

# Non-typical values of financial ratios as signs of change processes in brewing sector businesses operating in Poland – a case study<sup>1</sup>

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**Abstract:** The paper includes four case studies on brewing companies operating in the Polish market. The businesses were selected on the basis of non-typical values of various economic efficiency measures (ROS, inventory turnover, total debt ratio) revealed in their ratio analyses. Usually, non-typical ratio values are indicative of turbulent changes taking place in a business. Stabilisation of the above measures most frequently signifies recovery, while their variability may signal an imminent crisis or may accompany winding up a business.

*Keywords: non-typical values of financial ratios, crisis phenomena, winding up, recovery, case study, brewing sector*

## 1. Introduction

The analysis of financial statements of companies from various economy sectors allows a conclusion that cases of dramatic and sudden changes in ratios year-on-year are not unusual. The same applies to the brewing companies being the subject of this paper. The purpose of the paper is to present the causes of selected flagrant changes in the values of various economic efficiency measures. The present discussion of selected mechanisms leading to the stabilisation or deeper

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imbalance of the economic situation of businesses is a contribution to the exploration of the problem of significant variability of results. This variability is larger than would be justified by market changes. Thus, it may be proposed that a significant variability of efficiency measures accompanies the processes taking place when the going concern status of a business is threatened. Their stabilisation on the other hand is usually a sign of recovery and restoration of financial equilibrium, both external and internal (Kozmiński and Oblój, 1989). Interestingly enough, seemingly favourable values of certain measures, e.g. return on sales (ROS), may be a symptom of an imminent collapse.

## **2. Cases of non-typical values of financial ratios signifying processes of change in the market situation of brewing sector companies**

Below are four *case studies* on brewing sector enterprises which in 2003-2011 posted non-typical values of selected measures of economic efficiency. They have been selected on the basis of material including financial statements of companies operating in the Polish brewing sector, obtained from the Inforlex database (see: [www.inforlex.pl](http://www.inforlex.pl)). The selected clearly non-typical values of various economic measures, such as return on sales (ROS) calculated as net income to net sales revenues \* 100%), inventory turnover in days (average inventory in a given reference period by sales revenues, multiplied by the number of days in the reference period) (Leszczyński and Skowronek-Mielczarek, 2004: 141, 193-196), or the debt ratio (total liabilities to equity), were an indication for a more detailed analysis of a company's general financial condition. They were also a stimulus for looking for the causes of non-typical values of the ratios and for showing the processes of recovery, change or winding up which they were signs of. The tables accompanying each of the four case studies not only include the non-standard values of the measures but also show certain events in a chronological order which explain the causes of such values. Not every field in the table has been filled out because the events relevant for the problem did not happen every year. The tables include only the events that can be regarded as having critical significance for the explanation of the causes for non-typical values of various financial ratios. If there were multiple causes, several lines were shown in the tables, each describing the changes in a given economic category. For instance, in the first case study there is an overlap of

such causes and their direct results as: changes in other operating income, changes in financial expenses, changes in short-term financial assets or changes in financial revenues.

In 2001, following the merger of breweries in Okocim, Szczecin (Bosman), Sierpc (Kasztelan) and Wrocław (Piaśt), the Carlsberg Okocim S.A. brewing group was formed. After Carlsberg had taken over the majority of the company's share capital, it was delisted in 2004. Since 13 October 2004 the company has been trading under the name of Carlsberg Polska S.A. Already in 2004, after modernisation work conducted in the Okocim brewery, the Piaśt brewery in Wrocław ceased its beer production. Piaśt remained however within the company's brand portfolio. Production of the Piaśt beer was taken over by other breweries of the group. The decision to close the Piaśt brewery in Wrocław may be viewed as asset management optimization. When the Okocim brewery achieved an annual capacity of 2.4 million hectolitres, production and maintenance of fully depreciated production assets in Wrocław became economically irrational. Similar trends were observed in sugar production. As the Polish sugar factories that were the subjects of takeovers were technologically obsolete, they were closed down, their production limits were taken over and production itself was moved to more modern plants of the group (Table 1).

The dramatic fluctuations in ROS (Pomykalska and Pomykalski, 2007: 92) in 2006-2010 may be explained by the fact that in 2007 and 2009 the company recorded high proceeds from the sale of its non-financial assets, which is a typical divestment accompanying winding up of a business. In 2008 these revenues were small, so ROS was rapidly falling. High ROS values, e.g. more than 2400% in 2007, are a consequence of profit from the disposal of non-financial fixed assets, accompanied by a simultaneous drop in the sales of products. 2009 witnessed an interesting phenomenon, i.e. an inflow of short-term financial assets in related undertakings. It may be guessed that a company being wound up was either lending financial assets to other companies of the group or was receiving shares in their assets in return for cash. Anyway, it was a basis for transferring the company's assets turned into cash to other group companies. Thus, it may be concluded that the dramatic changes in ROS in the winding-up period were in no way correlated with the market, and the apparent acquisition by the company of financial assets which is most often interpreted as a sign of growth, could be a basis for the transfer of funds of a business in the course of winding up.

Vifling Sp. z o.o. is a small brewery in liquidation. It was established in 1994 following a takeover of the production line of Stainecken company. The company was set up in Prochowice (Lower Silesia). Beer production using traditional Czech brewing techniques was started in 1995. Vifling is an example of an independent brewery which is not a part of any large group of companies (Table 2). It posted sudden changes in ROS when the company's future became uncertain and its going concern status was threatened. Interestingly enough, the ratio fluctuated even more dramatically than in the Piast brewery (from more than 87 600% in 2007 to nearly -9 000% in 2008). The above changes had nothing to do with the economy or with sales efficiency. In the difficult period, extraordinary gains and losses were generated which caused sudden fluctuations in ROS. The above extraordinary losses could be connected with the costs of liquidation of assets while extraordinary gains could be attributable to the sale of an organised part of assets or to compensations. ROS also fluctuated at the end of the winding-up period, when sales revenues were clearly on the decline.

**Table 1.** Changes in return on sales at the Piast brewery in Wrocław in 2006-2010 (after ceasing production) and changes in other operating revenue and financial revenues and expenses items that explain these changes

Business category	Years				
	2010	2009	2008	2007	2006
Revenues from sales of products	61 700	313 800	287 700	893 300	2 424 200
Cost of products sold	17 500	44 300	45 500	85 200	1 543 000
ROS	-0.742	10.563	-5.251	24.624	5.178
Changes in other operating revenues		Gain on disposal of non-financial fixed assets	Dramatic drop in the value of other operating revenue	Gain on disposal of non-financial fixed assets	
Changes in financial expenses	Dramatic drop of financial expenses				
Changes in short-term financial assets	Short-term financial assets in related undertakings	Appearance of short-term financial assets in related undertakings (transfer of cash?)			
Changes in financial revenues	Financial revenues from related undertakings	Appearance of financial revenues from related undertakings			

Source: authors' own elaboration on the basis of Inforflex data

**Table 2.** Changes in the return on sales of the Vilfing brewery in Prochowice in 2003-2009 and changes in the extraordinary gains and losses item that explain them

Business category	Years						
	2009	2008	2007	2006	2005	2004	2003
Revenues	49 691.800	41 823.330	1 313.500	2 319 761.500	6 783 890.400	7 754 419.50	8 095 835.900
Costs	55 926.160	506 371.980	1 342 750.350	4 790 161.570	7 482 330.100	8 301 090.50	7 650 370.700
ROS	-11.094	-87.479	876.996	-1.247	-0.163	-0.13	0.009
Extraordinary gains and losses	Extraordinary gains and losses	Extraordinary losses (asset liquidation costs?)	Extraordinary gains (compensation?, disposal of an organised part of the enterprise?)				

Source: authors' own elaboration on the basis of Inforflex data

Following the privatization in 1991 of Elbląskie Zakłady Piwowskie (Elbląg Beer Company), the Braniewo brewery became part of Australia's Elbrewery. The once popular EB beer was produced there. At the end of the 1990s the shares in the company were sold to the Żywiec S.A. Group. Then, the company went into the hands of Dr Witt S.A. and of Andrzej Konończuk, a private entrepreneur based in Elbląg. Production of beer under the Barkas brand was resumed and modernisation of the Braniewo brewery was started. Unsuccessful expansion into the markets of northern and eastern Poland and into the Kaliningrad Oblast brought further trouble, as a result of which production was suspended in 2008.

The history of the Braniewo brewery is a history of a rapid decline in equity value caused by an annual loss generated since the start in 2005. Since 2010 when a planned purchase of the brewery by Van Pur fell through, the efforts to find an investor for Braniewo have been unsuccessful. What is striking in the company's financial ratios already since 2005 are huge fluctuations of ROS which in 2005 were the effect of the planned shift in the production programme accompanied by ownership changes. A net loss for 2005 and a minimum value of sales revenues caused a non-typical value of return on sales standing at above -63 400%. Resumption of production brought an improvement which was not sufficient however to bring the company into the black. In this case, frequent ownership changes and changing market plans did not lead to an improvement in business performance. 2007, which witnessed the company's expansion into the markets of Russia and northern and eastern Poland, brought a significant increase in sales but at the same time an even larger increase in costs. The above made the management aware of the difficult situation which in 2008 deteriorated even further. The

development strategies prepared for the company turned out to be wrong. 2009 marked the start of decline in business results.

In the period under analysis, the company also had problems with handling the size of its stock levels. 2007 was the best year in terms of sales, but then the company lost its market. Sales were always below the breakeven point.

**Table 3.** Changes in return on sales and inventory turnover in days at the Braniewo brewery in 2005-2011 as a result of failed ownership changes and ineffective market strategies

Business category	Years						
	2011	2010	2009	2008	2007	2006	2005
Revenues	60 000.000	101 402.640	424 850.800	3 634 355.580	15 495 988.000	10 558 427.000	1 300.000
Costs	619 825.170	769 737.440	2 314 125.220	12 367 635.700	26 727 956.000	14 763 958.000	821 203.350
ROS	-11.726	-3.543	-4.667	-2.426	-0.721	-0.338	-634.465
Inventory	2 737 115.600	12 258 440.000	3 652 388.980	3 667 068.680	12 619 017.000	18 537 764.000	1 461 162.800
Inventory turn in days	5 883.290	4 850.240	1 157.360	149.810	197.830	259.110	105 402.230
Relation between inventory and revenues	Inventory>>>> revenues	Inventory>>>> revenues	Inventory>>> revenues	Inventory> revenues		Inventory>> revenues	Minimum value of sales (value for 30 Aug. until the end of the year)

Source: authors' own elaboration on the basis of Inforflex data

**Table 4.** Changes in the debt ratio and in shareholders' equity accompanying the process of market reorientation and change of business model of Stary Browar in 2006-2011

Business category and activities undertaken during the process of change	Years					
	2011	2010	2009	2008	2007	2006
Total liabilities	2 021 964.50	2 014 469.80	2 386 128.64	4 184 746.14	893 731.88	126 000.58
Shareholders' equity	606 782.00	104 637.72	-233 225.47	-1 308 697.30	-97 848.55	-84.75
Total debt ratio	3.33	19.24	-10.22	-3.2	-9.13	-1 474.93
Changes in basic financial ratios and reorganisation activities	Further reorganisation	Accounting profit and limitation of debt	Reduction of loss through an evident increase in revenues relative to costs	Further growth of debt and further drop of equity	More than 700% increase in liabilities accompanied by a drop in equity	

Source: authors' own elaboration on the basis of Inforflex data

In 2006, inventory turnover in days (Dudycz, 2011: 86-87) was very bad - it stood at nearly 260 days. Since 2008, when production was stopped, stock turn ratios have assumed absurd values and are hard to interpret. Similar values were also observed when the company's going concern status was threatened. The last line in Table 3 shows cases when stock levels exceeded revenues. Only the year 2007 is an exception.

In the remaining years, stock levels exceeded revenues only slightly (single inequality sign), significantly or very significantly (two or three inequality signs). The case of Stary Browar Sp. z o.o. in Gdańsk is different from the above ones. 2006 stands out because of its non-typical, very high (with negative value) debt ratio (calculated as total liabilities to equity). The above value was an effect of accumulated losses from the years before 2006 as a result of which a negative value of equity was recorded. With a relatively high debt level, the ratio stood at more than -1 474. 2007 and 2008 brought further drops in the value of equity caused by growing debt. The above growing debt was connected with rational, as it turned out later, plans to expand into hotel and mini-brewery sectors (shifting core business to a more profitable hospitality sector - change of operating strategy through moving to a profit zone and to a new business model). When the above strategic business model shift started to bring profits in 2009, there took place an increase in the debt ratio accompanied by further negative change in equity through accumulation, but the loss was significantly limited. The new strategy produced a significant improvement in all ratios in 2010 and 2011. The loss carried forward was covered, equity returned into the black and liabilities stabilised. Total debt ratio also became close to normal. Stary Browar is an example of a small business which successfully reoriented its market strategy and gained financial stability. Unlike in the remaining cases, business stabilisation was accompanied by "smoothing out" of the values of individual ratios and reduction of their variability.

### **3. Concluding remarks**

The brewing sector includes both large entities forming part of international groups and small independent players of regional or even local significance. In all of the above groups there were cases of liquidations and winding up, successful or unsuccessful reorganisations and of

successful or failed market strategies. In most cases, the above changes are well illustrated by financial ratios whose intriguing and non-typical values encourage an investigation into their causes. It usually turns out that dramatic fluctuations of various economic efficiency measures accompany unfavourable processes resulting from intensification of crisis phenomena or winding up the business. On the other hand, effective market strategies and recovery are reflected in stabilisation of business performance results. Non-typical and unusually volatile values of various financial ratios are usually a sign of turbulent changes in a business, both the ones being a sign of an improvement of the company's standing and those leading to a total loss of market position. They may serve as a basis for interesting case studies in business management.

## Literature

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### *Nietypowe wartości wskaźników finansowych obrazujących procesy zmian w przedsiębiorstwach sektora browarniczego działających na rynku polskim - case study*

#### *Streszczenie:*

W artykule zaprezentowano cztery case studies działających na rynku polskim przedsiębiorstw sektora browarniczego. Zostały one wyselekcjonowane na podstawie nietypowych wartości różnych miar efektywności ekonomicznej (ROS, rotacja zapasów, wskaźnik zadłużenia ogólnego) pojawiających się w ich analizach wskaźnikowych. Takie wartości towarzyszą bowiem zwykle burzliwym zmianom w przedsiębiorstwach. Stabilizowanie się wartości miar prawdopodobnie częściej odnosi się do sanacji, zaś labilność - do nasilania się zjawisk kryzysowych bądź zamykania działalności

**Słowa kluczowe:** wskaźniki finansowe, likwidacja przedsiębiorstwa, browarnictwo, studium przypadku