Financial measures for performance measurement in a regulated environment

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Abstract: - Built on the concepts of performance measurement systems developed in the management accounting literature, the paper is primarily a conceptual approach on the issue of financial measures used to measure performance in a specific organizational context. Choosing the appropriate measures for performance measurement is a sensitive issue, since they must be linked to organization strategy in order to ensure successful implementation of strategy. This paper addresses these issues in the context of companies activating in a highly regulated sector, such telecommunications, which raises other problems regarding performance measurement. It also explains the advantages and disadvantages of exclusive use of financial ratios calculated on the basis of the information provided in the accounting system, which is past-oriented, while value creation must be future oriented.

Key-Words: - performance measurement, financial measures, investment centers, internal transfers, invested capital, return on investment, economic value added

1 Introduction

Performance measurement problem has attracted special interest in literature, taking as its starting point Otley's conceptual framework [19]. Performance measurement is, traditionally, used for organizational control and for achievement of financial objectives. Traditional models have focused on maximizing shareholders value, such as earning per share, return on investment, but they are considered to be “the result of management action and organizational performance, and not the cause of it” "[7]. Some studies pointed out that these performance measurement systems are inadequate in an uncertain, complex and competitive environment [17], [10]. Other surveys argued for a multidimensional approach of performance measures [9], [8], [11]. These papers aimed both the internal and external side of performance measurement, as well as the use of non-financial measures, alongside with the financial ones.

This paper is primarily a conceptual one. It tries to discuss the use of appropriate measures for performance measurement, so they derive from company’s strategy and objectives. Most of the studies have discussed the issue of performance measurement in manufacturing industries and less in services industries [9], so we considered interesting to analyze the performance measurement at Romtelecom, a leading telecommunications operator in Romania. The paper is structured in three sections, followed by reflective conclusions. The next section (the second) explores from theoretical point of view, aspects of performance measurement using financial measures, with pros and cons in this regard, while underlying the importance of non-financial factors in supporting value creation. The third section includes a survey regarding the computing and analysis of most usual financial measures (return on investment and economic value added) conducted at Romtelecom.

Research methodology implies a deductive approach, providing also an interpretative perspective. The data were collected from annual reports and financial statements prepared and published by the company. Presenting some findings, without using statistical or quantitative methods, permits us to affirm that in this paper we privileged qualitative approaches.

2 Performance measurement: financial or non-financial measures?

Proper management of a business requires finding answers to questions about the efficient use of resources, achieving an appropriate level of profitability or if financing options are properly and prudently chosen [13]. Creating value for shareholders requires, ultimately, positive results in all these aspects, which will create positive cash flows over the cost of capital.

Generally, an effective organizational performance measurement system must have the following characteristics [20]:

- performance measures should be linked with the organization strategy and objectives;
- there must be a feedback and review system to ensure that the information flow allows the organization to learn and adapt from its own experiences;
- performance measurement system should include both financial and non-financial measures;
- includes a wide variety of measures, the system must be simple, clear and understandable, focusing its attention to key performance indicators;
- the performance measurement system should be sustained within the organization and correlated with the reward / penalty system for (non)achievement of the performance objectives.

Choosing the right measures for measuring the performance is a sensitive issue for any company. In most textbooks the financial indicators of performance measurement - return on investment (ROI), residual income (RI) and economic value added (EVA) – are concepts presented in the chapters regarding the performance measurement of divisions treated as "investment center" [6], [3], [20]. However, they are more than simple measures. The indicators help to illustrate trends and structure of these changes, however, may indicate the risks or the opportunities associated to the business [13].

Investor interest consists in the return of their investments, meaning the return achieved through management efforts, based on the resources invested by the owners. In this respect, the most widely used indicator - ROI – evaluates such a return for shareholders. This measure focuses on the benefits generated by the investment, but the issue of costs associated with the investment also should be questioned. Creating value for shareholders has become a priority, involving a variety of adjustments regarding the investment and operational results. More recently the cost of capital has been rediscovered as criteria for performance appraisal and the cash flows as vectors for creating value [12]. In order to create value for shareholders, profits generated by the use of allocated resources must overcome the cost of capital which finances these resources. In this respect, the measure used is EVA.

Our study conducted in a highly regulated environment – telecoms – will be centered on these two financial measures: ROI and EVA. We renounce to discuss and analyze the residual income because EVA enables a more detailed and analytical computation, leading us to the same conclusions.

Performance measurement has gained significant interest recently among both academics and practitioners. However, despite the remarkable progress made over recent years in performance measurement, many companies are still primarily relying on traditional financial performance measures [22].

Each measure is useful only in accordance with the hypothesis and objectives pursued. Performance evaluation based on the information provided by financial statements is a past -oriented task, being difficult to make future explorations [13]. However, any decision made is the result of such an analysis of performance, which may only affect the future, because the past is unrepeatable. This idea is emphasized by several authors. Referring to the value-based management, Malmi and Granlund argued that VBM is "not a theory of accounting practice but a theory of organizational performance, including accounting-related issues as a mechanism of explaining outcomes" [18].

Schuster and Jameson consider that "the usefulness of each measure is considered both a "backward-looking" measure of managerial performance and a "forward-looking" measure of corporate value based on present value of anticipated cash flows" [21].

The fact is that the choice of appropriate measures must derive from the company's objectives, critical success factors and strategy as part of the strategy implementation process [16]. This idea is supported by Chenhall [5], but also by Ittner and Larcker which states that "the choice of performance measures is a function of the organization's competitive environment, strategy, and organizational design" [14]. This statement points out that linking measures with strategy affects organizational performance.

Achieving a superior performance often involves sacrificing short term profits in favor of long-term value creation. Such an analysis based exclusively on the company's profit should be avoided. In fact, a firm creates value and, thus, achieve superior performance if properly manage its critical success factors, capitalizing the opportunities offered by the economic environment.

3 Romtelecom: a case study regarding the use of financial ratios for performance measurement

3.1 Romtelecom: short presentation

Romtelecom is the leading telecommunications operator in Romania, until 2002 held the monopoly on fixed telephony services in Romania. Telecom liberalization was necessary to increase sector's competitiveness, but it is accompanied by a regulation activity to ensure the creation and implementation of an open market. Strong regulation in this sector leaves its imprint on the performance management.

We chose this company to conduct our study because the performance issue seems interesting by the fact that it is subjected to strict regulation and enforcement of the regulatory authority, because was designated as "operator with significant market power on relevant retail markets". Company managers must deal with a particular situation: on the one hand, to comply with the regulations imposed and, on the other hand, to achieve performance targets set by shareholders.

Romtelecom's activities are divided into several business units, for each one being allocated revenues and costs, but also a certain level of capital, which means that we are talking about investment centers. Four business units are identified: transport network (TN), access network (AN), retail (RE) and other activities (OA). Between the business units exist an internal transfer system. The services provided by the transport and access networks are transferred to the retail unit.

The problem regarding the determination of the prices of these internal transfers is particularly important in terms of assessing the performance of each division (business unit). The transfer price is settled differently, depending on business unit located as provider, as follows:

• transfer prices for "access network" – is calculated by summing the full cost of all network elements involved in providing the service and a reasonable margin of return on capital employed;

• transfer prices for "transport network" – is the actual full cost for the transport component, determined on the basis of network elements used, plus actual costs related to non-transportation component.

Using actual cost for settling the transfer prices is a major inconvenient because it transfer the efficiency or inefficiency of provider to the beneficiary sector, which means that the result and performance of beneficiary center will be affected. Using market price as the internal transfer price may motivate managers, while it may represent an advantage for these centers, offering the possibility to act under the market conditions.

3.2 Using ROI as unique tool for performance measurement

The financial measure used at Romtelecom is the return on investment (ROI), an indicator that establishes the link between the center's profitability and the capital used to perform the activities. To determine ROI, the information is taken from the entity's accounting reports, which is why this measure is strongly influenced by the applied accounting principles and rules. By using the current cost in valuation of the assets in this particular case, it is eliminated one of the ROI inconveniences, namely the similar evaluation of the result and invested capital.

For the year 2009 the ROI computation, for each business unit, is presented in table 1:

Table 1 – ROI computation

	AN	TN	RE	OA	TOTAL
Benefits	610.089	394.517	(1.154.593)	(5.964)	(155.951)
Invested capital	3.245.707	2.899.721	1.119.410	414.482	7.679.320
ROI	19%	14%	- 103%	- 1%	- 2%

Source: Financial Statements prepared for the year 2009 (www.romtelecom.ro)

The *main advantage* of this measure is that it makes the managers more responsible on the return on invested capital, while providing them freedom of action. An accurate analysis of ROI, in this case is difficult because of internal transfer prices used, which affects both the results of provider and the customer. Given the high level of capital employed for each business unit, we wonder whether that capital is fully used or there is an unused capacity whose cost has not been determined and isolated.

Improving this measure may generate two of "perverse" effects, namely [12]:

- creates the tendency to sacrifice certain expenses (R&D, marketing, training) that generate almost no short term effects, but ensure the long-term performance;
- can affect the organization's relationships with trading partners, if decides to reduce the financial commitments by reducing inventories (affecting the relationships with its customers) or by extending the deadlines for paying the suppliers.

The *main disadvantage* of this measure regards the fact that it "provides" the temptation of neglecting the strategic development, in favor of short-term profitability. Focusing the attention on improving the profitability can lead to the "freezing" of the investment policy of a particular center, managers being concerned particularly in increasing the sales. Romtelecom has a moderate level of investment, because had already developed a solid infrastructure and the access of other operators to its network do not encourage the investments.

The company will be tempted to focus its attention to the maximization of profitability. However, permanent renewal of existing technologies makes necessary the development and implementation of some investment projects.

Despite its "popularity", ROI is the subject of various criticisms [2]. Those who contest this measure were arguing their critics saying that the most effective approach for performance appraisal consists in monitoring and evaluation of the organization critical success factors, such as quality, service, employees' knowledge and skills.

3.3 Economic Value Added analysis

Several authors recommend simultaneous use of ROI, with other useful measures for performance assessment [4]. Literature makes reference to the residual income (RI) and to the economic value-added (EVA), very useful in measuring the centers performance. EVA is mainly used for performance measurement of the investment centers. This measure was developed based on economic profit concept, on the assumption that, in order to create shareholders value, the income generated by the resources involved must exceed the cost of capital that finances those resources.

Weighted average cost of capital (WACC) used in EVA's computation is, in fact, after tax cost of the sustainable financial resources. In our case, at Romtelecom, WACC used to compute the cost of regulated services is required by the regulatory authority, and for the period 2004 - 2009 has been set at a level of 15.24%. The accuracy of this CMPC might be the object of a future study.

It is believed that value is created only if the net operating profit after taxes (NOPAT) is greater than the cost of capital, meaning that EVA is positive. Given the fact that the company's overall result is negative, EVA is also negative, which means that shareholders value is not created, but "destroyed", because the company does not generate enough profits to cover the cost of capital. Given that, WACC used by Romtelecom is imposed by the regulatory authority, for EVA analysis the attention should be directed to the invested capital.

Only one business unit generates positive EVA – access network, but this is largely due to the level of the prices of serviced provided to the retail business unit. It should be noted that 98.8% of access network sales are transferred to the retail unit.

Jabert identified three major difficulties in implementing EVA, namely [15]:

- NOPAT's computation requires many adjustments and leaves room for errors and inconsistent interpretations;
- determination of the level of capital invested in each center;
- estimation of WACC, because of the risk associated with the business.

In a highly regulated environment, such as telecoms, these difficulties are made worse, adding them the pressure exerted by the regulator regarding the internal transfers.

Existence of a negative EVA is a warning to organizations and necessitates corrective action. Sale of unused assets or their involvement in projects and activities that generate superior performance may be solutions that will lead to improving EVA.

4 Conclusions

Using preponderantly the profit in measuring the performance makes that the organization efforts focus on the short term results and to ignore the long-term effects of its actions, which are more relevant when it comes to performance assessment.

The loss recorded by "retail" business unit is driven largely by the internal transfers, which are reflected in the operational costs of the beneficiary unit. In addition, the influence of regulatory authority on transfer pricing system is strongly felt, because the services internally transferred (transport network services, access network services) are intended also to other operators and the regulatory authority tries to discourage any Romtelecom unfair actions by exercising tight control over prices charged for these services. Whatever the internal transfer price is adopted should not be omitted that overall objectives must prevail to those of each responsibility center.

Improving overall income requires focusing the company's attention, paradoxically perhaps, on those business units that record profits, because the processes undertaken in these units must become more efficient. Transport and access networks are more oriented towards the development, implementation and operation of advanced technologies, their costs being relatively high. But through internal transfer system, the costs of these networks are transferred to the 'retail' business unit, which, in conjunction with the existence of regulatory authority control, results in significant losses of this unit. Despite the negative results recorded by this business unit, the abandonment of services provided by 'retail' unit is practically impossible.

Performance analysis based on information provided by financial measures can be frustrating for the managers of those business units that have no power of decision and control over the internally transferred costs.

Difficulties faced by Romtelecom's managers are important because of the intervention from the regulatory authority, which makes the company's efforts to achieve superior performance and create value for investors to be substantial.

Addressing the concept of performance, and Alazard & Separi stated that "performance requires a comprehensive vision of interdependence between internal and external parameters, quantitative and qualitative, technical and human resources, physical and financial" [1]. Trying to measure the value created by the organization solely on the basis of purely financial measures can lead to a manipulation of numbers. These negative effects can be counteracted by supplementing the analysis of financial measures with non-financial elements. Balanced Scorecard is a tool that can facilitate such an analysis, since it allows achieving financial performance in terms of improving internal processes, customer orientation and develop learning and development organization members.

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