

# CHAPTER 1

## INTRODUCTION

### 1.1 BACKGROUND

There is general consensus that the main financial objective of a business enterprise is to maximize the wealth of its shareholders. However, it is also widely recognized that various other stakeholder groups, such as customers, management, employees, creditors, banks and government, have their own objectives, which can be of a financial and/or non-financial nature. The stakeholders that make up this “coalition of constituents” have different levels of influence. It is obvious that the stakeholder group that has the most power influences the objectives of a company most. The most influential stakeholder group is usually senior management, which is appointed and dismissed by the shareholders via a board of directors.

Without diverting too much attention to the ongoing debate regarding a “shareholder versus a stakeholder approach”, it is clear that the financial objectives of any company need to tread a delicate balance between the interests of all the stakeholder groups. However, the prerogative ultimately lies with the shareholders, who in a free market always have the option of withdrawing their invested capital and putting it in other investments which will yield returns that will compensate them better for the risk they are taking.

It is generally accepted that financial objectives should be related to key factors for business success. These include, according to ACCA (ACCA Study Text 1999:8),

- profitability (return on investment);
- market share;
- growth;
- cash flow;
- customer satisfaction;
- the quality of the firm's products;
- industrial relations; and
- added value.

Even if a company endeavours to satisfy the needs of a wide range of stakeholders, it cannot be denied that the single most important financial objective of the company is to maximize the wealth of the shareholders. The wealth of the shareholders is maximized when the returns of the shareholders, relative to their investments, are maximized. These returns are made up of capital gains in the form of increases in the share price, as well as of dividends, which are made possible when the company generates adequate distributable profits (and cash flows).

The utility values of dividends (the value to a specific person or institution) differ widely among different shareholders. Some investors with a long-term perspective are adamant that dividends should only be paid if the company has no other value-enhancing capital projects to invest in. Consequently, the market value of the (ordinary) shares of a business is seen as the main indicator of shareholder wealth. To be even more specific, it is not the absolute size of a business in terms of its market value alone, but the amount by which the market value of the business as a whole exceeds the capital invested in it – the so-called Market Value Added (MVA) – that is the most appropriate external financial measure of shareholder wealth. If the share price is available, the MVA can be calculated easily.

If one knows what is important to the shareholders and also how to measure that which is most important, the next question that needs answering is what a company can do to maximize this external measure of value, MVA. It is well

known that MVA is driven by increases in share prices, which, in turn, are driven by expectations based on external factors over which the company has no control (such as exchange rates, inflation rates, the changing needs of customers, changes in tax rates and political instability) and internal factors which management can control more easily, for example by investing in assets and incurring costs that lead to profits and cash flows.

Over the years, a number of financial accounting indicators have been used as internal measures of performance that drive shareholder value. Typical measures that were used were profits after tax (PAT), total earnings and earnings per share (EPS), return on assets (ROA) and return on equity (ROE). Each of these has its merits, but in recent years all of them have been strongly criticized for all having the same flaw, namely that they do not reflect the cost of own capital (equity).

Furthermore, the profit-based measures, such as total earnings and EPS, have come under fire on account of the fact that they “do not take into account the balance sheet”, in other words, that they disregard the value of the assets used to generate them. In order to overcome the criticism against the abovementioned measures, numerous authors have suggested that a new, improved measure of internal performance that takes into account the full cost of all long-term capital, the so-called Economic Value Added (EVA), must be used.

EVA is not an entirely new concept. It is similar to the “residual income” measure, which has been used for a number of years for performance measurement and evaluation. EVA calculates an economic profit, which takes into account the full cost of capital of all long-term sources of capital invested in the business, including the cost of own capital, or equity. The concepts of EVA and MVA have been popularised and marketed by the Stern Stewart Consulting Company and many top companies have implemented EVA performance measurement and employee incentive systems, both inside and outside the United States of America (USA), including in South Africa.

Although there is some evidence of correlation between EVA and MVA, there has also been a lot of criticism of EVA of late and the evidence supporting EVA as the best driver of MVA is still not significant enough to be considered conclusive.

The focus of this study was to place companies listed on the Johannesburg Securities Exchange (JSE) of South Africa on a financial strategy matrix, based on their ability to generate EVA and to manage sales growth (and cash). A relative measure of EVA, the so-called “spread”, was used, along with the difference between the actual sales growth of a company and its sustainable growth rate (SGR) as a measure of cash management. The spread is the difference between the actual return on assets and the cost of capital, and value is created when the actual return on assets is higher than the cost of capital.

Both individual companies and sectors were placed on the financial strategy matrix in order to identify trends over time for different periods between 1993 and 2002 and to suggest appropriate strategies towards value maximization, given a certain position on the financial strategy matrix. The financial strategy matrix was used as a strategic tool to regulate the optimal allocation and usage of scarce resources and to highlight opportunities to enhance value for shareholders. Furthermore, the main drivers of EVA were determined, as was their impact on shareholder value.

## **1.2 RATIONALE FOR THE STUDY**

Some recent research has been done on the EVA of South African companies. Some models have been developed locally to determine the present value of future expected EVAs. There have also been several surveys ranking companies in terms of the biggest increases in their EVA. Hall (1998:165) used the data of listed South African companies for the period from 1987 to 1996 to determine the variables that drive EVA and to derive a statistical equation describing the relationship between these variables and EVA.

This current study is unique in the sense that it is the first to use a relative measure of EVA, the spread, to rank the performance of companies in South Africa. The spread (referred to on page four) is the EVA of a company divided by its invested capital (IC) at the beginning of the year. This makes it possible to compare the EVA performance of companies that differ considerably in terms of their size.

This study is also the first to place companies listed on the JSE of South Africa on a financial strategy matrix. The information content of the results enables any analyst to track not only a company's relative EVA performance in terms of spreads, but also its management of sales growth and cash over time and to compare it with the performance of the sector in which it operates, or the performance of all other listed companies. This model acknowledges that the generation of EVA is important, and it also takes into account the cash management of a company. Bearing in mind that, on a worldwide scale, the majority of companies that close down do so because of cash flow problems rather than because of a lack of profits, this aspect is very important.

In contrast to the studies of Hall (1998:165) who used a large number (19) of independent variables to test their impact on EVA, this study uses only the six most important drivers that make up EVA, to test their impact on MVA. The outcome with regard to this facet of the study could prove helpful to managers who want to determine which components of EVA (such as profitability relative to sales, or sales relative to assets, for instance) contribute most towards increases in MVA. It is obvious that the components with the highest "leverage" would be the ones that should receive top priority from management.

### **1.3 RESEARCH OBJECTIVES**

The main objectives of this study revolve around providing a strategic approach for the analysis and evaluation of companies and sectors to assist them in implementing optimal strategies in order to maximize shareholder wealth. The study and pursuit of measures of performance that drive shareholder value has

been going on for a long time, and it still carries on unabatedly. Recent events such as the Enron disaster in the United States of America highlight the fact that an undue focus on accounting profits and EPS, rather than on economic profits like EVA, could lead to poor decision-making, with unfortunate consequences (Stewart 2002:1). Ever-increasing and intense competition is a constant reminder of the need for companies to use performance measures linked to shareholder value. In order to make a real impact on a business, a value-driven culture needs to be fostered at all levels of management. This can only be accomplished if management incentives are linked to EVA.

The first objective of this study was therefore to do research aimed at establishing a firm theoretical background and understanding of

- the nature and weaknesses of existing accounting performance measures;
- other economic measures of performance, such as EVA; and
- why EVA is considered to be superior to accounting-based measures.

The ranking of companies in terms of their relative EVA performance (spreads) has identified the top-performing companies in South Africa. A second objective of the study was to determine the benefits of placing locally listed companies and the averages (actually medians) of the sectors in which they operate, on a financial strategy matrix for a given year, or over a period of time. It was anticipated that movements over time (trends) would be helpful in determining the strategies most appropriate for a given company.

A next objective was to test the validity or strength of the financial strategy matrix by means of statistical tests that evaluate the impact of the size of positive spreads and the sales growth minus the SGR percentage have on different measures of shareholder value such as MVA.

Finally, the study explored the effect that the six main drivers of EVA, namely profitability, asset turnover, cash tax rates, the cost of capital, the invested capital and the expected growth in EVA, have on MVA. This exploration has led to

guidelines for the management of specific companies regarding the variables that have the greatest impact (leverage) on value.

#### 1.4 LITERATURE REVIEW

In recent years, there has been a growing chorus of criticism against the use of popular accounting indicators as measures of financial performance. Measures such as PAT, EPS, ROA and ROE have come under fire from various authors, including Rappaport (1986:43), Stewart (1991:2), Stern (1993:36), Copeland, Koller and Murrin (1996:105) and Ehrbar (1998:161). The main arguments against these accounting measures are that the profit-based measures ignore the amount of the investment as reflected in the balance sheet and that none of them show any link to the market values of the companies concerned.

The criticism of these accounting measures has given rise to the development of other economic methods of value determination. Rappaport (1986) was one of the leading proponents of this endeavour, with his Strategic Shareholder Analysis (SVA). Rappaport used the free cash flow valuation approach, linked to strategic management principles, to identify and manage the main drivers of shareholder value.

Copeland, *et al.* (1996:149) put forward the economic profit model, which states that not only recorded accounting expenses that should be taken into account when determining whether a company has created value, but also the opportunity cost of capital used in the business. The economic profit model effectively incorporates the cost of own capital (which is missing from the accounting profit model) and gives a result very similar to EVA.

Some authors have defined EVA and MVA and provided different ways of calculating these indicators. This group includes Stewart (1991:153), Firer (1995:57), Stern, Shiely and Ross (2001:394) and Reilly and Brown (2003:591). The next main thrust of theoretical research focused on research evidence in support of EVA as a driver of MVA. A host of authors have published work

supporting EVA. The most noteworthy of these are Stewart (1991:118), Finegan (1991:36), Stern (1993:36), Lehn and Makhija (1996:36), Uyemura, Kantor and Pettit (1996:98), Ehrbar (1998:6), Makelainen (1998:15), Milano (2000:119), Hatfield (2002:41), Stewart (2002:4) and Singer and Millar (2003:6).

In the wake of all the publications extolling the virtues of EVA, there have also been many authors who criticize EVA. Some have even provided research evidence showing that some accounting measures linkup better with market value than EVA does. This group includes De Villiers (1997:285), Kramer and Pushner (1997:41), Makelainen (1998:21), Biddle, Bowen and Wallace (1999:69), Brealy and Myers (2000:329), Keef and Roush (2002:20), Ramezani, Soenen and Jung (2002:56), Paulo (2002a:53), Ooi and Liow (2002:29) and Copeland (2002:51).

To date, relatively little research on EVA and MVA has been done in South Africa. De Villiers (1997:285) has investigated the application of EVA under conditions of inflation and has suggested that an adjusted version of EVA, allowing for inflation, be used. Hall (1998:165) used companies listed on the JSE for the period from 1987 to 1996. He researched and identified the components (drivers) of EVA and employed stepwise regression analysis to develop a model that can help to increase EVA most efficiently. Eedes (2001:1 and 2002:1) has reported on surveys ranking companies listed on the JSE in terms of the amount of EVA generated over the past year. He also discussed the splitting of EVA in terms of a current operating value (COV) and a future growth value (FGV) and suggests the use of the FGV to determine whether a company is under- or overvalued.

## **1.5 LIMITATIONS OF THE STUDY**

If the requirements of recency and accessibility of data were to be met, clear limitations needed to be specified. For this study, it was decided to use the data of companies listed on the JSE and to exclude all unlisted companies. The reason for this is that it would be very difficult to obtain adequate data for unlisted companies, while the data for listed companies can be readily obtained from



various sources. The McGregor's Bureau of Financial Analysis (BFA) at the University of Pretoria supplied the data for this study.

The time frame that was decided on was ten years. In order to use the latest available information, the data for the year 2002 was used as a starting point and then the other years were added on, working back to 1993. Where some of the data required for the study was not available for some companies in specific sectors, those companies were left out as well. A further criterion for inclusion was that the data for each company included in the final database had to be complete for each data item required for each year. The inclusion criteria also took into account that some variables may not be calculated with reasonable accuracy if the volume of trade in shares is not at a fair level. Therefore, companies with thinly traded shares were also excluded from the final list of companies used in the study.

The following is a summary of the criteria laid down for the inclusion of companies in the final database:

- all companies listed on the JSE were included in the initial database;
- companies in certain sectors were excluded due to the unavailability of some information;
- companies for which there was not complete information for the full ten-year period from 1993 to 2002 were excluded; and
- companies with thinly traded shares were excluded.

The 89 companies included in the final database, after all exclusions, provided the information upon which the calculations and statistical tests were performed.

## **1.6 OUTLINE OF THE STUDY**

Each part of the study was conducted in a logical sequence and within a framework that allowed for natural progression from one topic to the next. The

broad guidelines were first to research and describe all relevant aspects of EVA and MVA, while at the same time creating a platform for the empirical research to follow. The empirical research on the data of the selected listed companies was followed by statistical tests. Conclusions and recommendations were then made.

The remaining chapters of the study are briefly described below.

- Chapter 2 describes the weaknesses of traditional accounting measures of performance such as PAT, EPS, dividends paid, ROA and ROE. Some of the main reasons for the flaws in these measures are highlighted. This is followed by a discussion of the economic methods of value determination, namely net present value (NPV), shareholder value analysis (SVA) and the economic profit model. The chapter concludes with the observation that the economic methods are superior to the accounting methods because they take into account the full cost of capital used by a business.
- Chapter 3 introduces the concepts of EVA and MVA and cites various authors who support or criticize EVA as the main internal driver of MVA. Different ways of calculating EVA and MVA are discussed, as well as some of the most prominent adjustments that need to be made to the financial statements in order to be able to calculate EVA and MVA.
- Chapter 4 deals with the relationship between EVA, MVA and leverage. The effects of operational leverage and financial leverage on profits are discussed. The leverage effect of the cost of equity can be added when EVA and MVA are calculated, and the chapter illustrates how the impact of a certain percentage change in sales on EVA and MVA can be determined if it is assumed that all other factors remain constant.
- Chapter 5 describes the main components in the determination of EVA, namely the return on invested capital (ROIC), the weighted average cost of capital (WACC), the performance spread and the IC. All the factors that relate to the calculation of these components are discussed and explained.

- Chapter 6 first discusses sales growth and cash management. The indicator used to determine the level of cash management is the sales growth percentage minus the SGR percentage. Next, the financial strategy matrix is introduced and an illustration is given of how a company can be placed on the matrix in terms of value creation (spread) and cash management (sales growth percentage minus the SGR percentage).
- Chapter 7 contains the research design, as well as the first set of results of the empirical study, namely the rankings of companies in terms of spreads and the placement of three individual companies, all sub-sectors and all companies as a group on the financial strategy matrix. The placement of companies and sectors was done for specific years, as well as for the two five-year periods from 1993 to 1997 and 1998 to 2002, and for the ten-year period from 1993 to 2002.
- Chapter 8 covers the statistical tests, which can be grouped into two categories. The first group deals with testing the strength and significance of the factors used on the financial strategy matrix, namely the spreads and the sales growth minus the SGR percentage, relative to MVA and two adjusted versions of MVA. The second group of tests revolved around the determination of the impact (correlation) of the main drivers of EVA on MVA and two adjusted versions of MVA.
- Chapter 9 is the conclusion to the study and contains a final summary, as well as recommendations. It also suggests further possible areas of research.

## **1.7 CONCLUSION**

In a global economy, where highly competitive business environments and diminishing trade barriers between countries and markets facilitate the free flow

and migration of investors' funds, it is more important than ever before that companies are managed in terms of value to the suppliers of risk capital, the shareholders. Just like raw materials and labour, financial capital is a scarce resource that must be allocated and invested with care and managed with skill. It is therefore important for an investor to know, with a reasonable measure of accuracy, whether a business enterprise is creating value or destroying value and what the amount of the value created or destroyed is.

For a number of years, there has been a growing concern that the traditional accounting profit-based indicators appearing in financial statements no longer serve the purpose of sound financial decision-making. In the ongoing search for more appropriate performance measures that show some link with shareholder value, the EVA, which is similar to the economic profit of a company, seems to have emerged as a real improvement on the older accounting measures. EVA reflects performance by taking into account both the income statement and the balance sheet, in other words, both the returns and the invested amount. Furthermore, the EVA is determined after taking into account the full cost of capital (including the opportunity cost of own capital), leading to improved decision-making.

This study explores the benefits of using EVA and MVA as real indicators of value and applies these value-driven concepts to companies listed on the JSE of South Africa. The following chapters propose a strategic approach which will hopefully be helpful in improving the management of shareholder wealth in South African companies.