number 15. However, despite this downward movement, EVA for 1998 is reported to be an increase of R100 million (results for 1999 were not available at the time of writing and therefore the 1999 ranking is based on the 1998 EVA figures) and the 5-year change in EVA is an increase of R81 million. The MVA for the company is R1 202 million however, the 5-year change in MVA has been reported by the Stern Stewart Top 200 Performance Companies as negative R1 780 million. The market value of the group is R3 900 million and the total capital employed is R2 697 million. The 5-year average profit index is 1.3. The 5-year return on capital is 26.1% and the 5-year average capital growth is 19.9%. The company's beginning capital is R3 056 million and the 1998 NOPAT for the company was R729 million. In 1998 the cost of capital was 20.6% and the return on capital for that year was 23.8%.

8.3 Company EVA Orientation

This section concerns itself with determining the understanding and commitment of the EVA financial management system by the companies involved in the study.

A commitment to EVA should be backed by a commitment from the organisation, especially senior management, to the concepts and elements involving the EVA system. A method of observing such a commitment is answered by finding out how the company uses EVA, what priority the organisation places on the EVA policy and how the company defines EVA.

Both the JD Group and New Clicks have fully implemented the EVA financial management system proposed by Stern Stewart & Co. throughout the organisation. Wooltru however, has only implemented the EVA financial management system at senior management level.

The JD Group, New Clicks and Wooltru all define EVA as a measure of corporate performance that comes closer than any other to capturing true economic performance by subtracting a capital charge from the company's operating profits. The EVA calculation is believed to analyse whether a company is adding wealth to its shareholders or subtracting it. This is a universally accepted definition for EVA and it shows that senior management within all three of the companies understands the essence of EVA.

The JD Group and New Clicks use the measure for decision making, as a measurement aid and as an incentive based scheme aid. Therefore planning and budgeting, internal and external communications, setting goals, capital investment decisions and, acquisitions and divestitures decisions are all made using EVA as a benchmark. EVA issues are given

the highest level of priority within these two organisations. Wooltru in contrast uses EVA for decision making and most importantly as a measurement aid. The use of EVA in Wooltru is purely by the senior financial managers and not by any of the operating managers within the group.

The JD Group implemented the EVA financial management system in 1996 (4-years ago) and New Clicks implemented the system in 1995 (5-years ago). Wooltru implemented the financial management system in 1997 (3-years ago). A number of barriers needed to be overcome before the EVA system could be used as a financial management tool. The New Clicks group reported that all employees needed to be educated and trained with regard to the EVA financial management system. Education regarding this took place from top management to the lowest levels of decision-makers. Computer software needed to be adapted to facilitate the new financial management system. This resulted in major costs which needed to be substantiated before implementation of the measurement system could take place. These costs were substantiated when top management learnt that the EVA financial management system offered the company improved transparency as to whether the company or a division of the company was indeed adding shareholder wealth or destroying it.

Both New Clicks and the JD Group experience no barriers presently in using the EVA financial management system for performance assessment and other managerial functions because these companies both have had the system successfully implemented for a number of years. The reasons for the implementation of the EVA system by the JD Group and New Clicks is similar. Both companies believed that the fundamental reason for the implementation of the financial management system was that it would result in an improvement in the managing of the company for the long-term. Both companies were attracted to a measure that took into account the cost of capital. This is one of the main attractions to the EVA system.

8.4 Performance Related Issues – EVA as a Performance Measure

This section deals with determining what measures of financial performance the companies involved in the study use.

All three companies use EVA exclusively to measure financial performance. Wooltru reported that the biggest problem they associated with EVA as a financial performance measure was determining the company's weighted average cost of capital (WACC) accurately.

Despite the enthusiasm with which these companies embrace EVA, the financial statements do not report on the system. This shows that although these companies use EVA to measure value created or destroyed by management during a financial year and as a financial management tool, the concept is still not widely accepted in standard company financial reporting. All three companies accepted that because standard company financial reporting did not recognise the EVA concept, traditional measures including price earnings ratios (P/E's), EPS, and DPS were used in circular financial reports to shareholders. The short-comings of these traditional measures have been discussed in Chapter 4.

The most important reason to adopt EVA as the main corporate financial goal, is that it is the only measure to tie directly to intrinsic market value. The capital budgeting prescription to accept all positive net present value (NPV) projects is therefore restated as follows: accept all investment opportunities which will produce a positive discounted EVA. The financial management of all three-retail companies comprehends that maximising shareholder wealth, (i.e. maximising the respective companies EVA) is not the same as maximising the company's total value. The difference is that shareholder wealth is maximised only by maximising the difference between the firm's total value and the total capital that investors have committed to it. This difference is the company's

MVA. All three companies seem to have a clear understanding of the concepts of EVA and MVA and of how they essentially differ.

As a result of the top management of all three companies understanding the concepts of EVA and MVA, it can be further deduced that management understands that an increase in EVA will bring about an increase in the MVA of the respective company. Both EVA and MVA are measures that are used by New Clicks, the JD Group, and Wooltru to measure financial performance. However, the JD Group mentions a fundamental shortcoming of the MVA performance measure in South Africa. The reason for this shortcoming is that MVA can be used as a performance measure in efficient markets with a greater degree of success than in less than perfect markets. The JSE is not however efficient and the market takes time for information to filter through before it reacts. This results in a time lag and the performance measure loses its validity. This results in MVA being used successfully in efficient capital markets only, whereas EVA always works and is in no way dependent on the market mechanism.

8.5 Management Issues – EVA as a Management System

The most fundamental duty any manager has to perform is create value for the shareholders. There is good reason why value creation should be the number one rule – basic macro-economics and corporate finance theory promotes that the prime financial objective of any firm should be to maximise the wealth of shareholders. Managing for value has a number of spin-offs and serves the interests of society at large.

Corporate reports of the late nineties are filled with references to value. The quest for value is the corporate goal of this decade. The quest continues though as, not all of the strategies aimed to create value have succeeded. This section provides insight on whether the companies included in the study have managed their organisations using EVA to

create shareholder wealth. The section provides evidence that managing a company using the EVA financial management system results in better management throughout the organisation.

8.5.1 Determining the decision-making process within the organisation

Consistent answers were reported from all three respondents regarding company decision making. All staff members with any authority within the company (from top management to store management level) are in the position to make decisions regarding their immediate department. More important decisions, which affect shareholder wealth are made by the board of directors in all three of the companies. Deployment of scarce resources is done on a centralised and a decentralised basis depending on the value content of the resource in question.

The senior management of the companies involved were questioned as to whether decision-makers understood the Net Present Value (NPV) concept. This is an important question and it is vital that management understands this concept when dealing with EVA as a financial management system as EVA is the only performance measure that is entirely consistent with the standard capital budgeting rule. This rule accepts all positive and rejects all negative NPV investments. (EPS, on the other hand will increase so long as new capital investments earn anything more than the after-tax cost of borrowing, which is hardly an acceptable return). It appears that the management of the companies concerned in the study make decisions with the aim of increasing EVA and that decisions are made using EVA as the primary benchmark. This provides conclusive evidence that the NPV concept is well understood by the decision makers within the concerned organisations.

8.5.2 The Importance of Technology as a value-adding driver within the organisation

It was unanimously agreed by all the companies involved in the study that technology is a major EVA driver. Senior managers traditionally have a negative opinion of the relationship between information technology (IT) and business performance. They are often dissatisfied with the investments and practices of IT and fail to see the real benefit of technology within their organisation. However, with the implementation of the EVA financial management system, information needs to be gathered and distributed from all levels of the organisation before the company's EVA figure can be accurately calculated.

All three companies reported having an internal computer communication network ('intranet') which is used exclusively for communication between employees throughout the organisation. The New Clicks group reported that their intranet system, which has been implemented since inception of the EVA financial management system has meant fewer meetings as discussions and decisions are now mainly executed electronically. The group's retail mindset is focused clearly on supply chain management. As an ongoing strategy supply chain management complements EVA as it requires maximum efficient use of capital to obtain the desired return on investment. It is through managing the supply chain, with the focus on achieving increased stockturns, improved margins, operational efficiencies and cost controls that the group will achieve its primary aim of increasing EVA. In pursuit of the goal of just-in-time inventory, the group is moving towards centralised distribution and automatic stock replenishment. The supply chain management programme has now evolved to the stage where projects generated by it now have a momentum of their own, pointing to an important and growing link between the groups staff and the way they are using technology.

The JD Group goes one step further than the New Clicks group and mentions that for value to be truly added in an organisation, knowledge within the organisation needs to be

effectively managed. According to the JD Group, knowledge management is a management discipline that treats intellectual capital as a managed asset. The primary tools applied in knowledge management are organisational dynamics, process engineering and technology. These work together within the JD Group to streamline and enhance the capture and flow of the organisation's data, information and knowledge and to deliver it to individuals and groups engaged in accomplishing specific tasks. Knowledge management principles are used to sift out what is important. According to the group these individuals are the most vital resource in the company. The primary goal of knowledge management is to deliver the intellectual capacity of the firm to the individual knowledge workers who make the day-to-day decisions that ultimately determine the EVA added or subtracted to the business. Knowledge management is therefore about partnering technology with a corporate culture and business processes and using it as a vehicle to manage and deliver the business information and the expertise of fellow workers to the most fundamental driver of value; the knowledge worker.

All three companies believe that the technology network within the business referred to as a Digital Nervous System (DNS) by Microsoft, enables their businesses to act and react speedily, making them more effective in the market place and therefore able to add more economic value to the organisation. A DNS is not a technology even though technology does enable one. It is a process of managing information throughout an organisation effectively, at high speed. All three retail companies involved in the study acknowledge that technology has positively affected the business performance of their company thereby adding EVA and, is a vital element in the EVA financial management framework.

In order to continue to improve EVA, companies need to understand and interpret information. This ensures that scarce resources are allocated in such a way that EVA is not destroyed. However, for this to happen information needs to be effectively managed. In the past a company's worth would have been measured by its tangible assets. These days a more accurate measure is information, which is considered by many executives to be a true barometer of an organisation's worth. The real value of information lies in how

it is used. The critical processes for every enterprise involves capturing the daily flood of data about markets, customers, competitors, consumer trends and internal processes. Data must be stored and organised so that employees can access it easily and intuitively and act upon the findings effortlessly. This has been made possible through knowledge management solutions created through the concept of the DNS.

Technology as shown above, has greatly aided these companies in improving EVA. Senior management throughout all three organisations understands that technology is a major EVA driver.

8.5.3 Other Value-drivers introduced by Management

Despite the acceptance that technology is one of the major EVA drivers, the New Clicks group pointed out a number of core business improvements which they have implemented and believe to be EVA drivers. These include projects designed to improve or revitalise aspects of the existing business in pursuit of EVA. Such projects include customer loyalty programmes, exclusive brand development and improved store formats.

Exclusive brand development is achieving steady improvements in operating margins which is paramount to the increase in EVA. The group believes that there is an on-going potential for further development in exclusive brands, especially with regard to health products. The trend is towards smaller-format stores with higher trading densities. These add new life to a trading brand and can generally be rolled out faster. The Clicks ClubCard loyalty programme, a savings card which rewards customer loyalty, is one of the most successful customer retention programmes of its kind. It was introduced in 1996 at a time when many competitors opted for private label credit cards, the ClubCard is a classic example of how information from technology can be used in powerful business applications, such as direct marketing and data mining. The group believes that the ClubCard loyalty programme has lifted the base of their business onto a new level and

added significant value to the company. The ClubCard currently has 1.8 million members.

8.5.4 Organisation Investment Decisions

Future company capital investments are all analysed on the basis of the economic value which they could add to the company. It was found that throughout these companies the benchmark used in determining whether capital investments were executed or not was determined on whether the investment would result in a positive impact on the companies' EVA. Despite the fact that the impact on EVA is one of the primary concerns, it is not the only measure used in analysing an investment project. The more traditional measures of net present value (NPV) and internal rate of return (IRR) are measures that are used in conjunction with EVA in the New Clicks and Wooltru groups. Wooltru also uses other measures including: calculating the contribution to earnings that a project/acquisition makes, the impact on headline earnings and the impact that the project/acquisition has on EPS. Wooltru mentioned that these are the present measures used and that it did intend in future to use the EVA benchmark exclusively. The JD Group uses EVA exclusively for decisions regarding future capital investments and believes that this is effective and leads to fewer complications as one performance measurement is used instead of an array.

According to New Clicks, EVA analysis has also been crucial in evaluating potential acquisitions (so far no major ones have passed the test) as well as the feasibility of the group's internal expansion plans. The JD Group also uses the EVA model to determine whether or not potential acquisitions are advisable. However, the effect of potential acquisitions on the EVA over a period of three years as a benchmark in determining whether or not the capital expenditure is indeed desirable is used. The balance sheet is also considered before capital investments are made as the companies in question are forced to keep track of their gearing ratios. A company's gearing ratio is determined by taking the company's net interest bearing debt and dividing it by shareholders funds. All

three companies have a gearing ratio presently below 32% (JD Group: 31.8% (1999), New Clicks: 25 % (1999), Wooltru 26%(1999)).

From the above comments, it stands to reason that all the companies in the study understand the essence of the EVA model and the importance of relating it to future capital expenditure.

8.5.5 Adjustments to GAAP Financial Statements in Calculating EVA

Should GAAP distort the measurement of capital or operating income, it is adjusted as necessary. The logic behind these adjustments is that when companies apply GAAP, certain items are charged to income, which misleadingly reduce stated capital. Unless these charges are restored to equity, capital charges will be understated and operating income will be misstated. In computing the rate of return, these adjustments are added to capital and the period-to-period change is taken into NOPAT. The adjustments turn capital into a more accurate measure of the base upon which investors expect their returns to accrue and make NOPAT a more realistic measure of the actual cash yield generated for investors from recurring business activities. In doing this research, it was vital to determine whether the companies involved made particular adjustments to more realistically calculate operating income and measure capital.

According to Stern Stewart & Co. a possible 160 adjustments exist but most companies make between five and fifteen adjustments. All three respondents were of the impression that the amount of adjustments made varied from year to year but that the average annual number of adjustments made to the GAAP statements to more realistically determine capital charges and operating income was between five and seven. The respondents mentioned that the key to using EVA was its simplicity and that too many adjustments would overcomplicate the measure. It must be emphasised that the EVA measure is somewhat simplified in practise in these companies and involves far less detail than the model presented in the literature review. The reasoning behind simplifying the model is

best explained by the New Clicks group. They believe that by implementing the EVA financial management system everybody who works in the company needs to understand the mechanics behind the actual calculation. Fewer adjustments results in less complication and greater understanding amongst management at all levels throughout the company. Greater understanding of the measure results in a greater commitment to the actual improvement of the company's EVA.

All the respondents make adjustments for interest expenses, leases, goodwill, gain/loss on asset sales, restructuring costs and employee training. The New Clicks group reported making further adjustments for: operating leases, marketing and advertising, R&D expenses and investment income. The JD Group makes further adjustments for: accrued wages, marketing and advertising, warranty reserve and joint ventures. Wooltru reported making additional adjustments to sales returns and intangible investments to better reflect value creation and to motivate the right value creating behaviour.

According to the companies included in the study, the adjustments are made following the guidelines presented by Stern Stewart & Co. These guidelines can be summarised as follows:

- **Material:** Is the adjustment financially significant, or will it be in future?
- **Motivational Impact:** Does the adjustment encourage behaviour which will enhance EVA and highlight accountability?
- **Data Availability:** Is the necessary information available in a cost efficient manner?
- **Understandable:** Can managers understand the nature of the adjustment with reasonable levels of training?

The retail groups involved in the analysis all confirmed that the primary guideline for the making of an adjustment was whether it made sense according to basic principles of EVA i.e. whether the adjustment encourages behaviour which will enhance EVA and highlight accountability. The adjustments that are made by the company need to account for a more accurate EVA calculation, because the very essence of EVA is to highlight transparency. It is fundamental that the EVA calculation is kept basic and that it be used as a tool to

motivate everybody in the company. The adjustments must therefore be made keeping this factor in mind. These factors seem to be well understood by the senior management of the companies involved in the study and the primary reasons behind making these adjustments according to the JD Group is to minimise the opportunities for management to manipulate reported performance and to separate operating from non-operating and financing items.

8.5.6 The Division of a Company into Independent EVA Units

For the successful implementation of an EVA financial management system, an optimal structure of EVA units must exist. EVA centres are units or sub-units for which EVA will be measured and managed on an ongoing basis. The consolidated company is the ultimate EVA centre, and the aim is to increase EVA at that level as much as possible. Separating a company into cascading layers of EVA centres improves the line of sight of its managers and forges a closer link between decision and outcome.

Both New Clicks and the JD Group are well aware of the positive implications associated with dividing the entire company into individual EVA business units. The JD Group has divided the company up into EVA units from top management level all the way down to store management level. In total fourteen (14) EVA units exist and these units make up the entire Group. The company divides the group up into EVA units which make business sense for all practical uses of the EVA financial management system.

The New Clicks group, in contrast to the JD Group, has a clear strategy for dividing the group into individual EVA business units. Five categories of these units exist within each sub-group (i.e. subsidiary) of the group. Therefore five categories of EVA business units exist in the Clicks group, five in the Diskom group, five in the Priceline group, and five categories in the Music group. Twenty (20) EVA business units in total exist in the New Clicks group. The EVA units are listed below with an explanation of the composition of each:

Store: Each store is considered an EVA business unit.

Region: A region comprises of 4-6 stores and is treated as an EVA business unit

Area: An area consists of 4 or 5 regions and is treated as an EVA business unit.

Chain: A chain consists of 4 or 5 areas and is treated as an EVA business unit.

Group: A Group consists of 4 or 5 chains and is treated as an EVA business unit.

Since early 1995, management within the New Clicks group has been setting EVA targets for each of the company's twenty business units as well as for the group as a whole. In many cases, EVA targeting goes down to sub-divisions within an EVA business unit.

Wooltru group, in contrast to the JD Group and New Clicks, is not separated into layers of these units. Senior management realises that there are significant advantages in dividing the group into various units and again management intends to implement EVA business units within the operating divisions of the organisation.

Both the JD Group and the New Clicks group reported that managers of each EVA business unit receive monthly EVA reports, tracking performance against the target of the month, the year to date, and the prior year. Both companies believe that managers in each EVA business unit understand the utility of EVA as, it performs the duties of acting as a balance sheet and operating measure all in one. Continuous improvement and teamwork between interfacing units is vital for increasing the EVA in these two groups of companies. The staff members within the JD Group and New Clicks organisations are becoming increasingly aware of the drivers of EVA. Accordingly, there is better understanding of the business across the board of activities and the focus of the teams within the organisations has intensified. This results in a strong understanding of the implications of one EVA business unit on another which means that different EVA business units are now understanding the concept of improving performance by working together towards one common goal – the creation of economic value for the organisation as a whole.

8.6 Compensation Incentives – EVA as a Motivator

This section investigates whether the companies involved in the study understand the essence behind giving managers a bonus that is a share of the EVA added to the company over a financial period.

The study questioned the participants as to whether bonuses were devised using traditional budgets or whether managers received bonuses based on EVA. Both the JD Group and New Clicks reported that EVA is the performance measure used in determining managerial incentive schemes. The JD Group emphasised EVA was the broad basis on which incentive schemes were based because it promoted consistency which is vital when devising incentive schemes. EVA as well as share incentive schemes are used as measures to motivate employees throughout the groups. Wooltru reported using traditional budgets for bonuses determined largely by the performance of the business unit itself, measured in operating profits, with some additional weighting for overall corporate results. The alignment in this plan is failing because earnings make no provision for the opportunity cost of equity capital and the impact of balance sheet management on true bottom line, with the result that some actions that increase accounting earnings actually destroy shareholder wealth.

The EVA incentive system covers all salaried staff in the companies of the JD Group and New Clicks. This means that everybody within the organisation is dependant on whether or not value is created in the organisation. In 1995 New Clicks began its EVA incentive system. Senior management reported that some operating managers were sceptical about the move to EVA. Operating managers had learned how to succeed under the old system, which used after-tax earnings as the internal performance measure. The new system was seen as a threat. Because of this uncertainty with which managers viewed the new

method, New Clicks let its operating managers take whichever bonus proved to be higher in 1995 (whether it be the EVA bonus or their bonus under the old system). Top level management did not have a choice, they went on EVA. As it turned out, the EVA bonus paid far more than the old incentive compensation. Because of the EVA's acceptance, a performance bonus system based on EVA has been extended to everyone in the group.

The JD Group and New Clicks point out that the concept of being a stakeholder, that is of being responsible for and rewarded for adding economic value, is catching on right through the organisation. By using EVA bonus based incentives and EVA as a measure of performance, they solidly align the goals with the creation of shareholder wealth.

EVA offers a means of measurement and communicating performance. The JD Group and New Clicks communicate such information on a monthly basis throughout the organisation. Presentations are made showing EVA creation to all members of the organisation. New Clicks reports that technology aids this process tremendously as a number of employees receive this information electronically via the internal company communication network.

In theory, an EVA bonus plan makes managers one hundred percent accountable for the wealth created or destroyed within their particular business unit (Ehrbar, A. 1998). This means that if the EVA of a particular business unit is destroyed, (e.g. by a loss in the disposal of a fixed asset) this affects the economic value of the business unit and as a result EVA is destroyed. Therefore, there is an incentive compensation for what managers are directly accountable for and what they are not directly accountable for. The JD Group and New Clicks have incentives based on the above theoretical framework and emphasise that managers in their organisations know that the only way they can make themselves better off is by creating more wealth for the shareholders. They also know that they will share in any wealth they do create.

Managers of the JD Group and New Clicks get an unlimited share of EVA improvements, but bonuses can also be negative. The absence of bonus caps is made

possible by holding back part of the bonus earned in very good years and making it subject to loss if EVA subsequently falls. This ‘holding back part of the bonus’ is the function performed by the ‘Bonus-Bank’, and ensures that managers collect bonuses only for sustained improvements in EVA. The ‘Bonus-Banking’ principal is a mechanism which lengthens the planning horizons of managers, since they know that ensuring short-term performance will not do them any good if it harms longer-term results. Banking levels out bonus payments in that employee’s build up bank balances in good years and draw down on them in poor years. Every employee is subject to this ‘banking mechanism’ in the New Clicks group but in the JD Group only managers at the highest corporate level adhere to the principle. The JD Group proclaims that the ‘bonus-bank’ acts as a set of “golden-handcuffs” for highly successful managers because any uncollected bank balance is forfeited if a manager resigns. This “banking” feature genuinely having something at risk, is what the New Clicks and the JD Group believes transforms managers into owners. Because Wooltru does not use an EVA incentive compensation scheme, the above principle does not apply.

An important aspect of EVA incentive systems is that performance targets are set according to a formula. Therefore, managers in New Clicks and the JD Group earn their target bonus when the Rand increase in EVA is equal to an expected improvement. This is similar to the performance target in conventional plans, but with two crucial differences. Firstly, the annual amount expected improvement typically is present for periods for five years instead of being negotiated annually. Secondly, the base to which expected improvement is added is automatically reset up or down each year in line with actual experience. The bonus formula that the JD Group and New Clicks use states that, the EVA target is the EVA generated in the prior year. Therefore, if EVA is just maintained at its current level, the managers will earn a target bonus each year. This is very fair because EVA may not be growing even though the business is. If EVA rises, managers will qualify for an exceptionally good bonus. By doing so they also force the EVA target to be reset that much higher for the next year.

As mentioned before, all employees in the JD Group have their bonuses determined by EVA and therefore one hundred percent of their bonus is variable. In the New Clicks Group however, although all employees are subject to bonuses based on EVA, the higher the management level the higher the stakes of having something at risk. Top management level has bonuses that are one hundred percent dependant on EVA and therefore their bonuses are totally variable. Lower levels of employees however, have 70% of their bonuses dependant on company EVA performance (and therefore variable) and 30% of the bonus is fixed. The interests of all stakeholders are aligned because a performance bonus system based on economic value has been extended to everyone in the groups of New Clicks and the JD Group. At Wooltru, all employees have their bonuses based on company performance, however company performance is based on budgets and not EVA.

The JD Group and New Clicks wholeheartedly believe that their incentive schemes based on EVA ultimately lead to the attraction, retention and motivation of key executives which are vital for adding economic value to an organisation. Wooltru believes that their incentive schemes which involve stock options and other equity-linked compensation devices are equally attractive in attracting, retaining and motivating key executives however, the interests of all stakeholders are not as effectively aligned as they are in the New Clicks group and the JD Group, emphasising the advantages of the EVA incentive based bonus plans.

What every company wants is a culture of continuous improvement, responsibility, and accountability. Enlightened companies want their employees to feel involved, to be creative, and to welcome change. Companies want to instil an ownership culture that eliminates the need to constantly control behaviour from higher management levels. To achieve this New Clicks and the JD Group have implemented EVA incentive based bonus plans, which they believe, objectively, predictably and continuously rewards managers for creating shareholder wealth and penalises them for destroying it.

8.7 EVA as a Mindset

For an EVA financial management system to be truly successful, a value-adding culture must exist within the organisation, where each and every employee understands the essence of EVA and realises how he can positively influence it within the organisation. There is no use of having an innovative financial measurement implemented within an organisation if the employees do not know how it works.

The concept of EVA needs to be simplified so that even the most junior employees within the organisation understand the essence of adding economic value, only then does an EVA culture exist within the organisation. Both the JD Group and New Clicks reported that the development of an EVA culture within the organisation has been a major factor ascribing to the success of the EVA financial management system within those organisations. This culture has been created by simplifying the essence of EVA and applying it throughout the organisation by training all staff to think in terms of creating economic value. A great deal of resources are spent on teambuilding and the joint processing of decisions and issues throughout both organisations. The companies believe that the net result is an unleashing of creativity and initiative at all levels throughout the organisation, which in turn results in a value adding culture throughout the organisation.

People development is another important element of organisational development throughout both organisations. Both New Clicks and the JD Group see people development as a wide-ranging, ongoing process. These organisations define people development as equipping staff with the necessary skills and resources to do the job of creating value, but equally important providing the correct environment for them to develop themselves. The management style encourages this approach as it is based on involvement, respect and devolution of power. Within the JD Group managers as well as lower ranking employees are all empowered by giving them a balance sheet to manage and, as a result increase the organisation's EVA by improving the balance sheet which

they are assigned to manage. This concludes that the employees in the organisation are becoming increasingly aware of the drivers of EVA.

The JD Group and New Clicks continuously set up workshops and training programmes to keep employees focussed on creating economic value. It is vital that all employees throughout the organisation understand the concept of EVA and the affects that they personally can have on it. The New Clicks group reported that conflict in corporate culture between different sub-units negatively affected value creation. Sub-units of the group often develop their own corporate culture. This becomes a problem when the main goal of the entire group (i.e. EVA) is jeopardised. It therefore becomes vital that all the sub-units within the group completely understand that the goal of increasing EVA is the central purpose of operation. To ensure that all sub-units have the same understanding, a philosophy referred to by the group as 'hands and brains' was implemented. This philosophy encourages suggestions and debates by employees. The programme consisted of three legs:

1. A change in sub-group leadership occurred.
2. A change of agents within the organisation occurred – this resulted in people emitting positiveness and not negativness (this process brought about the same desired results as leg 1 above however, it is associated with lower management levels).
3. Live television conferences to entire staff body.

Leg three involves top management within New Clicks emitting a live television broadcast on a monthly basis, to all employees of the entire group. This broadcast divulges all group information pertaining to EVA. Through this live television broadcast all employees are informed as to exactly how the group as a whole is performing against the monthly EVA target. This broadcast encourages employees to make suggestions and therefore results in greater participation at a strategic level. Furthermore, this exercise results in the ironing-out of problems associated with different cultures within the same group. Employees begin to see more clearly that different business units within the group are partners and not rivals. Synergies between companies within the business group have a number of important advantages in creating group EVA. This exercise clearly illustrates

this concept to all employees and creates a culture with an obsessive need to communicate.

Wooltru, in contrast to the other two companies does not have an EVA culture. The only employees that receive formal training involving the mechanics of EVA are the top financial managers, this is because EVA is an issue that only top management level deals with. The top financial team at Wooltru consists of four key members. These members have all undergone a formal theoretical training course however, they are the only members within the organisation who understand the essence and mechanics of EVA. The only communication of EVA changes within the group exists at board level. This results in a far more 'closed' organisation where managers and employees are less informed. It would appear that the culture within Wooltru is such that issues involving value creation are only matters concerning the highest management level. Employees are uninformed and uneducated as to what exactly EVA is and how it could directly influence them.

8.8 Summary

This chapter served to focus on the present understanding and application of the EVA financial management system by three selected large retail groups (New Clicks Ltd, JD Group Ltd, and Wooltru Ltd.) within South Africa. This was done by focussing on five separate aspects concerning the system, namely: the general EVA orientation within the chosen retail groups, financial performance measures used, group managerial practices and issues, compensation incentive issues and an analysis of the EVA-culture within the selected groups.

All three retail groups define EVA as a measure of corporate performance that comes closer than any other to capturing true economic performance by subtracting a capital

charge from the company's operating profits. This is a universally accepted definition for EVA and it shows that senior management within all the companies understands the essence of EVA. Both the JD Group and New Clicks have fully implemented the financial management system throughout all levels of the organisation. Wooltru has only implemented the management system at senior management level. This indicates that although the management system is used by all three retail groups, greater priority is given to EVA financial management issues in the JD Group and New Clicks than in the Wooltru group. This concludes that the goal of EVA (i.e. greater shareholder wealth creation) is reached with greater ease in the JD Group and New Clicks.

All three companies reported using EVA and MVA exclusively to measure financial performance. They have a clear understanding of how these concepts differ.

The third section of the study provided insight into how the companies have managed their organisations with the aim of improving EVA. It appears that managerial decisions are made using EVA as the primary benchmark. Technology has greatly aided these companies in improving EVA and is seen as a major EVA driver. The benchmark used in determining whether capital investments were executed or not was determined on whether the investment would result in a positive impact on the EVA of the company in question. Despite the fact that the impact on EVA is the primary concern, it is not the only measure used in analysing an investment project. The more traditional measures of NPV and IRR are measures used in conjunction with EVA in New Clicks and Wooltru. The JD Group uses EVA exclusively in determining whether projects are executed or not as it believes in using one performance measure in deciding on capital investments as opposed to an array. Wooltru also reported using measures including: the investments contribution to earnings, the impact on headline earnings and the impact on earnings per share. New Clicks and the JD Group divide the entire group into independent EVA business units. The sole purpose of this is to manage the entire company through smaller units. This provides for greater transparency throughout the organisation, and indicates whether particular units are creating wealth or destroying it.

The fourth section of the questionnaire dealt with issues relating to aspects of compensation incentives. A major initiative of the EVA financial management system is to revitalise and redirect managerial incentives. The EVA incentive bonus system covers all salaried staff in the companies of the JD Group and New Clicks. This means that everybody within these organisations is dependant on whether or not value is created in the organisation. The concept of being a stakeholder is catching on right through these organisations. By using EVA bonus based incentives and EVA as a measure of performance, they align the goals with the creation of shareholder wealth. Wooltru, uses traditional budgets for bonuses determined largely by the performance of the business unit itself, measured in operating profits, with some additional weighting for overall corporate results. The alignment in this plan is failing because, earnings make no provision for the opportunity cost of equity capital and the impact of balance sheet management on true bottom line, with the result that some actions that increase accounting earnings actually destroy shareholder wealth.

For an EVA financial management system to be truly successful, a value-adding culture must exist within the organisation, where every employee understands the essence of EVA and realises how he can positively influence it within the organisation. Both the JD Group and New Clicks report that the development of an EVA culture within the organisation has been a major factor ascribing to the success of the EVA financial management system within those organisations. The result of creating an EVA culture throughout the organisation is an unleashing of creativity and initiative at all levels throughout the organisation. Wooltru, does not have an EVA culture, because EVA is an issue that only top management level deals with. The only employees that receive formal training involving the essence of EVA are the top financial managers. This negatively impacts the benefits of managing the company using the EVA financial management system.

The EVA financial management system is a means of managing a company with the sole intention of creating shareholder wealth. This system is the key to creating real wealth

but for this to occur, it needs to be entrenched throughout the organisation and all employees, not just senior management must be aware of the value-adding drivers.

Chapter 9

Summary, conclusions and recommendations

9.1 Introduction

The final chapter comprises of three sections. The first section provides a summary of the various chapters of this study, in which the main findings are given. The second section comprises a number of conclusions drawn from the literature and empirical investigation. The third and final section entails a number of recommendations for further study and practical EVA financial management implementation.

9.2 Summary

The summary of the study is given in order of the chapters.

9.2.1 Introduction

Basic corporate finance and microeconomic theory indicate that the primary financial directive of any firm ought to be to maximise the wealth of the shareholders. EVA is about looking at the value created by the company instead of just the profits. The organisation that fails to take this relatively new performance measure into account could be destroying shareholder wealth without even realising it. Based on this background this study was undertaken to examine EVA and the practical implementation thereof in three selected large retail groups within South Africa.

9.2.2 EVA Background and Analysis

This chapter introduced the concept of EVA and provided some insight into the background and history. It indicated that EVA as a financial performance measure has received great praise and acceptance from the business press as well as from hundreds of companies, including many multi-national companies throughout the world. EVA represents a genuine revolution in management because it is a new and fundamentally better answer to the age-old problem of how to align the interests of agents with principles, of how to bind managers and employees to the will of shareholders.

EVA is similar to conventional measures of profit but with two important differences: EVA considers the cost of capital and it is not constrained by the generally accepted accounting principles (GAAP) that govern corporate financial reporting. EVA corrects possible distortions caused by GAAP and therefore the user can abandon any accounting principles that are viewed as distorting the measurement of wealth creation. EVA is *not* another form of downsizing or the financial version of re-engineering. It is a fundamental way of measuring and managing corporate performance. Implementing the financial measurement system often results in a number of challenges. To implement EVA properly, it must be kept simple and accountable. To make it simple it must become the focal point for managing the business.

9.2.3 The EVA Calculation

This chapter explains the mechanics involving the EVA calculation. EVA is a company's after tax profits from operations minus the cost of capital to produce those profits. The concept of EVA is so revealing because it takes into account a factor no other conventional measures include: the cost of operating capital – not just the cost of debt but the cost of equity as well. To accurately calculate a company's EVA a number of adjustments need to be made to the company's GAAP financial statements. Interest

expense is treated as a non-operating expense in the EVA calculation. It is removed from the NOPAT calculation since the interest is related to financing activities and therefore shown in the cost of capital. Interest income is generally included in NOPAT because it is offset by a charge on the cash on the balance sheet that generates the interest. EVA uses gross accounts receivable and recognises only actual write-downs due to defaults not accrued bad debt expense. In doing an adjustment for this, the actual write-downs of receivables correlates with what is in NOPAT. At the same time gross receivables is used to calculate the capital charge. Amortisation of goodwill is not incorporated for EVA calculations. Stern and Stewart's most radical departure from GAAP is the treatment of gains and losses on disposals. For Stern and Stewart, the focus is on the entity's total 'invested capital' and not on the corresponding component assets. This is a radical departure from GAAP. Extraordinary items, such as plant close downs and restructuring costs that occur on a once-off basis, and that are expected to yield benefits in the future, are treated not as an operating expense in the current period, but rather as an investment (or disinvestment) in the business.

A comprehensive example is included which numerically shows all the adjustments made to correctly calculate EVA.

9.2.4 EVA: The Essence of a Good Financial Performance Measure

This chapter provided an overview into the understanding of what a good financial performance measure entails. The chapter further revealed that EVA is indeed the essence of a good performance measure. EVA measures more important financial elements and can tell management more than other performance measures. Many companies are using a number of measures to express financial goals and objectives. EVA eliminates this confusion by using a single financial measure that links all decision making with a common focus. It is a concept that can be implemented in virtually every type of company.

Despite the enthusiasm with which many companies have embraced EVA, it is not a new idea. EVA is basically a variant of Residual Income (RI), however RI is criticised for a number of reasons whereas EVA corrects these earlier criticisms launched at RI. Earnings, EPS, and earnings growth are misleading measures of corporate performance and EVA fulfils a number of their shortfalls. Earnings are diminished by accounting entries that have nothing to do with recurring cash flow, and are charged with such value-building capital outlays as R&D, all in an attempt to win over lenders' desire to assess liquidation value. EPS at best measures only the quantity of earnings, but the quality of earnings reflected in the P/E multiple matters, too. Quick earnings growth can be manufactured by pouring capital into substandard projects, but earning an adequate return is far more important than growing quickly.

Paying dividends does not enhance the total return received by investors over a period of time but paying dividends may deprive worthwhile projects of capital or force the company to incur unnecessary transaction costs, and because boards of directors usually loathe to cut the dividend except in the most dire circumstances, dividends become an additional and unnecessary fixed cost of running the business. Returning excess cash through periodic share repurchases, or a large, one-time, special dividend is likely to be more rewarding than paying out a stream of dividends over a period of time.

9.2.5 The EVA Incentive Plan

EVA has tremendous potential to drive performance. The way in which a company incorporates EVA into an incentive plan (i.e. having bonuses based on the contribution to a company's EVA) and the degree to which it takes the characteristics of its people – both senior management and lower level workers – into account is critical. Every company needs an incentive system that clearly, objectively, predictably, and continuously rewards managers for creating shareholder wealth and penalises them for destroying it. This is precisely what the EVA incentive plans do.

9.2.6 EVA's correlation with Stock Prices

It has been asserted that stock-prices and EVA show a remarkable tendency to move up and down together. However, studies reviewed for the purpose of this chapter reveal conflicting result and Chen and Dodd (1997) claim that although improving EVA measures will likely lead to a better stock return, the payoff may not be as desirable as promised by EVA supporters.

9.2.7 Market Value Added (MVA) and comparison with EVA

This chapter revealed that whilst EVA is an evaluation of a company's internal performance, MVA is the best assessment of the external performance of a company. MVA is a significant summary assessment of corporate performance, one that shows how successful a company has been in allocating, managing, and re-deploying scarce resources to maximise the NPV of the enterprise and the wealth of its shareholders.

Continuous increases in EVA are rewarded with increases in MVA, while declining EVA is punished with declining MVA. Collectively, the results drawn from the study of this chapter suggest that used together, EVA and MVA are effective performance measures that contain information about the quality of strategic decisions and serve as signals of strategic change.

9.2.8 EVA Financial Management: Empirical results

In this chapter an analysis was provided of how three (New Clicks Ltd, JD Group Ltd, and Wooltru Ltd.) selected groups in the retail industry of South Africa, understand the

concept of EVA and how these organisations apply the EVA financial management system in their organisations.

All three retail groups define EVA as a measure of corporate performance that comes closer than any other to capturing true economic performance by subtracting a capital charge from the company's operating profits. This is a universally accepted definition for EVA and it shows that senior management within all the companies understands the essence of EVA. Both the JD Group and New Clicks have fully implemented the EVA financial management system throughout all levels of the organisation. Wooltru however, has only implemented the management system at senior management level. This indicates that although the management system is used by all three retail groups, greater priority is given to EVA financial management issues in the JD Group and New Clicks than in the Wooltru group. This concludes that the goals of EVA (i.e. greater shareholder wealth creation) are reached with greater ease in the JD Group and New Clicks.

It appears that managerial decisions are made using EVA as the primary benchmark throughout all three of the groups. Technology has greatly aided these companies in improving EVA and is seen as a major EVA driver. The benchmark used in determining whether capital investments were executed or not was determined on whether the investment would result in a positive impact on the EVA of the company in question. Despite the fact that the impact on EVA is the primary concern, it is not the only measure used in analysing an investment project. The more traditional measures of NPV and IRR are measures used in conjunction with EVA in New Clicks and Wooltru. The JD Group uses EVA exclusively in determining whether projects are executed or not as it believes in using one performance measure in deciding on capital investments as opposed to an array. New Clicks and the JD Group divide the entire group into independent EVA business units. The sole purpose of this is to manage the entire company through smaller units. This provides for greater transparency throughout the organisation, and indicates whether particular units are creating wealth or destroying it.

A major initiative of the EVA financial management system is to revitalise and redirect managerial incentives. The EVA incentive bonus system covers all salaried staff in the companies of the JD Group and New Clicks. This means that everybody within these organisations is dependant on whether value is created in the organisation. The concept of being a stakeholder, genuinely having something at risk, has caught on right through these organisations. By using EVA bonus plans in conjunction with EVA as a measure of performance, they solidly align the goals with shareholder wealth. Wooltru uses traditional budgets for bonuses determined largely by the performance of the business unit itself, measured in operating profits with some additional weighting for overall corporate results. The alignment in this plan is failing because earnings make no provision for the opportunity cost of equity capital and the impact of balance sheet management on true bottom line, with the result that some actions that increase accounting earnings actually destroy shareholder wealth.

For an EVA financial management system to be truly successful, a value-adding culture must exist within the organisation, where every employee understands the essence of EVA and realises how he can positively influence it within the organisation. The JD Group and New Clicks report that the development of an EVA culture within the organisation has been a major factor leading to the success of the EVA financial management system within those organisations. The result of creating an EVA culture throughout the organisation is an unleashing of creativity and initiative at all levels throughout the organisation. Wooltru does not have an EVA culture because this is an issue that only top level management deals with.

9.3 Conclusions

The major conclusions of the study include:

- All three companies have a good understanding of EVA and realise that their most important goal must be to increase their companies' EVA. The companies included in the research understand the short-comings of traditional performance measures including: EPS, earnings, earnings growth, and dividends, and therefore do not use these measures when analysing the financial performance of their companies.
- As a result of the JD Group and New Clicks having fully implemented the EVA financial management system throughout the organisation, the company is able to set goals, allocate capital, evaluate performance and determine bonuses using EVA as a benchmark. This means that all actions are performed with the sole intention of increasing the company's EVA. Wooltru has only implemented the management system at senior management level and as a result, the organisation is less focused on making business decisions that purely improve EVA.
- Despite the enthusiasm with which these companies embrace EVA, the financial statements do not report on the measure. This shows that although these companies use EVA as the measure of wealth created or destroyed by management during a financial year and as a financial management tool, the concept is still not widely accepted in standard company financial reporting. This detracts from the acceptance of the financial performance measure as shareholders are not informed of value created or destroyed over a financial year by the company.
- All three companies have a good understanding of the concept of MVA and how it essentially differs from EVA. The companies included in the study use both MVA and EVA as measures of performance. MVA does have one short-coming in the South African market. The market is not totally efficient and therefore time-lags exist which detract from the validity of the concept as a performance measure.
- In order to continue to improve EVA, companies need to understand and interpret information. This ensures that scarce resources are allocated in such a way that EVA is not destroyed. For this to happen information needs to be effectively managed. A

company's data must be stored and organised so that employees can access it easily and intuitively and act upon the findings effortlessly. Technology has greatly aided this process and as a result is seen as an EVA driver.

- The JD Group and New Clicks use the EVA benchmark to analyse all capital investment decisions as well as potential acquisitions. This proves that the company's EVA is the main concern that drives each and every business decision. Wooltru uses traditional decision making tools to determine what capital investments are made. These include: calculating the contribution to earnings that a project/acquisition makes, the impact on headline earnings and the impact on EPS. Wooltru, realises the limitations of these measures and intends using EVA as the benchmark in future.
- Should GAAP distort the measurement of capital or operating income, it is adjusted as necessary by the organisations. A possible 160 adjustments exist according to Stern Stewart & Co. however making too many adjustments overcomplicates the measure and simplicity is the key to the success of the measure. All the respondents make adjustments for: interest expenses, leases, goodwill, gain/loss on asset sales, restructuring costs and employee training. The rationale for making the adjustments is to: better reflect value creation and motivate the right value creating behaviour, separate operating from non-operating and financing items, extend the matching of revenues and expenses and minimise the opportunities for management to manipulate reported performance.
- For the successful implementation of an EVA financial management system, an optimal structure of EVA units must exist. Separating the company into these layers has the effect of improving the line of sight of its managers and forges a closer link between decision and outcome. Furthermore the company achieves greater transparency and is able to determine which business units are creating shareholder wealth and which units are destroying it. Both New Clicks and the JD Group divide the entire company into individual business units. Wooltru is not separated into layers of EVA business units.

- A major initiative of the EVA financial management system is to revitalise and redirect managerial incentives. The JD Group and New Clicks believe that the right way to motivate managers is by giving them a bonus that is a share of EVA. They believe that this is the way to motivate them to create value and make them think and behave more like owners. The EVA incentive system covers all salaried staff in these companies. At Wooltru, all employees have their bonuses based on company performance however, company performance is based on budgets and not EVA.
- The concept of EVA has been simplified throughout the organisations of the JD Group and New Clicks. Each and every employee including the most junior of employee's understands the essence of EVA. The development of an EVA culture within the organisation has been a major factor leading to the success of the EVA financial management system within those organisations.
- The EVA financial management system is a means of managing a company with the sole intention of creating shareholder wealth. This system is the key to creating real wealth if employed at all levels throughout the organisation.

9.4 Recommendations

The recommendations of the study are as follows:

- To effectively implement the EVA financial management system in a company, a commitment to EVA is required from senior management. This commitment should be translated into an EVA policy. This policy should not only drive future events but should assist in creating an EVA corporate culture.

- An EVA financial management system should be established in each organisation. It is a fundamentally better way of measuring financial performance and can be implemented effectively in all types of organisations. This system should be designed so that a company's value creating performance is regularly evaluated to determine whether in fact the organisation is fulfilling its primary goal of adding wealth to the shareholders.
- Any attempts to embark on an EVA financial management strategy should be backed by a commitment to a total EVA improvement process at all levels of the organisation. It is therefore important to have the entire organisation divided up into individual EVA business units. This creates greater transparency throughout the entire organisation and makes it easier to determine which business units are creating wealth and which units are destroying it.
- EVA and MVA are both performance measurements that should be used in conjunction with each other. It is vital that management understands how these two measures essentially differ as well as the short comings associated with MVA.
- Management should have a clear understanding of all EVA drivers and use these to positively impact on the EVA of the company.
- A number of adjustments need to be made to the GAAP financial statements of a company to accurately calculate a company's EVA. According to Stern Stewart & Co. a possible 160 adjustments exist but most companies make between five and fifteen. The key to using EVA is its simplicity, making too many adjustments overcomplicates the measure. This is fundamental when dealing with EVA.
- Two reasons exist for making adjustments to GAAP: (1) conventions do not define the true economics of a business, (2) the rationale for making the adjustment is to: separate operating from non-operating and financing items, extend the matching of revenues and expenses, better reflect value creation and motivate the right value

creating behaviour and minimise the opportunities for management to manipulate reported performance.

- A major initiative of the EVA financial management system is to revitalise and redirect managerial incentives. All companies that use this financial management system should employ the EVA based bonus plan. This is the right way to motivate managers to create value and think and behave more like owners. Managers get an unlimited share of EVA improvements, but bonuses can also be negative. This aligns the interests of management with the interests of the shareholders as managers realise that the only way that they will be better off is by adding EVA.
- EVA offers a means of measurement and communicating performance. It is vital that companies using the financial management system communicate company performance on a monthly basis and compare it to targets as well as previous performance levels.
- The study points out the numerous advantages of managing a company using the EVA financial management system. Companies wishing to develop an EVA financial management system should start such efforts without hesitation.

Recommendations for further study include:

- The study contains an analysis of how companies in the retail sector have implemented the EVA financial management system. An analysis of how companies in other industries implement and use the management system would provide a more comprehensive view of how various industries use the management system and would also provide a basis for comparison.
- Determining the correlation between the company's EVA and share price would provide meaningful insight into whether or not there is a significant correlation

between the two in the local market (JSE). Little empirical research has been done on whether or not a correlation between the two exists and the research that has been done presents conflicting results.

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APPENDIX A

1998 MVA Rank	1997 MVA Rank	Company	1997 MVA	5 Year Change MVA	1997 Market Value	1997 Total Capital	1997 EVA	5 Year Change EVA	5 Year Average Return on Capital	5 Year Average Profit Index	5 Year Average Capital Growth
1	2	SA Breweries	25,626	14,095	44,769	19,142	605	393	19.4%	1.2	16.3%
2	1	Anglo American	12,500	9,770	53,623	41,022	N/A	N/A	N/A	N/A	14.5%
3	14	Dimension Data	9,173	8,990	11,596	2,424	N/A	N/A	N/A	N/A	163.2%
4	6	Rembrandt Group	7,211	(1,693)	20,364	13,153	(1,280)	(865)	12.3%	0.6	15.6%
5	43	Bidvest Group	6,794	6,671	9,310	2,516	(97)	(98)	15.8%	0.9	54.8%
6	N/A	Billiton PLC	6,528	N/A	32,148	25,620	N/A	N/A	N/A	N/A	N/A
7	12	Tiger Oats	6,267	1,774	11,803	5,536	68	7	18.0%	1.0	10.1%
8	5	SASOL	6,250	13,779	32,231	25,961	(590)	674	13.6%	0.7	6.9%
9	19	Imperial Holdings	6,105	5,627	10,286	4,181	(83)	(91)	21.8%	1.3	84.0%
10	13	Persetel Q-Data	5,318	N/A	8,314	2,996	N/A	N/A	N/A	N/A	527.7%
11	16	Johnnies Industrial	4,935	N/A	8,048	3,113	(287)	(318)	11.6%	0.8	2.8%
12	8	Gold Fields	4,170	1,018	8,039	3,869	N/A	N/A	N/A	N/A	6.3%
13	10	Nampak	4,092	1,646	7,710	3,818	52	82	19.6%	1.0	10.6%
14	20	Adcock Ingram	3,948	2,340	5,299	1,351	127	81	33.8%	1.8	42.0%
15	17	Wooltru	3,791	3,030	6,843	3,052	43	56	25.0%	1.4	22.5%
16	16	CG Smith	3,744	1,454	16,607	12,864	(39)	(10)	17.1%	0.9	9.7%
17	24	Charter PLC	3,501	495	6,218	2,717	283	315	21.2%	1.7	3.9%
18	51	Pepkor	3,346	1,821	6,613	3,267	N/A	N/A	N/A	N/A	88.8%
19	45	Shoprite Holdings	3,343	2,964	4,285	942	79	200	25.0%	1.5	26.8%
20	22	Nasionale Pers	3,328	N/A	4,920	1,592	(33)	N/A	23.7%	1.4	40.6%
21	27	MIH Holdings	3,313	N/A	3,717	405	601	N/A	66.3%	2.0	(79.1%)
22	9	Anglo American Gold	3,236	782	4,507	1,271	N/A	N/A	N/A	N/A	6.0%
23	55	Amalgamated Bev Ind	3,077	1,260	3,922	845	(8)	(25)	21.0%	1.2	12.2%
24	44	Metro Cash & Carry	3,029	2,660	3,968	937	(14)	(5)	17.7%	0.9	13.8%
25	47	Pick 'n Pay Stores	2,741	1,373	3,418	677	61	65	22.8%	1.1	5.8%
26	29	African Oxygen	2,687	378	4,531	1,844	74	60	21.0%	1.3	12.5%
27	38	Cadbury Schweppes	2,624	1,092	3,272	648	13	10	22.8%	1.2	17.7%
28	34	Barlow	2,314	2,151	12,917	10,603	(480)	49	10.6%	0.6	(1.6%)
29	28	PG & Shatterprufe	2,255	1,496	4,420	2,165	122	164	24.1%	1.4	14.3%
30	48	Primedia	2,201	N/A	4,433	2,232	N/A	N/A	N/A	N/A	285.3%
31	46	Tongaat Hulett Group	2,186	3,864	6,487	4,302	(210)	304	10.5%	0.5	5.9%
32	26	Edgars Stores	2,174	(35)	4,516	2,341	17	(68)	23.2%	1.4	16.5%
33	58	JD Group	1,875	2,047	3,680	1,805	(36)	(32)	19.7%	0.9	27.9%
34	39	Foschini	1,847	(75)	3,229	1,383	(50)	(92)	22.0%	1.3	19.8%
35	144	New Africa Investments	1,792	N/A	4,598	2,806	N/A	N/A	N/A	N/A	213.5%
36	59	PEP Limited	1,782	257	2,852	1,070	(1)	(50)	21.9%	1.3	15.0%
37	31	Premier Group	1,776	(403)	6,287	4,511	(211)	(84)	15.5%	0.8	12.9%
38	37	Trencor	1,696	(504)	3,628	1,932	(26)	(37)	18.5%	1.1	18.4%
39	63	Suncrush	1,498	476	1,807	309	(2)	(19)	20.6%	1.1	9.2%
40	N/A	Super Group	1,421	N/A	2,514	1,093	(18)	N/A	16.9%	0.8	1585.3%

1998 MVA Rank	1997 MVA Rank	Company	1997 MVA	5 Year Change MVA	1997 Market Value	1997 Total Capital	1997 EVA	5 Year Change EVA	6 Year Average Return on Capital	5 Year Average Profit Index	5 Year Average Capital Growth
41	61	Ellerine Holdings	1,421	1,369	2,393	972	19	18	22.6%	0.2	20.2%
42	57	Polifin	1,365	N/A	4,043	2,687	50	N/A	22.5%	1.2	6.2%
43	111	Protea Furnishers	1,287	1,328	1,557	270	N/A	N/A	N/A	N/A	24.3%
44	104	Illovo Sugar	1,269	1,560	3,965	2,696	(0)	24	11.9%	0.7	22.3%
45	54	CTP Holdings	1,226	1,213	1,825	599	9	(3)	20.4%	1.3	16.5%
46	N/A	Datatec	1,191	N/A	1,482	291	(11)	N/A	9.8%	0.6	525.1%
47	65	MEGA ¹	1,142	449	1,750	607	6	10	82.2%	4.0	16.9%
48	80	New Clicks Holdings	1,086	596	1,564	479	13	12	21.4%	1.1	26.5%
49	18	Avmin	1,028	N/A	4,137	3,109	N/A	N/A	N/A	N/A	315.2%
50	N/A	Rebhold	952	N/A	1,287	335	(9)	N/A	12.8%	0.8	N/A
51	N/A	Avis South Africa	937	N/A	1,528	591	52	N/A	23.2%	1.8	20.4%
52	77	Tiger Wheels	757	N/A	955	198	3	N/A	21.5%	0.6	18.4%
53	70	Pta Portland Cement	747	940	2,955	2,217	(176)	3	11.8%	0.6	5.2%
54	60	M-Net	746	60	1,163	417	29	3	26.4%	1.6	33.4%
55	79	Fintech	731	571	1,288	557	36	33	30.7%	1.5	37.3%
56	50	Chromecorp Holdings	728	N/A	1,304	576	96	N/A	45.5%	1.0	41.0%
57	62	Distillers Corp	694	222	1,707	1,012	8	(1)	18.8%	1.0	9.6%
58	87	Power Technologies	692	413	1,416	724	(38)	4	14.7%	0.7	8.7%
59	52	McCarthy Retail	677	802	2,349	1,672	102	N/A	23.1%	1.6	21.2%
60	35	IBM South Africa	668	630	959	291	39	1	30.5%	1.7	(0.2%)
61	40	SA Druggists	667	63	1,999	1,332	22	54	16.3%	1.0	17.5%
62	175	Altech	618	(311)	1,429	811	(21)	(7)	15.2%	0.6	6.4%
63	41	Reunert	612	(63)	1,897	1,275	(88)	(124)	20.6%	1.1	14.6%
64	85	Delta Electrical Ind	598	285	862	264	26	20	25.6%	1.3	16.3%
65	N/A	Mustek	593	N/A	820	227	10	N/A	22.4%	1.2	N/A
66	N/A	Monex	544	N/A	721	177	(5)	N/A	14.2%	0.6	99.6%
67	84	Chemical Services	528	486	917	389	13	10	18.7%	1.1	15.9%
68	N/A	OTK Holdings	526	N/A	1,885	1,356	(40)	N/A	12.4%	0.8	N/A
69	78	Times Media	495	131	720	225	60	39	36.7%	1.9	15.2%
70	72	Perskorgroep	479	572	1,049	570	(15)	(11)	16.1%	0.9	14.1%
71	75	Untrans	470	N/A	1,138	668	3	N/A	16.0%	0.6	(0.7%)
72	109	Leisurenet	455	N/A	788	333	3	N/A	19.1%	0.6	79.9%
73	123	Markels Group	452	508	821	370	13	28	14.1%	1.0	13.8%
74	97	Oceana Fishing Group	370	305	582	213	44	41	31.0%	1.9	9.5%
75	98	LTA	363	419	899	537	14	8	20.5%	1.1	24.0%
76	53	Consol ²	352	(1,263)	2,233	1,881	34	(36)	16.2%	1.0	8.4%
77	134	Teljoy Holdings	344	324	696	262	(12)	(17)	8.1%	0.6	7.7%
78	N/A	Corpgro	339	N/A	512	174	19	N/A	40.7%	1.9	N/A
79	88	Specialty Stores	321	308	716	395	(28)	(30)	17.6%	1.0	27.0%
80	76	ICS Holdings	299	287	1,274	975	52	127	15.9%	0.9	8.6%

1998 MVA Rank	1997 MVA Rank	Company	1997 MVA	5 Year Change MVA	1997 Market Value	1997 Total Capital	1997 EVA	5 Year Change EVA	5 Year Average Return on Capital	5 Year Average Profit Index	5 Year Average Capital Growth
81	71	SFW	298	597	1,405	1,107	(26)	3	13.3%	0.7	10.3%
82	91	Hudaco Ind	294	11	611	317	33	23	24.0%	1.4	20.9%
83	25	JCI	274	N/A	4,972	4,699	N/A	N/A	N/A	N/A	5.8%
84	129	Brit. Am. Tobacco SA ^a	268	(17)	276	7	23	20	693.4%	10.2	N/A
85	69	Medi-Clinic Corp	243	173	1,227	985	(7)	(5)	14.3%	1.0	43.6%
86	N/A	Maqmed Health Care	242	N/A	365	122	6	N/A	24.7%	1.4	116.5%
87	N/A	Chariots	233	N/A	520	287	17	N/A	28.1%	1.7	1452.8%
88	101	Clinic Holdings	213	100	2,105	1,891	(45)	(67)	16.1%	1.2	82.9%
89	147	Usko	213	N/A	465	252	10	N/A	24.6%	0.6	11.7%
90	67	Kohler	210	N/A	1,619	1,409	(28)	N/A	15.5%	0.4	16.2%
91	163	Ceramic Industries	206	N/A	357	162	(7)	N/A	17.8%	0.4	19.0%
92	162	Portland Holdings	188	281	507	319	38	27	25.7%	1.8	16.8%
93	N/A	Grinaker Construction	182	N/A	604	422	(27)	N/A	14.2%	0.7	N/A
94	132	Rhoex	181	227	378	197	N/A	N/A	N/A	N/A	16.4%
95	64	Plessey Corporation	165	N/A	862	697	(47)	N/A	10.5%	0.3	53.8%
96	N/A	Basil Read Holdings	160	N/A	212	52	1	N/A	20.0%	1.1	(7.9%)
97	81	City Lodge Hotels	151	(4)	500	349	3	N/A	17.8%	1.4	26.9%
98	93	New Wits	150	79	299	149	N/A	N/A	N/A	N/A	(0.9%)
99	90	Ozz	149	147	454	305	(8)	(10)	18.5%	1.0	28.1%
100	99	Foodcorp	149	(686)	1,474	1,325	(54)	18	14.0%	0.8	4.7%
101	121	Concor	144	176	380	237	(1)	(2)	20.8%	1.2	26.9%
102	148	Wilson Bayly Hlm-Ovc	141	N/A	310	168	8	N/A	27.2%	0.7	14.7%
103	102	Omnia Holdings	128	144	585	457	29	22	20.2%	1.3	11.4%
104	140	Howden Africa Holdings	127	N/A	262	135	(6)	N/A	18.4%	0.4	(23.6%)
105	N/A	Coastal Group	112	N/A	500	388	6	N/A	10.8%	1.3	1348.7%
106	117	Voltex Holdings	111	308	1,081	970	(57)	5	8.8%	0.5	(1.4%)
107	105	Bearing Man	99	108	287	188	7	9	24.9%	1.6	20.9%
108	N/A	Masterfridge	96	N/A	312	217	(6)	N/A	15.6%	0.8	69.9%
109	116	Telematrix PLC	89	(354)	498	409	(57)	(55)	20.2%	1.1	21.1%
110	156	Indep. Newspapers	89	N/A	1,082	994	(111)	N/A	16.5%	0.9	94.9%
111	125	Vogelstruisbuit Metal	80	66	147	67	N/A	N/A	N/A	N/A	3.6%
112	130	Berzack Brothers	78	120	426	348	(43)	18	3.6%	0.2	(5.8%)
113	124	Bafeman Project	71	N/A	149	79	10	N/A	38.9%	1.0	48.1%
114	N/A	Lithosaver Systems	55	N/A	223	167	(1)	N/A	18.1%	0.9	212.0%
115	160	Cullinan Holdings	46	159	209	163	(80)	(9)	(7.9%)	(0.5)	(6.7%)
116	141	Hoechst SA	44	N/A	1,004	960	(63)	N/A	7.2%	0.2	12.8%
117	133	Lion Match Co.	37	57	315	278	(11)	(0)	18.4%	0.9	7.6%
118	108	Sea Harvest Corp.	36	N/A	375	339	6	N/A	23.2%	1.2	10.7%
119	145	Teltron	36	N/A	232	197	(7)	N/A	16.4%	0.4	4.0%
120	138	Cashbuild	(0)	(39)	117	117	(2)	(6)	19.1%	1.2	26.8%

1998 MVA Rank	1997 MVA Rank	Company	1997 MVA	5 Year Change MVA	1997 Market Value	1997 Total Capital	1997 EVA	5 Year Change EVA	5 Year Average Return on Capital	5 Year Average Profit Index	5 Year Average Capital Growth
121	118	Edward L. Bateman	(5)	(130)	351	356	(9)	(18)	19.9%	1.3	20.2%
122	152	Choice Holdings	(9)	N/A	265	274	(99)	(99)	17.1%	1.4	184.9%
123	N/A	Sabvest	(12)	N/A	147	159	(8)	N/A	13.8%	0.6	158.6%
124	N/A	Consol. Afex Corp.	(15)	N/A	145	160	(15)	N/A	7.0%	0.4	25.5%
125	136	Crookes Brothers	(20)	14	133	153	(13)	(11)	12.8%	1.3	11.9%
126	N/A	Fralax	(22)	N/A	269	290	19	N/A	23.8%	1.3	(11.0%)
127	103	Grinaker Holdings	(26)	78	600	625	(53)	21	21.9%	1.1	7.4%
128	161	Laser Transport Hlds	(26)	N/A	147	173	(6)	(7)	11.4%	0.8	40.0%
129	128	Island View Holdings	(29)	N/A	281	310	(25)	N/A	13.0%	0.6	0.4%
130	89	Canadian Overseas Pkg	(38)	(182)	929	966	(124)	(93)	9.3%	0.5	13.7%
131	131	Assoc. Ore & Metal Cor	(40)	216	336	376	N/A	N/A	N/A	N/A	(2.3%)
132	113	Bell Equipment	(40)	N/A	319	360	(9)	N/A	13.5%	0.4	13.5%
133	32	Malbak	(41)	(1,476)	2,053	2,093	(542)	(413)	14.0%	0.7	(6.2%)
134	135	Gallagher Estate Hlds	(45)	N/A	113	158	(64)	N/A	(21.3%)	(0.9)	(19.5%)
135	49	Kersaf Investments	(56)	(1,557)	4,625	4,680	(266)	(270)	16.8%	0.8	9.7%
136	165	Gubb and Inggs	(57)	10	159	216	(19)	(15)	5.2%	0.4	6.8%
137	N/A	Stocks Hotels & Resorts	(62)	N/A	148	210	(25)	N/A	6.9%	0.4	N/A
138	114	PresMed	(63)	(141)	214	277	(0)	(2)	23.4%	1.5	64.0%
139	154	NEI Africa Holdings	(68)	55	218	286	(17)	4	5.5%	0.3	7.8%
140	126	Bateman Industrial Corp	(72)	N/A	124	196	(19)	N/A	0.4%	0.0	2.8%
141	115	Lenco Holdings	(73)	(172)	411	484	(25)	(40)	16.3%	1.0	17.4%
142	150	Monteagle Societe Ano	(78)	N/A	98	175	(17)	(10)	7.2%	0.4	17.6%
143	N/A	Don Group	(83)	N/A	101	184	(24)	N/A	(1.7%)	(0.1)	39.9%
144	82	Dorbyl	(89)	686	1,214	1,303	(121)	12	6.7%	0.4	(1.3%)
145	167	Cementation Co. (Africa	(89)	25	69	159	(18)	5	6.0%	0.4	0.8%
146	56	Siltek	(95)	(349)	308	403	N/A	N/A	N/A	N/A	16.2%
147	171	Medex	(107)	N/A	158	266	(37)	(24)	0.6%	0.0	16.7%
148	169	Schamighulsen Holdings	(108)	(179)	301	409	1	(12)	26.7%	1.6	31.1%
149	179	Toco Holdings	(108)	(119)	185	293	(26)	(29)	8.5%	0.5	35.7%
150	127	Group Five Holdings	(111)	97	443	554	(61)	(18)	8.9%	0.5	(1.7%)
151	74	Grintek	(112)	(228)	519	631	(28)	0	27.8%	1.5	19.7%
152	94	Langeberg Holdings	(117)	(954)	458	576	(44)	(92)	16.9%	1.0	8.3%
153	159	Karos Hotels	(126)	(57)	206	334	(38)	(19)	4.9%	0.3	11.7%
154	182	Amalgamated Retail	(136)	82	712	849	(57)	(3)	7.5%	0.5	15.3%
155	173	Bolton Ind. Holdings	(137)	(66)	167	304	(34)	2	8.0%	0.4	10.6%
156	170	Metair Investments	(137)	(66)	219	356	(7)	(5)	19.1%	1.1	13.5%
157	122	Boumat	(143)	(44)	226	369	(46)	(35)	11.0%	0.7	12.1%
158	180	Conshu Holdings	(176)	(80)	175	350	(44)	(39)	13.3%	0.8	5.7%
159	157	T & N Holdings	(186)	(100)	280	466	(16)	(2)	17.6%	1.1	12.6%
160	95	Consol. Metallurgical	(189)	(25)	526	714	(74)	(33)	14.1%	0.9	7.1%

1998 MVA Rank	1997 MVA Rank	Company	1997 MVA	5 Year Change MVA	1997 Market Value	1997 Total Capital	1997 EVA	5 Year Change EVA	5 Year Average Return on Capital	5 Year Average Profit Index	5 Year Average Capital Growth
161	174	Unispin Holdings	(193)	(127)	224	417	(47)	26	6.4%	0.3	16.6%
162	100	Bonnlta Holdings	(195)	N/A	270	464	(40)	N/A	15.0%	0.7	2.6%
163	181	Gold Fields Namibia	(212)	(3)	34	245	N/A	N/A	N/A	N/A	(0.3%)
164	176	Putco	(219)	(131)	87	305	(37)	(34)	12.4%	0.6	14.4%
165	183	Romatex	(219)	116	73	292	(81)	(21)	5.3%	0.3	(8.9%)
166	163	Stocks & Stocks	(221)	(77)	625	846	(58)	N/A	12.3%	0.8	23.6%
167	184	Da Gama Textile	(228)	(65)	120	348	(49)	(25)	9.4%	0.5	4.0%
168	112	Griffin Shipping Hlds	(234)	N/A	850	784	15	N/A	17.0%	1.1	29.3%
169	168	Assoc. Furniture	(245)	(89)	270	515	(85)	(50)	10.2%	0.5	2.8%
170	83	Irvin & Johnson	(246)	(1,093)	879	1,125	(46)	(42)	12.6%	0.7	12.5%
171	151	Grindrod Unicorn Group	(260)	(102)	910	1,171	3	29	14.3%	0.9	16.7%
172	30	Lonrho PLC	(269)	3,649	14,806	15,075	(889)	614	7.3%	0.5	0.7%
173	177	Kolosus Holdings	(299)	N/A	333	632	(33)	N/A	10.3%	0.7	8.3%
174	107	Housewares Group	(336)	N/A	129	465	(36)	N/A	22.7%	1.1	67.6%
175	172	Metkor Group	(350)	156	1,233	1,582	(97)	71	8.3%	0.5	1.1%
176	166	Oceana Investment	(371)	(656)	323	695	(85)	(50)	3.4%	0.2	16.2%
177	189	Searde! Investment	(512)	(351)	1,178	1,690	(154)	(135)	16.3%	1.0	49.6%
178	191	Rainbow Chicken	(514)	N/A	907	1,421	(366)	N/A	(11.3%)	(0.7)	40.7%
179	86	Alpha	(533)	88	1,767	2,300	(126)	(64)	14.7%	0.8	6.0%
180	186	Forward Corp.	(534)	(82)	1,412	1,946	(162)	130	7.2%	0.5	(6.8%)
181	73	Safmarine & Rennies	(547)	(2,911)	10,567	11,115	(502)	(658)	14.9%	0.8	15.4%
182	180	Haggie	(645)	(416)	609	1,254	(125)	(67)	8.9%	0.5	6.2%
183	139	BTR Dunlop	(675)	(568)	282	957	(75)	(41)	11.0%	0.5	11.8%
184	96	Sun International (SA)	(679)	(2,615)	1,944	2,623	(151)	(240)	18.1%	1.0	13.9%
185	188	Hunt Leuchars & Habbur	(728)	(831)	2,112	2,840	(241)	(133)	7.6%	0.4	17.5%
186	193	Consol. Frame Textiles	(876)	(72)	547	1,423	(165)	102	5.2%	0.3	7.7%
187	194	M & R Holdings	(971)	(1,198)	4,226	5,197	(1,002)	(921)	9.9%	0.5	7.3%
188	187	Engen	(1,002)	(4,941)	7,467	8,469	(223)	(277)	13.3%	0.9	15.4%
189	198	Toyota SA	(1,019)	(503)	1,892	2,612	(180)	(102)	11.5%	0.7	11.7%
190	92	AECI	(1,491)	1,560	3,381	4,872	(183)	188	10.4%	0.6	(0.2%)
191	21	Anglovaal	(1,583)	(3,251)	9,972	11,556	N/A	N/A	N/A	N/A	14.0%
192	7	Gencor	(1,653)	(4,609)	3,941	5,594	N/A	N/A	N/A	N/A	N/A
193	33	Anglovaal Ind.	(1,867)	(4,248)	5,995	7,862	(401)	(304)	14.8%	0.8	13.5%
194	198	Highveld Steel	(2,475)	(290)	2,218	4,693	(702)	(314)	7.3%	0.4	11.6%
195	197	Delmonte Royal Foods	(2,811)	(3,434)	2,444	5,255	(425)	N/A	18.4%	1.0	163.0%
196	4	De Beers	(3,873)	(7,452)	37,685	41,558	N/A	N/A	N/A	N/A	17.9%
197	11	Minorco Societe An.	(3,910)	(6,787)	36,066	39,966	N/A	N/A	N/A	N/A	36.2%
198	196	AMIC	(5,802)	(754)	17,081	22,892	(1,357)	105	10.6%	0.6	15.6%
199	200	Sappi	(7,745)	(6,818)	14,479	22,224	(1,477)	(698)	7.6%	0.4	26.0%
200	199	Iscor	(7,842)	3,050	5,155	12,998	(2,539)	(429)	7.1%	0.4	(2.0%)

¹ CNA Gello renamed MEGA² Consol delisted 12/97³ Ulco Holdings renamed BATSA

APPENDIX B

Rank	1999	1998	Company	Ticker	Market Value Added (Rm)			Economic Value Added (Rm)		5 Year Average			
					1998	5 Year Change	Market Value	Total Capital	1998	5 Year Change	Return on Capital (%)	Profit Index	Capital Growth (%)
1	1		South African Breweries Ltd	SAB	22,364	2,015	43,383	21,019	(786)	(915)	18.6%	1.1	13.4%
2	3		Dimension Data Holdings Ltd	DDT *	11,504	11,138	16,953	5,449	N/A	N/A	N/A	N/A	157.2%
3	10		Comparex Holdings Ltd (Old PQH)	CPX	11,203	N/A	16,226	5,023	914	N/A	42.3%	1.1	67.6%
4	5		Bidvest Group Ltd	BVT	7,699	7,310	12,432	4,733	N/A	N/A	N/A	N/A	50.4%
5	4		Rembrandt Group Ltd	RMT	5,604	(4,935)	20,864	15,260	(1,465)	(794)	11.6%	0.6	17.8%
6	7		Tiger Oats Ltd	TIG	5,153	(164)	11,645	6,492	118	117	19.0%	1.0	11.7%
7	22		Anglo American Gold Inv Co Ltd	AMG	3,761	(4,713)	5,312	1,551	N/A	N/A	N/A	N/A	23.9%
8	23		Amalgamated Beverage Industries	ABI	3,597	1,709	6,173	2,577	(125)	(148)	19.2%	1.0	51.3%
9	14		Adcock Ingram Ltd	ADC	3,354	1,625	4,812	1,458	219	171	34.1%	1.8	39.9%
10	N/A		Real Africa Holdings Ltd	RAH	3,315	N/A	5,953	2,637	N/A	N/A	N/A	N/A	158.6%
11	18		Pepkor Ltd	PEP	3,076	1,862	7,336	4,260	(15)	(78)	24.9%	1.4	72.9%
12	21		MIH Holdings Ltd	MIB	3,054	N/A	3,415	362	(52)	N/A	17.8%	0.8	(44.9%)
13	19		Shoprite Holdings	SHP	2,889	2,396	4,435	1,545	124	118	27.2%	1.6	33.9%
14	35		New Africa Investments Ltd	NAI *	2,868	N/A	7,507	4,638	N/A	N/A	N/A	N/A	176.5%
15	46		Datalec Ltd	DTC	2,757	N/A	7,361	4,605	N/A	N/A	N/A	N/A	1482.2%
16	9		Imperial Holdings Ltd	IPL	2,651	1,625	8,746	6,095	(100)	(109)	18.7%	1.0	61.7%
17	24		Metro Cash & Carry Ltd	MTC	2,623	1,594	3,758	1,135	16	26	19.4%	1.0	18.8%
18	27		Cadbury Schweppes (SA) Ltd	CAS *	2,282	714	3,150	868	22	16	22.8%	1.2	21.4%
19	25		Pick 'n Pay Stores Ltd	PIK	2,028	570	2,826	798	72	68	24.6%	1.2	7.8%
20	50		Rebhoild Ltd	RBH *	1,805	N/A	2,789	984	(38)	N/A	15.0%	0.4	193.6%
21	N/A		Softline Ltd	SFT	1,715	N/A	2,057	341	N/A	N/A	N/A	N/A	492.6%
22	40		Super Group Ltd	SPG	1,502	N/A	3,288	1,786	(89)	N/A	13.0%	0.3	63.4%
23	N/A		Education Investment Corp Ltd	EDC *	1,486	N/A	2,827	1,341	N/A	N/A	N/A	N/A	1054.2%
24	20		Naspers Ltd	NPN	1,400	N/A	3,115	1,715	(106)	N/A	22.1%	1.2	32.4%
25	36		PEP Ltd	PEI	1,371	157	2,384	1,013	(95)	(157)	18.5%	1.0	12.2%
26	52		Tiger Wheels Ltd	TIW	1,278	N/A	1,782	504	(5)	N/A	19.4%	0.7	86.1%
27	43		Profurn Ltd	PON *	1,273	1,266	2,482	1,208	N/A	N/A	N/A	N/A	99.1%
28	33		JD Group Ltd	JDG	1,235	N/A	3,286	2,051	(28)	N/A	19.2%	0.8	24.3%
29	15		Wooltru Ltd	WLO	1,202	(1,780)	3,900	2,697	100	81	26.1%	1.3	19.9%
30	48		New Clicks Holdings Ltd	NCL	1,063	445	1,753	690	24	16	21.3%	1.1	31.0%
31	70		Caxton Publishers & Printers Ltd	CXT	1,022	1,098	1,719	697	41	44	19.0%	1.0	16.9%
32	61		South African Druggists	SDG	993	160	2,520	1,527	(2)	2	16.9%	1.0	17.3%
33	54		Electronic Media Network Ltd	MNS	934	(172)	861	(72)	265	278	59.2%	3.0	8.4%
34	N/A		Molope Group Ltd	MOL	891	N/A	1,042	151	55	N/A	56.3%	2.9	N/A
35	89		Usko Ltd	USK	878	N/A	1,356	478	(17)	N/A	19.4%	0.7	52.6%
36	45		CTP Holdings Ltd	CTP	867	697	1,553	686	39	33	22.3%	1.3	19.0%
37	26		African Oxygen Ltd	AFX	802	(1,399)	2,823	2,021	77	58	21.4%	1.2	13.6%
38	13		Nampak Ltd	NPK	774	(2,502)	4,816	4,043	(14)	21	19.7%	1.0	11.6%
39	N/A		Truworths International Ltd	TRU	762	N/A	1,565	803	(8)	N/A	19.5%	1.0	N/A
40	N/A		Corpcom Ltd	CPM	758	N/A	965	207	(24)	N/A	16.6%	0.8	N/A
41	64		Delta Electrical Industries Ltd	DEL *	688	361	1,004	316	31	25	26.8%	1.4	18.8%
42	N/A		MGX Holdings Ltd	MGX *	662	N/A	1,004	342	(5)	N/A	17.4%	0.9	2385.5%
43	N/A		Paradigm Interactive Media Ltd	PDM	616	N/A	731	115	20	N/A	38.3%	1.9	N/A
44	44		Illovo Sugar Ltd	ILV	605	881	3,267	2,661	77	179	16.3%	0.9	21.8%
45	51		Avis Southern Africa Ltd	AVS	581	N/A	1,368	786	50	N/A	23.0%	0.8	33.0%
46	78		Corpgro Ltd	CPG	576	N/A	1,394	1,018	(23)	N/A	16.0%	0.4	487.3%
47	65		Mustek Ltd	MST	569	N/A	815	246	44	N/A	37.9%	1.0	8.4%
48	86		Macmed Health Care Ltd	MMD	549	N/A	858	308	13	N/A	23.9%	0.7	152.5%
49	63		Reunert Ltd	RLO	547	(1,280)	1,913	1,366	72	31	20.7%	1.0	11.3%
50	N/A		Woolworths Holdings Ltd	WHL	518	N/A	2,919	2,401	225	N/A	32.9%	1.7	44.3%

Rank		Company	Ticker	Market Value Added (Rm)				Economic Value Added (Rm)		5 Year Average		
1999	1998			1998	5 Year Change	Market Value	Total Capital	1998	5 Year Change	Return on Capital (%)	Profit Index	Capital Growth (%)
51	62	Allied Technologies Ltd	ALT	491	141	1,403	912	34	19	15.2%	0.8	6.4%
52	29	Plate Glass & Shatterprufe Ind.	PGS	390	(1,443)	3,299	2,909	(30)	33	24.7%	1.4	25.3%
53	34	Foschini Ltd	FOS	377	(2,665)	1,891	1,513	(49)	(66)	21.4%	1.2	19.6%
54	N/A	Comair Ltd	COM	312	N/A	469	157	20	N/A	31.8%	1.7	N/A
55	11	Johnnies Industrial Corporation	JNC	281	N/A	4,557	4,276	76	206	13.8%	0.7	9.7%
56	58	Power Technologies Ltd	POW	279	(84)	1,083	804	(2)	38	15.6%	0.8	12.0%
57	66	Monex Ltd	MNX	274	N/A	843	569	(33)	N/A	12.5%	0.3	221.9%
58	55	Fintech Ltd	FIN	269	(22)	832	562	28	24	33.5%	1.7	35.0%
59	84	British American Tobacco SA	BTS *	264	(153)	287	23	25	20	193.3%	2.9	210.0%
60	72	Leisurenet Ltd	LST *	254	N/A	762	508	36	N/A	26.5%	1.0	66.2%
61	74	Oceana Fishing Group Ltd	OCF	245	124	519	275	58	49	36.3%	1.9	13.4%
62	N/A	Fedics Group Ltd	FCS	244	N/A	345	101	15	N/A	35.8%	1.7	N/A
63	151	Grintek Ltd	GNK	237	140	301	64	28	18	28.4%	1.5	1.4%
64	79	Specialty Stores Ltd	SPY	179	27	606	427	(35)	(34)	17.3%	0.9	25.7%
65	106	Voltex Holdings Ltd	VLX	172	379	340	168	192	302	17.9%	1.0	(15.5%)
66	67	Chemical Services Ltd	CHE *	171	32	702	530	32	33	20.3%	1.2	23.5%
67	N/A	MB Technologies Ltd	MBT	162	N/A	377	215	(29)	N/A	3.2%	0.2	N/A
68	105	Coastal Group Ltd	CTL *	149	N/A	539	390	25	N/A	20.8%	1.2	1355.2%
69	109	Telemetrix plc	TMX *	146	(608)	568	422	(62)	(77)	16.0%	0.9	19.0%
70	91	Ceramic Industries Ltd	CRM	137	N/A	305	169	N/A	N/A	N/A	N/A	15.1%
71	77	Teljoy Holdings Ltd	TLJ	136	61	537	401	N/A	N/A	N/A	N/A	22.7%
72	N/A	Kunene Technology Ltd	KTL	130	N/A	139	9	35	N/A	28.3%	1.6	(98.5%)
73	122	Choice Holdings Ltd	COI	129	N/A	276	147	(157)	(156)	6.9%	0.5	163.3%
74	N/A	Maxiprest Ltd	MXR	120	N/A	246	127	3	N/A	22.6%	1.1	N/A
75	111	Vogelstruisbult Metal Holdings Ltd	VOG	114	74	184	70	N/A	N/A	N/A	N/A	4.2%
76	N/A	Unihold Ltd	UHS	102	N/A	321	219	19	N/A	35.8%	1.9	7464.8%
77	68	OTK Holdings Ltd	OTK	100	N/A	1,654	1,554	2	N/A	16.0%	0.5	14.4%
78	146	Siltek Ltd	STK	98	(147)	378	280	7	(10)	29.1%	1.5	7.3%
79	96	Basil Read Holdings Ltd	BSR *	96	N/A	171	75	15	N/A	47.5%	1.3	44.0%
80	75	LTA Ltd	LTA *	82	92	616	534	17	13	20.3%	1.0	13.1%
81	71	Unitrans Ltd	UTR	75	N/A	1,056	981	52	N/A	19.6%	0.8	23.1%
82	124	Consolidated Afex Corporation SA	CFX *	52	N/A	123	71	(21)	N/A	1.2%	0.0	(57.0%)
83	119	Teltron Ltd	TLT	48	N/A	252	204	(10)	N/A	16.3%	0.5	3.9%
84	118	Sea Harvest Corporation Ltd	SHV	40	(368)	420	380	9	(3)	23.0%	1.1	11.0%
85	N/A	Abacus Technology Holdings	ABC	34	N/A	273	239	0	N/A	10.4%	0.6	776.1%
86	126	Fralex Ltd	FRX	4	N/A	168	163	4	N/A	18.4%	0.5	(43.8%)
87	115	Cullinan Holdings Ltd	CUL	(1)	105	170	172	(8)	11	(6.3%)	(0.4)	(5.8%)
88	117	Lion Match Company Ltd	LNM	(2)	(68)	299	302	(13)	(7)	18.8%	0.9	6.8%
89	N/A	Combined Motor Holdings Ltd	CMH	(3)	N/A	83	86	4	N/A	25.9%	1.3	14.7%
90	147	Medex Ltd	MDX	(13)	N/A	258	271	(49)	(12)	2.7%	0.1	11.8%
91	N/A	Fashion Africa Ltd	FSH	(16)	N/A	55	70	N/A	N/A	N/A	N/A	N/A
92	113	Bateman Project Holdings Ltd	BTO	(23)	N/A	98	122	8	N/A	33.0%	1.1	51.2%
93	103	Omnia Holdings Ltd	OMN *	(27)	(139)	355	382	20	27	21.7%	1.3	11.8%
94	120	Cashbuild Ltd	CSB	(31)	(143)	53	84	(5)	(5)	19.0%	1.1	10.3%
95	114	Lithotech Ltd	LTH	(33)	N/A	199	232	(0)	N/A	15.4%	0.5	37.4%
96	128	Laser Group Ltd	LSR	(36)	N/A	182	218	5	13	14.9%	1.0	48.0%
97	87	Chariots Ltd	CHT *	(37)	N/A	251	287	17	N/A	28.0%	0.8	1444.6%
98	N/A	Terexko Ltd	TRX	(48)	N/A	99	147	(14)	N/A	12.4%	0.7	(39.8%)
99	N/A	Coates Brothers (SA) Ltd	COT *	(49)	N/A	150	199	9	N/A	24.6%	1.3	75.6%
100	142	Monteagle Societe Anonyme	MTE *	(50)	N/A	117	167	(30)	(17)	6.9%	0.4	21.7%

Rank		Company	Ticker	Market Value Added (Rm)				Economic Value Added (Rm)		5 Year Average		
1999	1998			1998	5 Year Change	Market Value	Total Capital	1998	5 Year Change	Return on Capital (%)	Profit Index	Capital Growth (%)
101	92	Portland Holdings Ltd	POR *	(53)	(10)	252	305	(23)	(40)	23.6%	1.4	5.7%
102	108	Masterfridge Ltd	FGM	(55)	N/A	189	244	(88)	N/A	(23.3%)	(0.6)	12.3%
103	107	Bearing Man Ltd	BRM	(56)	(87)	137	193	(2)	(3)	24.7%	1.5	22.7%
104	123	Sabvest Ltd	SBV *	(59)	N/A	138	198	(24)	N/A	5.2%	0.1	24.0%
105	104	Howden Africa Holdings Ltd	HWN *	(60)	N/A	71	131	14	N/A	24.3%	0.7	(12.8%)
106	132	Bell Equipment Ltd	BEL *	(61)	N/A	428	490	7	N/A	15.2%	0.6	27.2%
107	N/A	EnviroServ Holdings Ltd	ENV	(63)	N/A	147	211	8	N/A	24.2%	1.4	21578.5%
108	N/A	Micor Industrial Corp Ltd	MIN	(64)	N/A	90	154	(4)	N/A	15.5%	0.8	17.2%
109	97	City Lodge Hotels Ltd	CLH	(69)	(280)	324	394	(9)	(16)	17.3%	1.2	23.3%
110	131	Assore Ltd	ASR	(72)	(53)	364	436	N/A	N/A	N/A	N/A	11.6%
111	145	Cementation Company (Africa)	CMT *	(78)	32	47	125	(39)	(21)	3.8%	0.2	(1.3%)
112	99	Ozz Ltd	OZZ	(79)	(136)	244	323	(8)	(3)	18.3%	1.0	21.2%
113	N/A	Astrapak Ltd	APK	(80)	N/A	383	463	(21)	N/A	10.9%	0.7	N/A
114	82	Hudaco Industries Ltd	HDC *	(84)	(282)	253	337	36	26	23.5%	1.4	8.1%
115	140	Bateman Industrial Coporation	BTR	(88)	N/A	157	245	(10)	N/A	3.8%	0.2	10.2%
116	59	McCarthy Retail Ltd	MCT	(95)	(175)	2,363	2,457	(172)	(223)	20.5%	1.3	17.6%
117	138	President Medical Investments Ltd	PSM	(95)	(144)	225	320	(12)	(15)	22.8%	1.3	61.8%
118	N/A	Invicta Holdings Ltd	IVT	(98)	N/A	144	242	10	N/A	26.5%	1.3	154.7%
119	101	Concor Ltd	CNC	(98)	(75)	167	265	2	6	22.5%	1.3	30.9%
120	125	Crookes Brothers Ltd	CKS	(100)	(91)	70	170	(8)	(1)	13.8%	0.7	13.4%
121	2	Anglo American Corporation	AAC	(102)	(31,907)	45,699	45,801	N/A	N/A	N/A	N/A	14.7%
122	N/A	Network Healthcare Holdings Ltd	NTC *	(102)	N/A	2,043	2,145	N/A	N/A	N/A	N/A	26.9%
123	N/A	A M Moolla Group Ltd	AGR	(104)	N/A	67	171	(17)	N/A	10.5%	0.5	N/A
124	164	Patco Ltd	PTC	(108)	(31)	70	178	(32)	(27)	10.6%	0.5	4.5%
125	31	Tongaat Hulett Group Ltd	TNT	(111)	773	5,033	5,143	(67)	345	12.7%	0.6	8.4%
126	102	Wilson Bayly Holmes - Ovcon Ltd	WBO	(111)	N/A	122	233	23	N/A	31.5%	1.0	26.4%
127	98	New Wits Ltd	NWT	(112)	(462)	54	166	N/A	N/A	N/A	N/A	1.5%
128	137	Stocks Hotels & Resorts Ltd	SCH	(114)	N/A	124	238	(19)	N/A	9.7%	0.3	13.4%
129	N/A	Brandcorp Holdings Ltd	BRC	(116)	N/A	196	312	(11)	N/A	15.3%	0.7	3075.5%
130	155	Bolton Industrial Holdings Ltd	BLT	(124)	26	176	300	(33)	(1)	8.1%	0.4	2.6%
131	N/A	Kagiso Media Ltd	KGM	(125)	N/A	415	540	(44)	N/A	4.5%	0.2	1643.3%
132	139	NEI Africa Holdings Ltd	NEH *	(126)	(20)	133	259	(35)	16	7.4%	0.4	(2.7%)
133	93	Grinaker Construction Ltd	GRC	(143)	N/A	320	463	(4)	N/A	20.2%	0.5	9.9%
134	41	Ellerine Holdings Ltd	ELH	(157)	(831)	1,180	1,336	(16)	(34)	22.4%	1.1	23.5%
135	121	Edward L. Bateman Ltd	ELB	(161)	(351)	256	417	11	5	20.2%	1.1	19.6%
136	N/A	Omega Holdings Ltd	OMA	(180)	N/A	37	218	(65)	N/A	(22.9%)	(1.4)	90.8%
137	148	Scharrighuisen Holdings Ltd	SCG	(182)	(177)	266	448	31	13	25.3%	1.5	(691.1%)
138	152	Langeberg Holdings Ltd	LGB	(196)	(660)	416	612	(61)	(81)	15.2%	0.8	5.5%
139	157	Boumat Ltd	BOU	(199)	(147)	188	387	(86)	(69)	8.4%	0.5	15.4%
140	37	Premier Group Ltd	PML	(201)	(3,653)	2,271	2,472	(318)	(203)	14.7%	0.8	2.1%
141	57	Distillers Corporation (SA) Ltd	DSL	(210)	(586)	943	1,153	3	(6)	18.9%	0.9	11.0%
142	167	Da Gama Textile Company Ltd	DAG	(211)	(37)	200	410	(46)	(14)	9.0%	0.4	6.7%
143	173	Kolossus Holdings Ltd	KOS	(213)	N/A	374	587	(106)	N/A	6.9%	0.4	3.4%
144	42	Polifin Ltd	PIN	(213)	N/A	2,769	2,982	189	N/A	23.6%	1.2	7.7%
145	165	Romatex Ltd	ROM	(214)	(37)	80	294	(52)	(23)	3.9%	0.2	(8.1%)
146	166	Stocks & Stocks Ltd	STS	(214)	(148)	583	797	(129)	(104)	11.3%	0.7	21.5%
147	N/A	Retail Apparel Group Ltd	RAG	(215)	N/A	638	852	(10)	N/A	15.2%	0.9	16.1%
148	153	Karos Hotels Ltd	KAR	(217)	(164)	326	543	(103)	(84)	2.5%	0.1	19.7%
149	185	Hunt Leuchars & Hepburn	HLH	(220)	(1,443)	1,334	1,554	(446)	(252)	6.7%	0.4	8.1%
150	161	Unispin Holdings Ltd	UNS *	(225)	(58)	160	385	N/A	N/A	N/A	N/A	3.8%

Rank		Company	Ticker	Market Value Added (Rm)				Economic Value Added (Rm)		5 Year Average		
1999	1998			1998	5 Year Change	Market Value	Total Capital	1998	5 Year Change	Return on Capital (%)	Profit Index	Capital Growth (%)
151	156	Metair Investments Ltd	MTA *	(238)	(159)	145	383	(3)	5	20.2%	1.1	11.6%
152	141	Lenco Holdings Ltd	LNC	(242)	(760)	332	574	(31)	(42)	13.6%	0.8	12.0%
153	158	Conshu Holdings Ltd	CNS	(248)	(192)	82	329	(40)	(29)	12.4%	0.7	4.8%
154	85	Medi-Clinic Corporation Ltd	MDC	(257)	(271)	825	1,082	(8)	(8)	16.9%	1.1	42.4%
155	192	Gencor Ltd	GMF	(258)	(858)	3,643	3,901	N/A	N/A	N/A	N/A	(9.0%)
156	129	Feltex Ltd	FLX	(266)	N/A	57	323	(39)	N/A	11.5%	0.5	1.6%
157	171	Grindrod Unicorn Group Ltd	GNR *	(305)	(145)	1,129	1,434	(21)	(5)	14.3%	0.9	17.6%
158	130	Canadian Overseas Packaging	CAN	(317)	(541)	964	1,281	(115)	(92)	9.0%	0.5	19.7%
159	177	Sear del Investment Corporation	SER	(339)	(195)	276	615	(114)	(109)	15.7%	0.9	37.5%
160	150	Group Five Ltd	GRF	(359)	(161)	307	665	(24)	47	11.0%	0.5	0.5%
161	53	Pretoria Portland Cement Co.	PPC	(367)	(1,601)	2,039	2,406	(147)	44	13.2%	0.6	7.7%
162	183	Dunlop Africa Ltd	DNL *	(406)	(333)	395	801	(151)	(80)	10.7%	0.5	7.9%
163	170	Irvin & Johnson Ltd	IRV	(409)	(995)	1,040	1,449	(55)	(23)	13.2%	0.7	14.3%
164	81	Stellenbosch Farmers' Winery	SFW	(426)	(200)	781	1,207	(77)	(37)	13.6%	0.7	11.4%
165	175	Metkor Group Ltd	MTK	(435)	116	1,074	1,509	(130)	23	8.8%	0.5	(1.4%)
166	154	Relyant Retail Ltd	RLY *	(473)	(263)	1,654	2,127	N/A	N/A	N/A	N/A	33.8%
167	182	Haggie Ltd	HAG *	(513)	(212)	714	1,227	(112)	(36)	8.8%	0.5	5.0%
168	133	Malbak Ltd	MLB	(523)	N/A	1,785	2,308	N/A	N/A	N/A	N/A	N/A
169	169	Cornick Group Ltd	CRK	(582)	(667)	211	793	N/A	N/A	N/A	N/A	17.4%
170	N/A	Consolidated African Mines Ltd	CAM	(587)	N/A	1,610	2,197	N/A	N/A	N/A	N/A	1721.6%
171	16	CG Smith Ltd	CGS	(626)	(3,275)	14,264	14,891	25	172	18.0%	0.9	10.5%
172	88	Clinic Holdings Ltd	CLC *	(629)	(720)	1,412	2,041	N/A	N/A	N/A	N/A	82.5%
173	144	Dorbyl Ltd	DLV	(719)	22	567	1,286	(68)	69	9.5%	0.5	(2.6%)
174	178	Rainbow Chicken Ltd	RBW	(785)	N/A	562	1,347	(448)	N/A	(11.9%)	(0.7)	25.4%
175	110	Independent Newspapers	IDW *	(832)	N/A	753	1,585	(158)	N/A	13.9%	0.7	83.1%
176	180	WACO International Ltd	WAC	(838)	(562)	1,289	2,128	(56)	342	10.6%	0.6	(3.7%)
177	186	Consolidated Frame Textiles Ltd	CFM	(841)	(47)	447	1,288	(208)	(57)	6.1%	0.3	6.6%
178	N/A	Dalys Ltd	DLS	(870)	N/A	315	1,185	(136)	N/A	5.1%	0.2	163.1%
179	172	Lonrho plc	LON *	(929)	(2,077)	9,132	10,061	N/A	N/A	N/A	N/A	(2.6%)
180	135	Kersaf Investments Ltd	KER	(1,020)	(2,418)	4,473	5,493	45	134	16.9%	0.8	11.3%
181	30	Primedia Ltd	PRI	(1,146)	N/A	3,292	4,437	(349)	N/A	18.6%	1.3	238.7%
182	32	Edgars Stores Ltd	EDS	(1,213)	(5,796)	1,673	2,887	(148)	(180)	22.1%	1.2	21.8%
183	195	Delmonte Royal Foods Ltd	DLF *	(1,431)	(4,107)	1,898	3,329	(607)	(582)	16.2%	0.8	141.9%
184	184	Sun International (SA) Ltd	SIS	(1,568)	(3,805)	1,363	2,931	(39)	(95)	17.6%	0.9	11.9%
185	189	Toyota South Africa Ltd	TOY *	(1,879)	(1,513)	1,044	2,923	(267)	(142)	11.2%	0.6	11.6%
186	194	Highveld Steel & Vanadium	HVL *	(2,010)	(1,300)	2,333	4,343	(534)	(35)	7.6%	0.4	15.6%
187	187	Murray & Roberts Holdings	MUR	(2,176)	(2,706)	2,783	4,958	(223)	15	10.3%	0.5	1.4%
188	193	Anglovaal Industries Ltd	AVI	(2,358)	(5,770)	4,331	6,689	(806)	(686)	13.9%	0.7	9.3%
189	181	Safmarine & RENNIES Holdings	SFR	(2,360)	(3,607)	5,736	8,096	(1,191)	(1,024)	13.3%	0.7	5.2%
190	28	Barlow Ltd	BAR	(2,409)	(3,217)	9,903	12,312	(406)	400	10.7%	0.6	(0.6%)
191	190	AECI Ltd	AFE *	(2,837)	(1,792)	2,168	5,005	(248)	294	11.4%	0.7	1.9%
192	197	Minorco Societe Anonyme	MNR *	(2,929)	(10,214)	42,409	45,338	N/A	N/A	N/A	N/A	37.4%
193	191	Anglovaal Mining Ltd	AIN	(3,120)	(6,959)	6,830	9,950	N/A	N/A	N/A	N/A	10.1%
194	12	Gold Fields of South Africa Ltd	GFS	(3,638)	(11,178)	1,682	5,320	N/A	N/A	N/A	N/A	13.1%
195	6	Billiton PLC	BIL	(5,963)	N/A	40,494	46,457	N/A	N/A	N/A	N/A	81.3%
196	198	Anglo American Industrial Corp.	AMI *	(8,898)	(8,939)	17,498	26,397	(1,452)	222	12.1%	0.6	20.4%
197	8	SASOL Ltd	SOL	(9,480)	(644)	16,748	26,227	(1,497)	(385)	13.6%	0.7	3.4%
198	200	Iscor Ltd	ISC	(10,831)	(5,204)	4,538	15,369	(892)	1,124	8.5%	0.4	4.6%
199	199	Sappi Ltd	SAP *	(12,972)	(10,077)	21,695	34,667	(1,904)	(999)	7.5%	0.4	31.2%
200	196	De Beers	DBR *	(22,772)	(38,224)	29,161	51,933	N/A	N/A	N/A	N/A	16.5%

APPENDIX C

QUESTIONNAIRE relating to an EVA study of three leading South African Retail companies

A. General EVA Orientation

Section A

1.1 Does your company have an **Economic Value Added (EVA) policy**? Yes | No

1.2 If yes, how is it used:

- As a **Decision making aid**
- As a **Measurement aid**
- As an **Incentive based scheme**

1.3 How would you describe the term **Economic Value Added**?

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1.4 What level of **priority** does your organisation place on the EVA policy and EVA issues?

None - - Low - - Medium - - High Please indicate why.

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1.5 Are there any **barriers** in the development of an EVA financial management orientation?

Cost - - Technical Barriers - - Complexity and Interrelatedness - - Organisational Barriers
- - Time-scales - - Information shortages - - Other

1.6 What has lead (or could lead) to your company's **adoption** of EVA principles?

Business Pressure - - International acceptability - - New Markets - - Management Pressure- - Shareholder Pressure - - Other

B. Performance Related Issues – EVA as a measure

Section B

1.1 What financial performance measures does your company use?

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1.2 What are the floors (impairments) associated with these measures? Do any of these measures conflict with EVA performance measures?

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1.3 Does your company appreciate the fact that maximising shareholder wealth is not the same as maximising the company's total value i.e. does your company understand the essence of Market Value Added (MVA)?

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1.4 Does management understand that an increase in EVA will bring about an increase in the market value added (MVA) of company?

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1.5 Does your company use both EVA and MVA to evaluate performance?

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C. Management Issues – EVA as a management system

Section C

C.1 Determining the Decision-making process within the Organisation

1.1 Who are the decision-makers in the organisation?

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1.2 Who makes decisions concerning the deployment of resources - are decisions made on a centralised or decentralised basis?

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1.3 On what basis are decisions made? Do decision-makers understand the Net Present Value (NPV) concept?

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C.2 The importance of Technology as a value-adding driver within the Organisation

1.1 How has technology aided decision making within the company and within various departments?

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1.2 Is technology seen as a EVA-driver by your particular organisation? Please Discuss.

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C.3 Other Value-drivers introduced by Management

1.1 How are future trends, which could impact on the economic value of the company managed?

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1.2 What other EVA-drivers have been introduced by management to positively influence the organisations EVA?

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C.4 Organisational Investment Decisions

1.1 What benchmarks are employed to determine future organisational capital investments?

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1.2 Is the company considering the Balance Sheet when dealing with capital investments?

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C.5 Adjustments to GAAP Financial Statements in Calculating EVA

1.1 Certain adjustments are made to a company's GAAP financial statements when EVA is employed. These adjustments are necessary to accurately calculate EVA and to discourage managers from short-sighted behaviour. (Examples include: discontinued operations, interest expense, goodwill, gain/loss on asset sale, accrued wages, product liability/reserve, R&D expense, operating leases, employee training, sales return, marketing and advertising, etc.) What adjustments are made to your company's GAAP financial statements and how many adjustments are made?

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1.2 What guidelines are followed when these adjustments are made?

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C.6 Division of the Organisation

1.1 Is your company separated into layers of independent EVA business units? Discuss these various layers.

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1.2 Is continuous improvement and teamwork between interfacing units encouraged?

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1.3 What sort of monitoring of the EVA units exists?

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D. Incentive Compensation – EVA for Motivation?

Section D

1.1 What performance measures are used in designing a managerial incentive compensation scheme?

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1.2 What measures are used to motivate managers in your company?

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1.3 Have EVA incentive bonuses been brought into lower levels of the organisation?
Discuss the reasoning for this answer.

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1.4 EVA offers a means of measurement and communicating performance – does your company communicate such performance in the evaluation and compensation of managerial performance?

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1.5 Is there an incentive compensation for what managers are accountable for and what they are not accountable for?

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1.6 The 'Bonus-Banking' principal is a mechanism which lengthens the planning horizons of managers – since they know that ensuring short-term performance will not do them any good if it harms longer-term results. How is the EVA banking system implemented in your company? Are managers penalised for negative value destruction and re-numerated for positive value creation?

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1.7 What percentage (%) of managers incentive is fixed and what percentage (%) is variable/performance related?

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1.8 Are performance measures linked to the company's planning and budgeting programme?

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1.9 Does incentive compensation encourage long-term planning within your company?

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1.10 Do incentive schemes effectively turn the managers into quasi-owners, i.e. do performance based incentives create autonomy and entrepreneurship within the business unit?

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1.11 Do incentive based schemes ultimately lead to the attraction, retention and motivation of key executives through stock options and other equity-linked compensation devices?

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E. EVA as a mindset

Section E

1.1 What training do managers within your organisation endure to fully comprehend the details involving an EVA financial performance system within their company?

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1.2 How does information concerning the EVA system get communicated throughout the company?

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1.3 Has the company experienced any resistance to using innovative measurement systems from any parties or stakeholders?

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