

ACCOUNTING APPROACH FOR ASSESSMENT OF THE EFFECTIVENESS OF THE RETAIL COMPANY

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Abstract: The digitalization of retail trade and the appearance of the active consumer change the criteria for financial success of the company. Dynamically are improving exchange technologies, the traded assortments of goods are accelerated, the importance of customer satisfaction is increased, the quality and stimulus' for preference. Management and financial approaches are refined. There is a growing need for a systematic study of accounting information for the purpose of developing multi-criteria models for complex measuring of the effectiveness, risk and other parameters of operating activities. Authors question the importance of accounting but at the same time mention its limitations in terms of environmental data. Leading indicators for trading operations are: (a) Structure of operating assets, (b) Revenue from sales of goods, (c) Duration of one turnover per unit stocks, (d) Duration of one turnover per unit of sales receivables, (e) Operating profit rate, (f) Structure of operating liabilities (g) Duration of one turnover per unit of delivery liabilities, (h) cash flow liquidity ratio. The outlined indicators reflect different aspects of the effectiveness of the retail company and are suitable for aggregation based on methodological framework of graphic radar. This assumes the construction of a n-dimensional (in this case an eight-dimensional) space that present the characteristics of commodity acquisition and realization. It is achieved a combination of a large amount of accounting information in one complex figure. In the methodology of business analysis are added two crucial advantages. Firstly, a visual illustration is created of the synthesis of the effects of eight individual factors of the effectiveness of the company. (The successful construction of the octagonal figure is preceded by the normalization of the single influences, i.e. their transformation into graphic radar values by "min-max method" and "max-max method"). Secondly, it is proposed an integrated value assessment of the factor influences on the effectiveness of the retail company – this evaluation measures the total area of the octagonal figure. The suggested approach to the use of accounting information offers broad knowledge of commodity acquisition and sales by combining the data of accounting and the methodological opportunities of business assessment and forms multi-dimensional knowledge of the optimality of trading operations. It is quite appropriate for analysis across time and industry. It helps to develop effective management solutions.

Keywords: Retail, Management, Effectiveness, Accounting Analysis, Graphic Radar

1. INTRODUCTION

The digitalization of retail and the appearance of the active consumer change the criteria for financial success of the company. Technologies for exchange are improving dynamically, the offered assortments of goods are updated rapidly. The importance of customer satisfaction, quality and motives for preference increases. Models of management and financing are refined. Relationships are becoming complicated with manufacturers, merchants and consumers. It is necessary a various research of accounting information for commercial buildings and equipment, inventory, sales revenue, intakes of customers and liabilities to suppliers.

The purpose of the current report is to propose a multi-criteria model for assessment of the effectiveness of the retail company by aggregating accounting information for short term financial state and operating activities.

2. METHODS

The assessment of the effectiveness of the retail company reflects the understanding that in the short term investment and financing are relatively stable parameters. It has limited capacity of business opportunities and constant capital. The customer base, the suggested assortment, the logistics are defined. There are commercial equipment with limited opportunities as well as permanent level of ownership and long-term attracted financing. The company is neither able to leave the company, nor can it be dominant in another. In management are developed mainly solutions which are accomplished in the context of a popular investment and budgetary framework and are related with achieving advancement in operational functioning.

Authors (Ivanova, R. 2015; Kasurova, V. 2013; Chukov, K. & R. Ivanova, 2014; Terezova, S. 2012; Nikolov, N. 1996) suggest different options for assessment of the effectiveness of the retail company. They focus on the amount of costs, revenues and financial results, the magnitude and composition of current resources, business activity, profitability. They affirm the significance of inventory optimization, sales management and estimated relationships with suppliers, staff and insurance organizations. They present the leading role of accounting as well as its inherent restrictions in data on multiple factors (Galabova, V. 2010).

In modern theory and practice for assessment of the effectiveness of the retail company there are required the following key indicators (Velkov, Yu. 2016):

a) Structure of operating assets (SOA). It describes how you invest in your regular business. It displays the relative share of goods and sales receivables in the value of operating assets. Operating assets are all current and fixed resources that are used directly for the purpose of conducting trading operations. They do not include long-term financial assets, cash funds and short-term financial investments:

$$SOA = \frac{\text{Inventories of Goods} + \text{Trade Receivables}}{\text{Operating Assets}} \quad (1)$$

The optimality of the structure of operative assets depends on the persistence of sales volume, commodity market conditions, customer demand.

b) Revenue from sales of goods (RSG). These are the inflows of economic benefits that are generated by sales of goods. They are accomplished in the form of cash funds or increase in receivables. They can be in gross or net (excluding VAT) amount:

$$RSG = (\text{Volume of Goods Sold}) \times (\text{Unit Selling Price}) \quad (2)$$

To ensure comparability, the sum of current sales is divided in the price index defined by the formulas of Etienne Lasper (1871) or Herman Paasche (1874) (Chukov, K. & R. Ivanova, 2014; Terezova, S. 2012).

c) Duration of one turnover per unit of inventories of goods (DTG). It characterizes the speed of the company's business activity. It indicates the duration of the transformation of a unit of inventory in income (in the form of financial assets or receivables) from sales:

$$DTG = \frac{\text{Mean of Inventories of Goods}}{\text{Revenue from Sales of Goods}} \times \text{Accounting Period} \quad (3)$$

The optimal appraisal of the duration of one turnover per unit of inventory is quite dependent on the requirement of goods supply, sales technology and the organization of the overall activity.

d) Duration of one turnover per unit of sales receivables (DTR). This is the length of time (in days) that begins with the occurrence of a unit of sales receivables and concludes with obtaining financial assets of the respective receivable:

$$DTR = \frac{\text{Mean of Sales of Receivables}}{\text{Revenue from Sales of Goods}} \times \text{Accounting Period} \quad (4)$$

The duration of one turnover per unit of sales receivables is highly dependent with the marketing policy of the company.

The sum of the duration of one turnover completed by a unit of inventories and the duration of one turnover accomplished by a unit of sales receivables forms the operating cycle. (Velkov, Yu. 2016).

e) Operating profit rate (OPR). The added value in business is characterized as the financial result (before interest and taxes) (EBIT) is assessed which is contained in the unit of net revenue from sales of production:

$$OPR = \frac{\text{EBIT}}{\text{Revenue from Sales of Goods}} \quad (5)$$

The operating profit rate directly reflects the revenue of the trade activity and does not take into account the effects of capital structure and taxation.

f) Structure of operating liabilities (SOL). It characterizes the financing of the usual action with the supplier funds. Indicates the relative share that trade payables occupy in the total amount of operating liabilities:

$$SOL = \frac{\text{Trade Payables}}{\text{Operating Liabilities}} \quad (6)$$

The optimality of the structure of operational liabilities is strongly dependent on the scale of business, the sustainability of sales volume, the circumstances for short-term financing.

g) Duration of one turnover per unit of delivery liabilities (DTL). It displays the speed of repayment of liabilities to suppliers of goods. It presents the average time that passes between the appearance and repayment of a unit liabilities to suppliers:

$$DTL = \frac{\text{Mean of Trade Payables}}{\text{Trade Loans from Suppliers}} \times \text{Accounting Period} \quad (7)$$

The common rule is that the long credit cycle is an unfortunate sign, though a positive assessment may be also justified in the case of slower turnover – this may imply that suppliers have confidence in the management and a tendency to enlarge lending to the company.

h) Cash flow liquidity ratio (CFLR). The cash flow is composed of cash receipts and cash payments that are directly related with the acquisition of goods and their sale. The liquidity and solvency are fundamental of the retail company (Nikolov, N. 1996):

$$CFLR = \frac{\text{Cash Initially} + \text{Net Cash Flow of Sales}}{\text{Trade Loans from Suppliers}} \quad (8)$$

The optimality of the liquidity ratio of the cash flow reflects the balance between ensuring security and generating high returns.

The displayed indicators evaluate the different sides of the effectiveness of the retail company. They are tools for preparing marketing and financing decisions. They allow a complex assessment and analysis of tendencies in the change of the effectiveness of the retail company (Velkov, Yu. 2016; Dimitrova, V. 2013; Vladimirova, I. 2005).

3. MODELING A COMPLEX ASSESSMENT OF THE EFFECTIVENESS

The complex assessment of the effectiveness of the retail company is a multidimensional measure of the implementation of commodity acquisition and sales plan. This is an organized aggregation of business indicators that are the foundation of accounting information. It suggests a methodological framework for business assessment and analysis and a suitable instrument for modeling of the complex assessment of the effectiveness is the chart radar – a figure consisting eight axes with a common beginning. This way in theory and practice is accomplished (Velkov, Yu. 2018):

a) It is created a visual summarized image of the impacts that the structure of operating assets and operating liabilities, sales revenues, business speed, operating profit rate and liquidity have on the effectiveness of the company. By connecting the dots – the graphical coordinates of the impact evaluations - a) ÷ h) – a set of levels are made. These are sides of a hexagonal figure. Her area visualizes the complex assessment of the effectiveness of the retail company. The successful construction of a radar chart is preceded by the normalization of single effects, i.e. their transformation in chart radar values (I_{Radar}):

a₁) Standardization of the plan implementation indexes at the standard minimum value (min-max method) – it is used to convert the plan implementation indexes by indicators (a) structure of operative assets, (c) duration of one turnover per unit stockpiles and (d) Duration of one turnover per unit sales receivables and h) Liquidity ratio of the cash flow:

$$I_{\text{Radar}} = \frac{I_n - I_{\text{max}}}{I_{\text{min}} - I_{\text{max}}} \quad (9)$$

Where:

I_n - Plan implementation index ($n = 1 \div 8$)

I_{Radar} - Normalized plan implementation index

$I_{\text{min}}, I_{\text{max}}$ - Lowest and highest possible value of the plan implementation index ($0 \div 1$)

The higher the rate estimates of the plan implementation indexes of the above mentioned indicators, the lower are their normalized values on the radar chart. And vice versa.

On of a₂) Standardization of plan implementation indexes at the standard maximum value (max-max method) – it is applied to transform the change in indicators (b) revenue from sales of goods, (e) rate of operating profit, (f) structure of operating liabilities and (g) duration of one turnover per unit delivery liabilities:

$$I_{\text{Radar}} = \frac{I_n - I_{\text{min}}}{I_{\text{max}} - I_{\text{min}}} \quad (10)$$

The higher the rate estimates of the plan implementation indexes by the four above mentioned indicators, the bigger are their normalized values on the radar chart. And the other way around.

b) A synthetic (aggregated) assessment is proposed for changes of the structure of operating assets and operational liabilities, sales revenues, speed of business activity, operating profit rate, liquidity. The area of the figure – Integral Index of the Effectiveness of the Retail Company (IIERC) that illustrates the overall dynamic, not only visualization, but also allows the calculation of eight-criteria total assessment of the effectiveness of the business activity:

$$I\text{IERC} = \left[\frac{(I_1 \times I_2) + (I_2 \times I_3) + (I_3 \times I_4) + (I_4 \times I_5) + (I_5 \times I_6) + (I_6 \times I_7) + (I_7 \times I_8)}{8} \right] \times \frac{\sin 360^\circ}{2} \quad (11)$$

The Integral Index of the Effectiveness of the Retail Company is a summarizing indicator of the rationality of commodity supply and sales. It synthesizes the implementation of the activity plan by eight accounting measures. It is described with the face of the figure which is limited by the normalized estimates of every individual plan implementation index. As a disadvantage of the obtained evaluation may be indicated its relative ambiguity – at a different sequence of arrangements of indexes may produce unequal results. However, empirical tests the possibility of drastic deviations.

4. SIMULATION AND VERIFICATION

In a retail company is analyzed the effectiveness of the commodity supplies and sales by eight indicators Information of the plan and its actual implementation is given in Table 1 (Velkov, Yu. 2018). In order to achieve benchmarking effect in formulas (9) and (10) the minimum and maximum values are the restricted estimates of other companies in the same industry.

Table 1.

Indicators	Plan	Plan _{Radar}	Report	Report _{Radar}
1. Structure of operational assets	0.74	0.53	0.71	0.63
2. Revenue from sales of goods	1 000 000	0.17	1 250 000	0.58
3. Duration of one turnover per unit of inventories of goods, days	10	0.62	8	0.77
4. Duration of one turnover per unit of sales receivables, days	21	0.60	17	0.87
5. Operating profit rate	0.30	0.33	0.28	0.20
6. Structure of operating liabilities	0.45	0.25	0.55	0.75
7. Duration of one turnover per unit of delivery liabilities, days	25	0.50	22	0.20
8. Cash flow liquidity ratio	1.2	0.86	1.7	0.14

Solution:

Complex assessment of the effectiveness of the company by plan:

$$I\text{IERC}_{\text{Plan}} = \left[\frac{(0.53 \times 0.17) + (0.17 \times 0.62) + (0.62 \times 0.60) + (0.60 \times 0.33) + (0.33 \times 0.25) + (0.25 \times 0.50) + (0.50 \times 0.86)}{8} \right] \times \frac{\sin 360^\circ}{2} = 1.403 \times 0.35355 = 0.496 \text{ p.}$$

Complex assessment of the effectiveness of the company by report:

$$I\text{IEERC}_{\text{Report}} = \left[\frac{(0.63 \times 0.58) + (0.58 \times 0.77) + (0.77 \times 0.87) + (0.87 \times 0.20) + (0.20 \times 0.75) + (0.75 \times 0.20) + (0.20 \times 0.14)}{8} \right] \times \frac{\sin 360^\circ}{2} = 1.9839 \times 0.35355 = 0.701 \text{ p.}$$

Conclusion: The company has accomplished effectiveness that is significantly higher than the intended one. All indicators with the exception of the last two are managed rationally. A key contributor to the high real effectiveness is the over-fulfillment of the revenue and sales plan, as well as the optimization of the structure of operating liabilities. Really fortunate is the accelerated collection of receivables from customers. The effectiveness gains reserve is located in finding business application of the excessively large inventories of cash funds; it is recommended as well to comply with the planned deadline for payment of supplies and goods obligations.

The results from the assessment are visualized on Figure 1.

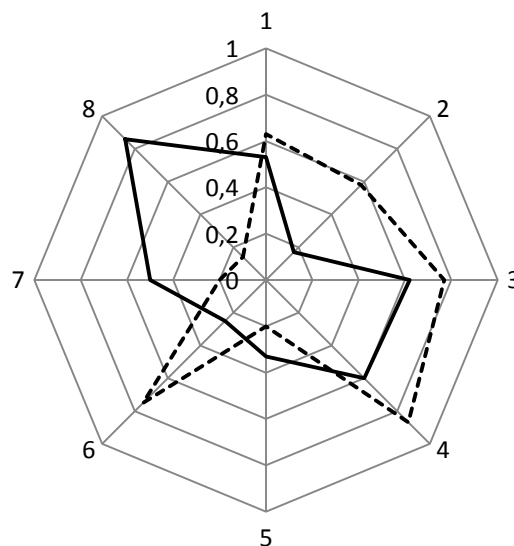


Figure 1. Graphical representation of the index of the effectiveness of the retail company

The complex assessment of the effectiveness of the retail company can be improved by including more indicators for operative assets, operating liabilities and business activity. In addition, it can be enriched with other accounting ratings as well as affixing individual importance (relative weight) of every measure.

5. CONCLUSION

The accounting approach for assessment of the effectiveness of the retail company offers broad knowledge of commodity acquisition and sales. It combines accounting data and methodological opportunities of business evaluation. By researching indicators of operating assets, operating liabilities and trading operations, it can form a multidimensional knowledge of the optimality of business operations. The accounting approach for the assessment of the effectiveness is very adequate for comparative analyses in time and industry. It assists the development of effective management solutions.

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