MODELLING FOR IMPROVING THE COMPETITIVENESS OF SMALL ENTERPRISES

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Abstract

In contemporary world alongside with the expansion of economic activity zones and mutual overlapping of enterprises the competition of enterprises is growing rapidly. Due to this fact modern enterprises (incl. Latvian retail business) should develop and implement their own strategies for fostering their competitive advantage. The concept "competitiveness" defines the ability of the enterprise to exist in the given market conditions and is linked with the quality of goods and volumes sold. Most objectively that would be defined by financial parameters, such as profitability, liquidity, capital structure indicators, etc. Investigating the dynamics of the values of these indicators and external environment of enterprises using PEST analysis it may be concluded that the main sources for problems are linked with inflation (higher than profitability of an enterprise), limited availability of the borrowed capital (due to high interest rates) and high VAT rate (22%). To solve or minimize these problems it becomes obvious that it is necessary to increase the profitability of the enterprise and share of equity capital by considering the internal factors affecting the competitiveness and trying to adapt to the external factors. When developing the strategy to foster the competitiveness, it is important not only to determine the measures to be taken due to which the desirable financial and other effects on the relevant factors could be reached, but also pay attention to the process itself when choosing the measures to be taken in order to gain the maximum effect from the set of measures aimed at increasing the competitiveness taking into account the market strategy implemented in the given enterprise. To this end a new model for evaluation of the measures taken would be useful which is based on 4 objective criteria: impactability (ability to leave an impact on the indicators), benefit (probabilities of positive effect), predictability and controllability (ability of the enterprise to leave an impact on predictability and controllability).

Key words: criteria, model, management, competitiveness, sustainable development.

Introduction

The concept "competitiveness" means the ability of a country, industry and/or enterprise to operate under conditions of national or international competition. According to the existing definitions it is linked with the ability of the enterprise to offer goods of higher quality than those produced by the competitors as well as the ability to sell the products in the market. There are many ways how to determine the competitive edge of the enterprise, though mostly it may be characterized qualitatively (e.g., by marketable innovation descriptions). Therefore, to get an objective and relatively accurate information financial indicators have been used in this research, including profitability indicators (e.g., commercial profitability, total return on capital, return on equity, return on assets, etc.) that characterize the profit share of enterprise revenue or the profit level of the capital, as well as liquidity indicators (e.g., total liquidity L1, intermediate liquidity L2, absolute liquidity L3) that characterize the enterprise ability to settle its liabilities, and financial structure indicators (coefficients of financial dependence, financial independence and financial balance) characterizing the stability of the enterprise as a ratio of equity and borrowed capital. Analysing the economic situation in Latvia, in the first place the situation in such an important sector for cooperation among countries and enterprises as retail trade, its characteristics by objective methods (financial analysis and PEST analysis of external environment) turns out to be rather ambiguous. On the one hand, financial analysis of Latvian retail companies shows that today and in the near future the retail companies will remain quite competitive, i.e., they can be characterized as being able to remain in business long enough, even not undertaking any measures to foster their competitiveness and relying only on the existing profit level without attracting additional capital, e.g., borrowed capital (further in this research, especially when making forecasts, this situation is referred to as the passive scenario), they will still be able to make profit. Of course, following the economic decline in 2007-2008 the profitability (both total return of capital and commercial profitability) remains low constituting only about 2,2–2,3% (see Figure 1), while the liquidity remains at its lowest permissible level and the equity continues to grow, though negligibly (see Figure 2).
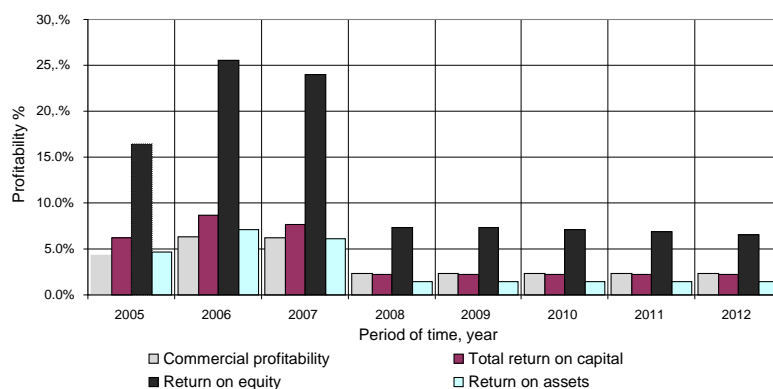
Fig. 1. Dynamics of profitability indicators and forecasts for Latvian retail companies
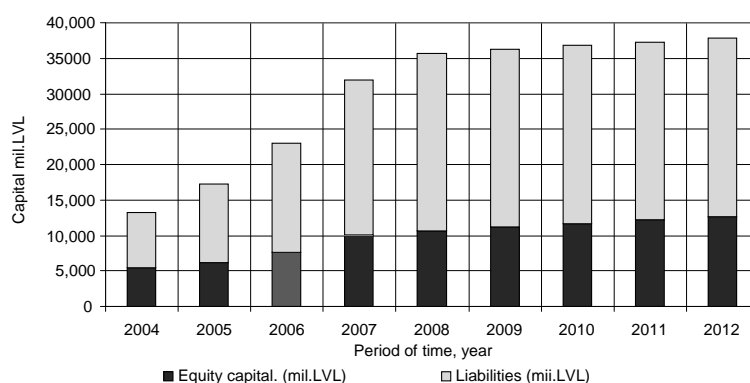

Fig. 2. Existing and projected size and structure of financing in Latvian retail companies

It manifests as inflation rate (which in the last 2 to 3 years was as high as 4,9%, but perhaps could be reduced to 2,7% - see Figure 3).
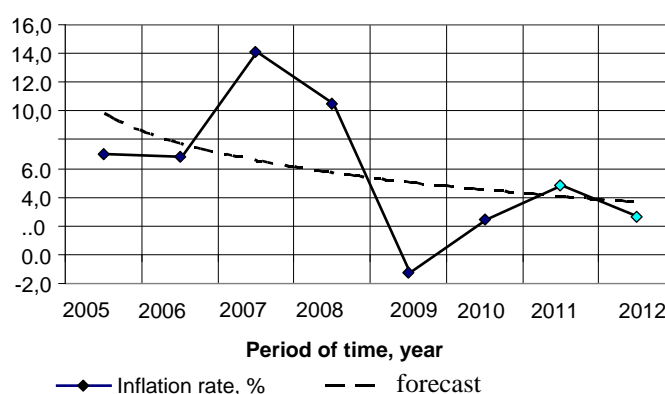
Fig. 3. Dynamics of inflation rate in Latvia in 2005–2012

Taking into consideration the following circumstances of external environment of Latvian retail companies, it becomes obvious that further hold on the market for those companies which would not undertake any measures to foster their competitive advantage in the market, may become problematic. The three reasons mentioned that could lead to this situation are the following:

1. inflation „eats up the profit margin" be-cause the level of the profitability indica-tors is 1,5–2 times less than the inflation rate;
2. limited accessibility to borrowed capital due to high loan interest rates, in particu-lar for credits in lats;
3. VAT rate which has risen to 22% since 1 January 2011.

The problems identified show that there is a growing need for the local retail companies to develop and implement such strategies that would help them to gain competitive advantage over their competitors under existing conditions of Latvian national economy. Moreover, in the recent years alongside with the economic crisis and the entry of established European companies into the Latvian market, the need for such strategies has become a survival issue for many of the local companies. While developing and implementing their strategies for solving the three above mentioned problems, the companies have to use their internal factors in trying to adapt to the external ones. As a result some in-dicators may be affected, including the financial indicators being linked with the problems men-tioned above, namely, indicators of profitability and indicators of capital structure.

The enterprises very often have to choose which measures to take since there are situa-tions when it is possible to undertake more risks, but in other situations it would be more advis-able to take more conservative measures. It means that in different situations the priority could be given to different model criteria combi-nations which are usually set depending on the financial condition of the enterprise or taking into consideration the characteristic indicators (see Figure 4).
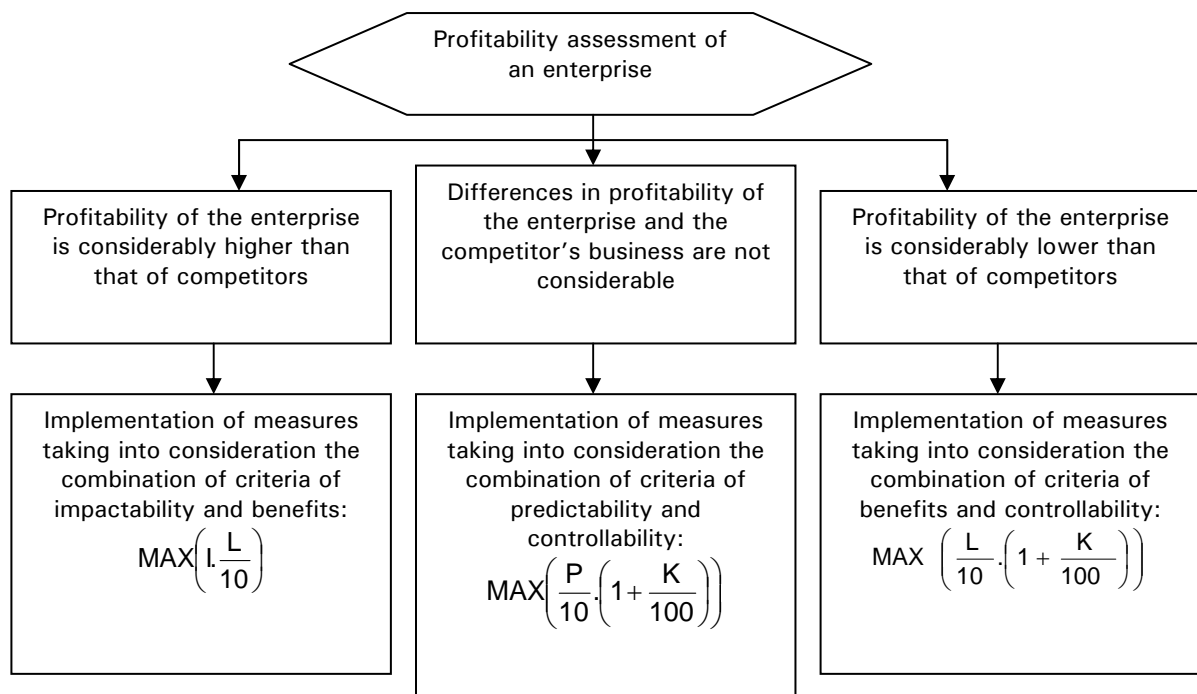

Fig. 4. Scheme for choosing the prioritized criteria of the model

In the figure:

Box 1: Profitability of the enterprise is considerably higher than that of competitors

Box 2: Differences in profitability of the enterprise and the competitor's business are not considerable

Box 3: Profitability of the enterprise is considerably lower than that of competitors

Box 4: Implementation of measures taking into consideration the combination of criteria of impactability and benefits:
$$MAX\left(I.\frac{L}{10}\right)$$

Box 5: Implementation of measures taking into consideration the combination of criteria of predictability and controllability:
$$MAX\left(\frac{P}{10}\cdot\left(1+\frac{K}{100}\right)\right)$$

Box 6: Implementation of measures taking into consideration the combination of criteria of benefits and controllability:
$$MAX\left(\frac{L}{10}\cdot\left(1+\frac{K}{100}\right)\right)$$

Criteria of the model

The coefficients „a" and „b" are calculated by the least square method on the basis of fore-casts of impacted indicators by trend functions see Table 1.

The corresponding indicator changes are con-sidered to be the given values of functions (y(x)) and the anticipated impact base values – the values of the given arguments (x).

Table 1. Calculated values of „a" and „b" coefficients

Indicator	Scenario	Formula coefficients	
		„a"	„b"
Commer-cial profit-ability	Pessimistic	-1,221619	0,000000
	Average	1,170456	0,000000
	Optimistic	4,318012	0,000000
Equity value	Pessimistic	0,051823	0,000000
	Average	3,314412	0,000000
	Optimistic	8,359928	0,000000

The next stage of the study is the evaluation of the effect by implementing the measures fostering competitiveness (see formulas 1, 2).

$$B_n(ILPK) = I.\frac{L}{10}.\frac{P}{10}.\left(1+\frac{K}{100}\right), \qquad (1)$$

where

Bn(ILPK) – the anticipated impact base by implementing of nth measure (coefficient);

I – the average n^{th} measure description by impact criterion;

L – the average n^{th} measure description by benefit criterion;

P – the average n^{th} measure description by predictability criterion;

K – the average n^{th} measure description by controllability criterion.

Using the values of the anticipated impact base as data, we may calculate the impacted indicator change rate – the linear function of the anticipated impact base that shows how much (%) the level of the impacted indicator is changing when implementing the relevant measure fostering the competitiveness (see formula 2).

$$e_n = \frac{a.B_n(ILPK)+b}{100}.100\% , \qquad (2)$$

where

e_n – rate of indicator changes by implementing of nth measure (%);

a, b – formula coefficients.

Inserting the values of coefficients into the formula 2 we obtain formulas oriented on Latvian retail companies that forecast the results of strategies to foster competitiveness (see Table 2).

Table 2. Average financial indicators of competitiveness of Latvian retail companies

Indicators		Forecast							
		Passive scenario		Pessimistic scenario		Average scenario		Optimistic scenario	
		2011	2012	2011	2012	2011	2012	2011	2012
Profiatblity indicators	Commercial profitabiility, %	2,3	2,3	1,88	1,88	2,76	2,76	3,90	3,90
	Total return on capital, %	2,2	2,2	1,78	1,77	2,61	2,59	3,70	3,65
	Return on equity, %	6,9	6,7	6,82	5,34	6,10	6,32	5,24	6,93
	Return on assets, %	1,2	1,2	1,40	1,13	1,40	1,65	1,40	2,32
	Return on capital	0,95	0,94	0,95	0,94	0,95	0,94	0,95	0,94
Liquidity indicators	L1 – total liquidity	1,19	1,23	1,20	1,24	1,35	1,60	1,67	2,87
	L2 – intermediate liquidity	0,85	0,88	0,86	0,90	0,96	1,16	1,19	2,08
	L3 - absolute liquidity	0,25	0,28	0,26	0,30	0,29	0,39	0,36	0,72
Financial structure indicators	Coefficient of financial dependence	0,68	0,67	0,68	0,67	0,64	0,59	0,58	0,47
	Coefficient of financial independence	0,32	0,33	0,32	0,33	0,36	0,41	0,42	0,53
	Coefficient of financial balance	2,13	2,05	2,09	2,01	1,77	1,44	1,38	0,90

Conclusion

According to the pessimistic scenario and comparing it to the passive one it would be possible to slightly raise the share of equity (for about 45 million lats or approximately by 1% for the whole industry, though the stimulation of the profitability would not bring the expected success and due to the fall of profitability indicators on average the profitability of retail trade would be much less than the projected inflation rate (<2,7%).

For many Latvian retail businesses there would not be any sense in undertaking the events contributing to promoting competitiveness and under such circumstances the future existence of such businesses would be more than doubtful.

By implementing the average scenario and comparing it to the passive scenario the equity of retail businesses would grow much faster for the industry as such (on average increasing by 8% taking into account the coefficients of capital structure), though the profitability indicators would on the whole be equal to the inflation rate. However, judging by expected total return on capital (2,59%<2,7%) and the level of return on assets (1,65%<2,7%), for some companies the forecasted effect would still not be sufficient to ensure development under forecasted market conditions.

Moreover, according to the optimistic scenario and comparing it to the passive one by fully implementing the set of measures to be undertaken to promote the competitiveness, on the whole the equity of Latvian retail businesses would additionally grow by 7 thousand million lats or by 20%, while the profitability would double and to a great extent would exceed the projected inflation rate. Therefore, further promotion of the competitiveness of local retail businesses would be ensured.

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