An overview of the implementation of Economic Value Added (EVA™) performance measures in South Africa

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ABSTRACT

Although Economic Value Added (EVA™) might improve the measurement of organisations' performance, it seems not to be used widely in South Africa. The need to measure financial performance and the different metrics that can be used should be investigated to establish the best measure for each sector. The purpose of the reported study was to determine the extent to which EVA™ is used by South African organisations. Furthermore, this investigation focused on methods used by these organisations to calculate EVA™ and aimed to determine the South African business sectors in which it is most likely to be implemented. A focus group discussion was conducted with financial experts, which included consultants, analysts and statisticians, to discuss EVA™ and challenges relating to its implementation. It was established that South African companies will benefit from using EVA™ in conjunction with other metrics. Management needs to understand its own organisation to be able to implement the most appropriate performance metric applicable to the organisation. It is recommended that companies do a thorough internal analysis of their organisations to assist them in making an informed decision regarding the appropriate performance metric, which includes EVA™.

Key words: EVA™, Economic Value Added, performance metrics, performance measurement

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Introduction

Management, investors and other stakeholders need to be aware of a company's performance to enable them to make informed decisions about the future. Measuring the financial performance of a company is therefore important. The variety of performance measurements and the diversity of companies make this a complex task. The measure decided on by an organisation will be determined by what a business is trying to achieve and the performance being measured.

Economic Value Added (EVA™) is one of a number of measures available to determine an organisation's performance. EVA™ reflects the residual wealth calculated by deducting cost of capital from the operating profit (adjusted for taxes on a cash basis) (Stewart 1990). The true benefits of the EVA™ measurement are realised when management understands what the profitability of their organisation entails and they become motivated to improve such profitability based on the findings of the measure (Evanomics 2011). The goal of all companies is to create value for the shareholders. In addition, Evanomics (2011) states that, when long-term EVA™ is maximised, the company will be maximising its own value. According to Stewart (1990), EVA™ may be viewed as a measure of value as well as a measure of performance. EVA™ can be used to set goals, evaluate performance, determine bonuses, communicate with investors and budget for capital expenditure (Stewart 1990).

Companies need to maximise on the use of various measurements that correlate with the value of their company. Metrics that may be employed include:

- Earnings or return on investment – an accounting variable
- Market share – a marketing variable
- Cash-flow return on investment (CFROI) – a cash-flow variable
- Economic Value Added (EVA) – a risk-adjusted cash-flow variable (Damodaran 2001).

EVA™ was developed based on the recognition that shareholders need to be compensated through a return on their investment for the risk they have taken (Mäkeläinen 1998). Investors may become frustrated with companies showing a high profit accompanied by large capital costs. Therefore, EVA™ may provide the investor with a more acceptable and comprehensive measure of a company's performance.

To avoid the issues relating to the use of the trademark of the EVA concept, EVA is often called economic profit (EP) (Mäkeläinen 1998). Mäkeläinen (1998) continues by stating that the concept of EVA is well accepted, and often all residual income concepts are referred to as EVA although they are not measured in the same manner as defined by Stern Stewart and Co. (Stewart 1990). Hence, hybrid metrics exist and are used by companies.

According to Pietge (2003), the concept of integrating a total capital charge (EVA™) is by no means new. Residual income or economic profit, which also requires a charge for equity capital, has been used for decades. Furthermore, Pietge (2003) agrees with Stewart (1990) that the use of accounting adjustments to calculate EVA™ and to evaluate performance at divisional level is not advisable. Therefore, performance metrics may need to be free of adjustments and be able to measure performance at a divisional level.

A great deal of research has been done on EVA™, the contribution of EVA™ towards the value for stakeholders and also on the suitability of EVA™ for different economic sectors (Evanomics 2011). However, EVA™, for some unknown reason, seems not to be widely used in South Africa, which led to the research project on which this article reports. If companies in South Africa understand how EVA™ is used by other companies in South Africa, it might lead towards a better understanding of the ways in which EVA™ could be used in South Africa and the benefits it holds for companies.

The purpose of the study on which this article is based was to determine the extent to which EVA™ is used as a performance measure by selected organisations in South Africa. Furthermore, this investigation focused on why EVA™ is implemented or not implemented by companies in South Africa and the sectors where it is most likely to be implemented. Some sub-problems that were identified and investigated are the understanding of organisations of the definition of EVA™, the way organisations calculate EVA™ and deviations from the Stern Stewart EVA™ model as well as hybrid forms of EVA™ used by organisations.

Literature review

A literature review was conducted in order to obtain background information relative to the research questions that could also be used to discuss the results of the research conducted for the purposes of this study. In order to synthesis the literature in this article, the authors embarked on a theoretical as well as an empirical overview of the literature.

Theoretical overview

In order to establish common ground, the theoretical overview provides a brief discussion of the background, definition and advantages of EVA™.

The goal of all companies is to create value for shareholders. Companies need to maximise on the use of various measurements that correlate with the value of their company. According to Damodaran (2001), the measurements that may be employed include:

- Earnings or return on investment – an accounting variable
- Market share – a marketing variable
- Cash-flow return on investment (CFROI) – a cash-flow variable
- Economic Value Added (EVA) – a risk-adjusted cash-flow variable.

McClure (2011) mentioned that companies and their consultants use EVA™ as the most successful performance metric. Financial theory justifies this metric, which is consistent with valuation principles. Both of the aforementioned are important to investors when they analyse companies' performance.

EVA™ as well as earnings per share (EPS) and price per earnings (P/E) ratios are continuously scrutinised by investors and analysts. Companies can change their focus from company performance to divisional performance with the use of EVA™ (Stewart 1990).

EVA™ is recognised as a strong indicator of a company's share performance. As a result of this, companies with a high EVA™ should perform more strongly that those with a poorer EVA™, in a given period of time. If EVA™ is expected to drop, this acts as a signal to investors, as does an expected rise in EVA™, as EVA™ indicates to investors a yield above the weighted average cost of capital (WACC) (Correira, Flynn, Uliana & Wormald 2007). Hence, this will meet the requirements of both equity and debt investors.

Definitions

EVA™ provides an estimate of an organisation's economic profit, which is the value created over and above the required return of the company's shareholders. Therefore, EVA™ reflects the earned profit of the organisation less the cost of financing the organisation's capital, in other words, what shareholders gain when the return from the capital employed is greater than the cost of that capital (Stewart 1990). One of the ways in which this amount can be calculated is by making adjustments to the generally accepted accounting principles (GAAP) book values and deducting the opportunity cost of equity capital.

EVA™ may be distinguished from other financial performance measures such as net profit and earnings per share (EPS), as it determines the profits remaining after the capital costs of a company – both debt and equity – have been deducted from the operating profit (McClure 2011). This means that profit should account for the cost of capital when calculating shareholder value. EVA™ is an estimate of true 'economic' profit, or the amount by which earnings exceed or fall short of the required minimum

rate of return that shareholders and lenders could get by investing in other securities of comparable risk.

To understand the difference between EVA™ and net income, the hypothetical company, Mariefoo, is used as an example. The company earned R200 000 on a capital base of R2 million through the sales generated by one of their large divisions. Other accounting metrics suggest that Mariefoo is performing excellently. The company offers a return on capital of 10%. However, Mariefoo has only been operating for a year, and the market for their products carries substantial uncertainty and risk. Debt obligations together with the required return that investors need in an early-stage project add up to an investment cost of capital of 13%. Although Mariefoo reflects accounting profits, the company in effect sustained a loss for its shareholders of 3% during the previous year.

Another example will further explain the difference: if Mariefoo's capital is R200 million, including debt and shareholder equity, and the cost of using the capital (interest on debt and the cost of underwriting the equity) is R26 million a year, economic value will only be gained for Mariefoo's shareholders when profits exceed R26 million a year. Therefore, if Mariefoo earns R40 million, the company's EVA™ will be R14 million. Hidden opportunity costs exist for investors to compensate them for forfeiting the use of their own cash. EVA™ includes this hidden cost of capital, whereas conventional measures ignore it. This indicates that EVA™ measures profit in the way that shareholders define it (McClure 2011).

EVA™ refines residual income by including adjustments to the divisional financial performance measure for distortions introduced by GAAP. It is used mostly in companies with divisions and is derived by starting with divisional profits, plus or minus accounting adjustments, less a cost of capital charge on divisional controllable assets. The divisional profit should be calculated before notional interest charges. Other adjustments are made to replace historic accounting entries with an amount that approximates economic profit and asset values. There are 160 possible adjustments that can be made, but most organisations will need to make at least ten adjustments, for example, the capitalisation of many discretionary expenses such as research and development (R&D), marketing and advertising to ensure that costs and benefits match. These adjustments are made to derive managerial information closer to economic reality (Correira et al. 2007; Drury 2007).

The adjustments to the definition of EVA™ are made only in those cases where the following four criteria are met (Correira et al. 2007; Drury 2007):

- It is likely to have a material influence on EVA™.
- Mangers can influence the outcome.
- Operational people can readily grasp it.
- The required information is relatively easy to track or derive.

The calculation of EVA™ (EVA™= net operating profit after tax – [capital x cost of capital]) appears straightforward and simple, but the calculation of EVA™ can be deceptive. Firstly, net operating profit after tax (NOPAT) hardly ever represents a dependable indicator of shareholder wealth. NOPAT might show profitability according to GAAP; however, accounting profits seldom reflect the remaining amount of cash at year end for shareholders. Calculating the WACC is even more complex. WACC is a function of the capital structure (proportion of debt and equity on the statement of financial position); the volatility of stock is measured through its beta and the market risk premium. A slight change in any of these may result in large changes in the final WACC calculation (McClure 2011).

EVA™ uses (advantages)

It is claimed that by implementing a complete EVA™-based financial management and incentive compensation system, managers will obtain better information – and will be more motivated – to make decisions that will create the greatest shareholder wealth in any publicly owned or private enterprise. Further advantages, among others, include (Correira et al. 2007):

- Evaluates (and rewards) corporate and divisional managers on the wealth created in the division, consequently aligning the interests of managers with those of the shareholders
- Good approximation of managerial performance and behaviour in the organisation's best interest
- Makes managers aware that capital has a cost, thus assisting in decisions of disposal of under-utilised assets that do not cover costs, making managers care about managing assets as well as income, and helping to assess the trade-offs between the two
- Senior managers concentrate on the delivery of shareholder value (maximising the wealth of shareholders)
- Return on investments (ROI) and hence EVA™ measures are surrogates for changes in market value/share value
- Conceptually simple and easy to explain to non-financial managers
- EVA™ provides a common language for all employees and allows management decisions to be modelled, monitored, communicated and compensated in a single and consistent way – always in terms of the value added to shareholders' investment.

This approach has proved effective in virtually all types of organisations, from emerging growth companies to turnarounds (Mäkeläinen 1998). This is because the current level of EVA™ is not really important. Current performance is already reflected in share prices. It is the continuous improvement in EVA™ that brings continuous increases in shareholder wealth.

Three hundred organisations (Drury 2007) world-wide were identified as having adopted EVA™ during 1997, including Coca-Cola, GE, AT&T, ICL, Boots and the Burton Group. SABMiller is a South African company that implemented the EVA™ system for performance measurement.

However, EVA™ remains a measure of a single-period return; therefore, management may not be inclined to invest in this project due to the short-term effects of EVA™.

Empirical overview

Some empirical evidence is provided in the literature, based on previous studies on the calculations and adjustments of EVA™. The literature also provides comprehensive studies on the application and the appropriateness of EVA™ as well as a comparison between EVA™ and other measurements.

Liapis (2010) provides a comprehensive overview of the adjustments required to calculate EVA™ in order to transform the accounting framework into an EVA™ framework. Liapis (2010) suggests adjustments of non-operating items, non-recurring events, on the cash basis, and on the economic basis.

The major adjustments include marketable securities and other non-operating assets, which are included in the statement of financial position, but excluded from EVA™'s capital, as marketable securities and other non-operating assets are not operational. Income derived from these is also excluded for EVA™ purposes. Operating leases are a further adjustment in the statement of financial position. These are treated as off-balance sheet future commitments, and rental expense is charged to expenses in the income statement. In EVA™ capital, the operating leases are capitalised and added to both assets and debt. In NOPAT, imputed interest on additional debt is added to NOPAT. The adjustment of recognised goodwill refers to net goodwill that is recognised in the statement of financial position as an asset. In the income statement, an amortisation expense is charged to earnings. In EVA™ capital, the cumulative amortisation is added back to goodwill, and in NOPAT no amortisation occurs. Unusual gains or losses are also included as a major adjustment. In the statement of financial position, these are written down, which reduces the asset balance by historical cost. In the income statement, gains and losses are included

in earnings. In EVA™ capital, gains reduce capital, and unusual losses are added back. In NOPAT, gains and losses are not included. The final major adjustment is research and development, and marketing. On the statement of financial position, no capitalisation is recognised, and in the income statement, research and development and marketing expenses are written off as incurred. In EVA™ capital, such expenses are capitalised if the economic life exceeds the accounting cycle. In NOPAT, the capitalised expenses are amortised over the economic life of the asset (Liapis 2010).

Sharma and Kumar (2010) carried out a comprehensive review of articles dealing with the theory and application of EVA™ over the past 15 years. They classified the literature on EVA™ into seven sub-themes, namely:

- EVA™ and stock returns, which includes articles on the relationship between company performance and EVA™, and EVA™ compared to other performance measures
- EVA™-MVA (market value added) relationship, which includes literature investigating the correlation between EVA™ and MVA, and EVA™ as a proxy for MVA
- Managerial behaviour and performance management, focusing on literature on wealth creation, management incentives and performance evaluation
- Concept, criticism and implementation, which covers literature on EVA™ as a tool to facilitate financial management and financial strategy formulation
- Value management and value-based management, including the creation and measurement of value
- Discounting approaches, which investigates the relationship between EVA™ and NPV (net present value), the impact of inflation, and the reconciliation between EVA™ and other variations of discounted cash-flow valuation
- Literature survey – studies comprising a comprehensive literature survey are covered in this category.

According to Sharma and Kumar (2010), the majority of the research (more than 50% of articles reviewed) was conducted on the relationship between EVA™ and stock returns. It therefore appears that most of the research focuses on the value of EVA™ as an indicator of value to external investors, as opposed to EVA™ simply being a tool for internal performance measurement, perhaps on a divisional basis within the organisation.

An overview of the literature indicates that EVA™ is more appropriate and applicable in a capital-intensive environment. Deo and Mukherjee (2009) conducted research on the perceptions of EVA™ among Fortune 1000 firms and found that 90% of respondents agreed that EVA™ is more appropriate in capital-intensive organisations

such as manufacturing rather than in an environment where organisations rely on intellectual capital.

Silverman (2010) also investigated the appropriateness of EVA™ in a high-technology environment. He found that calculated equity values based on EVA™ were lower than the market values of the same organisations, even in cases where research and development costs were adjusted and capitalised. In certain cases, the market value was almost double the intrinsic value of these organisations.

Kaur and Narang (2009) calculated EVA™ on a sample of 104 prominent organisations in India and found that almost 50% of the sampled companies clearly destroyed the wealth of their shareholders. Although Kaur and Narang (2009) suggested methods of improving the EVA™ of these organisations, their findings could also indicate that EVA™ is not a reliable measure of performance and value. Methods suggested included the lowering of an organisation's cost of capital, improved operational efficiency, selling off unproductive assets and optimising the debt/equity ratio of the organisation. However, if one assumes the accuracy of the collective wisdom of investors in these organisations, Kaur and Narang's (2009) findings may also be an indication that EVA™ may not be the best indicator of value and that alternative metrics should be investigated.

Chari (2009) did a comprehensive literature review on different performance measures used by companies, focusing on a comparison between EVA™ and other performance measures. Chari found that the nature and number of accounting adjustments made for the calculation of EVA™ are tailored to suit the needs of the company that is implementing it. No two companies calculate EVA™ in the same manner. This view is advocated and practised by its proponents as well (Chari 2009). This study indicated that of the total of 165 adjustments, only five to six accounting adjustments contribute to a discernible difference in EVA™; the others are immaterial (Chari 2009). Only six of the ten studies reviewed concluded that EVA™ as a measure of performance was superior to others.

Shotter, Dennis, Brummer and Boshoff (1998) investigated the strength of association of EVA™ with shareholder value and compared the association to that of traditional performance metrics. They concluded that EVA seems to have a stronger association with Market Value Added than other traditional performance metrics. It is therefore plausible that different performance metrics may be combined in order to assist companies in adding value. De Wet and Hall (2006) highlighted the importance of economic profits and the long-term effect on the shareholder value of a company. The results of their study indicated that a positive relationship exists between spread and shareholder value. Companies may therefore need to be made

more aware of the importance of economic profits and their effect on the shareholder value of the company.

Holler (2008) investigated the information content of the value-based measures RI (residual income) and EVA™, and two standard indicators used by investors (namely earnings and cash flow from operations) to address the question: "Have value-based measures recently gained superiority to traditional measures in explaining contemporaneous stock returns or firm value?" Holler (2008) found that earnings and its closest value-based measure, residual income or RI, continue to outperform EVA™ as an indicator of organisation value, and that EVA™ was probably not superior to other measures as an indicator of wealth. In addition, the number of accounting adjustments required for EVA™ calculations could be regarded as a significant disadvantage of using EVA™ as a performance measure.

Deo and Mukherjee (2009) conducted research on how Fortune 1000 organisations view EVA™. They received only 21 out of 1 000 usable responses despite sending multiple reminders. This may be an indication that many organisations are not committed to EVA™, as one would expect that an organisation using EVA™ would also show an interest in completing a research questionnaire on EVA™.

Deo and Mukherjee's (2009) research identified that the strengths of EVA™ as a reliable internal measure were the ability to provide correct incentives for allocating resources and being better when comparing performance than traditional accounting measures. The weaknesses identified include the fact that EVA™ is not suitable for all organisations, the computational process of EVA™ is complex, EVA™ is a short-term measure and it is more effective when used together with other measures.

Research methodology

A team of eight people from the University of South Africa's Department of Management Accounting and the Bureau of Market Research pooled their expertise in this research project. Qualitative research, specifically the focus group method (Morgan 1997), was chosen as the preferred method of research. This method was chosen since the team wanted to engage in a discussion with stakeholders in the field in order to arrive at an in-depth understanding of the reasons why EVA™ is implemented or not implemented. A questionnaire was not used as it might only have resulted in specific answers to predefined questions without making any discussion possible.

The qualitative research process adopted for the purposes of this study involved four steps, namely sampling in order to identify participants, a focus group, the analysis of focus group data and the interpretation of such data. Purposive sampling,

and more specifically a snowball sample, was used to select the participants. The criteria for inclusion in the sample was that responses should come from companies or people using EVA™ and/or having a good knowledge of EVA™. The research team investigated reasons why EVA™ is not implemented in companies and identified the sectors where implementation is most likely.

A focus group was organised for February 2011 to establish the following:

- What do you understand by the definition of EVA™?
- Do you use EVA™ or any other method similar to EVA™?
- If yes, why do you use EVA™?
- If you use EVA™, how do you calculate it?
- If no, which method do you employ?
- In which sector, according to your experience, is EVA™ most efficient?

Seven participants from the private and public sectors attended the focus group together with the eight members of the research team.

A dictaphone was used to record the discussion, and the recording of the focus group session was distributed on compact disc to the research team members. All team members listened to the recording several times and jointly identified 24 themes. After the original themes had been identified, they were categorised into five main themes, and the remaining themes were classified as sub-themes. After listening to the recording again, details from the discussions were added to the themes and sub-themes. The results of the analyses were logically interpreted using professional judgement based on the method of difference. This method is employed where a causal hypothesis is generated when the absence of an effect follows on the absence of an event which usually has this effect (Moore & Parker 2009). The validity and reliability of the data were established by comparing the consistency with which different team members arrived at the same conclusions. Where there was a difference of opinion, the team members discussed the differences and agreed upon the outcome after the critical discussion.

Results of the study

The identified themes form the framework for the discussion of the results that emerged during the focus group. These themes are discussed in the following sections:

Theme 1: Measures to determine performance

It is evident from the focus group discussion that there are a large number of measures available to determine organisational performance. Such measures include, among others, Economic Value Added (EVA™), economic profit (EP), free cash flow (FCF), cash-flow return on investment (CFROI, originally developed by HOLT Value Associates) and combinations or hybrids of these measures.

The discussion further revealed that the measure decided on is determined by what a business is trying to manage and the performance that is measured. The performance measure selected should ensure that the objective of the business (who or what is measured) is attained. The participants also emphasised that the main use of performance measurement is to increase shareholder value and to manage the performance of people and divisions. A participant with more than ten years' experience in value-based management and the shareholder value analysis sphere noted that calculating the economic value using FCF would result in the same answer as using EVA™.

The availability of data, management's needs, the nature of the business and the sector in which the business operates will influence the performance measure selected by the business. Therefore some measures might be better suited to certain organisations. The overall picture needs to be taken into account, where buy-in from the whole business needs to be obtained for the measure selected.

Theme 2: Calculation of EVA™

The basic calculation of EVA™ involves determining the NOPAT and then deducting a capital charge, based on the market value of operating assets. In the discussion of the calculation of EVA™ and economic profit by Stewart (1990), three different aspects of the calculation can be identified:

- Calculating profit
- Determining the asset base
- Determining the WACC.

Calculation of profit

The focus group participants agreed that the basic EVA™ definition of using NOPAT is correct. There were, however, various views on the specific adjustments required, and it was evident that the many adjustments suggested by Stern and Stewart are not always considered when calculating EVA™ or economic profit in the workplace.

With regard to depreciation, the response reflected that depreciation should not be excluded from the calculation of NOPAT, even though such depreciation did not involve cash flow. Where there is an increase in the value of an asset, for example fixed property, the asset should ideally be re-valued and the increase in value should be reflected in the net operating profit. It was admitted that it is not practical to re-value assets on an annual basis and that a five-year term for revaluation is probably more practical.

Theoretically, long-term expenses such as research, training and marketing should be excluded from net operating income and capitalised for EVA™ purposes. This is not always practical, according to the views of the participants. In some cases, the consultant calculating the economic profit will agree with the client on the question of whether these expenses should be capitalised or not. Research expenditure was singled out as a very difficult item, because the expected financial benefits arising from the research are not always certain and therefore do not necessarily justify the item being capitalised.

In terms of traditional EVA™, interest on long-term loans should not be included in the calculation of NOPAT (Stewart 1990), and if any saving on this interest occurs, it should therefore also be excluded. Some of the participants, however, confirmed that they do not make this adjustment when calculating economic profit. They simply use net profit after interest and taxation before deducting a capital charge.

Other adjustments, such as smoothing of lumpy cash flows, could also be considered for years where there are significant unexpected and once-off cash-flow items.

Determining the asset base

The consensus among focus group participants was that the asset base used in the calculation of EVA™ and economic profit consists of non-current assets and net current assets. The long-term financing of these assets is therefore not considered. This is in line with the Stern Stewart model (Stewart 1990).

Instead of using net book value of assets as reflected on the financial statements, the market value should be used for EVA™ purposes. Some of the adjustments required could include the revaluation of fixed property and other non-current assets. Operating leases are often capitalised as well to present a better picture of the operating asset base used to generate income.

Non-operating assets, for example housing provided to staff, are excluded from the EVA™ calculation. Furthermore, intellectual property is in practice a very difficult item to account for in EVA™ calculations. Valuing intellectual capital is not always

practical, and this is one of the reasons why it is often difficult to apply EVA™ in human capital-based companies.

Determining the weighted average cost of capital (WACC)

It was evident from the discussion that calculating EVA™ does not necessarily involve the calculation of the WACC as well. In all the cases, a previously determined WACC was provided to the individual preparing the EVA™ calculation. It appears that a number of companies have at some stage prepared a WACC calculation, and that this is subsequently used without too much questioning.

The participants agreed that WACC should be determined by comparing the company reviewed to similar listed entities and any other benchmark peer company available. It would be more appropriate to use target debt–equity ratios instead of actual debt–equity ratios. A typical WACC for larger listed companies could be estimated at around 12% to 13%, and a premium of at least 5% to 6% would be added for unlisted medium-sized companies. A further country-specific risk premium could also be added if deemed necessary.

Theme 3: Understanding the nature of business

It was clear from the discussion that an in-depth understanding of the business is required in order to select the most appropriate performance metric and to perform the most accurate calculation. The nature of the business not only refers to the industry in which the organisation is operating, but also to the current stage or season of the life cycle of the organisation, the organisation's risk profile, as well as the way in which the organisation operates. It should also be taken into account that the business and the various business units are not necessarily in the same stage of the life cycle.

Time should be invested in clearly understanding who and what management wants to manage before attempting to measure performance. The main purpose of performance measurement is firstly to increase shareholder wealth, and secondly to improve people's performance. According to the participants, a variety of metrics are required to measure accurately whether these goals have been met.

The economic sector in which the organisation functions plays a significant role in deciding on the most appropriate performance metric. The focus group indicated that there is a significant correlation between turnover, capital expenditure and inventory levels in capital-intensive organisations such as mining, inventory, trade and electricity, but that the correlation is less significant in other sectors such as business

services. The correlation between turnover, capital expenditure and inventory levels will also influence the choice of a performance metric. The focus group agreed that a capital-intensive organisation is more suitable for the EVA™ calculation than an intellectual capital-based organisation.

Participants mentioned the importance of the current stage or season of the life cycle of the organisation and agreed on the influence thereof on the selection of the performance metric used. Because different units in the business might be at different stages in their life cycle, different metrics might be required for the various units of the same organisation. Using the same metric throughout the business might result in an inaccurate calculation of performance, which might have an effect on decision-making. However, understanding the development stage of the different units and selecting the metric accordingly will result in the calculation of a more accurate performance indicator.

These findings imply that engaging with the client to gain an understanding of the business is of the utmost importance in order to determine which metrics are more appropriate and which adjustments need to be made in the EVA™ calculation. It is furthermore important to calculate the WACC accurately.

Theme 4: Performance metrics and the human factor

During the focus group discussions, it became evident that performance metrics are either positively or negatively influenced by the human factor. Participants agreed that any metric can be manipulated, and that the manipulation may be based on the intentions of the people applying the metrics. Therefore, according to the participants, EVA™ is just another metric and is not considered to be more important than the other measures.

The focus group highlighted the negative impacts associated with some internal metrics, for instance performance bonuses. EVA™ promotes the creation of a bonus bank (when results are EVA™-positive) whereby an employee may earn a bonus of 10% and only a third is paid to the employee and the rest is banked to incentivise the employee to think long term. The bonus is paid at a certain time based on past results and may therefore not invoke a forward-looking strategy. The following example was raised during the discussion: If an employee knows he or she will not be with the company for longer than three years, he or she may try to maximise his or her bonus by manipulating the performance measurement through reducing capital charges, statement of financial position items and adjustments, to the detriment of the company. His or her successor will need to face the challenge of recovering from the lack of capital investment and restoring long-term value.

Another issue raised is that general managers may not be willing to be part of a certain performance metric unless it is included in their key performance indicators (KPIs) and they have control over the allocation and utilisation of assets. This is why it is important for a company to make sure that managers' KPIs are aligned with the specific performance metrics in place and that managers are consulted for input.

The focus group further felt that EVA™ could give rise to 'short-termism', because EVA™ favours short-term projects, although long-term projects are usually more profitable. The longer one keeps the asset in operation, the more profitable the project will be – this was established when Activity Based Costing (ABC) was applied to measure unit costs.

The importance of staff buy-in into metrics was also mentioned. A performance metric will only be effective when organisations have the necessary employee buy-in to the metric applied by the company.

Theme 5: Challenges of implementing EVA™

EVA™ suggests a possibility of 160 adjustments. Therefore it is important to understand the business and strategy in order to make the important adjustments. Normally this can be limited to ten adjustments. Adjustments for different countries in which the business operates should also be considered.

It is important to understand that a lot of work should be done behind the scenes. The data should be valid and reliable, and the systems should be in place to calculate EVA™. Management should understand and be aware of the costs within the constraints of the company. Another challenge is to analyse and understand the sector and the cycle of the business, as this is important for the selection of appropriate metrics. Before EVA™ can be calculated, the business and its strategy need to be understood; therefore, buy-in from all important stakeholders is vital.

Companies are already struggling to calculate net profit correctly, and EVA™ has made it even more difficult. EVA™ is a long-term process, and should be calculated consistently over time. Sometimes EVA™ is incorrectly used by managers as a short-term tool to enhance their own performance, normally associated with bonuses, without considering the long-term effect on the value of the company. A good performance metric is both top-down and bottom-up. EVA™ can be calculated for each division (provided that the financial information is available per division) or for the company as a whole.

The EVA™ theory is subjective, can be manipulated and is mostly dependent on the ethics of top management. Adjustments should be implemented consistently and objectively chosen and cannot be included and excluded on whim. This will ensure

that the measure is reliable. Sometimes adjustments will be included or excluded to understand the effect of the adjustment. This is also important to smooth out the difference between internal and external reporting. EVA™ is normally used as a performance measure, which is an incentive for people in controlling positions to manipulate the calculation.

The focus group also noted that businesses need to be educated in terms of the EVA™ method and understanding of the EVA™ concept. Sufficient investment of time and resources is necessary to help managers understand what EVA™ is and how it should be used in managing their business. EVA™ can add value but is complex and not clear cut. It is important to automate the EVA™ calculations so that they become part of the monthly reporting to ensure optimal utilisation of the business decision tool.

Conclusions

Despite numerous advantages flowing from the use of EVA™, it seems not to be widely used by South African companies. The research being reported on here focused on the extent to which EVA™ is used in South Africa, the deviations from the Stern Stewart EVA™ model and the reasons for these deviations.

It became evident during the literature review that there are a number of different metrics that can be used to measure the financial performance of a company. A number of hybrids were also suggested by the participants in the focus group. The metric used is dependent on what the company wants to measure.

The EVA™ calculation is explained in the literature and is categorised into three steps, namely calculating the profit, determining the asset base, and determining the WACC. It was agreed in the focus group discussion that the EVA™ calculation includes a number of adjustments that are not always followed. These adjustments are often agreed upon with the organisation's management and seldom coincide with the adjustments suggested by Stern and Stewart. It was agreed that the market value rather than the book value should be used for the calculation of the asset base. It also became evident that the WACC is not always calculated concurrently with EVA™; however, a predetermined WACC is often used for the EVA™ calculation. Participants mentioned that it is very difficult to place a value on intellectual capital and that EVA™ may therefore not be a suitable measure for human capital-intensive companies, a fact that was evident from the literature review.

Understanding a company entails considering the sector in which it operates, as well as the seasonal trends of the business. Previous research refers to the role that the nature of an organisation plays in the selection of adjustments, and it was noted

that EVA™ is not suitable for all organisations. The present research revealed that understanding the business is very important when making an informed decision on which metric to use to measure financial performance. Engaging with management to gain an understanding of the business is of the utmost importance in determining which adjustments need to be made in the EVA™ calculation and to calculate the WACC accurately.

There are a number of challenges with the implementation of EVA™. It became apparent during the discussion that any metric can be subject to manipulation. The human factor may also lead to selfish decisions being made by managers, especially when they know they are not going to be with a company much longer. It is important that the staff buy into the metric that will be used, especially in companies with large capital outlays. If managers do not have a say in the use and allocation of the assets, they may not want to implement EVA™.

Companies struggle with the calculation of net profit and even more with the calculation of EVA™. The study on which this article is based indicated that EVA™ is more suitable for capital-intensive organisations. The EVA™ methodology is subjective, may be manipulated and may be mostly dependent on the ethics of top management. It was established that EVA™ has some advantages and is used by companies to enhance the evaluation process, but that the metric used is industry-specific and is influenced by the nature of the company. EVA™, as a metric is not widely used by South African companies and is not more important than other measures as an indicator.

Different metrics are used for financial performance. A better awareness of the advantages of EVA™ in conjunction with the other metrics might lead to wider use of EVA™. Further research on the adjustments and a classification of adjustments for use in different industries might enhance the use of EVA™ and lead to a better understanding of the calculations.

In summary, EVA™ is costly to implement, difficult to understand and often misunderstood by management and the staff who need to employ it. Furthermore, EVA™ might not be suitable for all types of organisations, and organisations and consultants therefore need to understand the specific company in order to decide which metric should be used.

Future research should include more focus groups with participants from listed companies, which could contribute to a better understanding of EVA™ and other metrics. The themes identified during the analysis of the results from the present focus group discussions provide a good guideline for possible questionnaires in further research. An analysis of the statements of listed companies will also contribute to the research objectives.

South African companies will benefit from using EVA™ in conjunction with other metrics, as it will empower management to make informed decisions to maximise performance.

Acknowledgements

The contribution of the following members of the focus group to the development of the ideas in this paper is acknowledged: Ho and Luksmidas.

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