Balanced Scorecard in Business Performance Measurement and Its Effect on Financial Structure

By Mustafa Iyibildiren & Fehmi Karasioglu
Necmettin Erbakan University

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Abstract - An effective performance appraisal system is substantially important for the success of the enterprises competing in complex environments. Performance measures are used in the evaluation, control and development of the enterprises’ processes to ensure achieving their goals and objectives. Performance measures are also used to compare the performance of different enterprises, factories, departments, teams, and individuals. Traditional performance appraisal methods based on financial criteria have been widely used in assessing business performance. However, performance evaluation methods, which are based on only financial criteria, are not enough to evaluate the performances of the enterprises today. Recognizing the incomplete aspects of performance measures based on financial measures, has led to the emergence of multidimensional performance appraisal approaches in assessing organizational performance. Therefore, along with the financial perspective, enterprises should also consider other perspectives while designing performance appraisal systems. The Balanced scorecard method is one of the multidimensional performance evaluation methods used in evaluating organizational performance.

In this study; first, the concept of performance is explained with the main lines, and among the multidimensional performance evaluation methods, the balanced scorecard method is discussed. In the sequel, the methods used for evaluating the enterprises’ financial structures are given. Finally, an analysis is carried out on the financial structure and the resulting changes of a medium-sized industrial enterprise before and after the application of the balanced scorecard.

Keywords: performance measurement, balanced scorecard, financial structure.

I. INTRODUCTION

According to modern management concept; performance measurement and management plays a crucial role in today’s competitive business environment characterized by the shortage of resources. Enterprises need to make effort for improving their productivity and performance and to achieve compliance by closing the strategic gap between business and environmental elements, in order to be successful in the global competition (Kádárová, Durkáčová, Tepická, & Kádár, 2015, p. 1503). They also have to demonstrate organizational innovation-focused growth and development behaviour, while achieving strategic alignment. In an environment, where competition increases day by day on a global scale and conscious consumer behaviour develops, one of the most important tools of enterprises’ competitive management approach is measuring business performance. In this respect, performance management and measurement are important in terms of ensuring compatibility with the business environment as well following and developing management capabilities on the internal business processes of the enterprises.

II. THE CONCEPT AND AIM OF PERFORMANCE MANAGEMENT

Performance management involves basically; planning and managing business resources in line with predetermined performance targets, gathering business data regularly, monitoring and evaluating improvements about business objectives (Sujova, Rajnoha, & Merková, 2014, p. 276). The concept of performance management is defined as “a form of management that envisages the unification of all employees in the organizations with a team culture and common goals aimed at continuous improvement of business performance and the planning, measurement, orientation and control activities necessary to achieve these goals in coordination with other functions of management” (Efe, 2012, p. 123).

The concerns that had led to the emergence of the concept of performance management are related primarily to the concepts of effectiveness, efficiency and economy. In addition, the provision of transparent and accountable good governance is one of the factors that lead to the development of the concept of performance management (Efe, 2012, p. 124). Performance management in general is; a management process that fulfils the duties of collecting and comparing information

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Author a: Department of Accounting and Financial Management, Necmettin Erbakan University, Konya, Türkiye. e-mail: miyibildiren@konya.edu.tr
Author b: Department of Business Administration, Selçuk University, Konya, Türkiye. e-mail: fehmi@selcuk.edu.tr

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on the current and future status of the business with the aim of directing the enterprises to predetermined goals, and initiating and maintaining the necessary activities to ensure continuous improvement of performance (Dinçer, 2003, p. 7).

In addition to providing effective control, performance management and measurement benefits managers in planning, control and creating an effective decision-making mechanism for objectives. It also provides information on the organizational process areas, where improvement is needed. Thus, continuous control and improvements made will have a positive impact on the success of the enterprise.

III. Development of Performance Measurement

At global scale, it is known that, performance management and measurement studies have been conducted for a long time, in developed countries. It is seen today that the success of the institutions depends on the criteria of efficiency and effectiveness in the processes as well as presentation of quality services and products. Performance understandings of the companies have shown a constantly evolving and changing process until today. Within this process, some insights of performance have lost importance, while some new or more important ones emerged. Shortly, this development has led to a management approach aimed at the organization of the future by focusing on the criteria such as customer satisfaction, quality and innovation; from the traditional management approach aiming at the most amount of production and high profit through the lowest cost. Moreover, it has been envisaged that the traditional budget and financial indicators alone is not sufficient for the success criteria and non-financial instruments should be evaluated in terms of performance (Kingir, 2007, p. 98)

In the field of performance measurement Cost-based financial methods and techniques were developed at the beginning of the 20th century and were used as a measure of success and performance for a long-term by the enterprises. Despite significant changes on administration in the field of management, the performance measurement approach, where financial methods and techniques were used, has remained unchanged for a long time. Traditional performance measurements, which use cost-based financial indicators, are not successful in supporting existing business objectives because they do not have the ability to provide continually improvement on other factors that affect performance for the enterprises (Tucker & Tucci, 1994, p.3)

On the other hand, in the studies of 2000s, performance was considered from a conceptual and functional point of view. In addition, the focus was on performance measurement perspectives, evaluation resources and evaluators. While performance management was primarily considered in the field of accounting departments concerned with the budget and planning, later it was seen as a function of superior management due to its being directly related to planning and supervision and therefore having a strategic importance in decision processes (Schiff, 2010, p. 2). In this process, which is seen as a stage of maturity of enterprises in terms of performance management; cultural perspectives, team evaluations and quality cycles are emphasized in performance improvement, planning and implementation for increasing the productivity of the employees and integrating them with the general objectives of the enterprises.

IV. Performance Measurement Methods in Enterprises

The first point that draws attention, when an enterprise is evaluated, is the final financial results. Regardless of whether the enterprise is large or small, the first indicator as a measure of success is the financial performance. Performance measures based on accounting data relate rather to "final business performance" than "relative business performance." Thus, these performance measures are used to assess the overall business performance as a whole. These criteria also allow for the performances assessments of managers in the middle and lower levels, whose areas of responsibility are limited to only one department or place of production (Çelik, 2002, p. 5).

Financial performance measurement methods are examined under four headings: financial statements analysis, residual income, economic value added and market value added.

a) Financial Statements Analysis

The most common method used to measure financial performance is financial statements analysis. Financial statements analysis is the study made up of the stages: applying various analysis methods on complex and large amounts of data in the financial tables resulting from the activities of the enterprise in order to make them more comprehensible and usable information; criticizing, interpreting and evaluating the derived results taking the past activity period, sector average, current economic situation of the country into consideration (Argun & İbiş, 2004, p. 39).

Groups interested in financial analysis can be classified as intra-enterprise groups and non-enterprise groups. According to this classification; while intra-enterprise groups involve enterprise owners, managers, employees, etc.; non-enterprise groups are investors, lenders, investment analysts, government, labour unions, public etc. (Short & Welsh, 1990, p. 764). Company managers are the ones, who use financial statements most frequently. Managers use financial statements in; examination of the current structure of the
enterprise, determination of how well past decisions were made, and formation of future by taking the elements mentioned into account (Akgüç, 2013, p. 19). Financial statements are used by business managers for the aims such as; assessing the success of the company, determining the level of achieving objectives, if any finding out the causes of negative results, taking decisions for the future, developing the policies of supply, production and marketing, and planning activities to increase profits (Okka, 2006, p. 40).

By taking advantage of various analysis techniques, it is tried to determine the issues such as the profitability and solvency of the enterprise and the productivity of the assets; and the change that the enterprise has shown over time is analyzed.

b) Residual Income

The residual income method has been mainly developed to calculate the net profit as a result of business activities. With the residual income method, the value of the net profits of the enterprise in a period is calculated by deducting the capital cost of the enterprise in that period. Accordingly, the net profit that is left after the investors’ expected return on their investments is deducted from the profit made at the end of the period is called residual income (Biddle, Bowen, & Wallace, 1999, p. 6).

Residual income can be expressed in short by the following formula:

\[ \text{Residual Income} = \text{Profit Obtained} - (\text{Expected Profit Ratio} \times \text{Investments}) \]

The decisive factor for the expected profit expressed in the equation above is the cost of capital invested by the enterprise. The enterprise wishes to obtain as much as the cost of the invested capital at least. Accordingly, the equality can be expressed as:

\[ \text{Residual Income} = \text{Profit Obtained} - (\text{Deposited Capital} \times \text{Cost of Capital}) \]

The residual income method is a performance appraisal method preferred by many enterprises. Because enterprises want to see the added value emerging as a result of their activities, also the residual income is expressed as the amount, not the percentage, such as in some other methods. Enterprises want to maximize their residual income, that is, to obtain more profits than the profits demanded by the investments (Christensen, Feltham, & Wu, 2002, p. 2).

c) Economic Value Added

Enterprises predispose creating value in the performance appraisal methods they use in order to maximize firm value, adapt to competitive conditions and sustain their presence in a sturdy manner. From here, many value-based performance criteria, which are used to determine firm value and performance measurement and are based on accounting data and financial literature, have emerged. The most widespread of those is the economic added value created by developing the concept of residual income (Merchant, 2006, p. 904).

Economic Value Added (EVA), which was patented by the New York-based Stern Stewart consulting firm in 1991, is the value difference between the profit gained by investment and the capital cost, and it is a different alternative to measuring corporate performance (Chakrabarti, 2000, p. 279).

The following formula can be used to calculate the economic value added (Hacırüstemoğlu, Şakrak, & Demir, 2002, p. 3):

\[ \text{EVA} = \text{After-Tax Operating Profit} - [(\text{Total Resources} - \text{Debts}) \times \text{Weighted Average Capital Cost}] \]

The basic idea of economic value added is; the achieving a positive value, that is enterprise’s obtaining higher after-tax operating profit or creating value added than the cost of the assets invested by the enterprise. In other words, it is self-sacrifice’s earning at least the as much profit as an investment at the same risky situation can earn in capital markets. The negative outcome indicates that the enterprise had spent its capital rather than creating value and had used the value added created in the previous periods. A zero increase in economic value added can be regarded as an adequate success; because the investors earn enough to cover the risk. As a result, the financial aim of the enterprise is to have a positive economic added value in a constantly positive tendency.

d) Market Value Added

With the widespread adoption of a value-based management approach, it has become necessary to see the market value of companies in order to seek an answer to the question on the direction the shareholders’ capital change. The Stern Stewart consulting firm, which is the developer of economic value added, developed the measure of market value added (MVA-Market Value Added) that shows how much the company adds value to the shareholder's investment, or how much it causes it to fall (Önal, Kandır, & Karadeniz, 2006, p. 16).

Market value added is equal to the difference between the market value of the enterprise and the capital it owns. Market value is also a measure of what an executive's management can achieve with a particular resource (Sullivan & Needy, 2000, p. 167).

\[ \text{Market Added Value} = \text{Total Market Value of the Enterprise} - \text{Invested Capital} \]

If the total market value of the enterprise is higher than the capital used, the shareholder value of the enterprise is increased, whereas if the market value of the enterprise is less than the capital invested, the value of the enterprise is decreased.

As market value indicates the relationship between market value and the capital invested, this
assessment may be made for only public companies. Correspondingly, the market added value emerges also as a perceived value of a company's past or future capital projects in the securities market. The market value added not only shows how successfully the capital projects have been implemented in the past periods, but also provides a prediction about whether the new capital projects will be implemented successfully in the future periods (Stewart, 1999, p. 154).

V. Balanced Scorecard and its Perspectives

With increasingly growing industries for information technology, attention on the business resources, which are not easily measured by financial methods, is increasing day by day. In order to optimize their performance, organizations want to ensure a relationship between the strategies and performance of processes, using a variety of tools (Kádárová, Durkáčová, & Kalafusová, 2014, p. 177). For this reason, managers try to improve performance measures, systems and management styles that perfectly assess the performance of their organization. These measurement systems must be flexible, not based on just financial data and must be changeable as needed (Öztürk, 2006, p. 83).

Depending on these, modern performance appraisal methods, which could use the budgets efficiently in short term and make focusing on long-term goals available, have been needed. Modern performance appraisal methods have been designed to compensate for the incomplete aspects of traditional methods. The Balanced Scorecard method emerges as one of the most important modern methods.

a) Balanced Scorecard Definition

Balanced Scorecard was developed for the first time by Robert Kaplan and David Norton with the thought that financial data should be defined in intangible indicators for the enterprises to be able to set future visions and provide competitive advantage. Balanced Scorecard was created in USA in 1992 with the article "The Balanced Scorecard Measures That Drive Performance", which dealt a study, conducted on twelve enterprises in the private sector as part of a project examining future performance measures and was published in Harvard Business Review and authored by Norton and Kaplan (Gumbus, 2005, p. 619).

Balanced Scorecard is defined as a measurement based strategic performance management system that forms a framework by transforming the missions and strategies of the organizations into comprehensive performance criteria sets (Kaplan & Norton, 1996a, p. 2). Balanced Scorecard is a performance measurement method that has goals designed according to perspectives, criteria and strategic actions categorized according to a specific structure (Erkollar & Oberer, 2015, p. 943). The Balanced Scorecard, based on the principle of 'non-measurable is unmanageable' principle, has emerged as a performance measurement system based on measurement of multiple performance components and briefly reporting them through each performance measurement with a specific weight (Coşkun, 2005, p. 54).

b) Balanced Scorecard Perspectives

Balanced Scorecard uses specific systematic structure to provide managers a broad framework while transforming the company's vision and strategy into a set of performance criteria. Kaplan and Norton suggest that within the Balanced Scorecard, the performance of an operator should be measured in non-financial perspectives such as customer perspective, internal business process perspective, and learning and growth perspective as well as financial perspectives (Kaplan & Norton, 1996a, p.9) However, according to Kaplan and Norton again, these four perspectives should be regarded rather as a pattern or template, than a sewn and ready-to-wear jacket. (Kaplan & Norton, 1996a, p.34) While only two or three of these four perspectives can be used, there may be some enterprises to add one or more perspectives to them according to the conditions in which the firms operate, and the strategy of the enterprise, as well. Those four key perspectives, given in Figure 2.1, are used to measure performances of the organizations and give managers an idea on what to do for being successful.
i. **Financial Perspective**

Financial measures are used to summarize the results of the past work and the measurable outcomes of the current situation with respect to those events. Financial measurements provide a common language for the evaluators to compare and analyze firms. The most important feature that distinguishes Balanced Scorecard from many other performance evaluation methods is that non-financial criteria are used in the system as well as those financial criteria. The financial perspectives is the focus of also the Balanced Scorecard as it is in many other methods.

The financial perspectives concerns the ability of providing financial profitability and financial stability or cost efficiency / effectiveness (Nassar, Othman, Hayajneh, & Ali, 2015, p. 99). The financial perspectives questions how the firm should seem to its shareholders in order to earn success and measures the contribution of the firm strategies to the results on financial structure.

ii. **Customer Perspective**

While enterprises focused on the performance of products and technological innovations, and concentrated more on their own internal competencies in the past, they today focus their attention on the external stakeholders, which are customers. The reason why a customer-focused management approach has become very important is; the quality of the enterprises’ products being assessed by the customers. If the enterprises want to create a sustainable business structure in addition to good financial performance in the long term, they need to produce products and services that customers value (Pan & Nguyen, 2015, p. 180).

As growth and profitability for enterprises depend heavily on their ability to satisfy their customers, many enterprises today adopt focusing on customers (Kaygusuz, 2005, p.92). That perspective of Balanced Scorecard; defines which methods will be used to create which values for the customers, how the customers will demand those values to be satisfied, and why they will be willing to pay for those values(Olve, Roy, & Wetter, 1999, p. 61).

iii. **Internal Business Process Perspective**

It is known that almost all of the enterprises today are working to improve quality, reduce processing times, increase productivity and profitability, minimize the amount of raw materials used, and reduce the cost of processes. However focusing on these issues intensively will allow enterprises to gain some advantages, it will not be enough to gain a significant competitive advantage against their competitors. At this stage, the internal business processes that reveal the two fundamental differences between traditional performance measurement systems and Balanced Scorecards appear.

The first one among these differences is that; while the current methods emphasize improving the measures based on cost, quality and time, Balanced Scorecard allows the enterprises to identify new methods and processes that must be applied in a
perfect way to obtain objectives on customers and finance. The second one is the inclusion of the renewal process in the internal business processes perspective so that enterprises can identify new emerging and potential needs of customers through the renewal procedure of the Balanced Scorecard application and develop products and services to meet those needs (Ölçer, 2005, p. 95).

iv. Learning and Growth Perspective

Factors such as education and motivation are considered to be insignificant by most of today's companies and expenditures made in those areas are seen to be unnecessary. However, the development and self-renewal of an enterprise are directly related to human resources as well as material resources. That is why the fourth and final perspective of the Balanced Scorecard is the learning and growth perspective, which involves the objectives to provide organizational learning and development, and their measurement. At that perspective, intangible assets, which are effective in the formation of strategic success, may be identified (Fooladvand, Yarmohammadian, & Shahtalebi, 2015, p. 952).

The most important element of the learning and growth perspective is the degree of having future value creation capacity of the enterprises for their shareholders (Amaratunga, Baldry, & Sarshar, 2001, p. 184). The ability of an enterprise to meet expectations such as growth and profits for its shareholders and those such as new and quality products for its customers depends on its learning and growth capacity.

VI. The Effect of Balanced Scorecard Application on Financial Structure

In this part of the study, the impact of Balanced Scorecard application, which was conducted at a manufacturing company, on the financial structure of the enterprise will be addressed. A one-year term has been preferred as the measurement and evaluation period, for the Balanced Scorecard created for the enterprise.

Three strategic goals have been identified with regard to the financial structure of the enterprise;
- Creating a sturdy financial structure
- Reducing financial costs
- Reducing foreign Exchange losses

Three performance indicators have been put forward in order to determine at which level the objective of creating a strong financial structure has been achieved. Those are; the budget compliance rate, the average maturity term and the foreign resources ratio. Despite trying to carry out a budgeting study within the enterprise, it has not been possible to actually put that into action. It has been determined according to the information obtained from the company that; the budget prepared could go beyond being a draft, no intra-period revisions were made and accordingly serious differences occurred in the period-end comparison. Regarding gradual solution of that problem, a compliance target of 85% was set for that period and efforts were made to ensure the reliability of the data provided in the budget preparation process.

A collection problem, especially regarding spot products, is faced during maturity periods. About the issue, it has been determined that, the maturity dates are stretched by the customers having open-account in addition to the long maturity terms. For that reason, it has planned to make a collection program to the enterprise and to review the maturity dates. For that purpose, it has been aimed firstly to reduce the maturity periods of 120 or more days to 90 days, in the short term.

The final objective for a strong financial structure is reducing the foreign source ratio. However, it is clear that the short-term success may not be achieved due to the fact that the enterprises’ usage of long-term foreign resources is excessive. It has been favoured for the enterprise not to ignore that objective in the long term and to set a small reduction target -60% on the ratio of foreign resources, through leastwise advance purchase target.

It was aimed to raise the enterprise's interest-coverage capacity and the target ratio was set at 4.5%.

One of the most important problems faced by the enterprise is foreign exchange losses. The enterprise is constantly confronted with this problem due to having to buy the raw material that needs especially foreign exchange. In order to encourage reduction of that loss, a target of 4% has been set for the ratio of foreign exchange losses to the sales.

In line with those strategic objectives determined, it was targeted to improve collection times, to reduce the liability ratio, to raise interest coverage capacity and to reduce foreign exchange losses. The performance indicators related those targets, past period achievements, targets and results are given in Table 5.1.
While the budget harmonization rate, which is adopted as an indicator in determining whether a business has a sturdy financial structure, is partially successful; the foreign resource usage target is seen to be 60%, however the borrowing targets are not met, so the rate becomes 62.3%. Again, the average maturity for this purpose is close to the target and is reduced to 94 days.

The calculated rate of interest-coverage capacity is 4, with a difference of 0.5 points from the target, as well.

The ratio of foreign exchange losses to sales, which is a very important indicator of financial performance for the enterprise, is 5.2%, and it is so higher than the target. The atmosphere of the country and the ongoing fragilities in the global markets have been reflected in foreign exchange prices, the enterprise have moved away from the stated objective and exceeded the rates of previous periods.

**VII. Conclusion**

Along with modern business management, there have been a number of changes in the competition approach in recent years, as well. Those changes can be dealt under many perspectives such as quality, innovation culture, flexible management/production capability, speed and authenticity. In the light of all these factors, enterprises should develop a performance-focused competitive perspective, in terms of effective and efficient usage of financial and non-financial resources. Among others, foremost important managerial problem of enterprises operating at a high level of competition is the lack of performance management based on strategic planning. That is, the difficulties in determining at which level they can reach objectives and expectations, or how reachable they are. This problem has led to a rapid increase in the importance of performance and especially performance measurement in enterprises.

In such an environment, enterprises are limited in looking through their futures with traditional measurement systems that only act with past period data and analyze their situation accordingly. For that reason, the performance indicators used to achieve performance measurement in a healthy manner need to be carefully selected. Non-financial factors as well as financial performance criteria should be taken into consideration in performance measurement.

Balanced Scorecard, which has been developed by recognizing the shortcomings and deficiencies of traditional measurement systems, has introduced a comprehensive performance management approach that uses the financial indicators and the non-financial ones together, and takes into account not only the tangible but also the intangible ones in line with the missions and strategies of the enterprises.

After the results of the Balanced Scorecard application in the scope of this study were revealed, a report has been prepared for the enterprise, where the study was conducted. In that report, some important issues were pointed out for each perspective and some suggestions were made about them. Among those suggestions, the ones related to the financial structure are as follows;

- Preference of advance purchases options to the extent that financial possibilities for the supply of raw materials are affordable, for reducing foreign exchange losses.
- Use of alternative financing methods (forward, future, option, etc.) in order to control foreign exchange losses.
- Realising some efforts for solving the inadequacy of equity, in order to reduce the dependency on the foreign source and to increase the interest-coverage capacity.

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