

Research Report

Implementing the EVA Business Philosophy: Management Accounting Evidence from New Zealand

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Contents

Executive Summary	2
1. Introduction	3
2. What is EVA?	5
2.1 The theoretical construct of EVA – the economic model.....	5
2.2 The Practical construct of EVA – the accounting model.....	5
2.3 Accounting EVA and the economic construct	6
2.4 Is EVA a unique measure?	6
2.5 EVA in the decentralised organisation	6
2.6 Is EVA a unique solution to the benefit sharing philosophy?.....	7
2.7 Measures that compete with EVA	7
3. Obtaining the EVA Measure	8
3.1 Feasibility of the measure	8
3.2 Factors to consider	8
4. Reasons for Implementing EVA	9
4.1 EVA as a complete measure of performance	9
4.2 Addressing the problems that are associated with the decentralised organisation.....	9
4.2.1 Short-termism	9
4.2.2 Real investment options	9
4.2.3 Economic dependence.....	10
5. The Research Project	11
5.1 Methodology	11
5.2 Research methods.....	11
5.3 Summary financial information on the case study companies	12
6. Results from the Case Study Companies	13
6.1 Initial implementation	13
6.2 The Implementation process.....	13
6.3 The EVA philosophy within the firms today	14
6.4 Feasibility of the measure	14
6.5 Measuring EVA.....	15
6.6 EVA as a complete measure	18
6.7 Addressing the problems that are associated with the decentralised organisation.....	18
6.7.1 Short-termism	18
6.7.2 Real investment options	19
6.7.3 Economic dependence.....	19
7. Conclusions	20
Appendices	22
Appendix 1: The New Zealand Environment	22
Appendix 2: Alternative Value Based Metrics	23
Appendix 3: Results for Company 1.....	24
Appendix 4: Results for Company 2.....	35
Appendix 5: Results for Company 3.....	43
References	54

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Executive Summary

This publication presents case study evidence on economic value added (EVA®) from a management accounting perspective.

The evidence is based on CIMA-sponsored research into three New Zealand companies that have been using EVA for a number of years. The aim was to look at EVA in a business context to discover how it has:

- replaced traditional measures used for planning, investment decision making and control, so is a complete measure of performance; and
- addressed the problems that are associated with the decentralised organisation such as those relating to short-termism and economic dependence and therefore solved conflicts of interest within the firm and between managers and shareholders.

While there are many publications on the benefits of EVA (many from its promoter, Stern Stewart Consultancy Company), there has been little unbiased empirical research on the companies that use EVA and their experiences. This research sought to close that gap by conducting detailed interviews within each organisation to address the research objectives, with a particular emphasis on the dynamic nature of EVA systems over time.

The evidence shows that EVA has not replaced traditional measures. All of the companies make use of many other measures, both internally and externally. It also appears that EVA cannot solve many of the problems associated with the decentralised organisation and conflicts of interest still exist, in particular over economic dependence between units and short-termism. Indeed, the calculation and use of EVA can create new problems. EVA may be misunderstood within the organisation so that people mistrust the results. The way that the measure is used may also create adverse incentives.

The companies dealt with these issues in different ways but the common theme was that the calculation of EVA has been simplified over time. Within each company, EVA was originally introduced as a complex measure but it has been simplified in order to improve objectivity and understanding – both of which are vital if EVA is to succeed.

Does the evidence indicate that EVA has been oversold? It may be that EVA does not do all that has been promised by its promoters but the consistent view is that EVA has been useful. The rewards focus means that EVA delivers benefit sharing since the surpluses can be shared out after the returns to capital providers have been recognised. It can also lead to improved decision making-through a focus on capital, the cost of capital and the key drivers of value. These focal points had been missing before the introduction of EVA.

Although the findings will not apply to all companies, the results should be of interest to practitioners since they address the pertinent issues concerning implementing and working with an EVA financial management system.

1. Introduction

The notion of 'benefit sharing' has become an important guiding philosophy in recent years. For a company, this means that all interested parties are recognised when addressing the fundamental question of 'what are we trying to do in this business?' The idea is that, by giving different parties – for example, managers, other employees, customers and suppliers – the chance of sharing in the benefits accruing to a firm, everybody will be better off. But how do you define 'better off'? To answer this, a company must consider first whether there should be one overall objective or a series of objectives (a 'scorecard') and then how to measure performance against the objectives.

Neo-classical economics would define value maximisation as the single objective for all firms as this is when social welfare is maximised. Value is created when firms convert their inputs into outputs of a higher value. In a theoretical or economic world, product and factor markets are perfect and complete. All inputs and outputs have prices and capital assets have values and rental costs and income, so value is well defined. In addition to defining value at a point in time, we can look at the increment in value for a firm from one period to another. This increment is the economic value added (EVA). It arises from the company adding value by buying assets that generate cash flows. EVA can be defined as the surplus that remains after deducting the cost of the investment over the period.

However, in the real world we cannot use the economic model. Markets are incomplete and prices are not well defined. In many cases prices are not observable because assets are not actively traded. Similarly, we do not have a traded market value of debt for estimating the cost of capital. All of which means we cannot have the economic construct of EVA. What we can do is build something that looks very similar to it based on accounting numbers – the accounting model. It is accounting EVA that is marketed by its developer, Stern Stewart, which promotes it as a complete financial management system. It is argued that EVA, which is defined as net operating profit after tax (NOPAT) less a charge for all providers of capital, can be pushed down the organisation and used in all dimensions of the business. The idea is that maximising EVA is consistent with the objective of value maximisation. EVA is also consistent with the notion of benefit sharing through the definition and use of value drivers for interested parties.

In this respect, EVA fits in with 'enlightened value maximisation' as advocated by Jensen (2001). He says that the aim for a company should be value maximisation and that structures must be put in place to ensure that all constituents are considered. Value cannot be created if the company does not have good relations with customers, employees, suppliers and so on.

Accounting EVA has long been advocated in the US and it is now gaining in popularity in the UK. But does it really work? This question could be answered normatively or positively. Normative questions might address how EVA should work in the organisation or how the measure should be constructed. Examples of research adopting this approach include O'Hanlon and Peasnell (1998).

Most positive studies to date have concentrated on claims that one particular measure, say EVA, is more highly correlated with share prices than other measures – examples include Stark and Thomas (1998) and other studies such as those mentioned in Ittner and Larker (1998). However, correlation is not sufficient. First of all, these studies do not consider EVA beyond the corporate or firm level so there is no evidence presented on the philosophy of EVA in the decentralised organisation. Second, there is no consideration of whether EVA is a complete measure and whether it can establish the right incentives to ensure value maximisation. Third, there is no causation investigated: it is just correlation, so EVA cannot be said to cause any observed improvement in share price.

This research is unique in that it investigates EVA within the organisation from a management accounting perspective, from corporate level down to business units. In particular, it considers EVA in a business context to discover the extent to which EVA has:

- replaced traditional measures used for planning, investment decision making and control, so is a complete measure of performance; and
- addressed the problems that are associated with the decentralised organisation such as those relating to short-termism and economic dependence and therefore solved conflicts of interest within the firm and between managers and shareholders.

The evidence is based on case study investigation of three companies that have worked with EVA for a number of years. Central to the investigation is whether EVA has been good for the firms and whether it provides the right incentives to ensure that the benefit sharing philosophy can be successful.

Evidence was gathered from interviews with participants at various levels within each company together with supporting documents. This approach meets the call in the article by Ittner and Larker (op. cit.) for research that analyses factors influencing adoption of value-based measures and the resulting performance consequences of such measures. Similarly, O'Hanlon and Peasnell (op. cit.) call for in-depth field studies of the experiences of companies that have implemented EVA. Otley (1999) advocates the case study methodology for the investigation of EVA within the organisation.

The three companies investigated are all based in New Zealand which was chosen for two reasons:

- several companies there have been working with EVA for a number of years and so have a well-established track record of EVA systems. This gives a picture of EVA over time.
- some EVA companies in New Zealand are nationalised companies, called State Owned Enterprises (SOEs). Some SOEs publish EVA information in their financial statements in comprehensive detail. SOEs differ from quoted companies in that they must operate under a Deed of Understanding. This can affect the speed at which companies can pursue actions to increase shareholder value. The research considered two SOEs and so was able to investigate the extent to which management accounting systems are driven by financial reporting requirements. It also explored the differences in EVA between these companies and the third company, a firm quoted on the New Zealand stock exchange.

Facts about the New Zealand environment, including a brief outline of the characteristics of SOEs, are presented in appendix I. The following three sections of the report provide background information on EVA, including what is EVA (section 2), obtaining the EVA measure (section 3) and the reasons for implementing EVA (section 4). Alternative measures to EVA are presented in appendix II. Section 5 outlines the research methodology, with the evidence presented in section 6. Supporting results from which the evidence is drawn are presented for the three companies in appendices III-V respectively, using the framework for analysis suggested by Otley (op. cit.). Section 7 concludes.

2. What is EVA?

In thinking about what we mean by EVA, it is important to consider the differences between the theoretical notion of economic value added and the practical or real world concept of EVA. We can then consider how EVA might be measured and applied in practice in the decentralised organisation.

2.1 The theoretical construct of EVA – the economic model

In a theoretical or economic world, product and factor markets are perfect and complete. All inputs and outputs have prices and capital assets have values, rental costs and income, so value is well defined. There is a price for everything for every possible state of the world. Firms can now create value by investing in projects that have a positive net present value (NPV), which is the theoretically correct model for investment appraisal in this market setting. There is no difficulty in obtaining a value for any real investment options that might exist, as we have perfect and complete markets. What's more, we can use a more general model of valuation in this economic setting – risk neutral valuation.

As well as defining value at a point in time, we can look at the increment in value for a firm from one period to another. This increment is the economic value added over the time period. It arises from the company adding value by buying assets that generate cash flows. EVA can be defined as the surplus that remains after deducting the cost of the investment over the period:

Equation 2.1.1

$$EVA_t = C_t - (\text{Capital}_{t-1} \times WACC_t)$$

Where

EVA_t = Economic value added for time period t
 C_t = Cash flow for time t
 Capital_{t-1} = Market value of capital at the start of time t
 $WACC_t$ = Weighted average cost of capital (based on market values)

The term in brackets in equation 2.1.1 is the cost of the investment. This reflects the amount that providers of finance should expect to earn in the market over time period t. In this theoretical world all cash flows and market values can be measured. There is no ambiguity over the EVA measure: it is unique. However, in this framework EVA is a redundant construct. It arises as a by-product from the valuation process and it is not necessary, as values are well defined. This is the argument for the irrelevance of economic income (Beaver and Demski, 1979).

2.2 The practical construct of EVA – the accounting model

In reality, we cannot use the economic model. Markets are incomplete and prices are not well defined. In many cases prices are not observable because assets are not actively traded. Similarly, we do not have a traded market value of debt for estimating the cost of capital. The consequence of this is that we cannot have the economic construct of EVA. What we can do is build something similar based on accounting numbers – the accounting model.

In the accounting model, value is based on the accounting measure of capital.

The definition of accounting EVA is:

Equation 2.2.1

$$EVA_t = \text{NOPAT}_t - (\text{Capital}_{t-1} \times WACC_t)$$

Where

EVA_t = Economic value added for time period t
 NOPAT_t = Net (after depreciation) operating profit after tax for time t
 Capital_{t-1} = Book value of debt plus equity capital at the start of time t
 $WACC_t$ = Estimated weighted average cost of capital to the providers of finance, which will be based on book value weight of debt return and the book or the market value weight of equity return.

This measure of EVA is clearly made at the operating level. It is not defined as the surplus to shareholders. The implicit assumption is that maximising the total surplus to capital providers is the same as maximising shareholder wealth. In other words, debt holders do not share in any positive NPV, they just earn the appropriate rate of return.

Equation 2.2.1 gives the natural definition for EVA that is based on accounting variables. EVA is the increment to profit over and above the capital charge. This is a clear definition of EVA that will hold for all companies.

2.3 Accounting EVA and the economic construct

For several years, much of the debate on income measurement centred on the premise that the economic construct of income is the 'ideal' measure, with accounting measures viewed as inferior or imperfect. Faced with the realisation that we must work with accounting numbers, the objective has been to define a measure that is as close as possible to the theoretical economic ideal. However, such an objective is fruitless. The theoretical ideal is just that, an ideal. It cannot be measured, so how do we know if we are close to it? If we could work within this theoretical world we would not need measures of income anyway. It also relates to an economic environment which is not the reality of business. This is the Beaver argument that has already been alluded to.

The argument carries across to EVA. We are not attempting to measure 'true' economic value added using an 'imperfect' construct derived from accounting numbers. We should not even pretend to do so. We have with accounting EVA the possibility of using accounting numbers to define an economically meaningful measure that is useful internally and to those outside the firm.

2.4 Is EVA a unique measure?

Even though we can write the definition for accounting EVA, the actual measurement of EVA will vary across firms. EVA is not a unique measure. It will depend on accounting policy and is affected by what appears on the balance sheet and what goes through the profit and loss account. Indeed Stern Stewart talks of the possibility of more than 160 adjustments to accounting numbers, although it says that, in reality, only around 20 adjustments will be relevant for an individual firm. The adjustments, which include for example the capitalising rather than the expensing of research and development, are designed to make the EVA measure more economically useful.

2.5 EVA in the decentralised organisation

The measure of EVA can be drilled down the organisation and calculated at the divisional, process or product level. It is important that the organisation is decentralised with devolved decision rights since the secondary measures lie at the lower levels of the organisation. For example, it is at these levels that we have the interface with employees, customers and suppliers. This means that EVA may not be suitable in countries with a culture of centralised organisations, such as in the Middle East.

When EVA is mapped through the organisation, individual EVAs sum back to yield the overall firm EVA, as illustrated in Figure 2.5.1.

Figure 2.5.1 EVA in the decentralised organisation: divisions and business units

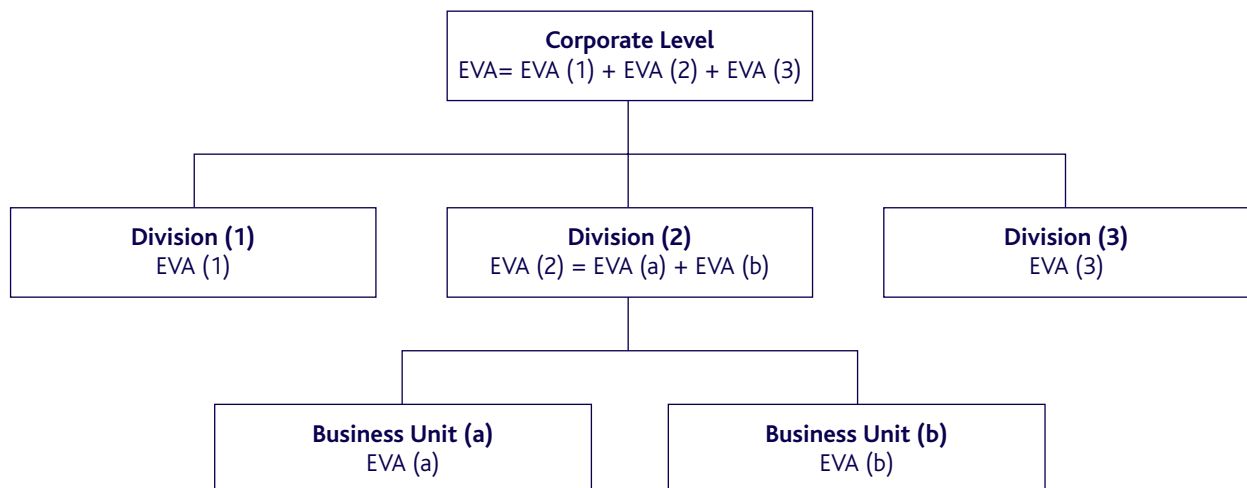
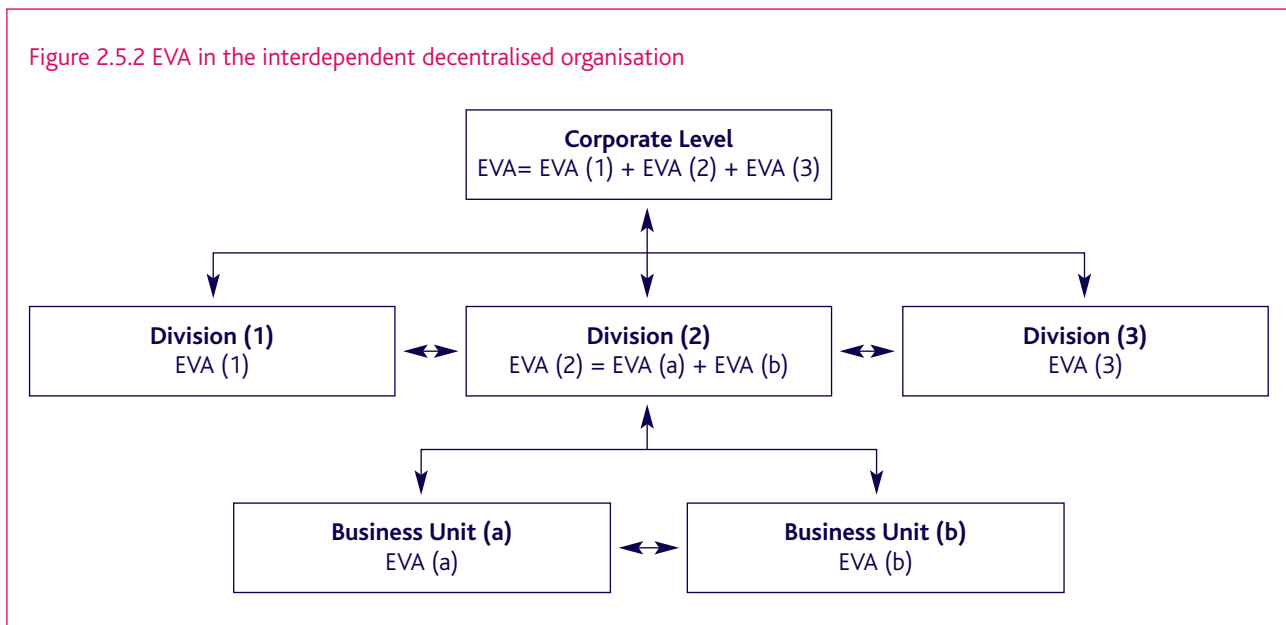


Figure 2.5.2 EVA in the interdependent decentralised organisation



In a firm made up of economically independent units, managers can be briefed to maximise their individual measures of EVA in the knowledge that this will ensure that overall EVA will also be maximised. In reality, decentralised organisations comprise a series of interdependent components with complicated linkages, as illustrated in Figure 2.5.2.

The arrows in Figure 2.5.2 indicate potential areas of interdependence, for example, over shared costs and revenues, transfer pricing of services and the allocation of central costs. These are discussed more fully below. Of course, the organisation may be much more complicated with many more intricate relationships.

In an organisation where there is dependence between units, EVA can still work when it is pushed down the organisation. It will work if the control function (the corporate function or executive board) establishes trade-offs between the units to deal with the interdependencies including dealing jointly with costs and revenues, transfer pricing and other impacts. Since like is being measured with like, it is in theory possible to establish these trade-offs. This is not necessarily the case with profit because it ignores the capital commitment.

2.6 Is EVA a unique solution to the benefit sharing philosophy?

The philosophy and ideas behind benefit sharing were instigated in the 1970s and 1980s with the pioneering work of Rappaport, who developed 'shareholder value analysis', based on the identification of key drivers of value for firms (see Rappaport (1986)). This philosophy of benefit sharing is not unique to EVA. The balanced scorecard approach, as advocated by Kaplan and Norton (1992, 1993, 1996a, 1996b, 2001a and 2001b) is an example of this philosophy, where there is an emphasis on balancing the interests in the business. Jensen (op. cit.) describes the balanced scorecard as the 'managerial equivalent of stakeholder theory'. He says

that the difference between the balanced scorecard and EVA is that the balanced scorecard gives no score – that is, no single measure of how a manager or a company has performed. As a consequence, managers have no guidance on how to establish the inevitable trade-offs that occur between the various interests. Without the appropriate incentives and direction, they can seek to act in their own best interests to maximise their remuneration.

EVA and the balanced scorecard are not conflicting philosophies. Indeed, the idea of 'taking EVA all the way down to the shop floor' is now regarded by some as impractical in certain situations (see Young and O'Byrne 2000). Instead, the focus at lower levels of the company is on the drivers of EVA, financial and non-financial, leading to a balanced scorecard approach. This suggests that the balanced scorecard and EVA are regarded as complementary systems. In effect EVA is split into its separate components, or value drivers, for the secondary stakeholders. These are then used to construct the balanced scorecard for the firm, unit or sub-unit. EVA might appear as one measure in the scorecard. The key difference between EVA and the balanced scorecard is that EVA collapses all the elements into one number.

2.7 Measures that compete with EVA

Since EVA is not a unique measure, what about its competitors? An array of consultancy firms have made their mark through promoting their own particular performance measures, all of which claim to be the best at ensuring that the primary objective of shareholder wealth maximisation is met. That companies are willing to buy into one or more of these measures illustrates the persuasiveness of the consultants and also perhaps dissatisfaction with more traditional performance measurement systems. The variety of value-based metrics can be classified along different dimensions according to their characteristics. A simple classification is provided in appendix II, together with examples of performance metrics in each of the categories.

3. Obtaining the EVA Measure

3.1 Feasibility of the measure

If a company wants to adopt the EVA philosophy it must be able to measure EVA down through the organisation. Although this seems obvious, it is something that Stern Stewart does not dwell on. Young and O'Byrne (op. cit.) suggest that units or divisions could be grouped together to measure EVA when there are difficulties in obtaining a finer measurement. However, they note that there are potential drawbacks to this solution, including the addition of another layer of management and the free-rider problem.

Corporate structure is another important factor in the feasibility of the measure of EVA. If the firm reorganises frequently, there is no history for the calculation and monitoring of EVA growth over time. What happens to any positive or negative EVA? Does it follow the manager since there is no longer a unit in which it can reside?

3.2 Factors to consider

There must be agreement as to:

- the adjustments to GAAP to obtain the EVA figure;
- the cost of capital;
- jointness over revenues, costs, assets and liabilities;
- allocated costs; and
- appropriate value drivers for each unit or sub-unit.

Adjustments

Measurement can have an impact on managerial behaviour and affect the way business is conducted. For these reasons, Stern Stewart recommends adjusting conventional GAAP figures to remove 'distortions' that they create. It says that more than 160 adjustments can be made to the financial accounting numbers although that, in reality, only around 20 adjustments will be made for a particular firm.

Adjustments must be consistently applied further down through the organisation if EVA is to be calculated at lower levels. However, as soon as you start making adjustments to accounting numbers and there is discretion over the nature of those adjustments, the measure is no longer objective. It would be easy to lose confidence in the measure if individuals within the firm couldn't see how it was calculated or where the adjustments came from.

The cost of capital

The cost of capital should be calculated as a weighted average cost of debt and equity, with the cost of equity derived from a model such as the capital asset pricing model. For EVA measurement there are two issues:

- should the cost of capital be time varying?
- should the cost of capital vary across business units to take account of possible differences in risk (and leverage)?

A general rise in interest rates or the market means a rise in the cost of capital. With rewards based on EVA, this potentially affects managerial compensation. One way to avoid this problem is to use a constant cost of capital over time. The estimate could be a company-wide cost of capital. However, this may not adequately reflect the risk of business units or the projects in which they invest. The cost of capital may be regarded as subjective if it is believed that risk is not adequately reflected. However, if the cost of capital varies across business units, it may create tensions within the firm.

Jointness over revenues and costs, assets and liabilities

Jointness over costs and revenues will inevitably arise in a decentralised organisation, particularly a network business. Shared revenues include, for example, revenue from bundling goods or services that go across business units. Similarly, costs may also be bundled, for example, advertising. Unless these costs and benefits can be broken down and priced separately for all units of the company, a satisfactory means of allocating these costs and benefits has to be devised. Any allocation will inevitably involve judgement, leading to subjectivity in the measure.

Capital must be allocated to business units in order to measure business unit EVA. While this may be a simple enough exercise when units maintain essentially separate assets, it can become more difficult when there is jointness, for example, if products map to multiple assets in multiple business units or assets map to multiple products. Shared assets and liabilities will inevitably be the case down the hierarchy, particularly for network businesses.

Allocated costs

There is a standard problem of allocating costs and deciding on the appropriate measure of performance. Should managers' performance be measured before or after the allocation of such costs? There are arguments on both sides but the important point is that it is difficult to see how EVA can resolve this problem.

Value drivers

Value drivers for performance measurement are important, particularly as we move down through the organisation since this is where the secondary objectives lie. There must be agreement for each unit or sub-unit over:

- the appropriate value drivers;
- the key number of drivers on which to focus; and
- how often the value drivers will be reviewed

The use of value drivers is a dynamic process, with the possibility of all of the above factors changing between reporting periods.

4. Reasons for Implementing EVA

4.1 EVA as a complete measure of performance

The definition of EVA looks the same as that of residual income, a concept first discussed by Solomons (1965). However, proponents of EVA would argue that it is much more than a measure and that it can be adopted as a core business philosophy. They would describe EVA as a complete measure of operating performance as it balances the secondary measures (value drivers) to maximise value. Ex ante, the accounting definition of EVA can be used for investment decision making. It is used in much the same way as NPV projects will be accepted if the present value of the future EVAs is greater than the investment cost.

The control function can also be based on actual EVA, or budget versus actual EVA. EVA can be estimated at the firm level to gauge overall performance and it can be pushed right down through the divisional level to business units, making use of EVA in the compensation scheme in order to provide the right incentives to managers. The idea of one measure for planning and control is that managers and everybody working with EVA focus on this one indicator and the whole company pulls in the same direction.

4.2 Addressing the problems that are associated with the decentralised organisation

One definition of EVA that can be easily understood and applied consistently for all dimensions is that it is 'a complete measure with the potential to solve conflicts of interest within the firm'. However, we must consider the problems associated with the decentralised organisation and how EVA might resolve them. These problems have been identified as short-termism, real investment options and economic dependence. Although separate they are inter-related – for example, short-termism may lead to the rejection of real investment options.

4.2.1 Short-termism

For investment decisions, it is often argued that managers take a short-term outlook. They prefer projects that will realise cash flows quickly in order to maximise their remuneration and enhance their reputation in the labour market. In the UK and US economies, managers may not want to stay with the firm to realise longer-term cash flows.

Using EVA will not solve this short-termist view. Managers may still have the incentive to reject a project with negative EVA values in the early years – even if the EVA profile suggests positive overall value – if they think they may soon want to leave the company. This is because an annual EVA measure cannot fully capture all the consequences (in other words, future cash flows) arising from the decision.

In response to this criticism, Stern Stewart believes that managers will focus on long-term value building if their rewards are based on actual cumulative increases in EVA and if their bonuses are linked to share options that are exercisable at a future date. It is the remuneration link that addresses the short-termism problem, not the measure itself. Annual EVA is inevitably short-term and if this is a problem for the firm, then steps must be taken to address it using, for example, share options or other non-monetary rewards. The suggested solutions to short-termism are not new. Most firms outline a compensation scheme comprising an annual bonus and deferred pay in their remuneration report.

Of course, the company itself may also become short-term in its focus if it finds that the nature of the industry has changed and it has become a reactive, rather than a proactive, player. This may be a rational move but its sustainability is questionable.

4.2.2 Real investment options

In investment decision making we have the issue of projects that contain real investment options – choices involving some managerial flexibility – that are not explicitly modelled within the standard NPV framework. Valuing real investment options is difficult because it is an example of where market prices do not exist. We have seen that option pricing models can be used to value such flexibility, with the value added on to yield an expanded NPV.

Accounting EVA does not explicitly value such options. For example, investment made now in research and development for the development of a new drug may mean that EVA figures are negative for a number of years. Furthermore, the pay-off from such growth options is likely to be uncertain. If managers take a short-term view they may have an incentive to reject such projects, thus stifling innovation, even though they appear to be value adding for the company. Also some options to invest that remain unexercised may still have value, for example, the option to defer. Typically no accounting costs are incurred but the option is value adding for the company.

Stewart argues that adjustments to immediate EVA calculations can be made to take account of such options, by creating a suspense account for capital invested in such projects, so that it is kept 'off the books'. The capital charge would not therefore include a charge for this investment.

This clearly makes the EVA measure subjective. It may also be difficult to see how it is being calculated as costs are being shuffled across time periods in a subjective manner. In addition, this arbitrary reallocation of costs through the suspense account creates certain incentives for managers, which may not be in the company's best interests. It may be in their interests to take on options which are not 'in the money' if there is no charge on the capital cost, or alternatively to allocate the capital of non-growth options to the suspense account.

4.2.3 Economic dependence

Whenever there is economic dependence between units, it is possible that externalities are created when decisions made in one unit affect the EVA results of another. If these effects are not captured in the first unit's EVA measure, then certain incentives are created and there can be a conflict of goals. For example, a manager may make a decision that causes additional costs for another unit. If s/he does not 'pay' for these extra costs – through, say, buying a product or service from that unit – then s/he may have no incentive to manage those costs. Conversely if a decision to invest provides extra revenue for the second unit, the manager may have no incentive to make that decision if the side benefits are not incorporated in the EVA measure, even if it is value adding for the company. In both cases, the EVA measure at the business unit level is not capturing all the consequences of the decision.

According to Stern and Shiely (2001) all firms experience conflicts between individual units. They note 'the guiding purpose of the executive committee of any company is to be the ombudsman and to determine the appropriate choices'. While this may be reasonable, they also note 'firms that go on EVA do not experience any more or less of these conflicts than non-EVA firms' (page 187). In the evidence for one company (see section 6 of this report), the introduction of EVA actually made the tensions between the units worse and enhanced the conflicts – so EVA was not neutral as suggested. Indeed, it is the economic dependence created by units trading with each other that creates the real issue for the companies in the survey.

Trading arrangements (transfer prices) are important in any decentralised organisation where business units provide products or services to each other. Certain policies can be adopted, such as the use of market prices, in order to obtain an 'arm's length' price. However, this is not always possible, for example, if the traded product is incomplete or if a price does not exist. It is often a matter of business unit managers sitting down to set their service level agreements at the start of each year, with any disputes settled by the corporate function or by the board. However, it does mean that the EVA calculated for a particular unit may be more a result of skill in negotiating transfer prices, rather than the unit's performance. This negotiation can also divert managers' time away from value creating activities.

Although it may seem that EVA cannot solve all of these problems, the key question for managers is not whether EVA is a perfect measure but whether it works within the decentralised organisation. Is it a good measure, does it lead to better decisions, does it solve conflicts of interest and does it deliver what it promises? If the answer to these questions is yes, then we might start to see EVA as a real revolution in management accounting practice.

5. The Research Project

5.1 Methodology

Case study methodology was used to examine the philosophy of EVA in three companies from a management accounting perspective. Participants were asked about the following points:

- (a) the implementation process including the reasons for EVA introduction;
- (b) the measure of EVA, including the definition and identification of value drivers;
- (c) EVA and corporate strategy;
- (d) the use of EVA for investment decision making;
- (e) the use of EVA for performance management;
- (f) the use of EVA for setting remuneration; and
- (g) the changing nature of the EVA systems since implementation.

Using the terminology provided by Otley and Berry (1994), the case studies can be described as 'insight studies' because they provide in-depth insights into the management accounting dimensions of EVA.

In case study research, there is no attempt to assess the extent to which the cases are representative of the population in question. Such statistical generalisation would be appropriate for survey questionnaires but not case studies.

5.2 Research Methods

Access to the firms was through a mixture of cold calling and personal contacts established from the researcher's earlier work on EVA. The companies agreed to take part on the condition that anonymity and confidentiality would be maintained.

Data collection methods included:

- semi-structured interviews in February 2001;
- documentary evidence to support and illustrate the points made in the interviews. This evidence was offered by participants at the time of the interviews; and
- external information such as annual report and accounts.

Before visiting the companies, the researcher specified the areas to be covered and suggested the number of people to interview within each firm. This was an attempt to maintain consistency across the case studies so that comparative analysis could be done. However, the exact number of interviews and the choice of participants were at the discretion of the individual firms. This meant that, although the areas were covered, the firms controlled the boundaries of the case study.

In total, 17 interviews took place: seven in company 1, six in company 2 and four in company 3. Each participant held managerial positions within the company at the time of the interviews: they included one chief executive, group managers, HR managers, group controllers, strategic managers, corporate finance managers and accountants. There was some overlap in the areas covered in the interviews, in an attempt to ensure triangulation of results.

Each interview lasted between two and three hours. The same interviewer conducted all the interviews, with each interview recorded on tape and then transcribed. Within each firm the lead person checked all transcripts of tapes before the results were compiled.

5.3 Summary financial information on the case study companies

The research investigated one quoted company and two state owned enterprises (SOEs). Summary information on performance is presented in table 5.3.1.

Table 5.3.1 Summary information on participant companies

	Company 1	Company 2	Company 3
Type of Company	Publicly quoted – Business unit structure	SOE – Business unit structure	SOE – Business unit structure
Operating Revenue	\$NZ 4 billion	\$NZ 110 million	\$NZ 900 million
Capital Expenditure	\$NZ 600 million	\$NZ 23 million	\$NZ 33 million
Employees	6,500 FTE	650 FTE	7,500 FTE
Time since EVA implementation	> 6 years	> 5 years	> 3 years

\$NZ 1 = approximately £0.28 for 2000.

Source: 2000 Accounts and company documents

From Table 5.3.1 we can see that company 1 (the publicly quoted company) is by far the largest in terms of operating revenue and capital expenditure. Although the companies are different sizes and operate in diverse businesses, there are common themes. They could all be described as decentralised network businesses with an overriding objective of shareholder wealth maximisation. In the case of the two state-owned enterprises, their aim is to maximise value for the shareholding minister (see appendix I). Detailed information on companies 1-3 is provided in appendices III-V respectively, including corporate structure, performance and EVA history. These appendices also contain detailed evidence from which the results in the next section are drawn.

6. Results from the Case Study Companies

The results have been interpreted by the researcher as a means of building up the picture of EVA use in the companies. The interpretation allows links to be made between the different pieces of evidence in the context of the environments in which the firms operate.

6.1 Initial implementation

The three firms in the case study all chose EVA over other commercially available products, such as those discussed in section 3.8. EVA was seen by each company as a way of adding shareholder value and focusing on the drivers of value. There were both external and internal reasons cited for choosing it.

External reasons:

- the measure was thought to be closely correlated to market value (company 1).
- the EVA methodology provided a framework for discussion of prices and what was a reasonable level of profit for a monopoly service provider (company 2).
- in the absence of a share price and competition, EVA provided a benchmark as to the proper return for the risk incurred by the providers of finance (companies 2 and 3).
- recommendation made in the government issued Value Based Reporting Protocol for SOEs (companies 2 and 3).

Internal reasons:

- EVA could provide a better focus for drivers of value (companies 1 and 3).
- EVA could help focus on the cost of capital (company 2).
- incentives could be created through rewards linked to EVA (company 1).

In the external list there are motivations other than shareholder value. For example, in company 2, EVA was seen as a way of establishing a 'fair' price that customers were comfortable with in a monopoly market. This was not a secondary objective and it illustrates the fact that shareholder value was not necessarily the overriding objective. Since the introduction of EVA the original motivations for implementation have remained valid. All the companies are still working with EVA, although it has evolved.

6.2 The implementation process

Stern Stewart argues that EVA can be mapped through the organisation right down to processes and products – all the way to the 'shop floor'. Each of the companies followed the phased approach to EVA implementation. EVA was first discussed at board level in each company and then calculated at corporate level. Next it was cascaded through the organisation to business units. No reliance was put on the EVA figures for an initial period while it was being 'bedded down' (company 3).

Implementation stopped at the business unit level for all three companies. At the sub-unit level, the balanced scorecard was used, largely to focus on the value drivers (as suggested by Young and Byrne). Companies 1 and 2 introduced the balanced scorecard after EVA, which suggests that EVA itself is not sufficient as a philosophy: an explicit focus on value drivers was deemed necessary. Company 3 had a scorecard framework before bringing in EVA. On its introduction, EVA was slotted into the scorecard framework as a financial measure. This again is an indication that EVA itself is not sufficient and that you need the balanced scorecard as well to focus on the appropriate benefit sharing that will meet the primary objective.

In terms of the success of the implementation process, participants identified the following factors as critical:

- support from the chief executive and other members of the board;
- a phased implementation, with EVA targets and results running alongside conventional figures for some time before relying fully on EVA;
- EVA is treated as a project within the firm, with a project leader; and
- initial training is provided for all staff who will be working with EVA.

These conditions are regarded as necessary by Stern Stewart (see Stern and Shiely, 2001). It is vital, therefore, that there is backing for the measure from the top, and that everyone fully understands the EVA results. If there is any suspicion about EVA or it is not seen as objective or transparent, this can quickly undermine its success. Initial training can help understanding and the project team can ensure that there is corporate ownership of EVA, rather than it being the preserve of a particular person.

Company 1 found that, when one person left the firm, although there were systems in place to calculate EVA, they could not actually extract the number because the only person who knew how it worked had left the company. Within the company, no sub-group or unit actually 'owned' EVA so there was no one taking overall responsibility for the measure. When it realised the problem the company gave overall responsibility to HR, which is where it remains today. This suggests that EVA was seen largely as a remuneration tool.

Within each of the companies, there was no explicit budget for EVA. This means that any evaluation of the success of EVA is bound to be informal, rather than an assessment of actual costs against budget. Aside from a measure of success, there are other issues – for example, where does the money for implementation come from? What would constitute a cost over-run if there was no budget as a benchmark?

6.3 The EVA philosophy within the firms today

Each of the case study firms can be described as decentralised network businesses that have been working with EVA for a number of years. However, they are at different evolutionary stages in their EVA philosophy (see figure 6.3.1).

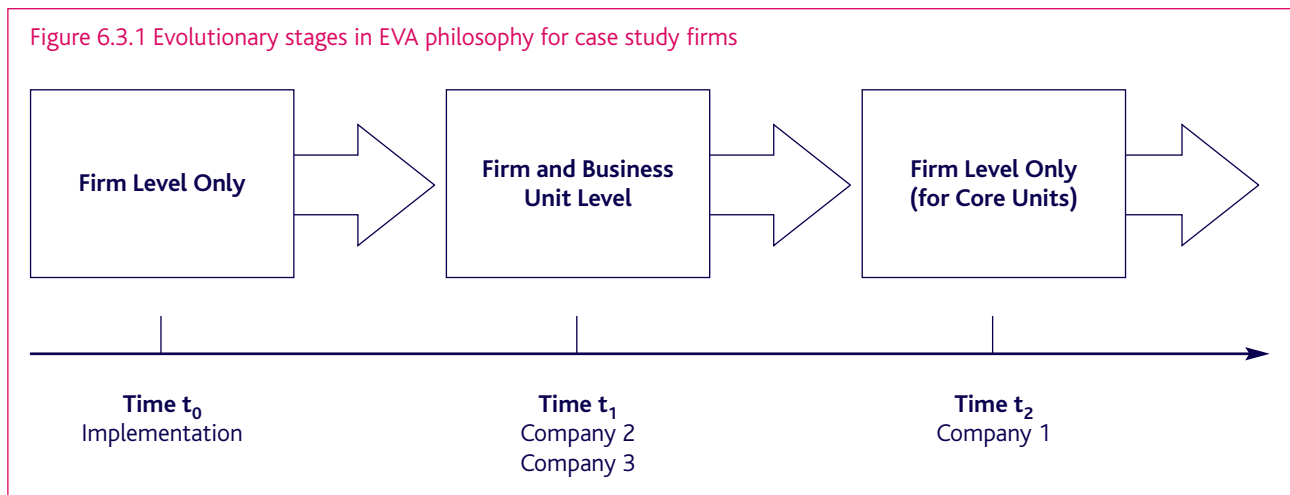


Figure 6.3.1 is developed from the evidence to give an indication of the evolution that may occur in companies generally, based on the experiences of the companies in the case studies.

- Company 1 has come full circle from using EVA at the firm level only, then to the business unit level and finally back to EVA at the corporate level for its core integrated units. It remains to be seen whether the cycle will repeat itself. At the moment the company does not really operate with an EVA mentality.
- Companies 2 and 3 are part way through the evolutionary process, since they are using EVA at both the corporate and business unit level, as advocated by Stern Stewart. The indications are that they will remain at this level – in other words, their EVA evolution is complete at the second stage.

That company 1 abandoned the use of EVA at the business unit level for its core businesses is evidence that the major objective of enhancing secondary measures to improve the primary measure using EVA philosophy failed.

6.4 Feasibility of the measure

Company 1 abandoned EVA partly because it could not measure it at the business unit level. Arguably this could apply to all network businesses. Difficulties included:

- establishing the asset register due to jointness of assets across business units; and
- the stability of the organisational structure.

Establishing the asset register

This was a real problem for company 1 where the network nature of the business meant that it was difficult to segment the asset base. The time taken up by this exercise should not be underestimated. Company 3 found that there was a lot of discussion on the initial creation of business unit balance sheets, despite the fact that the capital base was essentially separate and stable.

Organisational structure

This was a particular problem for company 1 which continually reorganised its business units in response to market conditions (this was not related to the introduction or use of EVA). Business units were continuously being 'sliced and diced', so there was no history for the calculation of EVA growth.

6.5 Measuring EVA

The definition of EVA

The companies make use of the standard definition for corporate EVA, as shown in equation 6.5.1.

Equation 6.5.1

$$\text{Corporate EVA}_t = \text{NOPAT}_t - (k \cdot \text{WACC}_t)$$

Where:

NOPAT_t = Earnings before interest and tax,
less a notional tax charge

k = Book value capital for the year

WACC_t = Corporate weighted average cost of capital

Calculating corporate EVA

Differences appear when we examine the application of the definition of corporate EVA to the case study firms. Summary information is presented in table 6.5.1.

Table 6.5.1

	Company 1	Company 2	Company 3
NOPAT_t	EBIT – notional tax charge	Revenue – Depreciation – Operating Costs (including cash tax paid)	EBIT – Depreciation – Operating Costs – adjustments
k	Average book value	Average book value	Opening book value
WACC_t	<ul style="list-style-type: none"> ● Corporate WACC_t, with return on equity calculated using CAPM* ● Differs across different risk profiles (units and/or projects) ● Reviewed annually 	<ul style="list-style-type: none"> ● Unlevered beta is used to determine unlevered return using CAPM ● Unlevered return is the cost of capital ● Constant for domestic business ● Reviewed annually 	<ul style="list-style-type: none"> ● Unlevered beta is used to determine unlevered return using CAPM ● Unlevered return is the cost of capital ● Differs across different risk profiles (units and/or projects) ● Reviewed annually

* CAPM is the capital asset pricing model

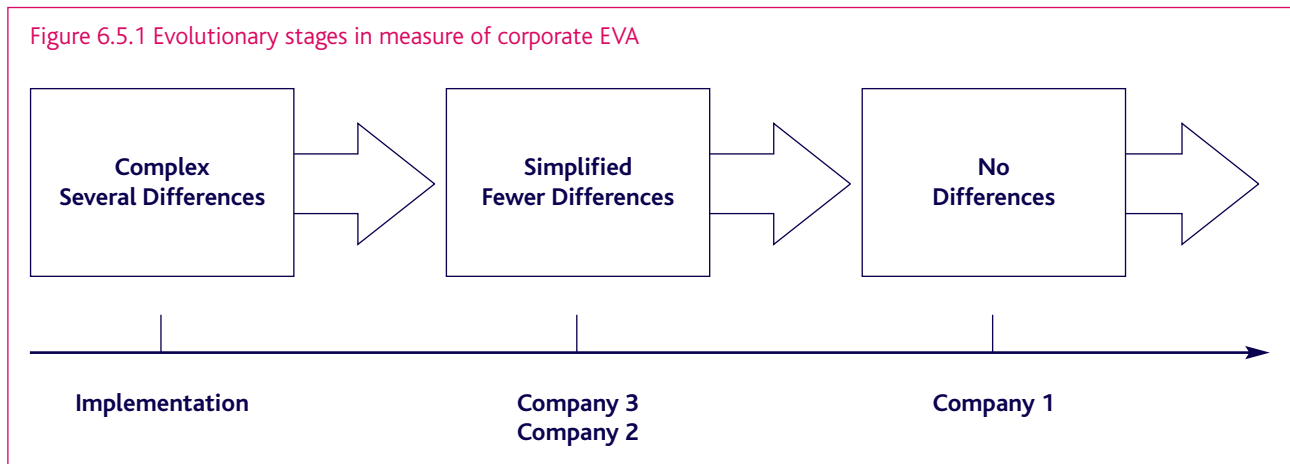
Key features of the measure of corporate EVA include:

- companies 1 and 2 made use of the average book value of capital for the year rather than the opening book value. Company 1 said this was because EVA was earned on 'all the capital during the year, including new investments'. However, it does mean that EVA is not a return-type concept where the focus is on the surplus for the period after deducting the cost of the invested capital – the Stern Stewart definition.
- company 2 maintained a cash basis for EVA wherever possible so tax was cash tax paid, for example. There were no accruals or adjustments for the tax shield on debt.

Adjustments to GAAP to obtain the EVA figure

The companies have gone through an evolutionary process in the way they calculate EVA: as differences between EVA inputs and financial accounting figures lessened, they have simplified the definition of EVA (see figure 6.5.1).

Figure 6.5.1 Evolutionary stages in measure of corporate EVA



The evolution is fairly standard for EVA users. Initially, there is a relatively complex measure that involves several differences between GAAP figures and those used for the calculation of EVA. However, even at the beginning, none of them had as many adjustments as 20, as recommended by Stern Stewart. Company 3 made most adjustments, up to 15 at one point. This company also had two EVA measures – internal and external – and the latter had more adjustments. A decision was taken not to make too many changes to the EVA calculation within the first two years. EVA has since been simplified to one measure with fewer adjustments.

The companies were clear as to why simplification is more important than greater 'accuracy' and why there is an evolution in the EVA calculation. Too many adjustments make EVA more difficult to understand for everyone in the company and make EVA look like the result of arbitrary shuffling of cash flows across time periods.

In other words, a complex measure of EVA is neither transparent nor objective. This was a real problem for company 1, where board members believed that managers were 'pulling the wool over their eyes' with EVA. The result is that there are no longer any adjustments made to accounting figures in company 1. Corporate EVA is simply earnings before interest and tax (EBIT) less a notional tax charge less the capital charge. As one participant put it, 'if EVA is not properly understood by all, then it will be relegated to a financial issue for the accountants to deal with'.

Company 2 is unusual in that it runs all its systems on an EVA basis (effectively a cash basis). Therefore, since traditional accounting figures are not used as a starting point in the calculation of EVA, it technically makes no adjustments, as the relevant figures are on an EVA basis. The definition of NOPAT is straightforward (see table 6.5.1). What is interesting is that company 2 converts the EVA results to conventional GAAP in the preparation of the standard accounts. Both sets of results are published in the annual report and accounts, with the EVA results appearing before the GAAP results.

A natural question then arises. Does EVA influence accounting policy choice? If all the systems in company 2 are EVA based, you might expect there to be some influence. However, participants reported that this was not the case. There was no motive for enhancing EVA when making accounting policy decisions. This was also true for companies 1 and 3.

The cost of capital

The companies made use of the capital asset pricing model (CAPM) in the determination of the cost of capital. In this model, return is a function of the risk free rate, the market risk premium and the systematic risk or beta:

Equation 6.5.2

$$r = r_F + [E(r_M) - r_F]\beta$$

Where

r	= Required return
r_F	= Return on the risk free asset, typically Government Treasury Bills
$[E(r_M) - r_F]$	= Market risk premium – the excess of the return on the market (typically an index return is used) over the risk free return
β	= Beta or systematic risk

It is in the calculation of the cost of capital that we see differences between the quoted company and the SOEs. Company 1 makes use of the models in the standard way. In other words, the CAPM (equation 6.5.2) is used to derive the return on equity, with the equity beta input estimated from historical price data. The return on equity then provides an input to the cost of capital calculation, together with the return on debt.

As companies 2 and 3 are not quoted, the equity beta cannot be estimated and plugged into the CAPM formula. Instead, they impute a value for the unlevered beta (β_U), in order to estimate the unlevered return on equity (r_U) from the CAPM. This is the 'universal' version of CAPM where the relevant beta or risk input is the unlevered (asset) beta, rather than the equity beta (which rises with increases in the amount of debt in the company). A key point is that the cost of capital is the unlevered return. In other words, the unlevered return is not weighted against the return on debt. The cost of capital estimate does not therefore vary with changes in leverage. Furthermore, there is no tax advantage to debt in this model.

Companies 1 and 3 apply different costs of capital across business units because of differences in systematic risk. This can cause tensions but these arise whenever a cost of capital is used, regardless of EVA. The key point with EVA is that managerial reward is influenced by the cost of capital.

Within each firm, there is no adjustment to remuneration if there are exogenous changes in the cost of capital through the year. The consistent view is that there should be no tinkering with the measure – a case of 'swings and

roundabouts'. However, this would only apply if the cost of capital was the mean of the distribution every year.

Joint revenues and costs

Joint revenue will arise for any network business providing a product or service to its customers. As bundling becomes more and more important for companies (both within and outside the firm), this jointness in revenue becomes more significant. The evidence is that there is no 'scientific' way of dealing with this as it is a matter of discussion for business unit managers with support from the corporate function (companies 1 and 3) or the board (company 2). The central function must agree the trade-offs between the units to deal with the shared revenue. This inevitably introduces subjectivity into the calculation.

Joint costs should be attributed to units wherever possible on an actual basis with an agreed allocation for any remaining costs – we see this in all the companies. The allocation does not appear to cause too many disputes between units but there is still an element of subjectivity involved.

Allocated costs

Allocated costs can potentially create tensions between business units and the corporate function. Again such costs should be allocated based on actual usage where possible. We see differences arising between the companies, with companies 1 and 2 attributing any remaining costs to the units. However, this has created tensions over whether managers think they are getting value added for their allocation – in other words, whether there is appropriate benefit sharing. There is also a detrimental psychological impact when a unit that is EVA positive on a gross basis is EVA negative on a net basis because of corporate decisions. However, EVA itself does not create the issue as it would occur with a number of other performance measures. Company 3 gets around this problem by not allocating any central costs that are not attributable direct to business units. These costs reside within the corporate function. This can create certain incentives for units to demand central services when they cannot be directly assigned.

Value drivers

The identification of value drivers is a vital aspect of benefit sharing. It is critical in terms of the number of value drivers as well as the particular drivers to highlight. Too many or too few may mean that value is destroyed. There are trade-offs to make, both in the short and long term. For example, one driver may be related to the acquisition of new customers and another to revenue per customer. However, the costs incurred to maximise the first driver may decrease the second.

Another example of the trade-off is between service performance and personnel costs. An increase in service performance could greatly increase personnel costs and reduce EVA. Conversely, a slight reduction in service performance could save on the personnel costs, thereby increasing EVA. However, while this may work in the short run, customers may not tolerate the decline in service performance. Competition could enter the market, even where there is a monopoly. Finally, this example illustrates that there may be an optimal level of a particular driver where increasing (for service performance) or decreasing (for personnel costs) further actually destroys shareholder value.

The need to consider all these factors shows the level of sophistication required when identifying and working with value drivers. Within the case study companies, the two SOEs work between four and 10 value drivers for each of their business units. There are also value drivers relating to overall company performance. These are reviewed regularly and may be changed within an accounting period if it is deemed necessary to better reflect shareholder value.

For company 3, the number has been reduced from the original 50 key performance indicators (KPIs) as a result of EVA implementation. As one person put it: 'If you look at someone's individual objectives in some cases it is to juggle fifty balls this year and fifty balls next year. You are going to drop all of them.' The rationalisation also led managers to recognise the trade-offs between drivers. This was seen as a positive outcome of EVA. Managers were 'thinking in a different light' as a result.

For company 1, however, value drivers have only recently been identified at the business unit level. Although they appeared at corporate level, they did not see a need for drivers further down the organisation. It was the introduction of the balanced scorecard for performance management that triggered the need.

6.6 EVA as a complete measure

Is EVA a complete measure of performance, the only measure used for dimensions such as investment decision making, planning and control? The answer is a resounding 'no' for each of the companies. They all make use of additional measures, both internally and externally:

- investment decision making relies on other rules such as payback period (all companies);
- target setting relies on value drivers further down the business (all companies);
- the focus for control is still earnings before interest and tax (EBIT) (companies 1 and 3);
- remuneration further down the organisation is based partly on value drivers using the balanced scorecard (all companies); and
- externally, EBIT is promoted (company 1).

The key reasons for the continued use of other measures are:

- understanding – managers, board members and outsiders (shareholders, analysts or the media, for example) do not really understand the measure; and
- objectivity – EVA is seen as subjective because of the adjustments that are made. Other measures provide more 'objective' information.

It could be argued that better communication would improve things. The understanding issue should not be underestimated. Externally the continued focus on profit was cited as a 'challenge that all EVA companies will have'. Within companies 2 and 3, EVA had an adverse psychological effect in some negative EVA units because employees still think in profit terms: they see a negative figure and think that it is bad, despite the fact that the unit may be earning a positive gross margin and there may be sound corporate reasons for the result, such as yielding positive externalities to other units (not formalised).

6.7 Addressing the problems that are associated with the decentralised organisation

6.7.1 Short-termism

At least one participant from each of the firms thought short-termism was a major issue in their company. For example, in company 3, where EVA is run on an annual basis, one of the early criticisms by managers was that EVA did not help them to differentiate between the short and long run. Managers were told that they are 'paid to make those decisions', although for most, the incentive scheme is based on annual EVA, thus creating possible conflicts of interest.

The evidence is that, although EVA itself may not create the short-termist problem, it doesn't appear to solve it either. Within each of the companies short-termism is explicitly recognised through adjustments that are made to the EVA measure and the way that it is used for investment decision making, performance measurement and remuneration.

The key point is that these adjustments are largely subjective and they may themselves create tensions and/or incentives for managers that go against the primary objective. Also there is evidence in each of the companies of the continued use of other methods that promote short-termism, such as the payback period for investment decision making.

Investment decision making

All the companies switched initial investment costs from NOPAT to capital in certain situations to promote a longer term outlook. Since the increased capital is being multiplied by the cost of capital (a number less than one), the measure of EVA goes up.

- Company 1 has implemented a framework of 'forgiveness' where a suspense account of permitted (ex ante) EVA losses (suspended losses) is created, on which a capital charge must be paid. This is not the Stern Stewart approach of 'keeping capital off the books' to provide the incentive to invest. Indeed, this method increases the capital balance in return for 'forgiveness' on the revenue side. This method is not without problems, however, since in theory the capital charge is paid on the suspense account in perpetuity – managers (existing and new) would continue to pay for past decisions indefinitely.
- Company 2 has a policy of capitalising the set up costs and initial losses of strategic business ventures, calling it goodwill. The amount is then written off over the following years, once the venture starts making money. The only issue that arises is when a project doesn't work.
- Company 3 treats severance costs as an investment in the business. In this respect, annual severance costs are removed from NOPAT profit and capitalised on the balance sheet for seven years. This conflicts with the cash nature of EVA but it is an attempt to match the cost of the investment against the economic benefit derived over time. The seven-year period is an arbitrary length but it is based on the premise that businesses tend to go through significant restructuring cycles every five to 10 years, or people are replaced by capital assets that have a similar life span.

Performance measurement

Coupled with the switching of costs out of NOPAT to capital in order to encourage investment, we see adjustments to targets:

- companies 1 and 2 choose to revise targets in certain situations. This means that performance measurement may be against the expected losses, rather than against EVA growth (company 1) or against a base of zero (company 2).
- company 1 makes use of a Stern Stewart approach to target setting where targets are set in relation to expected improvements in EVA over three years, making use of an estimate of future growth value (FGV). The real purpose of this is to impose discipline on the corporate plan, which makes use of bottom-up targets. Prior to the introduction of FGV managers had the incentive to 'low-ball' their targets on an annual basis. The idea is that FGV is based on the share price and the long-term impacts of any decisions should be incorporated into the share price.

The remuneration scheme

Remuneration is a key factor if short-termism is perceived as a problem – managers cannot be expected to think long term if they are rewarded on annual EVA or annual increases in EVA.

Company 1 makes use of another Stern Stewart recommended practice, the bonus bank. A certain percentage is paid out if corporate EVA growth targets are met and the remainder is paid into the bank. However, the only way a manager can be paid what is in the bank is if s/he dies.

Companies 2 and 3 work purely on an annual basis. However, company 2 is looking into running a 'dummy' option scheme to get managers to think about creating longer-term value. This may be in the form of a bonus bank.

6.7.2 Real investment options

It is difficult to provide conclusive evidence on real investment options and whether EVA can capture any potential value from these options. However, the evidence from the companies is that:

- the binomial model is used as an additional measure in company 1 for investment decision making, suggesting that EVA does not capture the option elements; and
- there is no such modelling in companies 2 and 3. Participants did not provide any reason to believe that there is any attempt made to value real investment options. This is surprising for a network business as it is easy to imagine that such opportunities exist. However, it is not inconsistent with previous research, where the evidence is that managers may not be aware of how to value such options (see Busby and Pitts).

6.7.3 Economic dependence

The evidence from the companies is that the real issue concerning economic dependence relates to transfer pricing. When managers are evaluated on business unit EVA, transfer prices can become important as they can be seen as a way of increasing EVA.

Companies 1 and 2 avoid this issue. Company 1, after pushing EVA down to the business unit level, took the decision to pull back and work just with corporate EVA. There is no business unit EVA calculated or used as a measure within the MCS. The evidence from company 1 is that the introduction of EVA actually enhanced conflicts between units because of transfer pricing and allocation issues. One participant noted that 'they (business unit managers) spent a lot of their time fighting internally. That's what their EVA was driven off. There were some good outcomes from that, too, but in the end the chief executive said no I don't want this to continue, I want much more collaborative relationships between my executives and that should flow all the way down. Therefore we'll have one EVA for the company'.

Company 2 has a sharing in performance scheme where everybody shares equally in any positive corporate EVA above a certain threshold. The aim is to try to reinforce values of teamwork and emphasise that everybody contributes to performance. This approach is not without its problems as people feel that they can't do anything individually to influence the result. There is a 'removal of action from results'.

Company 3 said that transfer prices provide managers with a goal to focus on. However, the setting of service level agreements is time-consuming and it creates tensions between units.

7. Conclusions

EVA is promoted as a complete performance measurement system that allows benefit sharing within the decentralised organisation. The focus is on secondary objectives to achieve the primary objective of value maximisation. In evaluating EVA from a management accounting perspective, the report set out to discover whether EVA delivers what it promises, in particular whether it has:

- replaced traditional measures used for planning, investment decision making and control, so can be regarded as a complete measure of performance; and
- addressed problems associated with the decentralised organisation such as those relating to short-termism and economic dependence and therefore solved conflicts of interest within the firm and between managers and shareholders.

Case study methodology was used to investigate three New Zealand companies – one quoted and two state owned enterprises – that have worked with EVA for a number of years.

- Company 1 (the quoted company) presents something of a paradox. In one way it could be viewed as an EVA champion because it adopts many of the Stern Stewart approaches, such as future growth value for target setting and the bonus bank for remuneration. However, EVA is measured at the firm level only for the core integrated businesses. The consistent message from the company is that it no longer has an EVA mentality: its current focus is all about EBIT. The company has weakened the link between performance and incentives. The commitment to EVA and its philosophy really depends on the chief executive, a feeling echoed by all three companies.
- Company 2 (SOE) adopts a real EVA philosophy. It also runs its internal systems on an EVA basis and publishes EVA information in its financial statements. EVA is used for all dimensions of the management control system down at the business unit level. However, the approach to remuneration is different from that usually recommended. Common goals are promoted through a focus on equal sharing of corporate EVA above a certain threshold. This is clear recognition that business unit rewards can create tensions, thus preventing benefit sharing.
- Company 3 (SOE) is the most recent to implement EVA so although the measure is pushed right through the organisation, it is still relatively complex. However, the philosophy of EVA is nothing new for the company as it has been using the balanced scorecard for many years. EVA has been integrated with the balanced scorecard framework at the business unit level. It is used right through the management control system, from planning and decision making, to control and remuneration. Rewards are based on a combination of business unit and organisation performance.

The evidence shows that EVA has not replaced the traditional measures associated with investment decision making, planning and control. Each firm relies on additional measures for these different dimensions. This may be historical (for example, the use of the payback period internally or EBIT externally), or because EVA is seen as subjective because of the adjustments that are necessary to measure it.

The evidence shows that there are many complex dimensions to the EVA measure. Assets must be assigned to business units and issues over joint revenues, costs and allocated costs must be considered. The number of adjustments to GAAP figures necessary to create the right incentives is another factor. Discretion over these dimensions means that, as well as being complicated, the way that the measure is calculated can sometimes appear subjective and incomprehensible. Within the companies, EVA has evolved – initially it is quite complex with many adjustments but gradually the measure is simplified so in the end there are few (or no) differences between the inputs to EVA and the GAAP figures. This is an attempt to reduce subjectivity and increase understanding. If the measure is not readily understood, there is a danger that EVA could be relegated to a financial measure, used only by accountants.

For the case study firms, EVA does not appear to have addressed the problems that are associated with the decentralised organisation. EVA does not address issues of short-termism, real investment options and economic dependence. Adjustments to the measure of EVA in an attempt to counter these factors complicate the measure and lead to subjectivity. Remuneration is a way of overcoming these issues but we see this only in company 1, where the bonus bank creates tensions and where short-termism is still an issue.

Furthermore, EVA does not appear to solve conflicts of interest within the firm and between managers and shareholders. The recommended practice is to implement EVA at the firm level and then push it down to business units. Company 1 found that EVA actually created adverse incentives and enhanced conflicts of interest when it was mapped through the organisation, as a result of the economic dependence between the units. Shareholder value was being damaged through having EVA down at the business unit level. It decided to turn full circle and use EVA at the global level only for its core businesses. Companies 2 and 3 attempt to promote a common goal through their remuneration schemes. Company 2 has a sharing scheme based on corporate performance and company 3 rewards most of its staff on corporate EVA only, to foster teamwork.

Participants in each of the firms agree that, overall, EVA has been good for their companies. The rewards focus means that EVA delivers benefit sharing as the surpluses can be shared out after the returns to capital providers have been recognised. The evidence is that EVA can lead to improved decision making through a focus on capital and the cost of capital and the key drivers of value.

However, it is clear that EVA has not replaced traditional measures, does not solve the problems inherent in a decentralised organisation and does not solve conflicts of interest within the firm. Where economic dependence is strong between units, EVA can actually worsen conflicts of interest.

The use of EVA is not 'all or nothing'. The research shows that there is a range of acceptable approaches to the philosophy and measure of EVA. Over time, the philosophy may need to change, particularly as a result of economic dependence between units. The measure may also eventually be simplified. It is vital that the measure of EVA is seen as objective by all users, whether inside or outside the firm. Continued communication is necessary to improve and maintain understanding of the measure. The measure and application of EVA must also create the right incentives for managers and others in the decentralised organisation. If the firm can achieve these then it is a long way towards making EVA a success.

Finally, the research illustrates that EVA can be implemented for both quoted and unquoted companies. There are no major differences between the quoted company and the SOEs in the calculation and use of EVA. Although the SOEs cannot rely on share price for the estimation of the cost of capital, the fundamental approach is the same as for quoted companies. EVA may be viewed as a benchmark for performance in the absence of a share price for the SOEs while within the quoted company EVA is seen as a measure that closely maps the share price. Again, the fundamental idea is the same. That company 1 does not work with EVA at the business unit level is a result of the tensions that EVA created because of the organisational structure, not the fact that is quoted.

The case study companies all plan to continue with EVA. While it may not always deliver everything that it promises, EVA works for these firms.

Appendix 1

The New Zealand Environment

Quoted Companies

The New Zealand stock market is relatively small, reflecting its population (3.829 million people at the end of March 2000). On 31 March 2000, there were 231 quoted companies on the New Zealand Stock Exchange with a market capitalisation of \$42,064 million¹. The main index in New Zealand is the NZSE40, which comprises the top forty companies by market capitalisation. This index is heavily influenced by a few big players.

Short-term performance in the New Zealand market is influenced by global events and movements in other markets, in particular the United States, the United Kingdom and Japan. In line with these markets, the year 2000 saw a rapid slowdown with economic activity picking up in 2001. The global telecommunications slump impacted on performance towards the end of 2000 and through 2001.

Long run performance of New Zealand companies has not been too good. This fact was the subject of a presentation was made by the Australia and New Zealand (ANZ) Bank in 1999². It highlighted the destruction of value that was taking place. This study, which made use of EVA analysis, demonstrated that EVA was not been positive for the NZSE40 for the eight years leading up to 1999. According to the report, over 2% of GDP was being destroyed by the top forty companies. The main focus of this report was the premise that New Zealand companies are under-g geared (do not use enough debt finance), that there is no focus on shareholder value, and there is no real market for corporate control, leading to erosion in shareholder value. This report had obviously made participants think, as nearly every person interviewed mentioned it. However, it is not clear whether it has led to any change in behaviour in New Zealand companies.

State-Owned Enterprises (SOEs)

An SOE is formed at the time of 'corporatisation' of a government department. SOEs are not publicly quoted but they are legally bound to operate to comparable private sector standards. Under the SOE Act 1986, the company must provide the shareholder (the Minister for State Owned Enterprises and the Minister for Finance) with a commercial return on capital employed, be a good employer and exhibit a sense of social responsibility. The social obligations are outlined in the each company's Deed of Understanding – a published statement outlining minimum levels of service provision.

Key features of the SOE are:

- although many SOEs operate as monopoly businesses, there is no regulation of company behaviour, in terms of for example price caps or price regulation;
- every year the SOE's business plan is technically approved and discussed by the minister for State Owned Enterprises to form the annual Statement of Corporate Intent;
- once the agreement is reached, that sets the accounting return, from that the average shareholder funds, EBIT, return over EBIT to assets, together with other financial ratios. Those ratios become public targets which are tabled annually in Parliament. At the end of the year, SOEs are called to account against those targets;
- the targets are accounting targets. Irrespective of EVA, how the accounting number looks is terribly important because from a PR point of view, the accounting number remains the primary observable piece of data. The government does not presently focus on EVA;
- the government issued a consultative paper in 1995, entitled the 'Value Based Reporting Protocol', in consultation with SOEs and academics. However, a change in policy meant that this framework did not materialise. Some SOEs still decided to run with the basic philosophy of this framework – which was basically EVA;
- since SOEs are not quoted companies, it is difficult to define a cost of capital and its components using models that employ market values (such as the capital asset pricing model for determining the required return on equity). The difficulty is in the specification of the systematic risk (beta) of equity in order to get an estimate of the return on equity.

¹ Source: New Zealand Stock Exchange Fact Book 2001

² Healy (1999)

Appendix 2

Alternative Value Based Metrics

A classification of value-based metrics along different dimensions according to their characteristics is presented in Table 2.1 below. Examples of performance metrics in each of the categories are also provided. The classifications may not be mutually exclusive, so that a metric could fall into more than one category.

Table 2.1 Classification of Value-Based Measures

Classification	Features
Residual Income Measures	<ul style="list-style-type: none"> ● capital costs are deducted from operating profit; ● measured in absolute (monetary) terms; ● can be measured at the divisional/business unit level; and ● do not incorporate the value of future investments.
Market Based Measures	<ul style="list-style-type: none"> ● derived from the share price for publicly quoted companies; ● measured in absolute (monetary) or relative (percentage) terms; ● only valid at the corporate level for quoted companies; and ● incorporate the value of future investments (assuming that these are reflected in the share price).
Cashflow Measures	<ul style="list-style-type: none"> ● designed to side-step the influence of accrual accounting; ● attempt to measure the ability of an entity to generate cash; ● measured in absolute (monetary) or relative (percentage) terms; and ● can be measured at the divisional/business unit level.

Residual income measures

EVA (Promoted by Stern Stewart Consultancy Co):

- probably the most popular residual income measure; and
- $EVA = NOPAT - \text{Capital Charge}$.

Economic Profit (Promoted by Marakon Associates):

- $\text{Economic Profit} = \text{Earnings} - \text{Equity Capital Charge}$; and
- same philosophy as EVA but the difference is the charge is only for shareholder capital.

Market based measures

Market Value Added:

- related to EVA;
- can be thought of as the market value of the firm (debt plus equity) less the book value; and
- alternatively, MVA is the present value of future EVAs, discounted at the weighted average cost of capital (i.e. incorporates debt and equity).

Total Shareholder Return:

- a percentage measure of the total return to shareholders (dividend plus capital gain divided by original equity value) over the specified time period; and
- a measure of return earned in the market place.

Cash flow measures

Cash flow return on investment (CFROI) (Promoted by Holt Value Associates):

- a percentage measure which is like an internal rate of return (IRR); and
- a complex measure that attempts to find the IRR that equates the expected future cash flow over the life of the firm (including the cash flow arising from the sale of non-depreciating assets) back to the current value of the business's gross operating assets.

Appendix 3

Results from Company 1

1. Background

1.1 Industry

Company 1 has been operating as a successful publicly quoted company since its privatisation over ten years ago. It operates in a network industry in Australasia. The industry in which Company 1 operates could be described as a global market characterised by rapid advances in the technology employed to deliver the service. The industry is a highly capital intensive scale business. In many countries the industry is regulated but New Zealand's 'lighter touch' regulation means that there is no regulator present¹. Features of the market are concentration on a global basis and the existence of international joint ventures to develop and provide the service. Alliances with related service providers to achieve a 'bundling' of products are increasingly common within this industry².

1.2 Corporate Structure

The company has adopted a functional organisational structure around seven business units. There are also four corporate units, including HR, and Communications. Some of the business units are effectively stand-alone units and others are very dependent on each other. Apart from the Corporate function, the units are effectively profit centres and they can be classed as either 'asset-centric' (where the focus is cost management) or 'product-centric' (where the focus is revenue growth). The stand-alone units are a combination of the two (and consequently the focus is both cost management and revenue growth, leading also to an EVA focus, as discussed below). Within the business units there are also revenue and cost centres, with line managers attached to those. Units are aggregated for reporting purposes.

The nature of the industry means that the company has undergone several structural changes in its history. It is likely to continue to evolve in the future with ongoing technical advances in the industry.

¹ Regulation in New Zealand is characterised by a 'light touch' approach where there is no regulator. Companies are free to set their prices but the view is that markets should be contestable. If disputes between incumbents and entrants arise, for example over pricing policy, matters are settled via the courts. This judicial settlement inevitably makes reaching any solution a very long-winded and time-consuming process. A recent Government enquiry has led to some tightening up of this approach, although the UK framework of regulators has not been introduced.

² 'Bundling' of costs and revenues is becoming more important for companies as they do deals across their business units and with other companies. See for example, BSKyB in the UK.

1.3 Performance

Summary statistics are presented in Table 1.3 below. These are for information only and are deliberately kept general.

Table 1.3 Summary Statistics

Type of Company	Publicly quoted
Operating Revenue	\$NZ 4 billion
Capital Expenditure	\$NZ 600 million
Employees	6,500

\$NZ 1 = approximately £0.28

Source: Extract from financial statements 2000

2. EVA History

EVA was first implemented in the mid-1990s, so the company has over five years of experience on which to draw. This provides an opportunity to discuss the initial implementation of EVA and the resulting issues that led to the modified use of EVA that we see today. The following discussion adopts a chronological approach to the presentation of the evidence, looking firstly at the reasons for EVA implementation. Initial and subsequent issues with EVA are discussed in the following section, with the remaining sections focussing on EVA in the firm today.

2.1 Reasons for Implementation

Support for the introduction of EVA came from the Chief Executive (CE). The primary goal of the firm was (and still is) to increase shareholder wealth. The view was that EVA could do this because:

- the measure was thought to be highly correlated with market value. This carried some weight as market perception (shareholders and analysts) is highly important for the company;
- EVA could provide a better focus for drivers given the capital intensive nature of the business; and
- incentives can be created through rewards linked to EVA.

The implementation of EVA came just before a major change in the organisational structure. However, there is no evidence that the introduction of EVA drove the reorganisation. In other words, the company did not perform EVA analysis on the original structure in order to evaluate whether some units or products should be divested or regrouped.

2.2 The Implementation Process

The EVA implementation project was run as a three-way team between Finance, Human Resources and the Strategy Group, with the latter group driving the implementation process. The project was regarded as really big within the organisation, with many people involved, including consultants.

The implementation process involved the following steps:

- initial work with consultants to decide on the exact measure of EVA for the firm, including the adjustments to the accounting numbers to yield NOPAT³. There was a consistent definition applied through the organisation at the corporate and business unit level, with one cost of capital applied throughout the organisation. Corporate services were allocated down to business units based on usage for variable costs and on expected long term usage for fixed costs;
- preliminary presentations to managers made by the internal team and the external consultants;
- initial calculation of EVA alongside existing measures for around a year, with no significance placed on the EVA figures. This gradual introduction of EVA is widely regarded as the most appropriate, to give managers the time to understand how the figures are tracking and what may be driving them, without their performance being judged against the results; and
- after a year, full implementation of EVA and EVA incentives for 150 managers at the senior level.

Managers in the scheme were effectively offered new contracts based on EVA. The initial impacts were:

- the EVA incentive scheme was more risky, as it levered up the bonuses; and
- performance was no longer based on business units as it also included an element of corporate performance.

The over-arching objective was to maximise company EVA with each of the newly created business units having their own EVA objectives. This was reflected in the bonus scheme for managers, of which the most common was 60% on corporate EVA and 40% business unit EVA performance against target. The idea here was to get individual accountability through the business unit focus (i.e. controllability) and also for managers to have an incentive to act in the company's best interests (i.e. goal congruence). This formally recognises that what may be in the best interests of the business unit may not be in the company's best interests.

3. Issues that Arose with EVA

3.1 Initial Issues

Approximately 18 months after implementation, it became clear that things weren't working as they should. There were a number of reasons for this, including:

- problems over measurement – related to the whole approach;
- technical problems – related to implementation and on-going support; and
- training problems – related to implementation and on-going support.

Measurement Problems

On the measurement side, there was a lot of tinkering with the EVA calculation. This was largely in response to issues raised by members of the Board. One of the major problems was that they couldn't understand it and suspected that managers were 'pulling the wool over their eyes'. Members of the Board did not view the measure as objective and transparent. In response, managers kept simplifying the measure of EVA. However, this wasn't sufficient as basically the Board members didn't want differences between accounting numbers and EVA numbers because they didn't understand the adjustments.

Technical Problems

On the technical side, the process installed to produce the EVA number couldn't actually give the number. The problem arose when one of the key finance people who had written the process moved on. Nobody actually owned EVA on an ongoing basis and it did not form part of the management accounting information system. It is not much good if you find that you can't get your figures because one person has left the company!

Training Problems

Related to the responsibility for owning EVA overall was the issue of staff training. The company soon realised that training cannot stop at the implementation stage, as new managers are regularly coming on board. The general understanding of EVA by managers can be whittled away in a relatively short space of time as a result of personnel changes.

³ For example, adjustments for leases and for goodwill.

3.2 Addressing the Initial Issues

Measurement Issues

Measurement issues raised by the Board drove the company to conduct a review of EVA. They looked at it and decided that none of adjustments themselves made enough impact to make it worth the complexity that they added on. The outcome was that the company now makes no adjustments to earnings and capital figures that form an input to the EVA calculation (see section 4.1 on page 27).

Technical Issues

The decision was made fairly early on by the CE that Human Resources would own EVA overall. It seems that although there had been an initial team for the implementation, there was no continued responsibility for monitoring and review of EVA. This is something that the company realised that it needed to address.

Training Issues

This is something that was an initial issue for the company but which it has addressed only relatively recently. There are now procedures in place for regular monthly or bi-monthly sessions for new managers together with an EVA handbook and primer.

3.3 Subsequent Issues

At the business unit level, issues concerning the calculation and use of EVA began to surface over time. These were a result of the nature of the business and concerned extant issues not resolved by EVA and new issues created by the introduction of EVA. Extant issues included:

- internal trading arrangements.

New issues included:

- the allocation of assets to business units; and
- lack of continuity in business unit structure.

Internal Trading Arrangements

The nature and structure of the business and the interdependencies mean that internal trading arrangements were (and continue to be) very important. Setting service level agreements each year and negotiating over costs was devolved to business unit managers and it took up a big part of their time. Now this may be value adding for the company if trading arrangements are designed appropriately so that incentives are aligned in order to ensure that the 'pie' of company value is bigger. However, the danger is that business unit managers use trading arrangements to maximise their slice of the pie, to the detriment of the overall size of the pie. This is well known in management accounting theory and practice.

Because of the impact on business unit EVA, managers became very preoccupied with their trading arrangements. They saw these as a way of increasing their slice of the pie, which did indeed become more important than increasing the total size of the pie. Managers 'fought to the last' over these agreements. The evidence from the company was that the actual traded prices depended upon the skill of the units in estimating costs. If the manager of one unit was better skilled at cost estimation and management, then that unit did very well out of the trading arrangements, often to the detriment of other units⁴. It seems that the introduction of EVA did not help with transfer pricing. In fact, EVA heightened issues over transfer pricing because of the business unit focus in the remuneration scheme.

Allocation of Assets

EVA at the business unit level also created issues over the allocation of assets. Ring-fencing of assets in the determination of the capital charge was not an easy task. Down at the product level, one product might map to multiple assets in multiple business units or one asset might map to multiple products. Similarly, if several units are buying into one unit, the allocation of costs can be quite complicated. Jointness on the revenue side is also an issue, particularly with the move to more 'bundling' of revenues across products, both within and outwith the company. Decisions were regularly made in one unit that impact on the EVA of another unit. The company recognised that this was happening and that it created tensions.

Lack of Continuity in Business Unit Structure

The continual restructuring of business units was an exogenous problem, i.e. it wasn't related to the introduction or use of EVA⁵. Originally targets were set in relation to corporate (60%) and business unit EVA (40%). However, problems with this approach soon became evident as the business units were continuously being 'sliced and diced' over time, so there was never any history for the calculation of ex ante and ex post EVA growth. This is an ongoing issue and makes target setting difficult, particularly when using measures such as future growth value.

⁴ Costs are used as a starting point in the setting of the internal traded prices.

⁵ Restructuring could be seen as endogenous to the choice of performance management system. However, this was not the case for the company.

3.4 Addressing the Subsequent Issues

Upon commencing employment at the company a few years ago, the new CE was unhappy with the issues over EVA, particularly over the resulting tensions surrounding internal trading arrangements. The view of one participant was that the CE viewed EVA as an impediment to collaboration as it was creating conflicts of interest between different business units and the corporate goal. Given the business unit structure, there has to be interaction between the units⁶.

The CE's response was to change the entire focus from business unit EVA for the interdependent units to corporate EVA only⁷. The CE's aim was to get the business units to take a more holistic approach and to think about what is good for the company. This focus flowed through to rewards, which are now based on corporate EVA⁸.

3.5 Conclusions

The initial and subsequent issues with EVA mean that decisions have been taken as follows:

- EVA is used for remuneration purposes at the corporate level only; and
- in the calculation of EVA, no adjustments are made to the accounting numbers.

4. EVA in the Firm Today

4.1 Calculating Corporate EVA

To calculate corporate EVA, financial accounting figures are first consolidated on a monthly basis to yield the group earnings. From this a capital charge is deducted, based on corporate assets and the corporate cost of capital, as shown below:

Equation 4.1.1

$$\text{Corporate EVA} = \text{NOPA} - (k \cdot \text{WACC})$$

Where:

NOPAT = EBIT for the New Zealand business, less a notional tax charge. The tax charge is the set at the maximum tax rate in New Zealand (currently 33%)

k = Average book value capital for the year

WACC = Corporate cost of capital. The cost of capital is reviewed only periodically and changes only with changes in interest rates

the calculation of the capital charge also includes a charge on 'strategic investments' (see section 7.3 on page 30 for an explanation of these).

6 One possibility is to restructure to integrate the units into a centralised firm. However, this would destroy the advantages that a functional, decentralised structure can bring. Presumably these advantages outweigh the disadvantages.

7 At present corporate EVA refers to the New Zealand business.

4.2 Validation of the EVA Figure

Once the EVA figure is calculated, it is audited prior to being used for bonus purposes to ensure that it has been calculated with reference to the EVA Deeds (the agreed principles on which EVA is calculated). The EVA measure is driven off the back of the financial accounting numbers and it therefore uses figures that correspond with New Zealand generally accepted accounting principles. Participants did not believe that EVA in any way drove the financial accounting numbers. In other words, if there was discretion within accounting standards, the course of action chosen was not necessarily the one that enhanced EVA⁹.

5. EVA and Corporate Strategy

The company states explicitly in its accounts that it adopts strategies for growth in revenue and for cost control. Whilst not stating explicitly that the strategy is formulated in EVA terms, revenue growth and cost control could be regarded as equivalent to EVA growth, or profit growth or operating cash flow growth. The fact that the company does not adopt a full EVA culture makes it difficult to comment on whether the EVA performance management system can help to ensure that strategic objectives are met. In this company we see some attempts within business units to align target setting and control with strategy, through to use of drivers within the balanced scorecard. EVA is an input to this (see section 8.3.2 below).

6. EVA for Investment Decision Making

Key features over EVA for investment decision making include:

- the use of other measures in addition to EVA; and
- lack of empowerment for business unit managers.

Use of Other Measures

Business cases are assessed largely at the Board level, with business units submitting their proposals via the Corporate unit who construct forecasts of EVA together with evaluation based on other tools, for example NPV, real options (using the binomial model) and payback. This is partly because many members of the Board prefer the more traditional measures. Also if the different measures are telling the same story, then it reinforces the proposal. If on the other hand they are contradictory, then there are issues over which measure to 'believe' or whether to exercise judgement, for example if the payback period is long¹⁰. The hurdle rate for investment is set equal to the cost of capital with no adjustments made to account for differing risk levels.

8 Units that are seen as largely independent do have a business unit EVA focus. However, even they are not totally independent. For example there may be revenues that are joint due to the bundling of products.

9 It is unclear whether EVA led to any incentive for off-balance sheet financing.

10 It was not clear which measure, if any, would take priority.

Lack of Empowerment

The current organisational design means that decisions over investment and asset utilisation are made at the highest level and that there is no empowerment of business unit managers to make capital investment decisions. Whilst it would be impractical to allow business unit managers to have complete freedom over capital investment decisions, some authority (say for investments below an amount of \$x) would be desirable, to permit the Board to concentrate on the strategic direction of the company. This is standard management accounting practice and you would expect it with EVA. However, EVA hasn't impacted on this. There is no incentive for managers to offload surplus capital, one of the advantages of EVA cited by Stern Stewart¹¹. Of course given the corporate focus, business unit managers might have an incentive to bid for any old project. Presumably the Corporate unit places some discipline on this, otherwise credibility with the Board would be lost.

7. Performance Management at the Corporate Level

7.1 Corporate EVA Targets

Corporate EVA growth targets for each year are constructed from component targets over a three year rolling planning horizon. Thus EVA is like an output from the process – given the desired earnings growth and other measures, what corporate EVA might that translate to? Key steps in target setting are:

- 'bottom up' targets from the corporate plan;
- calculation of 'expected improvement' levels; and
- 'calibration' of expected improvements to the corporate plan.

'Bottom up' Target Setting from the Corporate Plan

Threshold targets for corporate EVA are set based on improvement from the previous year. These targets originally came solely from the corporate plan and essentially they were based on 'bottom up' EBIT targets from the internal planning process¹². The targets had always been regarded as subjective, leading to a lot of discussion between management and the Board who felt that figures from the corporate plan were not transparent. Targets were set on a rolling three year basis but only the current year was looked at, leading to short-termism. Although these problems were not a direct result of EVA, EVA did not solve them. In an attempt to find a solution, the company has recently introduced a new Stern Stewart calibration scheme, based on the fusion of the corporate plan and market expectations, called expected improvement (see opposite).

11 This may be consistent with the current corporate EVA focus for some units but it is inconsistent with the evaluation of EVA further down the organisation as business units would have no opportunity to manage capital and consequently their capital charge.

12 In this respect, target setting has not changed as a result of the introduction of EVA.

'Expected Improvement' Levels

The aim of this scheme, which is run on a spreadsheet, is to introduce more objectivity through the use of the share price for target setting at the corporate level. The scheme works out expected improvements over a three year time horizon.

The initial assumption is that the present value of future EVAs closely tracks the share price. This is done fairly informally as there is no explicit evidence for this company that EVA correlates more closely with the share price than other measures, for example accounting profits. Also there is no analysis as to whether movements in EVA lead, lag or mirror share price movements.¹³

To calculate expected improvements (EIs) for target setting, the following steps are applied:

- (i) The starting point is market value added for time t (MVAt), which can be defined as:

Equation 7.1.1

$$\begin{aligned} \text{MVA}_t &= \text{MV}_t - \text{BV}_t \\ &= (\text{MVD}_t + \text{MVE}_t) - (\text{BVD}_t + \text{BVE}_t) \end{aligned}$$

Where:

- MV_t = Market value at time t
- BV_t = Book value at time t
- MVD_t = Market value of debt at time t
- MVE_t = Market value of equity at time t
- BVE_t = Book value of equity at time t
- BVD_t = Book value of debt at time t

If we assume that BVD_t = MVD_t, then:

Equation 7.1.2

$$\text{MVA}_t = \text{MVE}_t - \text{BVE}_t$$

Obviously there are judgements about which share price and book value to use. Do you take end of year values or some average over the year? If one particular point is taken, then there is no account of movement in the market.¹⁴

13 There is some evidence of correlation in the Stern Stewart literature, although methodology is not made explicit.

14 It is unclear whether there are sign restrictions – i.e. whether MVAt could be negative.

- (ii) The assumption is that the company will continue to make at least the current level of EVA every year in the future. This EVA figure is treated as a perpetuity and the present value (PV) is calculated:

Equation 7.1.3

$$\text{PV}(\text{Current EVA in perpetuity}) = \frac{\text{EVA}_t}{r^*}$$

- (iii) The difference between MVA and the present value of the current level of EVA is the future growth value (FGV)¹⁵:

Equation 7.1.4

$$\text{FGV} = \frac{\text{EVA}_t}{r^*}$$

- (iv) FGV is then split across the three year planning horizon, giving annual expected improvements, EIs¹⁶.

'Calibration' of Expected Improvement and the Corporate Plan

EI targets are calibrated against the corporate plan targets for EVA growth, giving a recommended three year plan on a rolling basis (see below). The view within the company was that sometimes FGV and the corporate plan were telling the same story, but that FGV doesn't take into account the lumpiness in earnings. For example, the corporate plan can incorporate certain future unusual events (the example given was unusual dividend flows). Negotiations must then take place with the Board. Thus the role of the calibration is to impose some sort of discipline on the corporate plan.

One of the rules that the company applies in making the recommendation is that the NPV of the EIs over the three year time horizon must be the same for the Stern Stewart calculation of FGV and the corporate plan. For example, imagine the EI calculations for years 1-3 are 10, 12 and 14 for years 1-3, respectively. However, incorporated into the corporate plan is the knowledge that year 1 will be a struggle but there will be a big dividend in year 3. The recommended calibrated figures put to the Board is that the figures should be moderated as per Table 7.1.1¹⁷.

Table 7.1.1 EI versus Corporate Plan for EVA Growth

	1	2	3	NPV at say 10%
EI	10	12	14	~30
Recommended calibrated figures, (incorporating corporate plan)	5	10	24	~30

Now if the actual EVA increase is say +10 for year 1, managers would secure a good bonus. If on the other hand the improvement is only +2, then there would be no bonus (see section 9 below).

At the start of year 2, the process is rolled forward. The initial two figures (for years 2 and 3) are fixed and the third recommended figure (i.e. year 4) must be constructed, again based on EI and the corporate plan. The principle in the company is that there is no re-negotiation over the figures, that the Board will 'hold the managers' feet to the fire'. However, the company has not yet faced this issue as the calibration process has only just been introduced. Of course there are certain incentives created for managers. First of all, the company might face a retention problem if figures agreed one or two years earlier turn out to be simply inappropriate given the economic conditions. Secondly, managers might have certain incentives to push for re-negotiation of the figures upwards, if they feel confident that they can more than meet the recommended improvement. There is clearly less forecast error in the current year, so re-negotiating upwards in good times might be a way of securing lower thresholds in the future.

7.2 The Incentives Created within the Calibration Scheme

Because the Stern Stewart calculation of EI is done with reference to the current share price, managers have an incentive to have a low share price and a high actual EVA. In other words, the ex ante measures (for threshold target setting) and the ex post measures (for remuneration determination) are not exactly the same. However, making use of the corporate plan assures some consistency ex post and ex ante¹⁸.

¹⁵ Recent Stern Stewart articles and rankings make use of FGV. For further details, see Young and O'Byrne (2000).

¹⁶ There was no indication given as to how FGV is split across the planning horizon.

¹⁷ In this situation, it appears that the corporate plan is being used to moderate the EI calculations. This is somewhat unusual as the whole motivation for EI is to discipline or moderate the corporate plan!

¹⁸ Another possibility would be to reward managers with share options, and this is the case for approximately the top 3% of managers within the company.

7.3 Strategic Investments

Investment proposals that ex ante are overall EVA positive yet are EVA negative in the early years may not be put forward to the Board for consideration if it is believed that through investing, short-run corporate EVA will be adversely affected¹⁹. Similarly other investments that appear EVA negative might be desirable if for example they possess option characteristics (such as the option to expand into a new market). To the extent that these options are in the money, their rejection damages shareholder value in the long run.

Three years ago the company introduced a framework to deal with this issue. Its introduction partly reflected the fact that the company was moving from an income to a growth stock, and so was investing for the future. The framework is one of 'forgiveness', whereby targets for certain investments might be relaxed, if the investments are classed as 'strategic'. For this classification, investments must meet the following criteria:

- the initial investment is over a certain specified amount;
- ex ante the investment appears EVA negative for around the first three years yet overall it is EVA positive; and
- there is a Board approved plan for such investments.

For strategic investments, ex post EVA is evaluated with reference to an approved plan (i.e. against negative targets, rather than with reference to a base of zero). A suspense account of EVA losses is then created from year 1, called suspended losses, on which a capital charge must be paid. As soon as the EVA is predicted to switch to being positive in a particular year, then the manager is judged against EVA growth. This is not the Stern Stewart approach of 'keeping capital off the books' to provide the incentive to invest. Indeed, this method increases the capital balance in return for 'forgiveness' on the revenue side.

The issues created with this approach are:

- in theory the capital charge is paid on the suspense account in perpetuity; and
- certain incentives are created over the setting of targets.

Perpetual Capital Charge

The perpetual capital charge means that any new managers coming in are potentially paying for past decisions through the charge. Such a situation may be fine if the cash flows attached to that investment have gone positive and more than enough to pay the charge but what if they are not? Either way the manager continues to pay for past decisions, a clear violation of the accountability principle.

In theory there is no repayment of the suspense account but in practice the Board might allow this when EVA targets are exceeded so that surplus EVA could be used to repay the deficit and reduce the associated capital charge. However, the company is yet to face this situation.

Incentives over Targets

Managers and the Corporate function have an incentive to write their business cases for submission to the Board so that projected EVA from investment is as negative as possible, in an attempt to get the investment classified as strategic. This is a real issue for the company, with negotiation being the only perceived solution. However, negotiation also creates further issues over objectivity and transparency.

At the moment there are only four strategic investments within the company as the size rule precludes many investments. For investments below the stated value, managers take the hit if there is negative EVA in the early years.

7.4 Performance Management at the Corporate Level

As part of the performance management surrounding EVA, the company sets targets relating to three ratios based on MVA. These are Stern Stewart ratios designed to be used for control purposes:

- $\frac{FGV}{MVE}$ showing the proportion of market value that relates to future growth
- $\frac{EVA}{k}$ a return ratio, over one year²⁰
- $\frac{EI}{k}$ if this is positive, then the prediction is that greater EVA will be earned from existing capital

The Board reviews these ratios for the company and its competitors. It is not clear what it does with these figures, other than to benchmark performance against competitors. It is also not clear what assumptions are made about the cost of capital for competitors.

19 Particularly within the 3 year planning horizon.

20 This ratio is equal to:

$$\frac{NOPAT - r^*k}{k} = \frac{NOPAT}{k} - r^*, \text{ or } ROCE - r^*$$

(Return on capital employed less the cost of capital)

8. EVA within Business Units

8.1 EVA Calculations

Business unit managers have control over their capital expenditure and disposals, with proposals put forward to the Board via the Corporate unit. However, assessing business unit invested capital is difficult as the company does not have business unit balance sheets. For the business units, this leads to a focus on EBIT (earnings before interest and tax)²¹.

Notwithstanding the EBIT focus, there is a move to require managers to calculate their business unit's EVA. There are no formal guidelines on this, and it clearly involves the business units having some idea of their capital allocation. The Corporate unit would critique the business unit EVAs but not for any real purpose. One participant commented that EVA is like an 'accident that pops out at the end of the accounting process, rather than the key determinant for things'. It is pretty much left to business units how much emphasis they place on the figure or whether they actually make use of it.

8.2 Performance Management within Business Units

Key features are:

- EBIT for target setting;
- EBIT for monthly control;
- recent focus on value drivers; and
- recent move to the Balanced Scorecard.

EBIT Targets

For a full EVA company, you would expect targets to be expressed in EVA terms. However, here targets are based on revenues and expenses to get to EBIT but not on EVA, except for the stand-alone units. This reflects the dilution in the use of EVA over time but is consistent with the earnings focus. Because of the nature of the business, capital expenditure is very important. Forecasts of capital demands from the business units form an input to capital expenditure targets in another unit²². Incentives to over-forecast sales are created, to ensure delivery on promises made to customers.

The process involves business units putting forward their forecasts for EBIT over a three year planning horizon. Corporate may also add stretch targets where appropriate. Managers then agree the three year forecast, with the current year's forecast forming the budget for the year. In this sense the target setting is 'bottom up' but also there is some 'top down' focus, with the CE saying something like 'this year I want you to go for 5% earnings growth'. The corporate team then has to work out how best to achieve that growth and set targets appropriately. The interesting fact is that targets are based on earnings. This partly reflects the situation that it is EBIT that the market (analysts and shareholders, plus others) are interested in. It also reflects the fact that the company is adopting a short-term view. Indeed, the CE is looking at the forthcoming year²³. This somewhat contradicts the focus on FGV, as explained earlier.

EBIT for Monthly Control

On the control side, performance for the month and year to date is tracked against budget for the business units. If there are any external shocks, there would be no revision to the budget, leading to a budget variance. However, the forecasts would be revised. Success at meeting budget is one of the individual performance factors (IPFs) that feeds into remuneration (see section 9 below). However, this is success at meeting the EBIT budget and it is not to do with EVA.

Value Drivers

Supporting the EBIT figures are forecasts for key drivers with around three calculated for each of the units. The evidence from the company was a little inconsistent regarding whether these were drivers of EVA or EBIT²⁴. The drivers are compared to year on year trends with the view to assessing whether the unit has 'low-balled' their targets²⁵. In the identification of value drivers, the Corporate team works alongside the business units. Initially Corporate imposed some value drivers but the view within the firm was that there is general agreement as to the important drivers of value. It is a matter of focusing on what really drives revenue and costs in different aspects of the business and finding measures for the important factors. If the measure is deemed to be a significant driver of progress, then a budget is set for it in the business plan. These drivers are reviewed at a Quarterly Strategy Review meeting. Of course, there may be some re-jigging of the drivers as circumstances change or if it is believed that there are better measures (this has happened within the company). The problem with changing drivers is the loss of credibility it creates.

21 The stand-alone units has some discretion over capital expenditure but obviously the finite resources of the company must be borne in mind when making such decisions.

22 This unit would therefore have earnings and capital expenditure targets. Although these are the components of EVA, the targets are not formulated in terms of EVA. That capital expenditure in one unit benefits other units suggests that Board level approval for expenditure may be a sensible choice.

23 The evidence tends to be that a short-term approach by managers is bad. However, given the rapidly changing nature of the industry this perspective might be rational because a longer-term view might mean that the company cannot keep up with the competition.

24 Although it could be argued that whether you are talking EVA or EBIT, it is essentially the same thing in the short-run.

25 i.e. whether the manager of the unit has underestimated revenues and overestimated costs in a deliberate attempt to secure lower targets.

This explicit focus on value drivers is relatively recent (within the last twelve months) and although it is still evolving, it is regarded within the company as a major success. This is interesting as one of the first steps that Stern Stewart suggests in the implementation of EVA is the identification of value drivers for the business units²⁶.

Balanced Scorecard

The company is attempting to go further than the identification of value drivers for EVA. It has recently adopted the balanced scorecard approach, where EVA is the top measure in the finance quadrant. This is an attempt to make the measures more relevant to individuals, to recognise what they need to do and the possible trade-offs that result.

The decision to introduce the balanced scorecard is interesting because earlier literature from the Stern Stewart camp viewed the balanced scorecard and EVA as substitutes, arguing that EVA is the only performance management system that is required. However, recent EVA literature (for example Young and O'Byrne (op. cit.)) has mooted the idea of EVA and the balanced scorecard as complementary systems.

The company has an informal strategy map that goes with the scorecard²⁷. The strategy map contains the strategic objectives that drive EVA growth, which is the top driver in the finance quadrant. Then there are measures that are meant to be representative of the strategic objectives and which vary across business units.

However, the company realised that the strategy map didn't fully capture all the important aspects of the business. For example, revenue from the 'bread and butter' dimension of the business is still very important as the resulting revenue stream is relied on to support the other initiatives that do appear in the strategy map. However, this dimension of the business did not appear in the strategy, so there were no measures designed for it. The company has had to think more widely than the strategy map. This isn't a flaw with the strategy map per se, but rather it reflects the fact that corporate strategy didn't reflect the fundamental business.

Overall, the company is investigating the implementation of Gentia software, which co-ordinates the scorecard right through the organisation, with the strategy map and measures embedded into it. The idea is that this software would save time as the present system is paper-based. This might mean that the scorecard idea and value drivers can flow through the organisation more easily.

²⁶ Stern Stewart don't explicitly discuss how to determine the appropriate value drivers.

²⁷ See Kaplan and Norton (op. cit.) for further details on the strategy map.

9. Remuneration

9.1 The EVA Component of Remuneration

For managers on the corporate EVA scheme (around 15% of the employees in the company), the bonus is calculated as follows:

Equation 9.1.1

$$\text{Bonus} = 0.8 * \text{Corporate EVA Growth} + 0.2 * \text{Corporate Quality factors}$$

Within EVA there is an individual performance factor (IPF) used as a trigger for the bonus. It is possible to get more or less of the EVA entitlement if the IPFs are over- or under-achieved. There is no explicit link between IPFs and EVA. For example, an IPF for an individual could be related to revenue growth, without the corresponding focus on the capital cost to drive that growth. This can create certain tensions between individual incentives to increase IPFs and to work towards increasing corporate EVA (to the extent that managers can influence this).

9.2 Using Targets for the Determination of Bonuses

There are stepped thresholds that then determine the bonus multiple. For example, if corporate EVA growth is between a and b, the bonus multiple is one, if it is between b and c, the multiple is two, between c and d the multiple is four. Overall the cap on the multiple is four and the floor is zero. The multiples reflect the extra percentage of the salary that is paid as bonus, so for example a bonus multiple of one might mean an extra 25% of salary.

This is illustrated in Figure 9.2.1 below:

Figure 9.2.1 Bonus multiples as a result of EVA growth

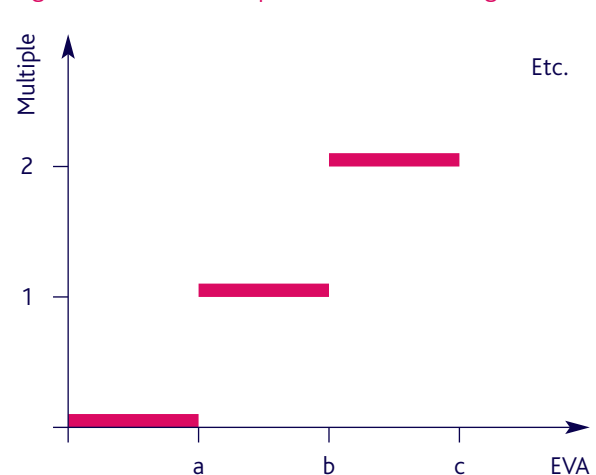


Figure 9.2.1 illustrates the fact that there is dilution in the full Stern Stewart approach to bonuses. The Stern Stewart approach would have no caps and floors. The reason given for this moderation is that New Zealand has more of an environment of equality. A culture of big bonuses is not readily acceptable to New Zealanders. Similarly the company could face retention problems if the bonus floor was not zero. If the company was performing poorly, then it needs to hold onto the best managers and not lose them through a very poor (or negative) bonus.

9.3 The Bonus Bank

The company runs an 'EVA bank'. Basically, each year, if corporate EVA growth targets are met, people in the scheme receive a percentage of their bonus with the remainder paid into the bank as detailed in Table 9.3.1.

Table 9.3.1 Percentage of bonus paid out

Year	% Paid Out
1	80%
2	67% of bank
3	57% of bank
4	50% of bank

The amount paid out remains at 50% thereafter.

The scheme is designed to ensure that if the targets are hit each year, the amount paid out is the same. For example, if for each year all targets are met and the EVA element for Mr X is 100 on a bonus multiple of 1:

Table 9.3.2 EVA bonus received

Year	Amount in bank prior to bonus	EVA bonus	Amount in bank after deduction of bonus
1	100	80	20
2	120	67% * 120 = 80	40
3	140	57% * 140 = 80	60
4	160	50% * 160 = 80	80

If targets are not met, there is a dilution in the amount paid out.

The difficulty within the company is that the bank isn't a bank in the usually accepted meaning of the word – it is not a sum of money that is set aside for repayment in the future. The bank does not act as a retention tool because the full amount is never paid out, except if the employee dies!²⁸ The bank therefore really acts as a mechanism to dull incentives within the organisation.

²⁸ In this respect the bonus bank is a bit like a death in service benefit.

9.4 The Future of EVA for Bonus Determination

The use of EVA for bonuses is currently under review. This is a result of two factors:

- the bonus bank aggravates people because there is a sum of money that never gets paid (except on death); and
- individuals believe that corporate EVA doesn't reflect their effort and that it doesn't reflect the value added. This is not surprising because a lot of what managers do is not direct to EVA.

The changing nature of the industry means that people are working even harder than they were before but it doesn't necessarily reflect the amount of effort they've put in to even maintain their profitability. The increase in competition means that future growth in EVA can be eroded.

10. The Future of EVA

The consistent message from the company was that it no longer has an EVA mentality. However, the general view was that the original introduction of EVA was good for the company because it did manage to drive two key messages:

- a focus on capital and the cost of capital – important in a capital intensive business; and
- education about the importance of shareholders – external perception is vital for the company.

The current focus for the company is all about EBIT. The company has weakened the link between performance and incentives. It's about saying, 'if the company is successful, we'll share some of it', as opposed to truly incenting individuals. The general belief in the company is that people cannot establish the linkages to be direct enough for EVA to have an incentive effect. This was a disappointment to some participants.

The on-going commitment to EVA and its philosophy really depends on the CE of the company. If the CE is an advocate of EVA, then it will remain in the company. It is possible to imagine that it could go either way. There are clearly opportunities for more extensive use of EVA by pushing it down to business units (again) to make more explicit and formal use of it for decision making, planning and control. However, organisational issues would need to be addressed. Business units would need capital assigned to them, which creates issues over shared assets. Other interdependencies such as jointness over costs and revenues and assets and liabilities and trading arrangements contribute to the difficulty of pushing EVA down through the organisation²⁹. Decision rights would also need to alter, at the moment the CE is the only one who can 'pull all the levers' associated with EVA. This CE's current focus on earnings is partly a result of the environment in which the company finds itself and the importance of the external market perception. This fact has permeated the company, so the consequence is that when people meet, they do not talk in terms of EVA. They will be more involved with short-term issues, such as next month's budget short-fall.

There is some evidence that things are changing. The introduction of the balanced scorecard has helped in the identification and measurement of value drivers for the company and for business units and the intention is to have EVA in the finance quadrant of the scorecards.

There is no explicit link as yet to EVA remuneration at the business unit level, except for the largely stand-alone units. EVA is therefore largely employed as a residual income measure for the determination of bonuses. However, even this is currently under review within the company. Managers don't like the bonus bank and they don't believe that corporate EVA reflects their effort. They believe that they cannot influence many of the decisions that really have an impact on EVA. It appears that managers within business units are largely interested in EVA solely for tracking their bonus. Managers coming into the company are interested in the bonus history, if it looks all right, then they are happy. There are no other real reasons for an interest in EVA. This is an issue that the company is currently trying to address in its review of EVA.

One participant summed up his view on EVA for the company in an interesting way:

'To take a good analogy is while we've had intellectual agreement about what the scoreboard is in the past, we haven't had the rules to play the game ... Continuing the sporting analogy, people haven't quite understood what their positions are and how they contribute to getting the overall score if they play in the forwards or backs.'

In other words, in the past there was the agreement within the firm that the aim is to maximise EVA (the scoreboard), the systems weren't in place to play the game properly (drive EVA down through the organisation). Individuals in different business units were unable to see how their behaviour contributed to the EVA of the organisation. These two issues remain unsolved within the company.

²⁹ These difficulties also arise in an EBIT framework.

Appendix 4

Results from Company 2

1. Background

1.1 Industry

Company 2 was established as a state owned enterprise (SOE) in the late 1980s. The majority of the company's revenue (around 90%) comes from its domestic business. Within this business, although the customer base is global, the market for provision of the service is largely segmented, with little scope for others (international or domestic) to enter. In other words, the company is a monopoly service provider. There is also some scope for alliances internationally to manage the provision of the service in other countries and also consultancy to provide the technology required in order to deliver the service. These business ventures are becoming more important for the company, as discussed in the analysis that follows.

If the customer chooses to come to New Zealand, they must trade with the company. There are a number of factors that determine whether the customer does operate in New Zealand; consequently revenue can be variable. The price charged by the company would not be a key factor. However, the price is not totally inelastic and the company could not decide to charge an infinite price for the service.

1.2 Corporate Structure

The company adopts a functional form based around four customer-specific delivery units. The customers are mainly network businesses and there is sometimes an overlap in their network across the units (for three of the units) leading to a sharing of assets and technology to deliver the service. Supporting these units are technology and corporate units. In addition, as mentioned above, there are international and consulting functions which are treated as separate units.

1.3 Performance

Summary statistics are presented in Table 1.3.1 below. These are for information only and are deliberately kept general.

Table 1.3.1 Summary Statistics

Type of Company	SOE
Operating Revenue	\$NZ 110 million
Capital Expenditure	\$NZ 23 million
Employees	650 FTE

\$NZ 1 = approximately £0.28 for 2000.
Source: Finance Director

The cost structure is essentially fixed with a broad step function¹. In the main business, the company delivers EVA in two ways:

- cost minimisations – becoming more difficult; and
- managing increased traffic growth with the same cost base – productivity improvements.

¹ The step function would kick in if the company was at capacity, which it is not.

2. EVA History

The company has been working with EVA for over five years. Initially EVA was used as a tool at largely the Board and Executive (senior management team) level and for reporting purposes. It was not pushed further down the organisation to business units or sub-units.

2.1 Reasons for Implementation

The company cited several reasons for the initial introduction of EVA:

- the primary reason was customer relations. The company wanted a strong relationship with its customers and the EVA methodology provided a framework for discussion of prices and what was a reasonable level of profit for a monopoly service provider;
- EVA was seen as a way to set a target for the company that the industry was comfortable with for a monopoly business. An EVA of zero was seen as being an appropriate return for a monopoly over the long run (whatever that might be);
- in the absence of a share price and competition, EVA provided a benchmark as to what should be the proper return for the risk incurred by the providers of finance (i.e. the Government at this stage); and
- recommendation made in the Value Based Reporting Protocol for SOEs – very much a secondary consideration.

Participants who were in the firm at the initial implementation stage stated that the view at the time was that EVA helped the mind shift towards thinking about the cost of capital and what delivers true value.

2.2 The Implementation Process

The company ran the implementation process as a project within the firm, making use of an EVA team to oversee the process and to run training sessions.

The implementation process involved the following steps:

- an initial target EVA target of zero was set;
- the target was used to inform the prices charged to customers and to think about what might be reasonable profits for the company; and
- the company spent a lot of time working with customers to inform them of what EVA was, how it worked and why it was right for the company and how price would be managed to the zero EVA target over time.

The customers (who are not EVA themselves users) found this to be an acceptable means of price setting. This is very interesting as it is not one of the 'traditional' reasons for the implementation of EVA yet the concept of earning the weighted average cost of capital is now well established².

² Perhaps this is because the situation of 'corporatised' but state owned organisations is not common in countries such as the UK.

3. Issues that Arose with EVA

Initial issues the company faced were to do with market conditions and the consequent EVA results, rather than with the measure itself. The company found that it had an accumulated EVA surplus and the question was what to do with it. The government didn't think that it was appropriate that it should be returned to them, so the company took the decision to adjust short-run prices (downwards) in order to get rid of it.

The company also decided to offer permanent price reductions to take account of forecasted growth. This was fine given the forecasts that they were working with at that time. However, in one participant's words, 'the revenue dropped out'. This was due to external events that affected the entire industry – in other words not a forecast issue per se but an industry downturn. When the customers' revenue fell, they cut back and this impacted upon the company's revenue. The ex ante agreement had been to increase prices if such a situation arose, in order to use the claw back to get to an EVA of zero³. In practice it became very difficult, as the customers were unhappy with the proposed price increases as they were suffering themselves. Now this was portrayed as an issue with EVA but in fact the issue was with ex ante events and with the customers, who had come to expect the upside all the time. It was not EVA per se that was at fault.

4. EVA in the Firm Today

Three major changes have taken place since the initial introduction of EVA:

- the firm restructured to give a stronger customer/service focus;
- EVA calculation has been pushed down to business units and their sub-units; and
- the corporate EVA target is no longer zero.

These changes are discussed below.

Restructure

As discussed above, pressure on EVA and the EVA targets was a result of the market environment. The fall in revenue in the late 1990s coupled with increasing costs led to EVA losses and upward pressure on prices. The company took the decision to restructure in an attempt to reverse the trend, moving towards customer oriented business units that were far more decentralised. The intention was to find a service level that customer groups were happy with and prepared to pay a reasonable price for.

³ This practice is similar to agreements for some regulated industries in the UK, where there is a target price rise of $(RPI - X)$ set with the aim that the companies will earn their cost of capital. Any returns perceived as being 'excess' may be the focus for claw back by the regulator, through price reductions.

The reorganisation introduced considerable cost savings to the business. Coupled with an upsurge in revenue the company managed to turn around and is now seeing surpluses again⁴.

Pushing EVA down to Business Units

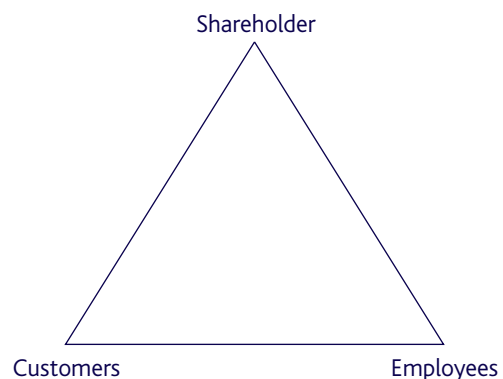
Prior to the restructure EVA was largely used as a tool at the Board and Executive level of the firm. EVA was not driven down to business units and they were run as essentially cost centres. Revenue accumulated in a commercial unit. There was also no inter-charge of maintenance and support to these units.

The view within the company was that pushing EVA right through the organisation to business units (and to sub-business units) followed naturally from the restructure. This was achieved through the assignment of capital to particular business units and the ongoing attribution of revenue and costs to particular units (although there is a jointness issue over pricing and costs, as explained in the following section)⁵. Units face an inter-charge for the corporate function and for maintenance and service.

The Corporate EVA Target

The issue of whether the company should still have an EVA target of zero arose at the time of the restructure. This caused a lot of debate in the company, with the result that they decided that there should be a framework for thought called the Customer Partnership Plan. This framework comprises a 'triangle' of stakeholders who have an interest in the 'pot' of EVA, as illustrated in Figure 4.1. The overall aim is to maximise EVA, with the view that this leads to a bigger pie of value to be shared out to all stakeholders. This constitutes a shift from the previous target of EVA zero. All the stakeholders have accepted the new target.

Figure 4.1 Customer Partnership Plan



⁴ One participant did raise the question of whether the company reacted in a 'knee-jerk' way when short-run EVA losses were predicted. The cyclical nature of the business meant that these losses may have been turned around without any restructure.

⁵ The assignment of capital to business units was described as 'an effort but possible'. The company had maintained a clear asset register and many assets are location specific, making the allocation to units easier.

Shareholders

The shareholders had accepted a lower dividend for a period of time, were they now entitled to an EVA positive return? Any quoted company should seek to maximise EVA as a means of increasing shareholder value but what is the appropriate situation for a state owned enterprise? The capital charge is designed to recompense the providers of capital for the risk they have borne. Should the shareholders (the government) make more money from this 'corporatised business'?

Customers

The customers want the lowest prices: the company is in a monopoly position and they want it to have an EVA of zero, with surpluses returned. Market conditions and the restructure demonstrated that this had become a soft target.

Employees

Employees wanted a share in the gains. They felt that the increase in revenue had increased their workload and they wanted a share in this.

Taking the partnership approach led the company to devise a proposal which they believed satisfied each of the stakeholders. Actual EVA is shared out as follows:

- provided a financial trigger or threshold EVA level is achieved and certain operational objectives are met, employees get the first slice of the EVA 'pie';
- employees share their slice equally;
- after the employees' slice, there are tiered rates between the shareholders and the customers;
- if the threshold is not met, yet EVA is greater than zero, the 'pie' of EVA is shared between the shareholders and the customers; and
- if EVA is negative, the shareholder 'wears' the loss (like a residual owner).

5. Measuring EVA

5.1 Corporate EVA

The company's accounting systems are EVA based. Unlike most other companies, internal accounting is done on an EVA basis, including budgets, forecasts, 3-year business plans and reports to the Board. Externally, the company also reports EVA figures. This is most unusual as there are few companies in New Zealand (or indeed globally) that provide detailed EVA information in the company accounts. Half-year or annual accounts are actually converted to conventional GAAP, rather than the other way around.

Accounts are in the form of an EVA ledger with an adjustments ledger running alongside for the posting of conventional journal items every month. Basically there is an EVA reconciliation process every month to provide the conventional figures, which are required under terms of the debt covenants and for banks.

Constructing accounts on an EVA basis obviously means that there is no need for adjustments to GAAP accounting numbers. Indeed, it is the EVA numbers that must be 'adjusted' to yield the conventional accounting numbers.

The definition is as follows:

Equation 5.1.1

$$\text{Corporate EVA} = \text{NOPAT} - (k \cdot \text{WACC})$$

Where:

NOPAT = Total revenue less depreciation and operating costs, including taxation. The tax charge cash based – i.e. whatever is physically paid during the year with an adjustment for the tax shield from debt interest

k = Average book value capital for the year

WACC = Weighted average cost of capital (with taxes)

The capital asset pricing model is used to estimate the return on equity, which is in turn an input into the cost of capital formula. In order to do this, values are imputed for the unlevered betas of the components of the business. There is no information in the accounts regarding exactly how these betas are actually derived. However, full explanation of the remaining calculations is provided.

5.2 Calculating Business Unit EVA

EVA calculations are designed to be additive across the company. In other words, sub-unit EVAs sum to business unit EVAs and business unit EVAs sum to corporate EVA. Potential issues arising over jointness of costs and revenues are discussed below.

NOPAT

Business unit NOPAT is calculated by deducting from revenue amounts for labour and for operating expenses. There is some sharing out of revenue, as customers create a network effect across the business yet they pay one price. This revenue split is agreed at Board level. Business units cannot choose to increase or decrease the prices they charge.

On the revenue side, standard terms and conditions are negotiated with customers and the company bills and receives money monthly. Long-term contracts potentially could create problems for the company. For example, there may be a flat cost base but the revenue can be up and down. The company recognises that it would be ideal to flatten out the revenue stream but that it is not in keeping with their cash philosophy of EVA. This is an issue that the company is still struggling with.

The majority of the revenue is in New Zealand dollars. However, some revenue into the business units may be in foreign currency. Capital expenditure is also likely to be in foreign currency. The company deals with this in one of two ways:

- the business unit should inform the Finance function – the policy is to cover all known foreign exchange (FX) exposures. The Finance function would wear any gains or losses on hedging transactions. The company regards itself as risk averse and would cover any known exposure with forward contracts or options, or by matching foreign cash inflows and outflows; and
- if the Finance function is unaware of the exposure (if say the business unit forgets to tell them) or the timing of cash flows is uncertain then the business unit takes the risk.

Operating Costs

The main costs incurred in business units and sub-units are labour costs and the costs for technology and support. The former costs are largely location specific and the latter are allocated through the inter-charge system. However, there is some sharing of labour across business units. From the business unit perspective, arrangements must be made to agree the cross-unit sharing of the costs.

The company deals with shared technology and support costs by looking at which unit primarily benefits from that expenditure. That unit then pays the costs. The justification for this is:

- without that unit, the other units would not need that level of expenditure; and
- the pricing within this unit (and consequently the resulting revenue stream) is more suited to carry the cost.

The bearing of the cost is recognised as it is built into that unit's targets. The unit also has to accept the fact that 'if they say they're not paying for it, the other units would just say that's fine, we don't need it'.

Allocated Costs

The main costs allocated to business units are:

- technology (project management) and maintenance costs (mentioned above); and
- corporate overheads.

Technology and maintenance costs are allocated wherever possible on a usage basis through service level agreements with business units. These agreements are struck at the beginning of each year, with reference to planned activity. The annual amount is then divided by twelve to yield the monthly charge. The inter-charge levels for technology and support are on a cost basis, with no profit margin added on for the support unit⁶.

⁶ The support unit also has an external arm which does have positive EVA targets. Of course tensions may be created between providing the service internally (at cost) and working externally (to earn positive EVA). The understanding is that the priority is the core business.

Corporate overheads are allocated wherever possible on an activity basis, through using for example headcount as a basis for allocation. The allocation of corporate costs causes some tensions within business units (see section 8.1 below). According to one participant from the corporate function, it's not so much the amount that's the issue, it's whether the units think that they get value added for that amount.

There is no reciprocal allocation of service costs within the organisation. For example, the Technology and Support unit is not allocated any HR costs. The aim of this is to simplify the inter-charge mechanism within the firm.

Capital Charge

Capital is largely location specific. Some assets used by multiple locations are just given to particular business units or leased to the business units. A monthly balance sheet multiplied by the cost of capital yields the monthly capital charge. The company adopts a constant cost of capital for its domestic business, with other businesses assumed to have a different risk profile. The cost of capital is derived by first setting a value for the unlevered beta, which enables the beta of equity and the return on equity to be calculated. The return on equity, together with the return on debt, provides the inputs to the cost of capital formula.

6. EVA and Corporate Strategy

The company makes use of forecast EVA in the formalisation of corporate strategy into objectives. Areas related to strategy where EVA played or plays a role are:

- the restructure of the firm;
- business planning and target setting; and
- the evaluation of new business ventures.

Each of these is discussed below.

The restructure of the firm

The view was that EVA helped to highlight the financial picture and where possible gains could be made. The company was entering a major life cycle capital programme which had a significant impact on costs and the growth in revenue was not enough to secure the company financially. Restructuring brought financial security for the company. It also helped to cement customer relationships. One participant stated that the real key for the company is thinking about where to move on from now. The restructure was a massive exercise but after the initial period, 'how do you stop complacency entering?' It is a big issue in the company, particularly with having so little influence on revenue. The main lever that the company has is for the domestic business is on the cost side: for example labour cost reduction through technology. Benchmarking within the industry indicates that there is no obvious scope for further cost reduction. The new direction for the business is on growing the offshore activities and EVA helps with this.

Business Planning

One of the positive outcomes cited for the restructuring was the improvement in the structure of business planning. EVA has been formalised for the setting of targets and strategies and people are 'writing down' those strategies. In looking at business growth, the company looks at where it thinks it can get more EVA, using EVA models as a basis for forecasting.

Out of the business planning, targets are formulated and expressed in EVA terms, with the aim of reflecting what the company is trying to achieve in the business. These bottom up targets are designed to be additive across the organisation. Because of the nature of the business, some units and sub-units will have overall zero or negative EVA targets, whilst others have positive EVA targets. The company tries to emphasise the one company philosophy, recognising that some units are perhaps service providers or that although loss making, they fulfil a necessary function.

The Finance function would monitor business unit expenditure to make sure they are actually spending their capital allocation. This is because any under spend can have serious implications, for example:

- it signals that capital is not being managed properly;
- debt funding may have been put in place. If expenditure is not made there is cash sloshing around in the system; and
- the operational viability of the network (and therefore safety) is threatened. The shareholder will not accept this.

To provide incentives to invest, individual targets may be adjusted to reflect capital expenditure that is deemed to be necessary for the company, bearing in mind the importance of safety. The aim of this is to ensure a longer term view is taken.

The Evaluation of New Business Ventures

Although the domestic business constitutes the majority of the company's revenue, there is increasing scope for business ventures both within New Zealand and abroad. These ventures provide an opportunity for the company to try to grow its revenue. Business cases for such ventures are constructed on an EVA basis with forecasts based on projected revenues and costs. The associated capital charge is formulated using the company's cost of capital, with a premium for extra risk, if this is deemed necessary.

Company policy is to capitalise the set up costs and initial losses of these new business ventures, calling it goodwill. The amount is then written off over the following years, once the venture starts making money. The only issue that arises is when a project doesn't work. The question is then:

- whether there is something to be learned from the project; or
- whether it is worthless.

Both possibilities have occurred in the company, leading to different actions. The former could mean that the company holds the goodwill balance and incurs a capital charge indefinitely. This would be in the situation where there is the possibility of new related projects in the future or where there may be a revenue stream.

The latter suggests writing off the project, in which case the manager within the business unit would take the hit. This in fact happened during the restructure and the manager involved left as part of this process. Writing off the costs could then be regarded as beneficial, as the incoming manager is not burdened with capital charges based on past decisions⁷.

Prior to any investment being made, business units may incur costs associated with exploration work, such as marketing costs and the costs of making contacts. In the past company policy was to capitalise these costs. The EVA impact of this was that the capital charge kept increasing. Now the policy is not to capitalise these costs, instead they are expensed. This is consistent with the treatment of such costs as 'sunk' costs which have no relevant when the decision to reject or accept the project is made or subsequent to this point.

7. EVA for Investment Decision Making

Investment decision making for the firm essentially comprises capital expenditure on technology to deliver the service. Much of the capital expenditure planning is top down from the ten year plan, based on life cycle replacements of existing assets. This is formalised into the annual capital expenditure budget via the rolling three year plan. Business unit managers are involved with the setting of annual capital expenditure targets. Based on the plan, they would put proposals for new investments to the Board. The EVA mentality of the company means that projected EVA is the focus for the analysis. At the Executive level, however, additional measures will be evaluated, such as payback and net present value. The view was that EVA is probably sufficient and it is the dominant tool, but you can't change all the years of experience in other companies that use more traditional measures.

⁷ Indeed, this is one of the issues highlighted by Stern Stewart.

8. Performance Management against Targets

8.1 Budget Setting

Business unit managers present their annual budgets to the Finance function, the figures are then either agreed or put back to the units for revision. These budgets are formulated from the three year plan.

Discussions with one business unit manager highlighted some issues with the presentation of EVA budgets⁸:

- because the company is a network and the network cuts across the business units, there is no scope to manage price within business units, or to manage demand for services through pricing. In this respect, business units have little control over revenue. Individuals may feel that they have been 'cut to the bone' through costs, yet nothing can be done on the revenue side; and
- the allocation of corporate overhead costs can turn a 'profitable' unit into an 'unprofitable' one.

These issues are not created by the use of EVA as they would occur with a number of other performance measures. Every company has overheads, so a positive gross margin does not necessarily mean that a business is profitable in net terms. The view from the manager was that this can demotivate staff. So although EVA has not created these issues, it hasn't solved them either.

The company aims to ensure that all its services earn a gross margin – i.e. that they cover direct costs and make a contribution to overheads. However, some services make more than others and the only way to change this would be to rebalance prices. It is difficult to change prices at present, due to the network and monopoly status, customer resistance and current profitable position. This means that some areas become EVA negative because the company chooses not to rebalance prices. This means that the company has chosen to retain varying profitability – leading to the argument by some managers that they are EVA negative because of corporate decisions. This has led the company to do two things:

- measure overall business unit profitability on a fully allocated EVA basis, with the intention of removing the negative EVA areas over time (through a combination of cost management, new service delivery options and ultimately pricing); and
- measure sub-units at a service level on a form of gross margin/direct cost as these managers can only influence this level. This means that the company still uses EVA but does not allocate overheads.

⁸ These views are not necessarily representative of other business unit managers.

The second action is interesting as it relates to the impact that negative EVA targets can have. One participant stated that employees still think in conventional profit terms, so when they see a low or negative EVA figure, they think that it is too low⁹. The company has worked hard at improving understanding of EVA. However, the psychological impact is still there for some employees.

8.2 Monthly Control

Key features are:

- performance management against budget is done on a monthly basis;
- there is also quarterly tracking of some items, for example the demand for technology and support. Adjustment may be made to service level agreements at this point including one-off rebates given to business units for underspend if it occurs;
- the focus is on actual EVA against budget and the tracking of targets relating to particular value drivers, which are largely cost drivers. The justification is that performance in the month and the year to date will give an indication of how the business unit is running against the annual budget and the three year plan;
- the company formulates EVA targets and value drivers into a balanced scorecard for each business unit and sub-unit. This is an attempt to make the measures more relevant to individuals, to recognise what they need to do and the possible trade-offs that result; and
- performance below budget may lead a manager to lobby for a downward revision in future targets. This may be granted if the Board believes that something has happened that is out of the manager's control¹⁰. Otherwise, if the stated reasons for the difference aren't convincing, the manager bears the impact. That there is some possibility of target revision is interesting as it indicates subjectivity in the measure.

8.3 Longer Term Performance Management

Performance management within the company is very much year on year. One participant believed that the focus is very much short-term within the company. This is consistent with the remuneration scheme that the company has in place (see section 9 below).

⁹ One participant noted that this point holds for a large section of the business community. Some press reporters have confused the published EVA with accounting profit, quoting EVA as if it was a profit.

¹⁰ The example given was a sudden steep rise in the cost of labour.

9. Remuneration

9.1 The 'Sharing in Performance' Scheme for All Employees

Key features of the remuneration scheme are:

- there is a threshold level of EVA required in order to trigger any reward across the organisation. Certain operational objectives must also be achieved. The amount available for employees is reduced if these are not met;
- there is a sharing scheme where employees share first in any EVA 'pie' over the threshold level
- employees share their slice equally;
- after the employees' slice, there is a tiered rate of sharing for customers; and
- if the threshold is not met, yet EVA is positive, the EVA 'pie' is shared only between shareholders and customers.

The reason that this scheme was implemented was to help align employees' interests with those of the shareholder and to promote some attention to the 'bottom line'. The scheme is seen as a recognition tool for performance across the organisation. The aim is to try to reinforce values of teamwork and that everybody contributes to performance.

Employees' Views Regarding the Scheme

The comment from HR and from a business unit manager was that at the individual staff level, there is not a high level of satisfaction with the scheme. People feel that they can't do anything individually to influence the result¹¹. There is a 'removal of action from results'. The message that HR tries to give is that without a particular individual's contribution the target may not be met, even though you cannot specifically identify and individual's contribution. The difficulty highlighted is that the company does not have a share price to use as a barometer of performance¹². The key point is that the aim is to reward staff for the performance of the company overall. This can create a disconnect between some staff and high level objectives but it does reinforce what the company as a whole is currently focused on and the view is that it is a powerful tool to ensure that objectives are achieved.

Participants also recognised that the company is yet to face the situation where the target hasn't been met. Therefore the organisation hasn't gone through some of the swings faced by other firms. EVA schemes are no exception to the fact that incentive schemes are often praised when the payout is good, but if and when the payout suffers, employees will focus their criticism on the scheme itself.

11 Notwithstanding these comments, internal reviews within the company have shown that there is almost universal support for retaining the scheme, largely as it currently is.

12 Of course, the existence of a share price may not allay this issue as individuals may not see how they can influence the share price.

9.2 The Senior Management Scheme

In addition to the scheme available for all employees, senior management have a bonus scheme, as follows:

Equation 9.2.1

$$\text{Total bonus} = \{\text{Sharing scheme}\} + \{\text{At-risk element}\}$$

The at-risk element comprises 15% of remuneration and it relates to the achievement of quantitative and qualitative targets, for example:

- quantitative: business unit EVA, safety, capital expenditure, down time; and
- qualitative: indicators from the staff survey.

These targets (around five to twelve in total) are set at the start of the year and reflect key areas for attention¹³. Participants in the scheme must achieve 60% of their at risk targets in order to trigger the bonus. The achievement of the targets is largely down to how the line manager rates the performance. Therefore the contentious part about the at risk element is whether the individual believes that his/her manager has been fair on them. This can create issues because:

- some managers may be very black and white about how they view those goals and whether they have been achieved; and
- others may be more forgiving or more willing to listen to reasons why the goals have not been achieved.

Different treatment therefore occurs across business units. That this happens is no surprise in a decentralised organisation, where there are different managerial styles at the business unit level. Although the targets themselves may be objective, what is subjective is the weighting that is placed on the reasons why the targets were not achieved. The company addresses this potential issue by calling in the HR function to referee if it can't be sorted out within the business unit. HR would also take an overview of how managers have assessed people across the organisation to try to ensure some consistency.

The overall percentage at risk (15%) is fairly low but in a company that it driven by the need to provide a high level of service it is appropriate. This company is not like a business that sells a product where you might put people on a much higher risk and reward scheme.

13 Business unit managers also track other targets that they regard as being important.

9.3 Taking a Longer Term View

The EVA incentive scheme is very much year on year, the justification being that there is no share price to run to so it would be difficult to have option schemes for managers. The company is however looking into running a 'dummy' option scheme in order to get managers to think about creating long term value. This may be in the form of a bonus bank. The issue the company is pondering is whether withholding some of the bonus would do anything when EVA is flat year on year. The company cannot really influence the growth of its domestic business. In addition, it doesn't face the short-termist problem of managers maximising EVA now, to the detriment of future EVA.

It seems that it is sensible within this organisation to consider EVA on a year by year basis, for the following reasons:

- staff turnover is very low within the business (excluding generic departments such as HR, finance and legal) as employees are both operational and technical experts in the monopoly business – to leave would mean going abroad;
- the business is however dynamic from an HR point of view, as staff move through their career paths. It may be complicated to maintain the scheme as people progress through the organisation; and
- the safety component is vitally important so that people are not short-term focussed.

However, the cyclical nature of the business means that there will be good and bad years for the company. Managers will have an incentive to reap the benefits in the good years. This may lead to further short-termist decision making.

10. The Future of EVA

EVA looks set to stay within this company. The EVA philosophy and mentality runs right through the business from the Board level down to business units, where managers will evaluate investment proposals, prepare budgets and have targets based on EVA. The additional dimension of publishing EVA information helps to qualify this company as a 'true' EVA user in the Stern Stewart sense of the word. The company had a cost management approach before the restructure which was perceived as less effective than the full EVA approach used now.

The view within the company is that EVA is a good concept and a good tool to drive performance because it:

- focuses on capital and the cost of capital, which is very important;
- is something that the customers understand and are happy to work with; and
- can be used in the evaluation of investment opportunities: this is what the company must look to if it wants to grow the business long term.

The company realises that education and importance (both with customers and employees) are really key.

There are no plans to change the use of EVA within the company.

Appendix 5

Results from Company 3

1. Background

1.1 Industry

Company 3 was established as a state owned enterprise (SOE) in the late 1980s. It operates as a profitable integrated network business providing a chain of services to its customers. The main regulatory influences include the State Owned Enterprises Act 1986, the company's Deed of Understanding and also a regulatory act relating to the industry. The Deed of Understanding specifies certain social obligations that must be met, such as average service provision and maximum prices that can be charged. These social obligations have a dampening effect on what the company can do in terms of starting to create value. In the company's view, the Deed of Understanding can mean greater lead times for major strategic changes and also it means there can be some political involvement in decision making¹.

For many years the company was a monopoly provider of its core service but more recently through deregulation competitors have entered to 'cherry pick' or 'cream skim' service provision in certain pockets of the business. However, the company has maintained its well known brand and it attracts a certain amount of loyalty from customers. Service performance is vital for the company in order to retain this loyalty. Adaptability and innovation is also important in order to respond to customers' changing needs. This is partly as a result of competition and partly due the core business being in its 'sunset' years, though opportunities exist and continue to be developed to stimulate growth in new and value added products. To this end the company has developed its strategy around managing the risk of erosion and substitution to its core business.

The company has a global competitive advantage so it has been able to sell some of its services internationally. These international alliances involve the management of service provision and also the supply of equipment necessary to deliver the service. Such ventures are becoming more important for the company, as discussed in the analysis that follows.

1.2 Corporate Structure

The company adopts a functional organisation structure with business units reflecting the different services that it provides to its customers. These units are supported by corporate units, such as finance and human resources.

Overall the services provided are interdependent which means that:

- the company comprises a huge matrix of inter-relationships;
- transfer pricing between units is perceived by the units as being very important; and
- a lot of customer satisfaction can be affected if the service level slips.

At the time of the interviews, the company had just gained approval for diversification into a major new business venture. Whilst the venture could be regarded as a 'new' business line, it will make use of the company's existing network, so there should be economies of scope to be extracted through the strategic asset.

1.3 Performance

Overall the company is profit making and each year it pays a dividend to its shareholder, the government.

Summary statistics are presented in Table 1.3.1 below. These are for information only and are deliberately kept general.

Table 1.3.1 Summary Statistics

Type of Company	SOE
Operating Revenue	\$NZ 900 million
Capital Expenditure	\$NZ 33 million
Employees (FTE)	7,500

\$NZ 1 = approximately £0.28 for 2000.

Source: 2000 Accounts and company documents

In the main business, the company delivers EVA in three ways:

- cost minimisation through operational gains, improved productivity and reappraisal of service standards;
- maintaining revenue in its core business plus looking for opportunities to diversify into more innovative areas at home and abroad; and
- better utilisation of income generating assets and operating infrastructure.

¹ This would be true for any company where there is a regulatory impact. In other words, the Deed of Understanding is a sufficient but not necessary condition for political involvement in the company.

2. EVA history

2.1 Reasons for Implementation

The original impetus for EVA came from one of the company directors. As the company was beginning to think about the right sort of measures for the company, the EVA debates were coming to the fore. This coincided with the interest from the shareholder, the Government, through the Value Based Reporting Protocol in 1995.

Initially the company established an EVA methodology at the company level. In 1998 the Board decided to implement EVA at the business unit level and to pay incentives based on EVA so the development of the EVA framework was initiated. Business units were to be treated as if they were real businesses, with the aim of creating some tension between them. The new remuneration scheme for managers was based in part on business unit performance and in part on organisation performance. Because of the inter-dependencies between the units, the importance of maintaining the one company view was recognised². The only exception to this was for certain people who might be for example setting up a new business and who are largely independent of the rest of the operation.

2.2 The Implementation Process

A phased implementation of EVA took place within the organisation, as follows:

- the value based reporting protocol was useful as a starting point for the mapping of EVA but it needed to be adapted for operation at the business unit level;
- EVA was implemented over the course of a year, making use of a project team which had representatives from corporate finance, human resources and key operational areas, with external advisors where appropriate;
- the project team initially ensured that the systems were in place to produce the EVA results, including the allocation of capital to business units and the transfer pricing policies;
- the first results were presented to the Board about three months into the year. After six months EVA was bedded down and the company spent the remaining six months fine-tuning it;
- managers were involved in training sessions and in the identification of value drivers;
- managers could see their EVA results alongside conventional EBIT results for the first year or so, in order to understand the language of EVA and have confidence in the results; and
- finally, the incentive scheme was linked to EVA.

The development of reporting systems included the enhancement of the Value Scorecard, which had been in place since 1995. This led to a focus on EVA outputs and the drivers of EVA. Managers of business units were asked to identify their key EVA drivers which would go into the business unit scorecard. Previously the company had been working with around 10-20 key performance indicators per business unit. This was radically cut to 5-10 EVA drivers. The process had a mixed success rate, as some picked up on it and others did not. The company then ran training sessions for the top one hundred and seventy people. The main aims of these sessions were for managers to:

- identify key value drivers;
- focus on these measures;
- report the measures; and
- communicate these drivers within their units.

The Corporate Finance function provided the tools for identifying the drivers – which really were about plotting possible indicators and then assessing whether they have a high or low ability to influence and a high or low impact on this year's EVA. Drivers that fell into the high/high quadrant became the focus. The process was backed up with some quantitative analysis. This can be a difficult process as a business unit might be made up of several sub-units. Sub-units might be fairly discrete but they are grouped together around the particular manager and his/her leadership qualities. In other words, the structure does not necessarily reflect the key drivers of the business³.

If EVA was to be a primary measure of performance, then the incentive scheme should reward managers on EVA. Prior to the introduction of EVA, the company used EBIT for its management incentive purposes. There was a difficulty in deciding on the 'real result' for remuneration determination, leading to more detailed analysis by a select group to recommend what if any adjustments were required on which to base incentive payments. This approach lacked transparency and visibility to the participants of the incentive scheme. The company decided that it needed a much more objective system that better reflected performance, including regular feedback as to how performance was tracking against incentive targets.

² These inter-dependencies were the reason that business unit remuneration had been avoided in the past.

³ It was recognised that organisation around value drivers might be ideal, or that EVA could be used to drive a restructure. Organisational structures tend to be shaped more around leadership capability. However, there is an attempt to cluster businesses with similar EVA drivers together.

2.3 The Initial Measure of EVA

The decision was taken to have two EVA numbers:

- internal figures based on information gathered at the business unit level – where around ten adjustments are made to the accounting numbers; and
- an external figure that was 'more accurate' but that was only done at a total company level – with around five additional adjustments.

Although it appeared that there were two calculations of EVA, it was emphasised that the internal figures added back to the external figure so really it was a partitioning of EVA across the business units⁴.

Other considerations in the initial implementation of EVA were:

- the construction of business unit balance sheets. The assignment of capital employed was not so much of an issue as most of the economic capital relates to fixed assets, with the major asset being property⁵. Other balance sheet items were allocated using an 'appropriate methodology'. Managers would have some control over their capital allocation by managing their debt, reducing work in progress and improving stock turnover; and
- the derivation of different cost of capital rates for different business units within the company. This was done to recognise the differing risk profiles of the markets individual businesses transacted in. For example, the Property Group operated in a comparatively lower risk market than the Contract Logistics Group.

Consultants provided advice on adjustments and also on the information that would be required once EVA was pushed to the business unit level. A deliberate decision was taken not to make too many changes to the EVA calculation within the first two years.

The main message pushed to managers of business units was that the focus was still going to be on EBIT but that they had to remember that capital was not free. In this respect the introduction of EVA met one of the advantages cited by Stern Stewart as it did force higher level managers to look at the allocation of resources to different business areas and whether the units were economically viable. Of course units that appear not to be viable could actually be supporting other aspects of the business but they might not get recognition through internal revenues.

The main impact of this, in one participant's view was:

- a lot of emphasis went into the transfer price, with units moving to charge market prices (for example the rentals charged by the property unit);
- the mindset changed within the company towards a more commercial focus; and
- resource allocation was improved within the company.

3. Initial Issues over EVA

Initial issues were raised during the introductory period of working with EVA. These included:

- issues raised by managers at the training sessions;
- the number of adjustments that were made to the accounting numbers; and
- the end of year performance review.

Issues Raised by Managers

Managers were mainly concerned with their capital allocation, transfer pricing and the perception that EVA doesn't help to make decisions between short and long run. The view was that the company could work together to improve allocations and transfer pricing. Regarding the final issue, the response was that managers are paid to make these decisions. However, this does not really resolve the short-term nature of EVA and the fact that managers may need incentives to encourage them to take a longer term view. We would expect to see this via the remuneration scheme for example.

The Adjustments Made to the Accounting Numbers

Initially the company was making around ten adjustments in the calculation of EVA. After two years they concluded that this was too many because people did not understand them and they got bogged down in the details of the cost of capital, and economic adjustments to the accounting numbers. Unless the adjustments are going to change behaviour and results in a positive manner, the view was that there is no point in complicating the calculation.

The End of Year Performance Review

In the initial year of EVA the company found that there was a lot of squabbling by business managers who were seeking revisions to business unit targets. Failure to meet threshold targets would impact adversely on remuneration for the first time (see section 8 below). The whole process of adjustments was described as 'messy', leading to the decision to encourage discussions between managers and the Corporate function during the year, as issues arise. A dim view is taken of any adjustments that managers may try to make at the end of the year that could have been made earlier.

⁴ Of course, there may be interdependencies and other complications when summing across business unit EVAs.

⁵ Barring acquisitions and restructuring, the capital base is fairly stable.

4. EVA in the Firm Today

The EVA philosophy continues within the organisation, with it promoted as a tool to help manage the business units better. The main points are:

- overall the company has a negative EVA target with different targets across business units. EVA has improved in recent time and it is projected to be positive going forward;
- over time the calculation of EVA has been (and continues to be) simplified. Since interviewing the company, the number of adjustments has been reduced and there is now only one measure for EVA;
- EVA is mapped right through the organisation to business units. Pushing below business unit level, the focus is more on EVA drivers than the EVA number;
- EVA sits within the balanced scorecard framework; and
- the company is moving to communicate the EVA philosophy to all employees.

Corporate EVA Target

The company has an overall negative EVA target, with targets set on a standard three year planning horizon. Business unit targets add up to the corporate target, with some units being positive and some negative. The impact of this is discussed in section 5 below.

Recent problems the company has faced with its corporate target include:

- the external environment has changed since long-term targets were set two years ago – the market has not continued to grow as expected; and
- competition has made more of an impact that was forecast.

The company now has no chance of achieving its corporate EVA targets – a case was put to the Board to revise the targets downwards to more achievable goals. Because the targets are negative, there is some resistance from the Board to revise them further and also to pay managers their incentives. However, the fact that the company is a SOE was reinforced, together with the social obligations that must be met under the Deed of Understanding. Retention of employees would be a real problem if the company only paid out when EVA was positive.

Simplification of the Calculation

The emphasis today is on the trend in EVA, rather than the 'accuracy' (or not) of the number. As long as it is increasing, that is viewed as a positive. The proposed simplified version of the EVA measure has only six adjustments (see section 5 below) and there is no longer an internal and an external measure.

Adjustments dropped include those concerning deferred tax and capitalised leases. The view is that by simplifying EVA, the company 'won't lose anything in terms of decision making or performance incentives but what it will do is improve comprehension of EVA.'

Mapping EVA through the Organisation

As EVA is pushed further down the organisation, the focus is not about EVA itself but rather the drivers of EVA. The view was that a lot of people won't know what EVA is and they wouldn't know what EBIT or profit was either. They can, however, understand the drivers if they are appropriate for them. Highlighting these drivers and linking remuneration to these drivers provides the incentive to improve EVA. The introduction of EVA has led to a dramatic reduction in the number of drivers that individuals focus on. Prior to EVA, businesses had perhaps 20 key performance indicators.

The Balanced Scorecard Framework

The company has been working with a value scorecard at the business unit level since 1995, i.e. three years prior to the introduction of EVA at the business unit level. Business unit EVA now sits as the primary financial measure within the scorecard with the EVA drivers made explicit. The introduction of EVA has provided the opportunity to clarify the drivers that go into the scorecard. The framework is applied for performance management and remuneration determination, as discussed below.

Communication and Training

After working with EVA for the first couple of years, it became apparent that the relevant EVA information wasn't being shared by business unit managers further down the organisation. There is a move to hold more training sessions, to advise managers on the best way to communicate the EVA message, whether via financial explanations of all the numbers or pictorial representations of the EVA drivers. Managers have the support of the Corporate function but they are not being dictated to in terms of how and where they should be doing business. With general staff turnover training has to be continually reintroduced and rolled out. It is important to keep that information and awareness level. Handbooks, manuals and presentations all help with this process. If the level of understanding is allowed to weaken, the view within the company was that EVA would be relegated to a financial issue for the accountants to deal with.

5. Measuring EVA

5.1 Corporate EVA

The definition is as follows:

Equation 5.1.1

$$\text{Corporate EVA} = \text{NOPAT} - (k \cdot \text{WACC})$$

Where:

- k** = Capital measured at opening value (historic cost with no revaluations). This is to save time in doing capital updates and also the capital base of the company is fairly stable
- WACC** = The cost of capital. This is an unlevered cost of capital, in other words there is no distinction between debt and equity

NOPAT

Labour expenses are the biggest driver of NOPAT. The company has been able to focus on this through joint ventures and franchising, which basically shift labour costs out of the company (see section 6 below). Long term contracts might cause lumpiness in EVA but this is taken account of in the targets that are set (see sections 6 and 8 below).

Capital

The main capital base is property. From this respect the introduction of EVA has not led to a shedding of excess capital or capital that was not earning an adequate return. Franchising and joint ventures do go some way to reducing the capital base.

Another focus for the company has been debtor days and accounts payable – managing these to improve cash flow to the company.

The Cost of Capital

Recently the company has simplified the calculation of the cost of capital in that the number is rounded and it is only reviewed annually. The key parameter is the risk free rate of interest.

Key features of the measure are:

- the proposed simplified version of EVA contains only six adjustments;
- there are several spreadsheets providing the inputs to the calculations; and
- the EVA measure does not influence accounting policy choice.

Adjustments to the Accounting Numbers

The company has recently implemented a simplified version of EVA, where there are only six adjustments. However, most business units are only impacted by one or two adjustments. The two main adjustments are:

- goodwill: Any goodwill write-offs are added back to economic profit and capital. This means that when an investment is made in a business, a return must be earned on whatever it originally cost; and
- severances: Severances have always been treated as an investment in the business. In this respect, annual severances are taken out of profit and capitalised on the balance sheet for seven years⁶. This conflicts with the cash nature of EVA but it is an attempt to match the cost of the investment against the economic benefit derived over time. For example, replacing labour (one time cost) with technology (multi-period benefit).

Spreadsheet modelling

On a practical basis modelling is spreadsheet based – with a master model taking all the information inputs such as capital allocations and the cost of capital from the various business unit files. This means that there are many files that must be coordinated in order to produce the EVA number. Capital allocation is performed at the start of the year after the prior year accounts are finalised. This means that EVA figures do not normally come out until about month two of the financial year. After the second month, EVA is calculated and reported monthly and at the same time as other financial and non-financial information.

Accounting Policy Choice

Conventional accounting numbers are used as a starting point for the calculation of EVA. Where there is discretion over accounting policy choice, EVA has not impacted upon any decisions that are made. Instead, when an accounting policy decision is taken, the impact on EVA is considered and also whether there needs to be any adjustments made to the EVA calculation. This might relate for example to a smoothing of a one-off liability incurred in a particular year⁷.

⁶ This means that every year, the company must go back and add back one seventh of each prior year's severance costs. There is no theoretical justification for seven years other than that businesses tend to go through significant restructuring cycles every five to ten years, or people are replaced by capital assets which have a similar life span.

⁷ This would only incur if the impact was judged to be 'severe'.

5.2 Business Unit EVA

The EVA Measure

Key features are:

- the definition of EVA at the business unit level is the same as at the corporate level;
- the actual cost of capital rate can however vary across units;
- there is no allocation of central costs for finance, human resources, etc. Where costs are directly attributable to particular business units, these will be absorbed by the units. The remainder of the costs reside within the Corporate function;
- asset bases may be very low for some units. The capital charge is paid on the investment costs of setting up that business; and
- earnings before interest and tax (EBIT) numbers are presented to managers in addition to the EVA figures.

The reasons for this are:

- the perception is that managers 'understand EBIT a lot better than EVA', so they are given both. The purpose is to really show what a particular EVA figure represents in EBIT terms; and
- external parties are focused on profit.

The latter point highlights a potential understanding issue with EVA.

Working with EVA at the Business Unit Level

Business unit managers have been encouraged to behave in a more commercial manner through:

- managing their capital base more actively;
- negotiating transfer prices with other units;
- setting targets that reflect EVA and the drivers of EVA (covered briefly and in more detail in sections 6 and 8 below); and
- using EVA for investment decision making (see section 7 below).

Managing Capital

The focus on capital and its active management has been quite slow to develop within the company. Managers are just beginning to look at this in a more meaningful way. The reasons given were that it was an 'understanding thing'. Also, the external EVA figures bore little resemblance to the internal results they saw during the course of the year. Managers know that there are some arbitrary adjustments made and they perceive it as financial juggling. Since they didn't understand what it means they lost confidence in it as a business tool, hence the move to simplify the measure.

However, managers are gradually starting to take a more proactive view of their capital base. For example, one business unit has outsourced an element of its service delivery to another unit. The impact of this was:

- the capital base was reduced through the reduction in fixed assets;
- NOPAT increased since employee costs were no longer paid – the unit paid one lump sum for the service; and
- future capital needs are avoided.

The latter point is particularly interesting. If further capital expenditure is not required, scarce funds can be deployed in value-producing parts of the business⁸.

Transfer Pricing

The chain of service provided by the company has led to some bundling of services for the customer. In terms of the price or prices quoted, the company may do one of two things:

- one unit facilitates all the myriad of activities and each activity quotes a price. The customer pays the total price; and
- a trading arrangement is struck whereby a unit or units 'supply' the service to another unit, who then bills the customer. This is where transfer pricing comes into play. The key point is that when a deal is struck with the customer the negotiating unit must ensure that the overall margin is satisfactory to cover the transfer prices. It is up to the individual managers concerned to strike the service level agreement.

Whilst EVA itself may not resolve any transfer pricing issues that may arise, the view within the company was that the use of EVA incentives at the business unit level has provided management with a goal to focus on when setting transfer prices. Issues with transfer pricing are always there but EVA has led to more of a commercial focus within the units. This does create tensions between units and can cause some element of 'silo' behaviour. Where disputes cannot be resolved between the units, the senior management team must step in to mediate and arbitrate.

Business Unit Targets

At the business unit level, managers work with targets expressed in EVA terms. At the sub-unit level, it is the drivers of EVA that become the focus. Some units have overall positive EVA targets, while some are negative. These arise because revenue from the customer is split between the units for the services that they provide at an agreed percentage. This split has been agreed at the corporate level and if the fractions were different, clearly profits would shift between units, and negative EVA units could become positive if the change was great enough.

⁸ One alternative is to sell the asset and lease it back. This may be EVA neutral if the costs of the lease are capitalised. However, future capital needs are still avoided, allowing funds to be used elsewhere in the business.

According to participants, there are adverse motivational impacts for the EVA negative units. If these units were shown to be positive, there would be a 'huge psychological benefit'. This also creates tensions between units and it creates a case for internal transfer pricing to shift the revenue.

6. EVA and Corporate Strategy

The company has a clear vision and builds its value-based performance management framework around a set of principles that is designed to achieve that vision. Strategic objectives have been developed with the aim of growing the company, creating value and managing the increasing risk of erosion and substitution to its core business⁹. Key features include:

- the use of EVA in the formation of corporate strategy;
- a step-wise shift from a bottom up to a top down approach for business planning and target setting off the back of corporate strategy; and
- greater use of joint ventures and franchising of service provision.

Strategy Formation

Within the planning framework there is a focus on the development of strategies to generate shareholder value. Business units are required to identify business level strategies which fit under different strategy 'umbrellas' specified at the corporate level. Strategic initiatives may also be generated from the Board. The organisational structure broadly fits into the strategic structure, although the former was not designed around the latter.

The policy is very much 'strategy before numbers'. However, when it does get down to the numbers, EVA is used for strategic planning – targets are set in relation to EVA results and the drivers of EVA. The introduction of EVA was not viewed as any real evolution in the way that strategy is formulated since prior to EVA, the company has a very rigorous capital investment analysis framework in place. By going to EVA, they were just staying 'one step ahead of the game'.

The aim is also to address long term issues for the company. At the time of the interviews, the company had just gained approval for a major business venture which had been evaluated using EVA. This venture, which is very much long-term, could be viewed as diversification from its existing business, although it will make use of the company's internal architecture.

The fact that the company is not quoted was identified as a problem for planning because the share market 'may recognise immediately an acquisition as being beneficial and put a value on it'. Thus there is a perceived advantage for quoted companies that the SOE does not have¹⁰.

Business Planning and Target Setting

Up until last year, business planning was very much a bottom up approach, with corporate targets formed from the sum of all the business unit targets. From this year more of a top down approach has been employed, with the Corporate function setting the corporate target and business unit targets off the back of the strategic plan. Business unit managers then have an opportunity to discuss these targets in terms of how they are going to deliver plans and actions to follow and deliver the strategy. At the end of the year Corporate will look closely at the plans to monitor whether managers actually embarked on projects as laid down in the plan. This is to prevent managers benefiting when they may not have delivered all aspects of their plan. However, there is a fine line to tread between over monitoring and allowing the businesses to under deliver.

Through the use of the balanced scorecard at the business unit level (see section 8 below) there is a feedback loop where an overview is taken of important EVA drivers for the business units. Economic modelling for these drivers (and also for external drivers) helps to formulate the plan for the forthcoming year, and so on¹¹. The economic modelling has been around a series of 'what if' questions – what if certain drivers perform to these levels? What is the impact on profits and EVA?

Joint Ventures and Franchising

Strategically the company has moved to franchising and joint ventures which can take capital off the balance sheet and more importantly, reduce labour costs. The drive for these sorts of projects came from both the Board and business unit level. If the Board members believe that they should get into a particular area, then the strategy is signed off at the Board level. In some cases, a business opportunity arises and it is taken up. Such ventures may also possess real investment option characteristics if they provide an opportunity to bolt on service provision to other, unrelated, services. However, there is no attempt to model these using option pricing models.

⁹ Strategy here would include shifting the demand curve for its service by stimulating volume growth. The company has constraints on the prices it can charge under a governing covenant.

¹⁰ The quoted company may counter that market perception (investors, analysts and the media) is very important, which leads to a focus on EBIT rather than EVA.

¹¹ With certain restrictions on key drivers under the governing covenant, the company must look for other initiatives to increase EVA.

7. EVA for Investment Decision Making

Once projects are in the business plan, managers must gain approval for the investment costs. Key features of EVA for investment decision making include:

- EVA analysis is an input for all business cases above a certain threshold – it is seen as a tool to provide a catalyst for management discussion;
- EVA is seen as one measure that is considered within a framework that allocates points for the different measures and then deducts points for the amount of capital required. The aim of this framework was to balance out the financial metrics. However, it has created certain issues, particular over incentives for long-term strategic decisions (which scored poorly) and operating business decisions (which scored relatively better);
- targets may be adjusted for units investing in ex ante value enhancing projects that impact adversely on EVA in the early years; and
- the company states that it uses EVA to evaluate strategic options. From discussion this seemed to relate to the evaluation of new business opportunities rather than projects with option characteristics attached.

Business units put forward their business cases based on forecasted EVA estimated using the unit's cost of capital. The Senior Management Team takes an overview of business cases and the associated targets. A proposed investment in a low cost of capital unit might look good for that unit yet it might not be good enough for the overall company. This leads to hurdle rates that are higher than the cost of capital. The danger with this is that opportunities may be lost to competition. This is something that the company is very conscious of.

Recently the company has adopted more careful monitoring of business cases through comprehensive project management, including terms of reference and the tracking of expenditure against target. This is done via a Project Management Office and is a result of a lack of success in major programmes in the past. This is not really done in EVA terms – rather the initial EVA analysis is broken down into the cost side and whether the project is operating within budget or within time. However, the problem with this is that new projects often get integrated within the business so that it is difficult to separately identify what is going on. This problem is not uncommon amongst integrated businesses.

8. Performance Management against Targets

Key features of performance management with EVA include:

- the company makes use of the balanced scorecard for performance management. EVA is viewed as the primary financial measure in one of the quadrants in the scorecard;
- monthly management reports are produced for the Board in the balanced scorecard framework, with four key performance areas represented. The presentation is consistent with the incentive system, with threshold and target levels of performance (see section 9 below). The company has worked hard at improving its monthly reports in terms of how performance is tracked against the reports;
- there are scheduled performance review meetings throughout the year where targets may be revised if it is deemed appropriate and if they don't impact upon the company's position. These are approved by the Chief Financial Officer. More fundamental revisions, such as the purchase of a new company that is outside the current plan, would require Board approval;
- several performance review meetings are held throughout the course of the year. This is to prevent squabbling about revisions to targets where it looks like remuneration might be adversely affected – which happened when EVA was first introduced; and
- at the individual level, employees can track their own performance on a regular basis via spreadsheets that are tailored to them in respect of value drivers.

The view was that EVA led to an improvement in objective setting (through the identification of value drivers) and the performance review process. One of the changes that EVA has brought about is for business managers, who are now 'thinking in a different light'. The managers have more of a free rein in terms of identifying their drivers, running their units and the decisions that they make. That this happens was attributed to the fact that managers are really focused on EVA and its drivers with the incentive to meet targets. However, this may be somewhat contradictory to what has been said before regarding:

- the difficulty faced in training managers to identify and work with value drivers; and
- the fact that the company also maintains EBIT for performance management.

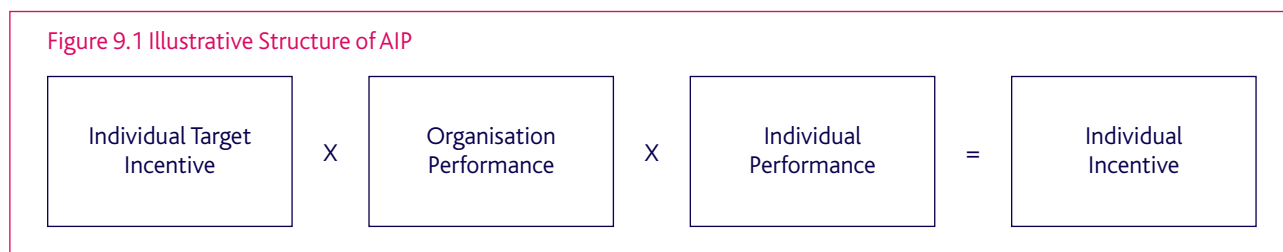
9. Remuneration

The company runs an Annual Incentive Plan (AIP) for around eight hundred participants (permanent managers and specialists), based on actual EVA. There is also a long term (three year) incentive plan for the top thirty senior managers. There is no bonus bank retention of EVA.

The AIP

The plan is based on annual EVA measured against target, together with balanced scorecard metrics. All incentive payments are based on a combination of company and individual performance objectives.

The structure of the scheme is illustrated in Figure 9.1, with explanations of the boxes presented below.



Individual Target Incentive

- individuals each have an individual target incentive, which is communicated to them at the start of the year;
- the levels are determined annually by the Compensation Committee of the Board;
- employees on the same grade would have the same target incentive; and
- individuals may earn more or less than their Individual target incentive, depending on how well they perform against their objectives and how the organisation performs against the business plan.

Organisation Performance

For the purposes of the scheme, the company has established two groups of participants:

1. Corporate groups and the senior management team (SMT) – Organisation performance is based solely on company performance.
2. Business units – Organisation performance is a combination of company performance (70%) and business unit performance (30%).

Targets for company and business unit performance are based on the Business Plan and relate to a balanced scorecard of metrics, as outlined in Table 9.1 below.

Table 9.1 The Balanced Scorecard for Organisational Performance

Key Performance Area	Key Value Drivers	Corporate/SMT Participant	Business Unit Participant
Making money	Company EVA Business unit EVA	80% –	50% 30%
Winning customers	Service performance	5%	5%
Building relationships	Public favourability} Employee satisfaction} Health and safety}	10%	10%
Delivering the future	Revenue growth	5%	5%

Deciding on the percentage to award to EVA (80%) and also the split between the parent and the business unit (70%/30%) were two of the key decisions that had to be made in developing this scheme. The aim is to show some recognition of separate business units but also to maintain the single company philosophy.

In exceptional circumstances, targets may change during the year. For example, consideration will be given to revise targets down for incentive purposes if a programme or investment:

- was undertaken during the year that was not envisaged or included in the original Business Plan;
- it's impact in the current financial year was significantly negative (but there was an expectation it would be EVA positive in later years); and
- the Business Case was approved by the Board.

Note while changes (namely reductions) to Business Plan targets can be considered, there is an expectation that any short-term negative impacts of implementing programmes are to be absorbed within existing targets. The advantage of having the target review mechanism allows management to bring to the table investments that it might not otherwise pursue if the short-term impacts impacted on incentives.

Before any incentive can be paid, the Making Money 'floor' must be met. The floor is the point where the company makes a net profit after tax including the cost of incentives. There is also a (higher) 'threshold' that must be met for each organisation performance measure before part of an incentive payment can be earned against that measure.

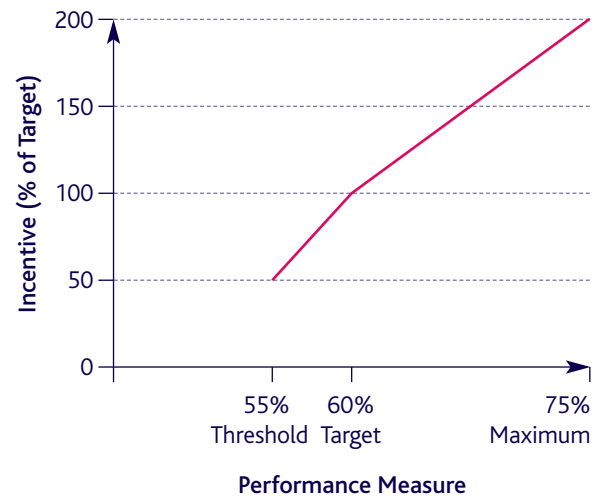
The actual incentive portion that can be earned for a performance measure is applied against a range. This range is defined across three levels – 'threshold', 'target' and 'maximum'. These levels are set at the beginning of each financial year, once the business plan has been finalised. Each level has a different reward multiplier attached to it:

Threshold: 50% of the target incentive for the particular measure
 Target: 100% of the target incentive
 Maximum: 200% of the target incentive

The incentive target is a monetary amount that is attached to each measure. This is illustrated graphically in Figure 9.2 where it is assumed that the performance measure, public favourability rating, is rated as follows:

- threshold 55%, Target 60% and Maximum 75%.

Figure 9.2 Determining the Incentive for Each Performance Measure



If actual performance is say 66% of target then the employee would get 140% of the incentive target for that measure.

Individual Performance

If performance is within the acceptable range, line managers award one of three performance appraisal ratings and decide on the individual performance multiplier.

Table 9.2 Acceptable range of Performance

Performance Ratings	Individual Performance Multiplier Ranges
3. Outstanding	126% – 200%
2. Target	76% – 125%
1. Minimum Acceptable	25% – 75%
Unacceptable performance	0%

If performance is not within the acceptable range, the individual performance multiplier is zero and there is no incentive payment. Fixing the threshold and the maximum performance ranges has been a difficult process in terms of trying to provide an equitable stretch across different businesses. There is always an element of judgement involved. The key thing is to build confidence with the employees. There is a 'one-up' review process to help ensure individual ratings are consistent across the company, both by activity and business area.

Payment Calculation Example

If we assume:

- an individual's target incentive is \$10,000;
- the overall organisation performance multiplier is 100% (which is a combination of company and in most cases, business unit performance as well); and
- the individual performance multiplier is 120%.

then the total incentive earned is \$12,000 calculated as follows:

- $\$10,000 \times 100\% \times 120\% = \$12,000$.

Overall Comments on the Scheme

The perception from HR was that there is a high degree of alignment and understanding of the scheme. Overall, the scheme is viewed favourably because:

- it seems to reflect the way that the business is managing and measuring its performance;
- for the first time, a business unit EVA target comprising 30% of the organisation performance incentive opportunity was introduced for those employees working in an operating business area (as opposed to a corporate function);
- targets are expressly known and communicated early in the financial year (normally around the third month) therefore staff understand what is important, and what they have to achieve in order to earn an incentive payment; and
- the individual multiplier has sharpened the focus for people and it has generated a much greater level of awareness and discussion about individual performance and contribution to business unit targets and plans.

The LTIP

In addition to the AIP, senior executive (general managers and above) are also offered a Long-term Incentive Plan (LTIP). This plan is designed to reward senior managers for the achievement of sustained value over time. The LTIP is complementary to the AIP. Whereas the AIP focuses on annual value creation and the drivers of value, the LTIP focuses on sustained creation of value over time. Consistent with the company's business plan, value is measured by cumulative company EVA performance over a three-year period. This measure and incentive is intended to reinforce long-term strategic decision-making among Post's senior managers.

10. The future of EVA

Within the company, EVA is seen as nothing new. Over the years it has been further developed and integrated with the balanced scorecard framework at the business unit level. Whilst the company recognises that ongoing effort must be placed on the training of and support for managers, the view overall is that pushing EVA down to business units has been beneficial because:

- it has crystallised management thinking on capital and their key value drivers;
- within business units EVA is regarded as a robust measure and an acceptable tool to measure performance and to incentivise individuals; and
- EVA has brought a real discipline to business cases that means that decisions are more clearly understood.

EVA is regarded as a good performance tool for the company and there are no plans to change its role within the organisation at present.

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