1 Introduction

Performance measurement has become more important as a tool for evaluation and reward purposes within organizations which emphasize on empowerment and decentralized decision makings, where managers are allowed to run their divisions as separate business enterprises. As a result, it is more often to reward managers based on divisional profits rather than the organization's overall performance. Traditional management accounting only uses financial performance to reward managers. However, this method is insufficient to provide a comprehensive picture of the internal activities within the organization and would encourage managers to adopt dysfunctional behaviour, such as refusing to invest in positive NPV projects to avoid lowering the overall "post investment ROI (Return on Investment)" in the division. These kinds of traditional accounting measure deficiencies have motivated a variety of performance measurement innovations ranging from "improved" financial metrics such as "Economic Value" measures to "Balanced Scorecards" of integrated financial and non-financial measures. In the following sections, I will first discuss some perceived inadequacies in traditional accounting-based performance measures, followed by the introduction and comparisons of the two new performance measurement approaches developed recently – Economic Value Added (EVA) by Stern Stewart Corporation and The Balanced Scorecard by Kaplan & Norton (1992). Finally, I will see what further researches can be used to test the effectiveness of these two approaches.

2 Deficiencies in Traditional Accounting Measure

Under-investment problem and Myopia

Defining performance in terms of profitability has long been known to results in under-investment since maximizing ROA (Return on Assets) or ROI (Return on Investment) may involve rejecting positive NPV projects that dilute the overall ROA or ROI.. This may also mean that managers are looking at short term profits rather than long term, so they would often give up R&D or marketing projects which incur current expenses and

reduce profits. However, they ignore the fact that long term benefits will also arise from those investments.

Historical and Backward Looking

Traditional accounting measure is only a lagging indicator of past performance. A historical profit figure tells us nothing about actions that managers should take to improve future performance. This method provides only poor guidance to management actions.

Dysfunctional Behaviour

Another counterproductive practice is to negotiate "easy to achieve" budgets with the headquarters, rather than reflecting the true situations of your division. This behaviour allows divisional managers to act in their personal interests rather than the company's shareholders' interests. Mangers are only concerned with achieving easy targets to earn more monetary incentives in the short run.

Conflicts of interests

Purely "objective" (financial) divisional performance measures can create internal conflicts that end up reducing firm's overall value, due to discouraging cooperation among divisions.

Incomplete Knowledge of the organization

The way accounting standards derive profits may not reflect the true profitability of the firm, accounting profits are more conservative and based on historical value rather than "cash flow". There are a lot of potential values missing out such as intangible assets or prudent write-offs (e.g. provisions on bad debts).

There are so many inadequacies perceived when using traditional accounting measure in performance evaluation. Therefore, it is necessary to introduce some better approaches to deal with those underlying problems to avoid value destruction. I will now look at two different approaches which have been developed to deal with some of the deficiencies described above. The first approach will be the EVA followed by the Balanced Scorecard.

3 Economic Value Added ® (EVA)

EVA is defined as adjusted operating income minus a capital charge, and assumes that a manager's actions only add economic value when the resulting profits exceed the cost of capital:

$$EVA_t = P_t - kA_{t-1} = (ROA_t - k)A_{t-1}$$

P_t = Accounting Profit for period t

K = cost of capital

A_{t-1} = Net assets during the period

This is an overall measure of financial performance that is intended to focus managers' mind on the delivery of shareholder value based on economic profits. EVA implicitly proposes empowering managers in a way that turns them into quasi-owners. Owners cannot escape the cost of earlier capital commitments, and so mangers must not be allowed to either.

Eliminating under-investment problems

EVA is marketed by Stern Stewart as an accounting-based performance measure which yields the same discounted PV as free cash flow, which again is consistent in maximizing the firm's overall value. It also ensures managers will undertake positive NPV projects to eliminate the under-investment problems.

Aligning mangers' personal interests with shareholders'

Taking into consideration the cost of capital would make mangers act like owners and to maximize overall shareholders' value rather than concentrating on short term profit maximization. This is because opportunity costs of generating profits now need to be taken into account as well. Thus managers have to decide if the associated cost outweighs the benefits before making any decisions to invest or reject a project**.**

Avoiding divisional conflicts of interests and improve internal communication

EVA integrates profit measurement throughout the whole organization as it is a single financial performance measurement. This can be used as a common single language

across all divisions and acts as a coherent financial management system. The primary goal of EVA is to maximize shareholders' value; therefore this ensures goal congruence between divisions and the organization as a whole.

Bonus Bank helps to reduce myopic behaviour to gain short term incentives

By paying out only proportion of the incentives to managers and keep the remaining in the bonus bank, managers can be penalized in the subsequent period by reducing some of their remaining bonus from the bonus bank. Therefore, their unpaid balances are at risk. This system ensures that managers will not try to boost short term profits at the expenses of any longer term benefits. This also separates long term from short term incentives, and this simulates the feel and payoff of ownership. The bonus bank, having no upper limit on the amount of incentives, is better than the traditional bonus system which has an upper bound of incentives being paid, discouraging mangers to put in maximum effort.

Tailored GAAP

Stern & Stewart proposed many adjustments in the GAAP to remove accounting conservatism, remove smoothing accounting profits between periods and to prevent past accounting errors from distorting manager's divestment decisions. I think the main advantage of the tailored GAAP is the inclusion of intangible investments such as R&D and marketing, to discourage mangers' myopic behaviour by treating investment in intangible in the same way as tangible assets.

4 Balanced Scorecard

The Balanced Scorecard provides a number of mechanisms for aligning long-term strategic objectives with short-term actions. This suggests that as well as financial measures of performance, we should also pay attention to the requirements of customers, business processes and longer-term sustainability. This approach forces managers to develop a consensus around the firm's vision and strategy, and allows managers to communicate the firm's strategy throughout the organization. The four areas of performance are defined as follows:

Financial perspectives – it is important to increase shareholder's value through revenue growth or productivity strategy.

Customer perspective – the core of any business strategy is the customer value proposition. It defines how a company differentiates itself from competitors to retain, and deepen customer relationships.

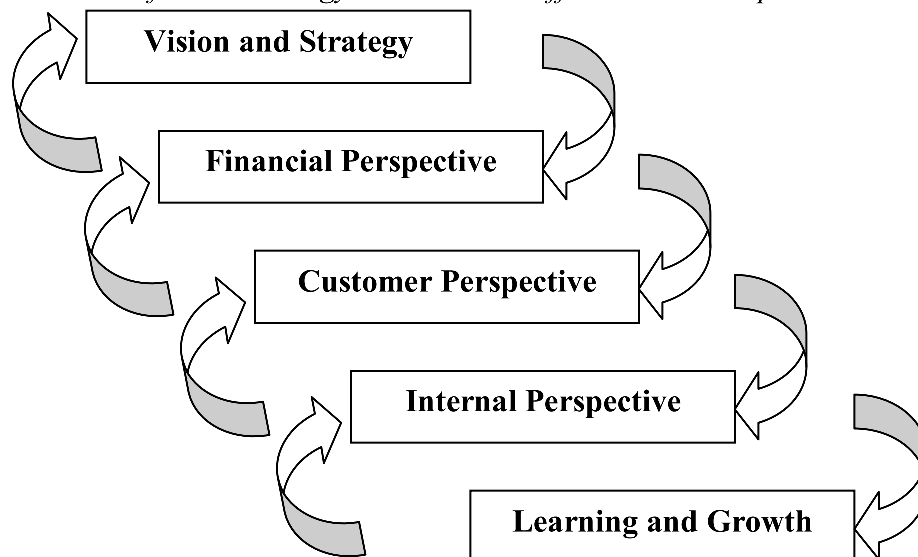
Internal Process perspective – captures the critical organizational activities a company undertakes to achieve the differentiated value proposition for customers and the productivity improvements for the financial objectives.

Learning and Growth – this is the foundation of any strategy, this enables a company to align its human resources and information technology with the strategic requirements from it critical internal business processes, differentiated value proposition and customer relationships.

Strategic development tool as well as performance measurement

The basic assumption in the Balanced Scorecard is the cause-and-effect linkage between each of the four perspectives in terms of the company's overall strategy, it becomes a linear chain by suggesting better trained employees will lead to better business processes being designed; will lead to more satisfies customers and then increase shareholder's value.

Figure 1: The BSC defines a Strategy's Cause-and-Effect Relationships



Therefore BSC is more than a purely performance measurement, it is also a tool for developing strategic process, through the use of a strategy map. By translating strategy into the logical architecture of a strategy map and Balanced Scorecard, organizations create a common and understandable point of reference for all organizational units and employees, which lead to better understanding of a company's long term strategy. This may reduce internal conflict of interests between divisions and departments as they will act towards the company's overall strategy rather than for their own interests.

Lead and lagging indicator

The BSC retains measures of financial performance – the lagging indicators, but supplements these with measures on the drivers, the lead indicators, of future financial performance, for example, how to improve customer satisfaction to improve revenues or internal processes to increase operational efficiency in order to reduce cost.

Mixture of Financial and Non-Financial Measures

The four different perspectives prevent managers looking only at the narrow focused financial performance measure. Including all the four areas in the incentives scheme encourages managers to balance their focus broadly.

Changing Competitive Environment

In an economy dominated by tangible assets, financial measurements were adequate to record investments on companies' balance sheets. But nowadays, intangible assets became the major source of competitive advantage. Therefore, strategies for creating value shifted from managing tangible assets to knowledge-based strategies that create an organization's intangible assets. These include customers' relationships, skills and knowledge of workforce etc.

5 Are the two approaches compatible?

EVA is a single financial measure that leads managers to increase shareholder's value. Similarly, Balanced Scorecard is an approach to make shareholders happier by treating the internal learning and growth as the basic foundation to improve internal business processes in order to improve customers' satisfaction and then to increase firm's value. The only difference is that the BSC also acts as a tool for implementing strategy by including non-financial perspectives as well as financial one in the creation of a strategy map. Nevertheless, EVA can possibly be used as one of the measurement metrics within the financial perspective of the BSC; therefore, they can be used together. However, both approaches are not without any limitations. For example, the EVA approach does not tell us "how to" maximize shareholders' value, as it is just a pure financial performance measurement tool. But if we use EVA as one of the financial measurement in the BSC, we would be able to figure out what kind of actions or strategy we need to undertake to achieve the desired outcomes, possibly by drawing up a strategy map. For the BSC approach, one can argue that formula based plan in the compensation systems may allow bonuses to be paid even when performance is "unbalanced", for example, over achievement in some perspectives but under-achievements in others. However, the use of the EVA's bonus bank can avoid managers concentrating only in some particular areas at the expenses of others in the long run, as there will be an opportunity to penalize the managers by deducting some of the unpaid bonuses from their accounts. I would say that both approaches can be used complementarily; especially some of the disadvantages of one approach can be corrected or improved by the use of the additional approach.

6 Suggestions for Future Research

As the two approaches have only been introduced and developed recently, there are still needs for more research to be done to test their effectives. For EVA, we are unsure whether introducing this new financial measure changes manager's behaviour. For example, does it really eliminate myopic behaviour within the organization? Secondly, perhaps the most important question: Does the long term performance benefit from the adoption of economic value measures. Thirdly, it is important to test if there is a stronger correlation between the share price and the EVA than between the share price and the

traditional accounting profits (i.e. EPS). Although there were some studies suggest that EVA is predictive of stock returns, it is not the only performance measures that tie directly to a stock's intrinsic value.

In terms of the BSC, Norreklit (2000) argues that the basic underlying assumption of the cause-and-effect relationships does not really hold. For example, the definition of loyal (satisfied) customers is inherently concerned with profitable customers. So, the cause-and-effect link between customers and financial perspectives should be a logical one. Therefore, increase customer loyalty should not be the cause that leads to increase shareholder's value. Some research has to be done in order to validate the underlying assumption about the causal relationship in the BSC approach. Moreover, it is very important to test whether you can understand the strategy by looking at the scorecard and its strategy map. If so, one can say that the scorecards enable all organizational units and employees to understand the strategy and identify how they can contribute by becoming aligned to the strategy. Finally, BSC involves multiple objectives and measures, but we have not been told if all the measures are evenly important or how do we differentiate between them. This may result in diluting managers' attentions over too many measures and objectives simultaneously.

7 Conclusion

Although there is little evidence to support the claim that EVA or BSC can actually improve a firm's overall performance, some companies may still choose to adopt new approach to measure performance. In my personal opinion, there is no single perfect system which works best on its own, as any approach has its costs and benefits. The most important point to remember when implementing new performance measurement is to get a right balance between its associated costs and future benefits to make the change worthwhile. And remember it is inadequate to look at only traditional accounting based measures to reward your managers, it is better to include both financial and non-financial measures as both tangible and intangible assets can generate value for your companies.