Working capital management – Efficient tool for success of milk producers: true or false?

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Abstract

Working capital management can be considered as vital issue in financial decision-making processes in company. Consequently, it directly affects company's success in the way of its profitability. Empirical evidence is provided on a sample of Croatian and Slovenian companies in the dairy processing industry. Univariate and multivariate analyses are used to test hypotheses about impact of working capital management components and cash conversion cycle on company's profitability. Furthermore, differences in working capital management policies in condition of crisis and before crisis are examined. Our findings show that none of working capital management components significant affect profitability, measured by return on assets, while statistically significant relation exists between cash conversion cycle as working capital management comprehensive measure and profitability.

Keywords*: Working capital management, Dairy industry, Milk production, Profitability.*

1. Introduction

The dairy processing industry together with dairy farming, dairy traders, retail and customers creates dairy supply chains (Muminović and Aljinović Barać, 2015). European Dairy Association (EDA) states that the dairy industry is one of the industry sectors of main importance for a healthy development of Europe and has an essential and functional contribution to the diet of all consumers in Europe. However, according to Muminović and Pavlović (2012) and Aljinović Barać and Muminović (2013), the dairy processing industry in Slovenia and Croatia are characterized by a few large companies (with dominant position and market share), accompanied by many small processors that often produce for niche markets. That is the case also in dairy processing industry in many other European countries (Gardebroek *et al*., 2010).

Specifically, Slovenian and Croatian dairies have been analyzed together as example of two neighbouring countries with a common history before 1991. Their demand and supply markets are assumed to have broadly the same preferences and moreover these two countries are tightly related with trade in goods as well as daily labour migrations. Namely, according to Croatian Bureau of Statistics (2015) data, in 2014 Slovenia contributed with 11% or 1.2 billion EUR to total export of Croatia amounted to 10.4 billion EUR. At the same time, the import of goods

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from Slovenia was 1.9 billion EUR which equals to 11% of total import of Croatia amounted to 17.1 billion EUR. According to South East Europe Programme data, at the end of 2013 around 2,100 foreign daily migrants were employed in Slovenia and two thirds of them (around 1,400) were from Croatia. Additionally, both countries culturally have the same (non-)tradition of capitalism, experience at management at middle-levels and similar characteristics of their respective labour market. Finally, both Slovenian and Croatian market leaders have the same foreign owner which implies the transfer of knowledge and best practices between companies and improves the homogeneity of the sample.

Profitability of the dairy processing industry, as common measure of business success, is a consequence of natural monopoly arising from the fact that the most dairy products are consumed in the region where they are produced. Only around 8% of global dairy production is traded on the world market (The Opinion of the European Economic and Social Committee, 2010). With the EU accession (Slovenia in 2004 and Croatia in 2013), domestic dairy processing industry faced the new competition from dairies from the other EU members in milk collection (buy-out) that caused new challenges. However, large time gap between membership to the EU of Slovenia and Croatia may potentially bias obtained results so it should be keep in mind in interpretation of the results. Additionally, previous research shows that the low price of the labour is not key factor for successful business, but the efficient use of the existing capacities (Muminović and Aljinović Barać, 2015).

Business success depends on the ability to manage effectively working capital. It is a daily necessity for businesses. According to the Viqar Ali Baig (2009) working capital is just like the heart of business. And for Jain & Godha (2014) management of working capital plays a significant role in the organization as the blood plays its role in the human body.

Inadequate working capital management has the potential to disrupt business operations. In otherwise well-run business enterprises, excessive working capital can adversely impact profitability.

Some investors value working capital with a discount compared to cash. According to the Kieschnick *et al*. (2013) the incremental dollar invested in net operating working capital is worth less than the incremental dollar held in cash for the average company; the valuation of the incremental dollar invested in net operating working capital is significantly influenced by a firm's future sales expectations, its debt load, its financial constraints, and its bankruptcy risk; and the value of the incremental dollar extended in credit to one's customers has a greater effect on shareholders' wealth than the incremental dollar invested in inventories for the average firm. Knauer and Wohrmann (2013) see two benefits associated with working capital management because of its impact on company's liquidity and company's profitability. It can affect profitability in two ways: influences company's sales and hence profits and it has impact on amount of capital employed and thus the cost of capital.

In time of crises the relationship between working capital level and profitability becomes more important. Some empirical results (Afrifa and Padachi, 2016) show that there is a concave relationship between working capital level and firm profitability and that there is an optimal working capital level at which firms' profitability is maximized.

However, working capital in dairy processing industry is special and interesting research topic because of above-mentioned characteristics of the industry by itself, in addition to its' products are an important part of daily diet. There is also specific relationship between supplies and consumers. Powerful position of dairy processing industry with regard to dairy farmers is due to the possibility to buy enough raw materials abroad. That is much stronger argument then competition from dairies abroad in milk collection. On the other hand, inferior position of dairy processing industry is in regard to their customers - mainly big trading chains. Therefore, the aim of this paper is to analyse working capital management and its' impact on financial performance measured by different profitability ratios in dairy processing industry in Croatia and Slovenia before and during crisis.

2. Materials and methods

Working capital management has been a subject of analysis in many studies in various industries and in different countries. The studies researched its interaction with a great many of business success measures, such as profitability, liquidity, capital investments, etc.

Gill *et al*. (2010) investigated the relationship between working capital management and profitability in the USA on a sample of 88 companies listed on NYSE for a period 2005-2007. Teruel and Solano (2007) provided empirical evidence on the effects of working capital management on the profitability of a sample of 8,872 small and medium-sized Spanish companies. Caballero *et al* (2014) examined the link between working capital management and corporate performance for a sample of non-financial UK companies.

Hayajneh and Yassine (2011) and Sabri (2012) made an empirical analysis on Jordanian manufacturing/industry companies. Lazaridis and Tryfonidis (2006) made similar survey on Greek listed companies, Deloof (2003) on Belgian companies, Padachi (2006) on Mauritian small manufacturing, Nwidobie (2012) and Akindele and Odusina (2015) on Nigerian selected companies and Jamil *et al*. (2015) on companies in Sultanate of Oman.

Knauer and Wohrmann (2013) identified several studies regarding working capital management and its impact on company's liquidity (e.g. Moss and Stine (1993), Kim *et al*. (1998), Chiou and Cheng (2006), etc). Filbeck and Krueger (2005) discovered significant differences between industries in working capital measures across time and that these measures for working capital change significantly within industries across time. In Croatia, Aljinović Barać *et al*. (2013) empirically investigated the impact of working capital management on the profitability on the sample of trading firms, because the trade industry is the most common type of activity in Croatia.

According to our best knowledge, the relationship between profitability or liquidity and working capital both in dairy processing industry and in dairy farming have been analyzed in very few studies. Viqar Ali Baig (2009) analyzed working capital management practices of private dairy companies in India and Rao (2012) presented a research study for two dairy units from India from the point of view of the management of working capital. Rani (2013) analyzed working capital components, liquidity position and working capital turnover position of Indian dairy industry.

Working paper of Petrick and Kloss (2012) provided an empirical analysis of the marginal return on working capital and fixed capital in agriculture, based on data gathered by the Farm Accountancy Data Network from seven EU member states: Germany, Slovakia, Denmark, France, UK, Italy and Poland.

Muchiri (2012) in his MBA thesis established the relationship between working capital management and profitability in the dairy industry with a case study of New KCC Ltd. He proved the positive relationship between net income and accounts payable outstanding days and a negative relationship with inventory outstanding days, accounts receivables outstanding days which in turn influenced the cash conversion cycle.

Talas (2014) made an analysis of working capital management of leading companies in the Hungarian dairy sector between 2008 and 2012. The results show that as a result of the economic crisis, the enterprises turned to internal sources of funding, and started to optimize production processes, similarly to the deviation between the terms of the credits they provided and the terms of the payment of suppliers due to the unorganized milk producers.

Bergmark and Dahlberg (2015) examined the change in working capital as a part of the research about the capital structure of the Swedish dairy farm industry on the sample comprised of annual financial information from 100 Swedish dairy farms during the period 2000-2013.

The working hypothesis assumes that companies which manage working capital more efficiently will obtain better financial performance measured by different profitability ratios. In addition, the difference in working capital management policy before and in crisis is investigated. In order to test those relations, the following statistical hypotheses have been developed (alternative form):

Table 1 - HICP – inflation rate / Percentage annual average rate of change.
Real GDP growth rate – volume / Percentage change on previous year.

		2007	2008	2009	2010	2011	2012	2013	2014
Croatia	*Inflation*	2.7%	5.8%	2.2%	1.1%	2.2%	3.4%	2.3%	0,2%
	GDP growth	5.2%	2.1%	-6.9%	-2.3%	-0.2%	-2.2%	-0.9%	-0,4%
Slovenia	*Inflation*	3.8%	5.5%	0.9%	2.1%	2.1%	2.8%	1.9%	0.4%
	GDP growth	6.9%	3.4%	-7.9%	1.3%	0.7%	-2.5%	-1.1%	3.0%

Source: authors' adaptation from Eurostat data base (2014).

H_1 ...Working capital management components have statistically significant impact on company's profitability.

H_2 ...Working capital management in dairy processing industry do statistically significant differ in crisis and before crisis economic conditions.

3. Sample and variables description

This research is conducted on the sample of Croatian and Slovenian companies in the dairy processing industry. A relatively homogenous sample of total 34 companies and 204 company-year observations is provided. This number includes 11 companies per year from Slovenia and 23 companies per year from Croatia, covering 91% and 95.7% of total assets of companies in division C10.5 – Manufacture of dairy products in year 2014, respectively.

Annual financial reports of all Slovenian and Croatian dairy processing companies in succession from 2007 to 2014 were reviewed and companies are selected in sample according to the following criteria:

- A company's main activity is designated in division C10.5 - Manufacture of dairy products of National Classification of Economic Activities.
- Companies in the bankruptcy/liquidation process were excluded from the sample.
- The companies with missing or incomplete data were excluded.

The data set necessary for the research has been extracted from the annual financial reports databases of Croatian Financial Agency (FINA) and Agency of the Republic of Slovenia for Public Legal Records and Related Services. For comparison purposes, all data were converted into a common currency – EUR, using the average annual exchange rate provided by national banks. The data were not been deflated, because inflation rates between countries studied were not significantly different, as it can be seen from data presented in Table 1, which show average annual inflation rate measured by Harmonised Indices of Consumer Prices – HICPs and Real GDP growth rate – volume in Slovenia and Croatia for the 2007-2014 period.

Variable return on assets (ROA) ratio is proxy variables for company's profitability and it is set as dependent in multivariate analysis, similar to Afeef (2011), Charitou *et al.* (2012), Kaddumi and Ramadan (2012), etc. ROA is calculated as operating income divided by total assets. Several factors of working capital management that could affect company's profitability are considered: average collection period, inventory turnover in days, average payment period and cash gap (cash conversion cycle). Those variables are set as independents in multivariate analysis, and they are selected based on their relevance on previous research results on this topic. Average collection period (ACP) or number of days accounts receivable is used as proxy for the collection policy, similar to Shin and Soenen (1998), Deloof (2003), Lazaridis and Tryfonidis (2006), Gill *et al*. (2010), Afeef (2011), Kaddumi and Ramadan (2012), Ray (2012), etc. It is calculated as daily accounts receivable divided by sales. Expected association with firm's profitability is negative, indicating that reduction in average collection period will enhance profitability. Inventory turnover in days (INVT) or number of days inventories is used as proxy for the inventory policy and it is calculated as

daily inventories divided by the cost of goods sold. Shin and Soenen (1998), Deloof (2003), Lazaridis and Tryfonidis (2006), Gill *et. al.* (2010), Afeef (2011), Kaddumi and Ramadan (2012) and Ray (2012) used this variable and found statistically significant negative correlation with firm's profitability. Average payment period (APP) or number of days accounts payable is used as proxy for the payment policy, according to Shin and Soenen (1998), Deloof (2003), Lazaridis and Tryfonidis (2006), Gill *et al.* (2010), Afeef (2011), Kaddumi and Ramadan (2012) and Ray (2012) approach. It is calculated as daily accounts payable divided by the cost of goods sold, and expected sign of association with profitability is not uniquely determined in previous research. These three variables described above are integrated in cash gap model or cash conversion cycle (CCC) as a comprehensive measure of working capital policy, which is consistent with Deloof (2003), Lazaridis and Tryfonidis (2006), Gill *et al.* (2010), Charitou *et al.* (2012) Afeef (2011), Kaddumi and Ramadan (2012) and Ray (2012) research. It is calculated as a sum of average collection period and inventory turnover in days less average payment period and it show time lag between the expenditure for the purchase of goods and the collection for the sale of that goods. Expected association with firm's profitability is negative, indicating that effective working capital management and shortening of cash conversion cycle enhances profitability.

The variables of debt ratio, size of the company, working capital to total assets ratio and ownership have also been used for controlling the working capital management policy. According to Shin and Soenen (1998), Lazaridis and Tryfonidis (2006), Gill *et al.* (2010), Afeef (2011) and Charitou *et al.* (2012), debt ratio (DR) is proxy for leverage. Negative relation with profitability is expected, indicating that when leverage increases it will adversely affect the profitability. Variable size (SIZE) is calculated as natural logarithm of total assets and its association with firm's profitability cannot be uniquely determined. For example, Eljelly (2004) found positive correlation between size of the company and working capital management, while Ray (2012) did not found the firm size statistically significant related with profitability. Variable of working capital to total assets ratio (WCTA) is used in Padachi (2006) and Lazaridis and Tryfonidis (2006) research.

Variable ownership (OWN) is set equal to one if the company has foreign owners (i.e. non-resident individuals or entities that own more than 50% of equity in cumulative) and zero otherwise. Expected association with working capital management is positive, based on assumption that the foreign owners invest in dairy processing industry companies continuously in order to improve their profitability. Furthermore, empirical findings of Douma *et al.* (2006) show the positive effects of foreign ownership on financial performance of companies in emerging countries.

Hypothesis that working capital management in dairy processing industry do significantly differ in crisis and before crisis economic conditions is based on the fact that both Slovenia and Croatia had been affected by global financial crisis in 2009. Slovenian economy was stricken twice by the crisis: first in 2009 with a sharp fall of GDP of 7.8% and again in 2012 with GDP fall of 2.7%. It was the end of an *era of cheap money combined with no capital restrictions and stable economy that was used for stock market speculation* (Vidakovic and Zbašnik, 2014). In Croatia, crisis begun in 2009 and GDP had negative growth the whole period 2009-2014 (Table 1). Expected relation of financial crisis and working capital management is negative due to the fact that crisis made business environment worse, so companies had to put more effort in effective working capital management.

Financial stability indicator shows if the long-term asset is financed with long term (reliable) sources i.e. capital and long-term liabilities. The indicator of financial strength is *ratio of the relative theoretical free money from activities, which are the profit, increased for amortization and depreciation and cover all the obligations with that money* (Belak, Aljinović Barać, 2007). The debt to total assets ratio is common indicator of financial leverage. It defines the total amount of debt relative to assets. The higher the

Table 2 - Definition of variables.

Symbol	Variable	Explanation
ROA	Return on assets	Operating income / Average total assets
INVT	Inventory turnover	Average inventories / (Cost of goods sales/365)
ACP	Average collection period	Average accounts receivable / (Sales/365)
APP	Average payable period	Average accounts payable / (Cost of goods sales/365)
CCC	Cash conversion cycle	ACP + INVT – APP
WCTA	Net working capital to total asset	(Accounts receivable – Accounts payable) / Total Assets
DR	Debt ratio	Total liabilities / Total Assets
SIZE	Size	Ln (Total Assets)
OWN	Ownership	Domestic or foreign
KFS	Financial stability	(Capital + long term liabilities) / Long term asset
FS	Financial strength	5* (Net result + depreciation + amortisation) / Total liabilities
DR	Debt to total asset	Total debt / total asset

Source: Authors' elaboration (2016).

ratio, the higher are the degree of leverage and financial risk.

Detail description of variables used in the research is presented in the Table 2.

4. Research results and discussion

4.1. *General findings*

Descriptive statistics highlight the average, minimum and maximum values of all variables used in the research and they are shown in the table below:

Data presented in the table provide insights in working capital management features of firms in dairy industry. It shows that companies in average wait 3 months to receive payment from customers, and they use average similarly as many days to pay their creditors. The credit period granted by companies to their customers range from 1 to 828 days (or two years and three months!), while credit period granted from suppliers range from 7 to half as many days customers (i.e. 457). The longer the number of days accounts receivable, the bigger the uncertainty about the collectability of an amount is, and, consequently the bigger the probability of loss. Inventories take minimum 1 day and maximum 73 days to be sold in dairy industry company. Average inventory turnover indicate that company in average spend 18 days from the purchasing until the sales of inventory, which is expected in accordance with the nature of main inventory – raw milk. The lower the number of days inventories, the better the turnover and profitability. In addition, a decrease of cost related to inventories (e.g. insurance cost, write-off, storage cost, etc.) could be expected. Cash Conversion Cycle varies from -359 to 584 days. Although negative cash gap looks better than the fact that company should provide additional capital sources for a year and a half because its capital is tied up in the business process, shortening of cash conversion cycle by aggressive collection of receivables and/or stretching the payables could also have negative implications on sustainability of business in a long run.

4.2. *Univariate analysis*

In the first part of the empirical research, univariate analysis is conducted. In order to test hypothesis about statistically significant impact of working capital management components on firm's profitability, Pearson's correlation coefficients are calculated and the correlation matrix is presented in Table 4:

As it can be seen from the presented results, most of Pearson's coefficient values are found statistically significant.

Table 3 - Descriptive statistics of variables used.

	ACP	INVT	APP	CCC	WCTA	ROA	SIZE	FDTA	DR	KFS	FS
Mean	91.68	18.16	92.48	17.36	0.007	0.02	16.65	0.25	0.66	1.09	0.82
Std. Dev.	117.80	12.51	77.32	103.27	0.27	0.09	1.99	0.21	0.27	0.63	1.31
Min.	1.07	1.77	7.88	-359.19	-1.72	-0.53	11.42	0.00	0.09	-2.33	-2.07
Max.	828.19	73.03	457.24	584.29	0.61	0.32	21.48	0.81	2.20	3.37	11.04

Source: Estimated according to data from authors' database (2016).

There is weak negative correlation between inventory turnover and average collection period (-0.220) and average payable period (-0.327). This is expected: with increase of average collection period receivables the level of inventories decrease as it is a case if average payable period accounts payable increase. Average collection period and average payable period are moderate positive correlated (0.513) which indicates that dairy processors are able to change credit period granted from suppliers due to the changes in period of payment due to their superior position. Average collection period is strongly positive correlated (0.73) with cash conversion cycle, while average payable period has weak negative correlation (-0.204), which is in compliance with the nature of cash conversion cycle calculation as well as its interpretation. Namely, as it described above, cash gap model or cash conversion cycle (CCC) is a comprehensive measure of working capital policy and it is calculated as sum of average collection period and inventories turnover reduced by the amount of average payable period. As it expresses in number of days the length of time that company needs to convert resource inputs into cash flows, the lower the number indicates the better working capital management. The same explanation can be applied to resulted correlations of net working capital and average collection period (0.257) and average payable period (-0.241).

Moderate positive correlation between financial strength (KFS) and return on asset (0.409) was expected because higher value of financial strength indicator shows that liability are covered by higher value of free cash flow. Low positive correlation between financial strength (KFS) and average collection period (0.254) and negative correlation between financial strength (KFS) average payable periods (-0.169) are also expected because on long run intensity of money collection and possibility of prolonging the

Table 4 - Pearson's correlation coefficients matrix.

	ROA	INVT	ACP	APP	CCC	WCTA	DR	FD_TA	KFS
ROA	1	0.103	-0.030	-0.068	0.029	0.462**	-0.427**	-0.023	0.409**
INVT		1	-0.220**	-0.327**	0.115	-0.028	-0.005	0.079	-0.064
ACP			1	0.513**	0.730**	0.257**	0.059	0.327**	0.254**
APP				1	0.204**	-0.241**	0.304**	0.254**	-0.169*
CCC					1	0.471**	-0.161*	0.192**	0.409**
WCTA						1	-0.769**	-0.178*	0.958**
DR							1	0.375**	-0.665**
FD_TA								1	-0.138
KFS									1

*Note: Correlation (2-tailed) is significant **at the 0.01 level; *at the 0.05 level.*
Source: Estimated according to data from authors' database (2016).

payment of debts have direct impact on financial strength.

Unexpectedly, moderate negative correlation between debt ratio and return on assets indicates that additional indebtedness did not result in higher return on asset. Also unexpectedly, between debt to total assets ratio and return to equity ratio there is moderate negative correlation (-0.591) which indicates that additional indebtedness did not result in higher return on equity, even worse it did not cover the interest costs.

However, according to Deloof (2003:578), a shortcoming of Pearson correlation is that it does not allow to identify causes from consequences. Therefore, a multivariate analysis is also applied.

4.3. *Multivariate analysis*

OLS regression data analysis as multivariate analysis method is used to test hypotheses about impact of working capital management components and cash conversion cycle on company's profitability. The variables of debt ratio, size of the company, working capital to total assets ratio and ownership have also been used for controlling the working capital management policy. Based on Deloof (2003) methodology, general form of empirical model is:

$$ROA_i = ß_0 + ß_1*WCM_i + ß_2*DR_i + ß_3*WCTA_i + ß_4*SIZE_i + ß_5*OWN_i + e_{it} \quad (1)$$

where:

ROA_i = performance measures of profitability of company *i* return on assets (ROA)

WCM_i = four measures of working capital management of company *i* in year *t*

DR_i = debt ratio of company *i*

$WCTA_i$ = working capital to total assets of company *i*

$SIZE_i$ = size of company *i*

OWN_i = ownership of company *i*

e_i = error term of the model.

Namely, in accordance with Deloof (2003) and Kaddumi and Ramadan (2012) methodology, WCM_i varable displayed in basic form of the model above is changed with its components ACP_i, APP_i, $INVT_i$ and CCC_i in turn in order to test following statistical hypotheses:

$H_{1.1}$ ...Working capital management component of number of days inventories has statistically significant negative impact on company's profitability.

$H_{1.2}$ ...Working capital management component of number of days accounts receivable has statistically significant negative impact on company's profitability.

$H_{1.3}$ ...Working capital management component of number of days accounts payable has statistically significant positive impact on company's profitability.

$H_{1.4}$ ...Working capital management comprehensive measure of the cash conversion cycle has statistically significant negative impact on company's profitability.

Analyses results presented in Table 5 show that none of working capital management components have statistically significant impact on the profitability of the company in dairy processing industry, measured by return on assets. Contrary, cash conversion cycle has been found statistically significant correlated with return on assets. These findings are not consistent with the view of the traditional working capital theory and previous research results that assume inverse association of inventory turnover, number of days accounts receivable and cash conversion cycle and positive association of number of days accounts payable with firm's profitability. On the other hand, control variable of working capital to total assets ratio (WCTA) is found statistically significant in all models, which may be due to the level of activity: higher level of activity involves more working capital.

The possible cause of identified discrepancies could be the ongoing global financial crisis which put a number of companies into liquidity and solvency problems and call in question efficiency of working capital management policy. Therewithal, shortening of cash conversion cycle in a way of policies of strict collections and relax payments could also cause negative implications on sustainability of business and on the firm's reputation. For that reason, we

Table 5 - Multivariate analyses results.

Dependent	ROA			
Independents	INVT	ACP	APP	CCC
Constant	0.145 (0.029)	0.154 (0.019)	0.152 (0.024)	0.123 (0.064)
INVT	0.001 (0.073)	-	-	-
ACP	-	0.001 (0.064)	-	-
APP	-	-	0.001 (0.447)	-
CCC	-	-	-	0.001 (0.007)
DR	-0.072 (0.052)	-0.045 (0.259)	-0.080 (0.035)	-0.037 (0.350)
WC_TA	0.108 (0.002)	0.139 (0.001)	0.105 (0.003)	0.167 (0.000)
SIZE	-0.007 (0.075)	-0.007 (0.087)	-0.006 (0.133)	-0.005 (0.177)
OWN	0.019 (0.385)	0.015 (0.503)	0.012 (0.570)	-0.010 (0.649)
R	*0.502*	*0.503*	*0.491*	*0.518*
R Square	*0.252*	*0.253*	*0.241*	*0.269*
F test	*12.005*	*12.068*	*11.305*	*13.085*
Sig.	*0.000*	*0.000*	*0.000*	*0.000*

Source: Estimated according to data from authors' database (2016).

test whether the working capital management in dairy processing industry do significantly differ in crisis and before crisis economic condition (H2). To test these propositions, one-way ANOVA test is conducted. Results of Levene's test of homogeneity of variances indicate that the population variances are not equal, so the analysis of variance is applied to test the importance of crisis for working capital management and obtained results are presented in Table 6.

Results of analysis of the differences between group means for each variable in crisis condition and before crisis show that there are no statistical differences of working capital management policies in pre-crisis (2007-2008) and crisis (2009-2014) years. Furthermore, we found no statistically significant differences in companies' financing structure as a result of working capital management policies in investigated conditions. The explanation for this lies into the characteristics of dairy industry itself, i.e. specific characteristics of the products as a staple of daily diet and relationships with suppliers and customers. As dairy products are essential in human diet, their price elasticity of demand is inelastic and the consumption did not decrease significantly in crisis period, which is in compliance with theory on price elasticity of necessity goods.

Furthermore, both markets are dominated by market leader. In Croatia market leader has foreign ownership from 2007 and in Slovenia the same entity bought market leader in 2013. This gave them additional international experience in working capital management, additional possibility to access finance sources and of course opportunity to use synergic effects. All of that make them stronger and more resistant to change. Smaller dairies concentrate on specific market niches, again staples of the diet, and are therefore less vulnerable to crisis.

Table 6 - One-way ANOVA results.

Grouping variable	CRISIS	
Variable/test results	F	Sig.
ROA	0.186	0.667
DR	0.650	0.421
FS	0.144	0.705
LTD_D	0.040	0.841
FD_D	1.598	0.208
LTD_TA	0.072	0.788
FD_TA	0.762	0.384
IND_FIN_POL	2.150	0.144
STD_TA	0.966	0.327
NWC_TA	0.102	0.749
INVENT	2.408	0.122
ACP	0.144	0.705
APP	3.205	0.075
CCC	1.182	0.278

Source: Estimated according to data from authors' database (2016).

5. Conclusion

Working capital management includes managing the relations between company's short-term assets and liabilities in order to obtain the optimum level of both. Besides profitability, the other key objective of working capital management is to ensure liquidity. This paper provided insights into working capital management elements and its impact company's success approximated with return on assets profitability ratio on the sample of Croatian and Slovenian companies in the dairy processing industry. Also, impact of financial crisis on working capital management policies as well as on company's financial performance has been examined.

Traditional working capital theory suggest that effective use of short-term assets and liabilities will lead to increased profitability, because effective working capital management shortens the time capital is tied up in the business process and consequently reduces all related costs. However, obtained results are not consistent with the above assumptions. Our findings show that none of working capital management components significant affect profitability measured by return on assets while statistically significant relation between cash conversion cycle as working capital management comprehensive measure and profitability has been found, but in opposite direction than expected. The findings can be explained in a number of ways that are needed to be researched further. The traditional working capital theory was set on paradigm of USA economy and may not be applicable on emerging markets completely. In our case, ensuring liquidity overwhelmed completely profitability as objective due to systemic problems of liquidity, which are prevalent in the observed sample. This has led to inefficiency in working capital management, which can be addressed in the future. Our findings show that the primary concern of management is in ensuring liquidity to the exclusion of other important issues. Even though this can ensure short time survival of the company, it will be detrimental to its long term existence. Therefore, if the aim is to increase profitability of dairy industry the policy should address the issues of liquidity: the problem of non-payments of already supplied goods and services. While this is already a part of legislation, it needs to be enforced more strictly – primarily by the state setting the example.

The limitation of our research that should be keep in mind in generalization of conclusions is related to the selected sample, i.e. industry which has specificities related to the nature of the business as well as the nature of the products. However, despite this limitation, paper offers a contribution to the existing literature by examining the determinants of the working capital management which are still rather unexplored. Finally, additional analyses could be done so the future researchers are recommended to extent the spatial coverage of the research in order to explore differences in working capital management policies in different institutional and economic environments (e.g. in all EU member countries, between EU and non-EU members, etc).

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