

Financial Performance in the Public Administration Sector: Comparison Between Hungary and Romania

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We investigate the long-run relationship between profitability, liquidity and capitalization for companies acting in the public administration and defense sector from Hungary and Romania, using firm-level data for the period 2006–2015. Our panel cointegration analysis proves the existence of a long-run relationship between the analyzed variables. The DOLS results posit in the favor of a trade-off between liquidity and profitability for Hungary, but not for Romania. At the same time, the capitalization ratio negatively impacts the profitability ratio in Romania. These results are validated by a series of robustness tests, considering different profitability indicators, and partially validated by the FMOLS analysis. Our findings have noteworthy implications for the financial management of companies acting in the field of public administration and defense, showing different financial management strategies for the companies located in the two analyzed countries.

Key words: financial performance, public administration sector, firm-level data, panel cointegration

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Introduction

The nexus between profitability and liquidity represents a challenge for the optimization of companies' financial decisions. Previous literature shows that firms' financial management might have different approaches to increase the financial performances, or the level

of profitability. A first theory states that more liquid firms are, more they can fulfill their short-term obligations and increase their sales. This way firms may obtain higher discounts for early payments that ensure an increase of the profitability level (Deloof 2003). In addition, short-term liquidity sources help firms to deal with unexpected situations and to take advantage of investment opportunities, especially during economic downturn periods. This is more evident for financially constrained firms. The second theory states that higher liquidity means unemployed resources. Therefore, liquidity might endanger profitability, and a trade-off appears between liquidity and profitability (Bolek and Wilinski, 2012). Otherwise said, firms that look for profitability are determined to have a small amount of current assets (i.e. cash, inventories and trade receivables). Ukaegbu (2014) provides a reconciliation between these opposite theories. The author underlines the necessary distinction between fluctuating current assets (to be financed by short-term financial sources) and permanent current assets (to be financed by long-term sources). In addition, in economic downturn periods, it is important to have an acceptable liquidity level (Albulescu et al., 2016). As Korajczyk and Levy (2003) show, recessions put pressure on liquidity and firms may react differently to the macroeconomic context and new financial conditions.

The empirical literature shows mixed evidence when assessing the profitability – liquidity nexus. Most of firm-level applications consider, beside profitability and liquidity, the role of working capital. In this line, Smith and Begemann (1997) report for a set of South African firms that the current liquidity ratio and the quick liquidity ratio have no significant impact on the profitability level. Other studies (e.g. Raheman and Nasr, 2007; Gill, Bigger, and Mathur 2010) report a negative impact of the working capital and liquidity on the profitability level. Opposite findings are advanced by Akinlo (2011) who tests the existence of a long-run relationship between profitability and liquidity for 66 Nigerian firms and discovers a positive effect.

At the same time, the capitalization level might have in its turn a mixed effect on profitability. A good capitalization helps companies to fulfill their long-term obligations. Therefore, on the one hand, this can be a good sign for investors and creditors, facilitating the firms' access to finance and fostering thus the profitability. However, on the other hand, firms may encounter higher costs with dividends as compared with loans' interest. In this case, if internal financial sources imply higher costs than external ones, the level of profitabil-

ity might decrease. We further on test these opposite theories by focusing on the firms acting in public administration and defense sector from Hungary and Romania. We perform a comparison between the two countries to see how liquidity and capitalization interact with the profitability level for firms which are state-dependent for doing business, and to see which the particularities of this relationship are in the post-crisis period. For this purpose, we use firm-level data from 2006 to 2015, resorting to AMADEUS statistics.

Different from similar works, we check for the existence of a long-run relationship between profitability on the one hand, and liquidity and capitalization on the other hand (using the Kao's (1999) test for panel cointegration). This relationship is afterwards estimated via the Dynamic Ordinary Least Square (DOLS) regression developed by Kao and Chiang (2000) for homogenous panels, and by the Fully Modified Ordinary Least Square (FMOLS) regression, designed for heterogenous panels, advanced by Pedroni (2000). For robustness purposes, we use alternative metrics for the level of profitability, as well as for the liquidity level.

The rest of the paper is as follows. The next section presents a short literature review. The third section addresses the data and the methodology. The fourth section presents the empirical results while the fifth section addresses the robustness analysis of our empirical findings. The last section draws the conclusions.

Literature Review

The optimization of firms' financial decisions represents one of the central focus of the financial management literature. Two main internal elements influence the companies' profitability level. On the one hand, on the assets side, the way firms operate their business influence their success. Companies should be prepared to fulfill the unexpected financial obligations, and to take advantage from investment opportunities as quick as possible. This can be achieved if a sufficient level of liquidity is ensured. A high level of liquidity is particularly important in crisis times, when the access to external financing sources is restricted, or when interesting investment opportunities appear. At the same time, if the operating assets as cash, inventory or accounts receivable are too high, important resources remain unused, and might diminished the companies' profitability level. This trade-off can be better explained comparing the situation of financially constrained and unconstrained firms (Perobelli, Famá, and Sacramento 2016).

On the other hand, the structure of financing sources may influ-

ence the level of profitability. The choice between internal and external financing sources is made considering the financing costs. The financial management usually resorts to internal sources to finance the business. In this case, a high capitalization level might be equivalent with cheaper financing sources, which help to increase financial performances. A high capitalization level, associated with a good solvability, is also a sign of financial soundness and might be useful to attract new investors in the case of listed companies. However, if the internal financing sources are more expensive compared with the external ones, given the level of dividend taxes for example, a high capitalization level and therefore the use of internal sources in the detriment of external ones as bank loans, might negatively influence the profitability level.

The empirical literature usually assesses the interdependence between liquidity and profitability, which might be considered as two conflicting goals of working capital management (Smith and Bege-
mann 1997). For example, Perobelli, Famá, and Sacramento (2016) investigate different theories for the profitability – liquidity relationship, considering 872 shares of publicly-traded Brazilian companies, between 1994 and 2013. Adhikary and Papachristou (2017) search for a panel of 114 microfinance firms from South Asia, the determinants of profitability, for the period 2003 to 2011. They show that a strong capitalization, liquidity, and an increased industry concentration, are positively related with the profitability level.

Noteworthy studies focus on the working capital as a *proxy* for the liquidity level. In this line, Raheman and Nasr (2007) and Gill, Bigger, and Mathur (2010) find a negative relationship between the working capital and the profitability level. Similar findings are reported by Wasiuzzaman (2015) who uses a sample of 160 manufacturing firms in Malaysia, and an ordinary least squares (OLS) regression technique. The author's investigation shows a negative relationship between working capital (and its components) and profitability. For a set of 66 Nigerian firms Akinlo (2011) reports on contrary, a positive long-run relationship between profitability and liquidity. These results are sustained by Akinlo (2012). For the same set of companies for the period 1997–2007, the author considers the cash conversion cycle as a comprehensive measure of working capital management and suggest that firms' profitability is reduced by lengthening the number of days accounts receivable.

The relationship between capitalization and profitability is particularly important for the banking industry, given the role of regulatory capital in banks' activity. This relationship is equally impor-

tant firms, as the capitalization ratio provides information about the structure of financing sources. At the same time, from the accounting point of view, a high capitalization ratio is associated with a small leverage ratio. Higher the leverage is, more a company depends on long-term creditors for its long-term capital (Murphy 1968). Therefore, the impact on profitability depends on the trade-off between the internal and external financing sources. Given the fact that not all the companies report the level of their loans and credits, from an empirical point of view the analysis of the capitalization impact on profitability level seems to be recommended. In this line, Ghosh (2008) discovers that by taking more debt relative to own assets, firms' profits decrease. For a sample of 21 Pakistani cement companies listed on Karachi Stock Exchange for the period 2007 to 2012, Iqbal, Mulani, and Kabiraj (2013) show that there is a strong negative relationship between leverage and profitability of the firm (or a strong positive relationship between capitalization and profitability).

However, none of the aforementioned papers addresses the case of companies from the public administration and defense sector, nor they perform a comparative analysis at international level. To fill in this gap, we compare the financial management strategies of companies from Hungary and Romania.

Data and Methodology

DATA

We use AMADEUS annual data from 2006 to 2015, considering private and public companies acting in the field of 'Public administration and defense; compulsory social security' (NACE code 84). We analyze to what extent their capacity to manage short and long-term obligations affects their profitability, drawing a comparison between Hungary and Romania. We have retained into analysis only those companies for which we found at least five years of observations (we have therefore obtained an unbalanced panel). In Hungary, 22 companies were registered in 2015 in this services field. We have found satisfactory data for half of them (11 firms). In Romania, 33 companies are recorded in this industry in 2015, out of which 17 are retained into analysis. The list of the companies is presented in table 1.

The profitability of these companies is assessed using the return on equity ratio. In the main analysis, in line with similar papers, we resort to the return on equity ratio calculated based on net income (ROEni):

$$\text{ROEni}(\%) = \frac{\text{NI}}{\text{E}}\%, \quad (1)$$

TABLE 1 List of Companies Included in the Study

Hungary	<ol style="list-style-type: none"> 1. Cordate 2. Ddrfü 3. Körösfönt 4. M3 Road 5. Magyar Alkotóművészeti Közhasznú 6. Magyar Nemzeti Filmalap Közhasznú 7. MIL-EXIM 8. Norda Észak 9. Pajzs '94' 10. Pro Rekreatiöne Közhasznú 11. Value Added Solutions Consulting
Romania	<ol style="list-style-type: none"> 1. Administratia Domeniului Public si Privat Giurgiu 2. Alfa Point Protect srl 3. AMA Consultanta si Servicii 4. Compania Nationala de Administrare a Infrastructurii Rutiere 5. Compania Stingeri si Interventii 6. Davi Comfire 7. Electromagnetica Fire 8. Falck Fire Services 9. Fireproof Team 10. Geo-Sting 11. Gepro 12. Interprev Crist 13. NEI Fire Protection 14. Parc Industrial Mija 15. Parc Tehnologic si Industrial Giurgiu Nord 16. Preventfire 17. Regia Autonoma de Servicii Publice Ploiesti

where NI represents the net income and E is the average total equity for the year.

In our robustness analysis, we use two alternative metrics for profitability, namely return on equity ratio calculated using the level of profit before tax (ROE_{pbt}), and the return on assets ratio calculated using the level of profit before tax (ROA_{pbt}):

$$ROE_{pbt}(\%) = \frac{EBIT}{E} \%, \quad (2)$$

where EBT represents the earnings before income taxes.

$$ROA_{pbt}(\%) = \frac{EBIT}{TA} \%, \quad (3)$$

where TA are the total assets of the company.

In terms of explanatory variables, we consider two alternative metrics, namely the general liquidity ratio (LR) and the current ratio (CR):

TABLE 2 Summary Statistics

Country		ROEni	ROEpbt	ROApbt	LR	CR	SER
Hungary	(1)	21.32289	20.87972	7.972772	2.674272	2.972544	38.36221
	(2)	18.31500	18.95700	4.475000	1.339000	1.460000	38.83200
	(3)	98.59800	339.7150	44.49400	40.85700	45.78500	87.52600
	(4)	-76.00800	-193.7550	-7.063000	0.029000	0.029000	0.365000
	(5)	31.02288	63.29523	10.90103	6.075432	6.638432	27.79668
	(6)	0.404938	1.687614	1.321158	5.163889	5.334920	0.165771
	(7)	4.645913	14.76823	4.445159	30.79581	33.06083	1.839647
Romania	(1)	35.04374	44.64911	15.81922	1.964355	1.863652	41.84619
	(2)	31.12350	37.65400	13.19850	1.355000	1.372500	43.02350
	(3)	184.6310	236.6000	84.20600	10.51000	11.09100	93.64500
	(4)	-81.28400	-81.27900	-16.68000	0.050000	0.071000	1.212000
	(5)	34.83133	44.77107	17.49132	1.639162	1.579840	23.15735
	(6)	0.547306	0.892182	1.261623	1.874644	2.150136	0.127147
	(7)	4.865546	5.126120	5.025017	7.895040	10.70493	2.060948

NOTES Row headings are as follows: (1) mean, (2) median, (3) maximum, (4) minimum, (5) standard deviation, (6) skewness, (7) kurtosis.

$$LR(\%) = \frac{OA}{CL}, \tag{4}$$

where OA are the operating assets and CL are the current liabilities.

$$CR(\%) = \frac{CA}{CL}, \tag{5}$$

where CA are the current assets or the difference between operating assets and non-current assets.

Finally, the capitalization is assessed considering the shareholder equity ratio as follows:

$$SER(\%) = \frac{E}{TA}, \tag{6}$$

where CA are the current assets, or the difference between operating assets and non-current assets.

Table 2 presents the descriptive statistics of the sample. We notice that the profitability of the Romanian companies is higher in comparison with those from Hungary, while the liquidity is smaller. We also notice that the financial indicators' volatility is higher in Hungary. Finally, data are positively skewed but not far from the normal distribution. However, the data shows excess kurtosis for liquidity ratio, in particular for Hungary, indicating the existence of leptokurtic densities.

We start our analysis with a series of cross-sectional dependence

TABLE 3 Cross-Sectional Dependence Tests

Country	Pesaran cd Norm.	Friedman χ^2	Frees Normal			
			Test	10%	5%	1%
Romania	0.106 (0.915)	4.571 (0.995)	0.967	0.412	0.567	0.902

NOTES The null hypothesis is no cross-sectional dependence; for Hungary, the number of observations contained by the unbalanced panel is insufficient to perform cross-sectional dependence tests.

TABLE 4 Panel Unit Root Tests

Country		ROENI	ROEPBT	ROAPBT	LR	CR	SER
Hungary	(1)	-9.395***	-10.60***	-11.38***	0.942	0.773	-5.726***
	(2)	-3.233***	-4.337***	-3.225***	-0.036	-0.027	-1.420*
	(3)	27.23***	32.44***	24.14***	8.135	7.996	15.51**
	(4)	22.47***	40.13***	34.14***	2.850	2.890	7.326
Romania	(1)	-10.01***	-11.90***	-1.037	-1.292*	-0.808*	-1.230
	(2)	-3.827***	-4.327***	0.562	0.756	0.882	-0.057
	(3)	66.56***	70.47***	21.35	26.71	27.21	32.95
	(4)	116.2***	121.0***	58.23***	47.55**	47.22**	65.87***

NOTES Row headings are as follows: (1) Levin, Lin, and Chu t^* , (2) Im, Pesaran, and Shin W -stat, (3) ADF – Fisher Chi-square, (4) PP – Fisher Chi-square.

tests to understand the characteristics of our panel, to apply adequate panel unit root tests (table 3). All tests (Friedman 1937; Frees 1995; Pesaran 2004) show that the cross-sectional independence can be accepted, and we may apply first-generation panel unit root tests.

For Hungary, the panel unit root tests from the first generation indicate that profitability series are stationary (table 4). However, the opposite applies for the liquidity ratios, while for the solvency ratio we document mixed findings. For Romania we obtain similar results. In this case, classic ordinary least square (OLS) regressions might generate biased results. Even if not all our series are $I(1)$ we can check the existence of a long-run relationship between profitability on the one hand, and liquidity and solvency on the other hand.

METHODOLOGY

To test for cointegration, we use Kao's (1999) test designed for strictly homogenous panels. This test assumes cross-section specific intercepts and homogeneous coefficients on the first-stage regressors. Given that our panels include companies from the same sector (companies that have similar performances and business models), we can rely on Kao (1999) to investigate the existence of a long-run relationship.

We consider a general three-term regression:

$$y_{i,t} = \alpha_{i,t} + \beta_{i,t}x_{i,t} + \gamma_{i,t}z_{i,t} + u_{i,t}, \quad (7)$$

where $i = 1, \dots, N$ are the cross-sections, $t = 1, \dots, T$ are the observations (years in our case), $\alpha_{i,t}$ are the individual constant terms $\beta_{i,t}$ and $\gamma_{i,t}$ are slope parameters, and $u_{i,t}$ are error terms.

We therefore have:

$$y_{i,t} = y_{i,t-1} + \vartheta_{i,t}, \quad (8)$$

$$x_{i,t} = x_{i,t-1} + \varepsilon_{i,t}, \quad (9)$$

$$z_{i,t} = z_{i,t-1} + \mu_{i,t}, \quad (10)$$

where $\vartheta_{i,t}$, $\varepsilon_{i,t}$ and $\mu_{i,t}$ are the stationary disturbance terms and therefore, $y_{i,t}$, $x_{i,t}$ and $z_{i,t}$ are integrated process of order 1 for all i .

The null of no cointegration ($\rho_{i=1}$) is tested performing an ADF unit root test on residuals:

$$u_{i,t} = \rho_i u_{it-1} + w_{i,t}. \quad (11)$$

If the long-run relationship is documented, it can be tested using a modified version of the OLS regression that produce asymptotically unbiased coefficient estimates. For this purpose, we use the DOLS, which involves augmenting the cointegrating regression with lags and leads for the explanatory variables (the choice of lags and leads is made using information criteria).

The tested equation became:

$$\begin{aligned} ROENi_{i,t} = & \alpha_{i,t} + \beta_{1,i}LR_{i,t} + \sum_{k=-k_i}^{k_i} \vartheta_{1ik} \Delta LR_{i,t} + \gamma_{1,i}SOLV_{i,t} \\ & + \sum_{k=-k_i}^{k_i} \pi_{1ik} \Delta SER_{i,t} + u_{i,t}. \end{aligned} \quad (12)$$

An alternative specification is the FMOLS designed for heterogeneous panels by Pedroni (2000). The model is:

$$ROENi_{i,t} = \alpha_{i,t} + \beta_{1,i}LR_{i,t} + \gamma_{1,i}SER_{i,t} + u_{i,t}. \quad (13)$$

Empirical Results

Kao's (1999) cointegration test shows that in all the cases the null hypothesis of no cointegration is rejected (table 2). Therefore, we admit the existence of a long-run relationship. Two models are tested for each country, namely Model 1 (considering LR) and Model 2 (considering CR for liquidity).

TABLE 5 Kao's (1999) Cointegration Test: Main Results

Variable		Hungary		Romania	
		Model 1	Model 2	Model 1	Model 2
ROENİ	ADF	-2.876***	-1.542*	-2.776***	-2.785***

NOTES Notes: HO – no cointegration. *, **, and ***, mean existence of cointegration at 10%, 5% and 1%, respectively. Model 1 assumes LR for liquidity, while Model 2 considers CR.

TABLE 6 Panel DOLS: Main Results

Variable		Hungary		Romania	
		Model 1	Model 2	Model 1	Model 2
ROENİ	LR	-6.611*		-0.428	
	CR		-6.834*		-1.816
	SER	-0.604	-0.558	-0.341*	-0.265

NOTES *, **, and *** mean statistic relationship significant at 10%, 5%, 1%, respectively. Pooled mean panel estimator for homogenous panels is used. Schwarz information criterion for lag and lead selection is employed. LR – liquidity ratio (general), CR – current ratio, SER – capitalization ratio.

In what follows, we apply the panel DOLS estimator and we discover that, for Hungary there is a trade-off between profitability and liquidity, and this result is obtain either we use LR or CR for estimating the liquidity level. At the same time, the solvency ratio has no significant effect on profitability. More exactly, under Model 1, an increase of liquidity ratio (LR) with 1% generates a decrease in the profitability level of 6.61 %. Opposite findings are obtained for Romania, where a higher liquidity does not necessary have a negative impact on profitability. On contrary, the solvency ratio negatively influences the level of profitability, but this result is obtained only for Model 1. In this case, an increase in the solvency ratio with 1%, generates a decrease of 0.34% in the profitability level.

Table 7 presents the results of the FMOLS estimator. In this case, none of the coefficients are significant, although the signs remain the same as in the DOLS analysis. Given the reduced level of significance for the obtained coefficients reported in table 6, a series of robustness checks are applied in the next section.

Robusness Analysis

Two sets of analyses are performed to check the robustness of the previous findings. First, even if the profitability is assessed through the same ROE, we consider this time the profit before tax and not the net income in the denominator. Second, we estimate the profitability

TABLE 7 Panel FMOLS: Main Results

Variable		Hungary		Romania	
		Model 1	Model 2	Model 1	Model 2
ROENI	LR	-0.325		-0.218	
	CR		-0.248		-0.178
	SER	-0.739	-0.706	-0.217	-0.224

NOTES *, **, and *** mean statistic relationship significant at 10%, 5%, 1%, respectively. Pooled mean panel estimator for homogenous panels is used. Schwarz information criterion for lag and lead selection is employed. LR – liquidity ratio (general), CR – current ratio, SER – capitalization ratio.

TABLE 8 Kao's (1999) Cointegration Test: Robustness Results

Variable		Hungary		Romania	
		Model 1	Model 2	Model 1	Model 2
ROEPBT	ADF	-0.988	0.461	-2.460***	-2.451***
ROAPBT	ADF	2.266**	1.820**	-0.170	-0.201

NOTES Notes: HO – no cointegration. *, **, and *** mean existence of cointegration at 10%, 5% and 1%, respectively. Model 1 assumes LR for liquidity, while Model 2 considers CR.

with ROA, considering the profit before tax (EBIT). We start the analysis with the Kao's (1999) cointegration test (table 7), which documents the existence of a long-run relationship between our variables, for Hungary (when ROAPBT is the dependent variable) and for Romania (when ROEPBT is the dependent variable).

We continue the analysis with the DOLS estimator, and we test the regression only for those cases where the cointegrating relationship was documented (table 9). For Hungary, we obtain similar findings with those reported in table 6. While the liquidity negatively influences the level of profitability, the capitalization ratio has no significant impact. For Romania, an opposite situation appears, confirming our main findings. While liquidity does not influence the profitability level, capitalization has a negative impact for both models. Our findings can be thus considered robust relative to the way we compute the profitability level. Therefore, these results recommend different financial management strategies for companies acting in the public administration and defense sector in Hungary and Romania.

We continue our analysis with the FMOLS estimator applied for robustness check. The FMOLS results confirm the DOLS findings for Romania, showing the negative and significant impact of capitalization ratio on profitability. This means that Romanian firms which resort to internal financing sources have a smaller level of profitability

TABLE 9 Panel DOLS: Robustness Results

Variable		Hungary		Romania	
		Model 1	Model 2	Model 1	Model 2
ROEpbt	LR			1.138	
	CR				-0.634
	SER			-0.697***	-0.593**
ROApbt	LR	-5.114**			
	CR		-5.648**		
	SER	0.000	0.045		

NOTES *, **, and *** mean statistic relationship significant at 10%, 5%, 1%, respectively. Pooled mean panel estimator for homogenous panels is used. Schwarz information criterion for lag and lead selection is employed. LR – liquidity ratio (general), CR – current ratio, SER – capitalization ratio.

TABLE 10 Panel FMOLS: Robustness Results

Variable		Hungary		Romania	
		Model 1	Model 2	Model 1	Model 2
ROEpbt	LR			0.949	
	CR				0.751
	SER			-0.499**	-0.490*
ROApbt	LR	-0.272			
	CR		-0.242		
	SER	-0.025	-0.015		

NOTES *, **, and *** mean statistic relationship significant at 10%, 5%, 1%, respectively. Pooled mean panel estimator for homogenous panels is used. Schwarz information criterion for lag and lead selection is employed. LR – liquidity ratio (general), CR – current ratio, SER – capitalization ratio.

compared to more leveraged companies. While the FMOLS findings do not confirm the DOLS findings in our robustness analysis for Hungary, we notice that they confirm the main results reported in table 7. The FMOLS analysis shows that the liquidity and capitalization ratios have no significant influence on the profitability level for Hungary.

All in all, we may conclude that our results are robust to different metrics used to compute the profitability and liquidity level. However, the findings reported by the DOLS and FMOLS estimators are robust for Romania only.

Conclusions

This paper tests the role of liquidity and capitalization in enhancing the profitability level of firms acting in the public administration and defense sector, performing a comparison between Hungary and

Romania, two neighbors, post-communist countries. To this end, we use firm-level data for the period 2006 to 2015, considering 17 firms from Romania and 11 from Hungary.

We perform a panel cointegration analysis and we discover several differences between the analyzed countries. On the one hand, we notice a trade-off between profitability and liquidity in Hungary, but not for Romania. On the other hand, we discover that the financing structure does not influence the profitability in Hungary. However, an increased capitalization has a negative impact on profitability for companies acting in the public sector in Romania. These findings are robust to different specifications for the profitability and liquidity ratios, and partially robust when we compare the results of the *DOLS* and *FMOLS* estimators.

Our results add to previous empirical findings investigating the profitability – liquidity nexus, and shows that, in general, unemployed resources negatively influence the level of firms' profitability. At the same time, for the financial management of companies located in Hungary, and acting in the public administration and defense sector, it is important to know that an increased liquidity triggers a smaller profitability level. Therefore, we may assume that the Hungarian companies did not benefited from new investment opportunities in the post-crisis period, opportunities which usually help liquid firms to quickly adapt to new market conditions. For the Romanian companies, the level of liquidity has no significant influence on profitability (a similar result was reported by Smith and Bege-mann (1997) for a set of South African firms). However, a higher capitalization ratio for companies acting in the analyzed sector from Romania, negatively influences the level of profitability. This result shows that internal financing sources are more expensive compared with the external ones and it is opposed to the findings advanced by Ghosh (2008).

The findings of our paper should, however, be considered with caution. On the one hand, the level of coefficient significance is reduced, and the relationship between profitability and liquidity is not straightforward. On the other hand, our estimation may suffer for the omitted variable bias. As we have presented in Introduction, the relationship between the profitability and liquidity, as well as the relationship between profitability and capitalization, might be influenced by the leverage level of companies. At the same time, given the particularities of the analyzed sector, the findings may be influenced by the business cycle, public investment but also by the level of corruption characterizing these countries. The profitability of firms act-

ing in the public sector and defense sector increase when the access to public contracts is facilitated. Therefore, the institutional characteristics of these countries might influence the empirical findings and requires additional investigations.

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