Corporate growth benchmarking in the food industry

Snezhinka Konstantinova¹, Gergana V. – Georgieva¹

¹University of Food Technologies, Plovdiv, Bulgaria

E-mail: sks_ko@abv.bg

Abstract. This study presents results of benchmarking of corporate growth of public companies in food industry. Security and profitability parameters from growth financing were selected as the main benchmarks. For the benchmarking have been selected results of the best public industrial companies in other sectors. For information were used audited annual reports on an individual basis. The comparative analysis shows that parameters of corporate growth management in food industry are significantly inferior to those of leading industrial companies.

1. Introduction

Benchmarking is process of comparing the performance of a company or group of companies with industry best practices or best practices from other industries [1, 2].

The name of “benchmarking” method is derived from English words “bench” and “mark” and are interpreted differently: “benchmark”, “reference marker”, etc. According to benchmarks, the following types of benchmarking differ [2]:

1. Internal benchmarking – a comparison is made within the organization.
2. External benchmarking – conducted outside the organization.
3. Competitive benchmarking.
4. Functional benchmarking.
5. Generic benchmarking.

The following types of benchmarking differ according to goals and objectives for improving productivity [3, 4]:

1. Strategic;
2. Product-oriented;
3. Process oriented.

The strategic needs of companies to explore best practices have turned to this specific benchmark, which began in the 1950s in Japan and United States, and turn into a widely used toolbox around the world. For this purposes, strategic common (general) benchmarking was used to analyze, evaluate, and compare corporate growth of food industry companies with the leading industrial companies [5, 6, 7].

2. Methodology and methods

Corporate growth benchmarking is based on two criteria:

- security of financing (reciprocal of creditors’ risk);
- profitability of financing.
The term “balance of growth” is used to refer to the degree of growth that a company can maintain with its own operating cash flows.

When the growth of the company is financed with equity, cash flows of the company are considered to be in equilibrium and growth is called “self-financing growth”. The growth equilibrium model contains three parameters [8].

On this basis, formula for self-financing growth is determined as follows:

\[ C_{fg}' = \frac{R}{T} \]  

where

- \( C_{fg}' \) is self-financing growth;
- \( R \) – a parameter that represents the ratio of profit after taxes for a given year and net sales revenue for the same year;
- \( T \) is a parameter that represents the ratio of equity and net sales revenue.

Self-financing growth is recommended in terms of taking a lower risk from foreign lenders as the company develops. In this context, the following levels of risk can be assessed in terms of financing growth:

1. Option one: self-financing growth – zero risk from foreign lenders;
2. Option two: 100% financing growth with foreign capital – high risk from foreign lenders.
3. Option three: Combined financing with equity and foreign capital.

To determine and compare the level of corporate growth, a sample of two groups of public industrial companies was sampled:

- Group I – companies from food industry;
- Group II – companies from other industrial sectors.

### 3. Results and dictation

Using results of food companies for 2017 and the previous year, Table 1 was compiled.

#### Table 1. Real and self-financing growth of food companies

| №   | Companies             | Real growth \( C_g \) (%) | Self-financing growth \( C_{fg}' \) (%) | Securitization \( S_p = \frac{C_g}{C_{fg}'} \) |
|-----|-----------------------|---------------------------|----------------------------------------|----------------------------------|
| 1.  | Zarneni hrani Bulgaria AD | 1.12                      | 1.23                                   | 1.10                             |
| 2.  | Zaharni zavodi AD      | 1.05                      | 2.55                                   | 2.42                             |
| 3.  | Gradus AD              | 11.80                     | 4.88                                   | 0.37                             |
| 4.  | Lavena AD              | 29.07                     | 12.62                                  | 0.43                             |
| 5.  | Balgarska Roza Sevtopolis AD | 1.03                  | 1.57                                   | 1.52                             |
| 6.  | Aroma Kosmetiks AD     | 0.35                      | 0.18                                   | 0.51                             |
| 7.  | Bulgartabak-holding AD | 8.98                      | 3.89                                   | 0.49                             |
| 8.  | Dupnitsa-BT AD         | 9.88                      | 3.35                                   | 0.34                             |
| 9.  | Nikotiana-BT AD        | 5.48                      | -1.83                                  | -0.33                            |
| 10. | Haskovo-Tabak AD       | 15.86                     | -2.18                                  | -0.14                            |
| 11. | Shumen-Tabak AD        | 3.54                      | -7.10                                  | -2.01                            |
| 12. | Yuri Gagarin AD        | 8.27                      | 7.06                                   | 0.85                             |
|     | Average                | 8.03                      | 2.15                                   | 0.46                             |

The data in Table 1 shows that the corporate growth \( C_g \) of whole group of food companies is 8.03%. It can be assumed that this is a moderate corporate growth. It is formed mainly by the high growth rate of the cosmetic company Lavena AD, Haskovo-Tabak AD and Gradus AD. The other two
companies in food industry have low corporate growth. Following three have moderate corporate growth: Yuri Gagarin AD; Bulgartabak-holding AD; Dupnitsa-BT AD.

Other companies have low corporate growth.

The own cash flows allow for low corporate growth, which is confirmed by average for whole group self-financing growth $C_g' = 2.15\%$. Only Lavena AD and Yuri Gagarin AD have moderate levels of this growth. In all other companies, the potential for financing growth through own cash flows is low. In three tobacco companies, $(C_g')$ is negative, which means that the cost of using foreign capital outweighs its own profits and corporate growth generates losses and uncertainty.

The “risk of creditor” criteria is reciprocal of security which was formed by ratio between the two types of growth:

$$S_f = \frac{C_g'}{C_g}$$  \hspace{1cm} (2)

where $S_f$ – security from financing.

The analysis of data in Table 1 shows that average security level for the whole group of companies in the food industry is 0.46. It can be concluded that the managers of these companies realize corporate growth within the limits of moderate (about 50%) risk from creditors.

This average contains a wide variety of values for $S_f$. Three companies achieve corporate growth at very high risk from creditors: Shumen-Tabak AD ($S_f = -2.01$); Nicotiana-BT AD ($S_f = -0.33$); Haskovo-Tabak AD ($S_f = -0.14$). This is probably main reason that they lose their publicity status in the years after the economic crisis. The growth security of four other companies is low: Dupnitsa-BT AD, Gradus AD, Lavena AD and Bulgartabak-holding AD. There is a group of companies that have high potential risk-free corporate growth, but due to commodity, capacity or other resource and market constraints, have not been able to use this potential: Zarneni hrani Bulgaria AD ($S_f = 1.10$); Zaharni zavodi AD ($S_f = 2.42$); Balgarska Roza Sevtopolis AD ($S_f = 1.52$).

In order to apply benchmarking approach, results of food companies were compared with those of the best public companies in other sectors.

The selection of the companies is purposeful and the aim is to research the best performing industrial companies of BSE AD – Sofia in the following way of grading:

Level I: All industrial companies included in calculation of basic index of the stock exchange – SOFIX: Sopharma AD; M+C Hydraulic AD; Sirma Group AD.

Level II: Premium segment on main market: Monbat AD; Korado Bulgaria AD.

Level III: Standard Segment on Main Market – all other companies.

Using the companies’ results for 2017 and the previous year, Table 2 was compiled:

| №  | Companies                        | Real growth $C_g$ (%) | Self-financing growth $C_g'$ (%) | Securitization $S_f = C_g'/C_g$ |
|----|----------------------------------|-----------------------|-------------------------------|---------------------------------|
| 1. | Sopharma AD                      | 24.14                 | 8.81                          | 0.36                            |
| 2. | Sirma Groups AD                  | 50.49                 | 4.35                          | 0.07                            |
| 3. | Korado Bulgaria AD               | 30.01                 | 25.85                         | 0.86                            |
| 4. | Hydraulic Elements and Systems AD| 19.93                 | 13.40                         | 0.67                            |
The data in Table 2 show that corporate growth \( (C_g) \) for the whole group of companies is 16.28%. This is a relatively high annual corporate growth, but it is formed by a very high level of growth of the IT company Sirma Group AD and Korado Bulgaria AD. The growth rate of three other companies is high (Sopharma AD, Hydraulic Elements and Systems AD and EMKA AD), while the rest of companies is moderate and low.

Moderate level of growth can be achieved, as the average for the whole group of annual self-financing growth \( (C_{gf}) \) is 10.75%. It should be noted that this level is formed by the high potential for self-financing growth in three companies: Korado Bulgaria AD (25.85%) M+C Hydraulic AD (18.70%) and EMKA AD (28.22%). In other companies, this potential is moderate and more often low.

The study shows that the average security level for the entire group of companies is 0.92, which means that managers realize corporate growth within low risk of lending. This average contains a wide variety of \( S_f \) values.

In addition to “security of finance” criterion, the profitability (efficiency) of growth financing must be analyzed and managed. Attracted capital has the ability to reduce or increase the return on equity. The ability of borrowed capital to change return on equity is known as “leverage effect” (leverage), which is defined as follows [9]:

\[
L_E = \frac{RSE \cdot PAT + [(1-RSE)\cdot PAT - I]}{RSE \cdot PAT}
\]  
(3)

where symbols have the following meanings:
- \( L_E \) – leverage effect;
- \( RSE \) – relative share of equity;
- \( PAT \) – profit after tax;
- \( I \) – interest.

Studies and calculations made on level of leverage in food companies made it possible to compile Table 3:

**Table 3.** Profitability and security in financing of the companies in the food industry

| No | Companies                          | Profitability | Security | Multiplication |
|----|-----------------------------------|---------------|----------|----------------|
| 1  | Zarneni hrani Bulgaria AD         | 0.75          | 1.10     | 0.83           |
| 2  | Zaharni zavodi AD                | 1.55          | 2.42     | 3.75           |
| 3  | Gradus AD                        | 1.21          | 0.37     | 0.45           |
| 4  | Lavena AD                        | 1.41          | 0.43     | 0.61           |
| 5  | Bulgarska Roza Sevtopolis AD     | 1.17          | 1.52     | 1.78           |
| 6  | Aroma Kosmetiks AD               | 1.09          | 0.51     | 0.56           |
| 7  | Bulgartabak-holding AD           | 1.10          | 0.49     | 0.54           |
| 8  | Dupnitsa-BT AD                   | 1.47          | 0.34     | 0.50           |
The analysis of data in Table 3 shows that most of companies have a favorable leverage effect. The level of this effect is relatively high for three companies: Zaharni zavodi AD, Lavena AD and Dupnitsa-BT AD. The profitability level of five more companies is good: Gradus AD, Yuri Gagarin AD, Aroma Kosmetiks AD, Bulgartabac-holding AD and Bulgarska Rosa Sevtopolis AD. The other four companies have an unfavorable leverage factor, with a relatively low level in two companies in tobacco industry. The leverage effect is good for whole group: \( L_E = 1.07 \).

The multiplication presented in Table 3 is determined by the following model:

\[
M_{ES} = S_f \cdot L_E
\]  

(4)

where \( M_{ES} \) is a multiplication of efficiency and security.

The study of the level of leverage effect in leading industrial companies made it possible to compile Table 4:

**Table 4. Profitability and security in financing the corporate growth of companies in other industrial sectors**

| №  | Companies                          | Profitability | Security | Multiplication |
|----|-----------------------------------|---------------|----------|----------------|
|    |                                   | \( L_E \)     | \( S_f \) | \( M_{ES} \)   |
| 1. | Sopharma AD                       | 1.19          | 0.36     | 0.43           |
| 2. | Sirma Groups AD                   | 1.15          | 0.07     | 0.08           |
| 3. | Korado Bulgaria AD                | 1.26          | 0.86     | 1.08           |
| 4. | Hydraulic elements and systems AD | 1.20          | 0.67     | 0.80           |
| 5. | Alcomet AD                        | 1.46          | 0.63     | 0.91           |
| 6. | Elhim Iskra AD                    | 1.05          | 0.19     | 0.20           |
| 7. | M+C Hydraulic AD                  | 1.19          | 1.68     | 1.99           |
| 9. | Monbat AD                         | 1.25          | 1.58     | 1.97           |
| 11. | EMKA AD                           | 2.98          | 1.56     | 4.65           |
| 12. | Fazerles AD                       | 0.98          | 1.30     | 1.27           |
| 13. | KRZ Odesos AD                     | 0.98          | 0.18     | 0.17           |
| 15. | Tchaikafharma AD                  | 1.14          | 1.95     | 2.21           |
|    | Average                           | 1.23          | 0.92     | 1.31           |

The table data shows that the majority of companies have a favorable leverage effect. Only two of the companies have an unfavorable leverage effect (Fazerles \( L_E = 0.98 \); KRZ Odesos \( L_E = 0.98 \)). The leverage effect of EMKA AD is high \( L_E = 2.98 \), the effect level in Alcomet AD \( L_E = 1.46 \) and Korado Bulgaria AD \( L_E = 1.26 \) is very good. For the rest of companies, the level of leverage is good, which is confirmed by the average level for whole group \( L_E = 1.23 \).

4. **Conclusion**

Benchmarking results for corporate growth of companies in food industry, compared with leading other sectors allow to draw following comparison:

1. Corporate growth \( (C_g) \):
   a) companies in food industry \( - 8.03\% \);
b) leading companies – 16.28%;
c) ratio (a : b) – 0.49.

2. Self-financing growth ($C_{DF}$):
a) companies in the food industry – 2.15%;
b) leading companies – 10.75%;
c) a ratio of 0.20.

3. Security ($S_{F}$):
a) companies in food industry – 0.46%;
b) leading companies – 0.92%;
c) a ratio of 0.50.

4. Yield ($L_{E}$):
a) companies in food industry – 1.07%;
b) leading companies – 1.23%;
c) ratio – 0.86.

5. Multiplication ($M_{ES}$):
a) companies in the food industry – 0.72%;
b) leading companies – 1.13%;
c) a ratio of 0.64.

In summary, the comparison shows that parameters of corporate growth management in food industry are significantly inferior to those of leading industrial companies.

In general, benchmarking has six main stages, five of which are presented in this report:
- Choosing a benchmarking process – corporate growth for companies in food industry;
- Determination of the main benchmarks – security and profitability of its financing;
- Choosing etalon for comparison – the best publicly traded industrial companies;
- Collection of information – official audited annual reports on an individual basis;
- Analysis and comparison – presented in table and text in detail.

Due to the limited volume, sixth chapter in adaptation and implementation of best practices will be presented in other scientific publications.

References

[1] Robert J and Boxwell Jr 1994 Benchmarking for Competitive Advantage (New York & McGraw – Hill)
[2] Camp R C 1995 Business Process Benchmarking: Funding and Implementing Best Practices (Milwaukee, Wisconsin: ASQ Quality Press)
[3] Mertins K and Holger K 2009 Benchmarking: Leffaden für den Vergleich mir den Besten – (Herausgeber: Symposion Publishing) Ausgabe 2
[4] Chipriyanov M 2008 Product benchmarking research, (E-Journal Dialogue) 3 (Svishtov: Tsenov Academy).
[5] Loginova E 2016 Benchmarking – tool for developing competitive advantages (Moscow: Scientific book)
[6] Longbottom D 2000 Benchmarking in the UK: an empirical study of practitioners and academics (Benchmarking: An International Journal) 7 (2) pp 98-117
[7] Berezin A and Kovalenko A 2014 Benchmarking in the system of competitive actions of entrepreneurial structures (E-Journal: Journal of Modern Competition) 5 (47) pp 117-129
[8] Konarev A and Konstantinova S 2017 Analysis of the Economics Activity of Industrials Companies Chapter 12 Analysis of corporate growth 1st edition (Plovdiv: Publishing house KSI) pp 222-231
[9] Konarev A and Konstantinova S 2015 Finance and financial management of the company Chapter 12 Asset and capital management (Plovdiv: Public house Janet-45) p 146