Information Power of Non-Financial Performance Measures

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Abstract

Accounting is a process of recording and studying financial data related to company's operations. Its aims are above all to provide information about the events in company business life in an agreed language comprehensible to accounting information users and to provide information which is vital to business decision making. Nevertheless, it is not easy to reach the above mentioned aims. Annual financial statements do not provide a true picture of a company's operations in the past. Accounting data, on the basis of which financial statements are drawn up, cannot be seen as a suitable source of accounting information for making decisions about the future. In addition, this means that the financial performance measures based on such sources are not sufficient to satisfy the information needs of the users. As a consequence, an increased number of non-financial performance measures or measurement systems are developed. While non-financial performance measures can be seen as completing the financial ones, they certainly cannot replace them. This important restriction of using non-financial performance measures is often neglected.

***Keywords**: financial performance measures, non-financial performance measures, accounting information, financial statements.*

1. Introduction

Accounting is a process of recording and studying financial data related to company's operations. Its aims are above all:

a) to provide information about the events in company business life in an agreed language comprehensible to accounting information users and

b) to provide information which is vital to business decision making.

The first aim of accounting relates to the past, the second to the future. However, reaching the above mentioned aims is not easy. Accounting is not an exact science, which means that approximations or planned amounts are very often used as its tool. In addition, as the future is uncertain, we cannot determine the exact value an asset is about to achieve when converted into monetary form, neither we can define the amount which will be required to discharge a certain liability.

In practice, the problem is even more serious. According to recent American studies in this field, the average ratio between book and market values of companies is 1 : 2.5 and is even higher in companies with high added value per employee, which can be as high as 1 : 10.

Obviously, we should ask ourselves if companies' annual financial statements show a true picture of companies' past operations. Moreover, another question should be raised: Is it possible to provide appropriate accounting information for making decisions about future on the basis of such accounting data?

Both answers are negative. Information provided by accounting (i.e. 'traditional' accounting) do not show a true picture of a business' operations in the past, neither do they form an appropriate basis for decision making in the company about its future. In other words: financial performance measures (FIPM) based on traditional accounting data can no longer meet information needs, above all, the information needs of the internal users of accounting information.

The problem can be solved in two ways:

The first option is to reshape the philosophy of accounting practices. It includes the change of generally accepted accounting principles and approaches to valuing balance sheet categories. This option faces two serious obstacles:

a) conservatism, which has always been a significant feature of accounting practice: accountants have never been very innovative; moreover, they tend to resist change quite irrationally; consequently, carefully verified approaches have always been used in accounting; a serious disadvantage is slow adaptation of the accounting profession to the rapidly changing circumstances in companies' operations.

b) objective difficulties in accounting of intangible long-term assets:

The present value of future services (economic benefits) which will be provided for its owners by these assets, can be difficult to establish; in accordance with the current accounting standards in use the majority of intangibles can be recognized in financial accounts only in process of mergers and acquisitions (Jerman et al., 2010); there are also various views concerning the value of employees and their abilities and how these values appear – or do not appear – in a company's financial statements; drivers of success in many industries are intangible assets rather than »hard assets« shown on the balance sheets.

The second option, in traditional accounting, is to explain FIPM in a non-financial, i.e. descriptive way.

There is a question of suitability of the above mentioned options. Professional community tend to consider applying the second option, which results in increasing number of non-financial performance measures (NFPM) or non-financial measurement systems. Nevertheless, is it possible to replace FIPM by non-financial ones? Can we use NFPM where FIPM are not applicable?

Interestingly, NFPM are for the most part not in the domain of accountants. It is entrepreneurial economists in the field of management that develop and promote these ratios. They are increasingly aware of the ineffectiveness of traditional accounting information about the past and its uselessness when taking decisions about the future. Accounting profession does not respond to the challenges of modern entrepreneurialship, therefore, the job is mainly done by non-accountants.

There are several well-known NFPM systems. For instance: the Navigator which was developed in a Swedish insurance company Skandia and Balanced Scorecard (Kaplan and Norton, 1996). Over the last few years, these systems have been frequently critised, e.g. by Dumay and Garanina (2013, 17):

»The trap intellectual capital researchers and practitioners fall into is the continued use and incremental evolution of models (such as Balanced Scorecard, the author's comment) based on grand theories that prevent us from experimenting … The result may be that researchers and practitioners are »flogging a dead horse« … rather than investing money in yearlings … with potential«.

In continuation performance measures, including NFPM, will be defined. The need for developing NFPM will be also considered. This will be followed by considering their advantages and disadvantages, and final findings.

2. Performance Measures Defined

Performance measures can be defined in a narrow or broad sense. In a broad sense, they include absolute and relative figures, in a narrow sense, they include only relative figures. An absolute figure can be a particular figure (e.g. price), difference (e.g. operating result) or mean value (e.g. the average amount of receivables) while relative figures are: participation rate, index and coefficient. In this article, a broad definition of performance measures was applied.

Performance measures can be subdivided into financial and non-financial. FIPM are parameters used to evaluate financial performance aspects and NFPM are parameters to evaluate non-financial performance aspects of an organization (Scanlon, 2009). By using FIPM, value-expressed amounts are compared, while NFPM are descriptive. NFPM are therefore a set of variables such as customer satisfaction, job satisfaction, management control system etc. which are not measured by financial systems (Malgharni et al., 2010). FIPM can be expressed as absolute and relative figures, on the other hand, NFPM are expressed as absolute data (e.g. customer satisfaction) or relative data (e.g. the number of complaints per 1000 sold products).

3. The Need For Developing NFPM

In the accounting community, there is a common belief that employees cannot be considered as company assets. The same is true for investment in people (human capital), implementing new approaches (in terms of accounting, we can refer to target costing, activity-based costing of a business process, and the like), investment in reorganization, etc. Nevertheless, increasing unbalanced relationships between the book value and the actual market value of companies indicate that companies actually have large asset values at their disposal, which are not stated in a »traditional« balance sheet. Understated assets also affect the operating result of a company.

Moreover, it is not only annual financial statements which do not provide a clear picture of a company's financial position; the same is true for the values of FIPM, which are based on the data provided in the above mentioned annual financial statements.

The professional community has responded to this fact in a quite genuine and interesting way. This resulted in developing numerous NFPM or even integrated measurement systems. They are to meet the needs of users, who are getting increasingly dissatisfied with accounting information. In other words, traditional financial statements provide a very poor picture of a company's operations in the past. Moreover, accounting information do not provide their users (management) with an appropriate source as a starting point for their business decisions. Therefore, we should find out if NFPM provide all the information which cannot be provided by FIPM? Can they simply replace

FIPM or in other words, is their applied value limited? We believe that this is closely related to asset definition and asset value.

There are various asset definitions in professional literature; nevertheless, what we can establish from these definitions is that an asset has the following characteristics (IASB, paragraph 49a):

a) it is controlled by the entity;
b) it is a scarce resource;
c) possessing assets may be associated with creating economic benefits;
d) its cost of acquisition can be measured with certainty and exactness.

Asset value can be defined as the present value of future services (economic benefits) provided by the asset to its owner in the whole period of its usefulness.

As already mentioned NFPM are expressed descriptively. They were designed to explain, in a non-financial way, certain relationships which are not satisfactorily explained in terms of finance (referring to value) in traditional accounting.

Theoretically, it is possible for NFPM to replace FIPM, however, this is only possible on condition that the relationships among particular occurrences included in FIPM or their absolute values can with certainty state the present value of economic benefits which are to be gained in the future. Such relationships can be treated as company assets. Unless NFPM have this feature, their information power is limited. In terms of information gap filling created by FIPM, such ratios are useless.

The users of NFPM do not include the relationships among individual occurrences (which are included in these ratios or their absolute values) in company assets. Therefore, we can conclude they are not aware of the present value of a company's future economic benefits, which leads to two essential findings:

a) the applied value of NFPM is limited, and obviously falls short of our expectations and it often does not justify the investments connected with developing these ratios and their practical usage;
b) applying NFPM as a means of explaining unbalanced relationships between book values and market values of companies, or as a means of information design for business decision making about future, is a poor choice.

Usefulness of NFPM is investigated by Stivers et al. (1998). Their study includes 253 executives of U.S. Fortune 500 firms and Canadian Post 300 companies. The questionnaire asked the research participants to indicate the importance of each of 21 non-financial performance factors grouped into five general categories: customer service, market performance, innovation, goal achivement and employee involvement. The study identifies two serious drawbacks:

a) the importance-measurement gap: although non-financial factors are viewed as important, they may not be measured (e.g. 63.2 % of the firms rated »innovation« as highly important factor, however, only 21.8 % of firms measured this factor), and
b) the measurement-use gap: even when non-financial factors are measured, they may not be used (e.g. 83.8 % of the firms measure the »delivery performance« factor, whereas only 71.1 % indicated that they use this information for planning purposes).

Some companies obviously waste resources when they only measure non-financial performance factors but do not use them.

4. Advantages And Disadvantages Of NFPM

Although designing non-financial ratios of performance is useful, their application faces some limitations. Nevertheless, there are advantages and disadvantages to it.

Advantages of NFPM

Their first advantage is explaining or trying to explain certain relationships or occurrences which are not evident from financial statements. For instance, from financial statements (or accounting information in general) we cannot read about the company's coexistence with the local community and its wider environment, about the company's technological development, employee satisfaction, health and safety at work, etc. There is also not much information on competitive advantages and company's weaknesses, its market share, customer satisfaction, new products, quality control expenses, branch development and the like. Financial statements do not show the value of investment in employees, neither do they show their knowledge and skills. NFPM provide information on events referring to essential aspects of the company's performance. According to Ittner and Larcker (2000), and also Pangarkar and Kirkwood (2006), NFPM provide a closer link to long-term organizational strategies. They also build a company's reputation (Agrawal, 2012), and are useful for valuation purposes (Amir and Lev, 1996; Rajgopal et al., 2000).

The second advantage of NFPM is the fact they reveal a deep crisis in traditional accounting, which does not respond to the challenges and changes of companies' operations. The traditional accounting played a purposeful role especially during the period of early capitalism when the two most important factors of production were material and work (in sense of using the physical potential of employees). By a rapid increase in the share of knowledge included in the prices of business effects and by a sharp increase in the share of intangible long-term assets in the company's asset structure, the value of accounting information is decreasing.

Discussing advantages of NFPM, the authors (e.g. Ittner et al., 1997; Ittner and Larcker, 1998; Banker et al., 2000; Ittner and Larcker, 2000; Pangarkar and Kirkwood, 2006) state that these measures can be a better (or even leading) indicator of future financial performance than FIPM. R&D investments are often given as an example. However, there should be more evidence provided. Therefore, it should be discussed whether taking theses measures into account reflect the present value of future economics benefits for the company or not.

In the existing accounting practice those investments increase current period expenses and reduce bottom-line results. This solution is broadly discussed in the professional community and is considered disputable by many authors (see Roslender and Fincham, 2001; Fincham and Roslender, 2003; Lev, 2008; Roslender and Stevenson, 2009). Is there a need to reshape the philosophy of accounting practices?

Disadvantages of NFPM

Developing and using NFPM also involves some disadvantages. Let us focus on the major ones.

Their first disadvantage has already been mentioned in the previous chapter. It refers to the fact that these measures cannot reflect the present value of future services or economic benefits for the company, resulting from the absolute value of a ratio or relation. The usefulness of such measures is thus limited. Moreover, NFPM are too often used to record occurrences (relations) which should be shown among assets if they are to gain future economic benefits. NFPM can be a useful complement to financial measures, above all when they indicate the present value of future economic benefits (services) for the company.

The second disadvantage is their disability to affect (at least not directly) a company's assets and financial position as well as its performance, which might be the result of the value of some NFPM (customer and supplier satisfaction, the number of complaints, etc.). In general, NFPM only explain these factors. For instance, company performance thus depends on its market share and customer satisfaction. Nevertheless, it is much more affected by the approaches selected to evaluate particular economic categories. A NFPM which reflects customer satisfaction only explains the achieved sales revenue which is ascertained financially.

Furthermore, one may question whether the favourable values of the majority of NFPM are always in line with better company performance and its higher market value or better chances for its development, etc. Many studies have intended to find the answer to that question, giving the most attention to customer satisfaction when considering the importance of NFPM. Researchers have mainly studied the influence of greater customer satisfaction on a company’s performance as well as its market value. Some of the findings are presented below.

Ittner and Larcker (1998), for example, found a statistically significant positive relationship between customer satisfaction and a company’s future financial performance, especially at lower satisfactory levels. However, they emphasize that the relationship is not always linear. When customer satisfaction exceeds a certain level, the linear relationship with financial performance fails. Lambert (1998, 46) also points out a positive relationship between customer satisfaction and future financial performance. And finally, Anderson et al. (2004) found a positive relationship between customer satisfaction and shareholder value.

However, the results of some studies vary a lot. Ittner and Larcker (1998, 3) present a study including staff responsible for quality control in the largest American companies, which shows that only 28 % of the value measuring customer satisfaction can be linked to a company’s financial performance, and only 27 % of that value with a company’s market value.

A similar study has been carried out by Arthur Andersen & Co. consulting firm. The study included companies from different fields, namely: the food industry, toy manufacturers and the aircraft industry. The authors found no statistically significant relationship between customer satisfaction on the one hand and a company’s financial performance and its market value on the other hand (Arthur Andersen & Co. 1994, 1).

Mavrinac and Seisfeld studied the meaning of certain FIPM and NFPM when adopting investment decisions. They established that institutional investors treat customer satisfaction as a rather non-significant factor (Mavrinac and Seisfeld, 1997).

Aaker and Jacobson (1994, 199) conducted a study that included 34 brands. The study aimed at establishing whether the profit per share of a particular company and the brand value are in some interdependence with the customer satisfaction. They established that, with regard to the customer, there is a weak relationship between the brand value and a company’s future performance.

The results of the aforementioned studies show that no relationship between the favourable values of NFPM and a company's financial performance exists or it is rather weak. There seems to be a sound reason for that, having already been pointed out by Ittner and Larcker in the aforementioned study: An increase of NFPM values is not without costs, however, it is usually related to substantial material investments. Bowbrick (1992, 64), for example, points out that raising customer satisfaction to high levels always leads to decreased financial performance. Moreover, in their study of the banking sector, Nagar and Rajan (2005) found that the link between NFPM such as customer satisfaction and profit is not straight forward.

Using incorrect NFPM or using NFPM without articulating the relations between measures can focus attention on the wrong objectives and improvements cannot be linked to later outcomes. Implementing an evaluation system with too many measures can also lead to "measurement disintegration". And finally, Ittner and Larcker (2000) state that evaluating performance using NFPM can be time consuming.

Their third disadvantage is the fact NFPM are used in external financial reporting. Their applicability is therein limited due to the fact that they cannot be verified by external auditors, and their credibility cannot be easily verified when considering numerous measures. Ittner and Larcker (2000) discuss the lack of their statistical reliability. They argue that many non-financial data such as satisfaction measures are based on surveys with few respondents and few questions; these measures usually exhibit poor statistical reliability, reducing their ability to discriminate superior performance or predict future financial performance. Non-financial data are also measured in many ways and there is no common denominator (Pangarkar and Kirkwood, 2006).

The fourth disadvantage of NFPM is their 'connivance' to accounting professionals who, in turn, do not tackle the problem in an appropriate way. Moreover, these ratios are often used to explain the difference between the companies' book values and their much higher market values. To sum up, the mentioned fact reflects a serious crisis in the accounting profession.

5. Conclusion

The last two decades witnessed the development of NFPM or measurement systems. These measures are an important complement to the financial ones. Nevertheless, their development and subsequently their application face a serious problem: they are overused, i.e., too much significance is ascribed to them.

Although NFPM are an important complement to the financial measures, they cannot replace them as their applied value is limited. From the relation expressed in a NFPM or its absolute value, we cannot ascertain the present value of a company's future economic benefits**.** Moreover, this means that NFPM cannot provide a satisfactory explanation for unbalanced relationships between a company's book value and its market value, neither do they provide information required for business decision making about the future.

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