The Effect of Working Capital, Liquidity, Solvency on Net Profit: a Case in Kosovo

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Abstract: The purpose of this study was to examine the significance of the effect of working capital efficiency, liquidity and solvency on amount of net profit. In this study, the dependent variable is Net Profit, denoted (Y), and the independent variables are: Working capital (X1), Liquidity (X2) and Solvency (X3). This research is quantitative study, where are used secondary data, which collected data from published annual financial reports, for period 2017-2021, from 30 different companies in Kosovo. The statistical data analysis is made by correlation coefficient and linear regression. The results in this study is found that working capital has significantly positive effect on net profit of company, liquidity does not affect net profit of company and solvency by debt to assets ratio does not affect net profit of the company.

Keywords: Net profit, Solvency, Liquidity, Working capital, company, accounting.

INTRODUCTION

The effect of working capital, liquidity, solvency on net profit is always a challenge for research on this subject will attract the attention of readers, the relationship between working capital, liquidity, solvency, and net profit can be complex and depends on various factors such as industry, market conditions, management efficiency, and economic environment. Is very important for every company to generate profit, increase continually their profit, and to grow up their business. The important information that wants to know every business is whether the income statement is closed with a profit or losses, and when it is closed with a profit, are interested to know the amount of the profit.

While the main objective of the company is to achieve the most important is maximize profit, to make it, is necessary to support company operation and activities by working capital and the other hand must to keep on controlling liquidity and solvency. Working capital in our study is current assets minus current liabilities. A company's liquidity refers to its ability to pay off short-term liabilities. In this study to calculate the liquidity ratio is used; current ratio = current assets / current liabilities. The company's solvency refers to its ability to pay long-term obligations. In this research to calculate solvency is used; solvency= Total debt /equity ratio.

There is very important for every company to understand that what important factors that affect profitability. In this study, based and the other previous research are selected several factors that taken to study their effect on the profit, for a certain companies in Kosovo. As we show above these factors are working capital, liquidity and solvency on net profit.

This study adopts the quantitative method, by secondary data that collected data from published annual financial reports, financial statement and balance sheet to 30 companies in Kosovo, for period 2017-2022. The data are analysis through by correlation and linear regression where are estimates and describe data, explains the relationship between one dependent variable and three independent variables. Based on the description above, in this study are three hypotheses, as: H1 There is a significance effect of working capital on net profit. H2 There is a significance effect of liquidity rations on net profit. H3 There is a significance effect of solvency rations on net profit. The Results of this study found that: working capital has significantly positive effect on net profit of company; the liquidity does not affect net profit of company; Solvency by debt to assets ratio does not affect net profit company. For further research is suggested to add more samples, to separate companies based in different type of activities, and to add more independent variables that can affect profit of company.

LITERATURE REVIEW AND DEVELOPING HYPOTHESES

Amount Net Profit, after Taxes

Profit is defined as income minus expenses during a certain period. This concept, which is assumed to be simple, creates many problems in practice. The measurement of profit depends on the estimation of income and expenses and future events. (Shuli. R & Perri. R, 2016, 121). The first infor-

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mation we want to know when we see the income statement is whether the income statement is closed with a profit or a loss, and when it is closed with a profit, we want to know the amount of the profit. So profit is the excess of income over expenses. Profitability differs from profit. Profitability is not measured in the amount of money but in the rate of return for the capital employed. Profitability is the company's ability to generate net income from activities carried out in the accounting period. Companies can maximize their profit if their managers know what factors affect profitability. In our case, we received the profit in the amount of money from the financial accounts (Ahmeti. S, 2020, 251).

Hypotheses

This study examines the relationship between the variables of working capital, liquidity rations, and solvency rations on net profit. The following is the development of the hypothesis of the variables studied:

Working capital – Companies need funds to run their business activities, and these funds are called working capital (Hidayat. I, 2023). Working capital is calculated as the difference between short-term assets and short-term liabilities. Working capital = short-term assets minus short-term liabilities. In the absence of working capital, it exists when short-term liabilities exceed short-term assets. When short-term assets exceed short-term liabilities, we are dealing with a surplus of working capital. It is estimated that the higher the working capital, the more the company can use this capital without facing financial problems. When there are more short-term assets, it also affects liquidity, because liquidity is estimated to be better. However, if the working capital is too high, this means that the funds of long-term investors are not being used efficiently, because not only do they not bring benefits, but they also have costs of maintaining and managing them (Shuli.I & Perri. R, 2016, 286).

The result of previous research conducted by Wahyuliza and Dewita, regarding the effect of working capital turnover on profitability stated that working capital had a significant positive effect on profitability. Working capital turnover has a positive and significant effect on profitability (Suratman. A, al at 2022). The working capital investment and financing policies have the most significant impact on profitability (Morshed, A. 2020, 264). The independent variables, working capital turnover and receivables turnover has a positive and significant effect on the dependent variable profitability (Herison, R., al at. 2022, 394). There is a significant relation between working capital management and profitability (Alipuor M, 2011, 6).

However, different results regarding the effect of working capital turnover on profitability were found from research conducted by (Sari), which states that working capital turnover has a significant negative effect on profitability. The working capital variable has a negative and insignificant effect on net income in the pharmaceutical sub-sector (Indrayani al at.2022, 409). Working capital has no significant effect on profitability of coal mining companies (Hidayat. I, 2023). Working capital turnover has a significant negative effect on profitability (Oktaputri. Sh.T & Setyarini.H, 2022), Is better to pay attention to the company's ability to manage working capital efficiency to support the company' operational activities so as to increase their income.

Based on the description above, the following hypotheses can be drawn:

H1 There is a significance effect of working capital on net profit.

Liquidity rations – A company's liquidity refers to its ability to pay off short-term liabilities. If a company is unable to pay its obligations when they mature, even if it will have high profitability, that company may be at risk of bankruptcy. Therefore, most analysts are interested in examining a company's liquidity indicators. Lack of liquidity can serve as a signal of deteriorating profitability. This can result in loss of ownership control or equity investments (Shuli.I & Perri. R, 2016, 284). In other hand, high liquidity is not always profitability because the company has more current assets, but the company will lose the opportunity to make a profit, because the funds are used to meet obligations (Oktaputri. Sh.T & Setyarini.H, 2022).

The result of previous research concluded by (Hidayat. I, 2023), liquidity has no significant effect on profitability. Liquidity has a significant negative effect on profitability (Oktaputri. Sh.T & Setyarini.H, 2022). Liquidity has no effect and insignificant on profitability (Suratman. A, al at, 2022). The variable liquidity ratio which i proxied by the current ration does not affect firm value (Ningsih, S,. & Sari, S.P., 2019, 357). Liquidity variable has a significant effect on profitability (Purwaningsih, E & Fida I,Q. 2022, 102). Liquidity ratios (quick ratio) have positive and significantly related to the firm profitability (Madushamka K.H.I & Jathurika, M. 2018,161). There is a negative relationship between liquidity and profitability (Raheman, 2007, 294). There is a significant relationship exists between liquidity and profitability (Ajanthan, 2013, 233). The liquid assets ratio leads to decrease in the profitability (Alshatti 2014, 62). The main liquidity ratio was regressed on the profitability ratio (Lartey 2013, 55). If the firm decreases its liquidity the profitability would be high. The results show that there is a negative relationship between profitability and liquidity, so it is essential for the every firm to maintain equilibrium between profitability and liquidity (Priya 2013, 165). There is negative relationship between the Profitability Ratio and the Liquidity Ratio. Some-times, there may be a weak positive relation between these ratios (Malik 2016,73).

Based on the description above, the following hypotheses can be drawn:

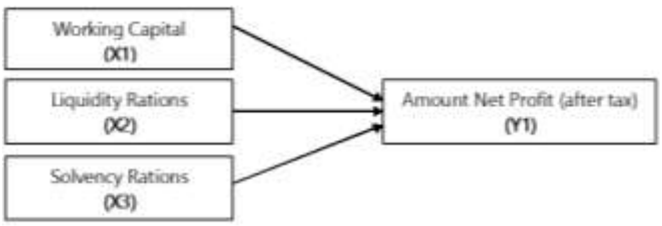
H2 There is a significance effect of liquidity rations on net profit.

Solvency ratio –The company's ability to pay long-term obligations. So it is different from liquidity in terms of time frame. Solvency represents the ratio of total liabilities to total assets. This report includes: long-term and short-term debts, as well as short-term assets and long-term assets, tangible and intangible assets. By comparing these two balance sheet positions, it can be presented to what extent the company has borrowed money to secure the assets that express the degree of capital. We get the information to calculate solvency from the company's annual balance sheet, which is prepared based on international accounting and financial reporting standards. A company with a high debt-to-asset ratio may be at risk (Ahmeti. S, 2020, 301).

The result of previous research concluded: leverage has no significant effect on profitability (Hidayat. I, 2023). Solvency has a negative and significant effect on profitability (Suratman. A, al at 2022). Debt to equity ratio have no significant effect on return on company (Kusmayadi, D,. al at. 2018, 4). Leverage significantly and negative effect on profitability (Saniloglu F.2008, 48).

H3 There is a significance effect of solvency rations on net profit.

Based on the description above, the following hypotheses can be drawn:



METHODOLOGY RESEARCH

The purpose of this study is to test whether there is any effect of liquidity, solvency and working capital on net profit. This research is quantitative explanatory study. The study used secondary data, which are collected from annual financial statements and the balance sheet, for period 2017 to 2021. As sample, are collected 61 observations from 30 private companies in Kosovo by mixed types and activities.

Variables Definition and Specification Statistics Model

This research has evaluated the effect of working capital, liquidity and solvency on net profit. The data analyses by applying linear regression using Statistical Package for the Social Science (SPSS).

In this study, the dependent variable is Net Profit, denoted (Y).

In this study, the independent variables are: Working capital (X1), Liquidity (X2) and Solvency (X3).

Statistics model - Linear regression:

$$Y_i = \beta_0 + \beta_1 x_1 + \ldots + \beta_k x_k$$

Where:

β0 = Constanta

Y = Dependent Variable (Net profit - ANP)

β1 β2 β3 = Regression Coefficient Value

X1 = 1st Independent Variable (Working capital –WoC)

X2 = 2nd Independent Variable (Liquidity – LiR)

X3 = 3rd Independent Variable (Solvency – SoR)

Working Capital

Most firms have a large amount of cash invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on the profitability of firms (Deloof M. 2003 ,9). A strong significant relationship between working capital management and profitability has been found in previous empirical work (Kesseven P. 2006, 45).

$$\textbf{Working capital} = current\ assets - current\ laibilities$$

Liquidity, refers to its ability to meet its short-term obligations.

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$$

Solvency ratio; refers to its ability to meet long-term obligations.

$$Debt\ to\ Equity\ ratio = \frac{Total\ Debt}{Equity}$$

Net profit;

$$Net\ Profit = Sales - Cost\ of\ Sales - Expenses - Tax$$

DATA COLLECTION AND ANALYSIS

Data Collection

In order to prove the hypothesis, data were collected from the annual financial statements and the balance sheet, for period 2017 to 2021, from 61 observation to 30 companies in Kosovo.

The table **1**, as can see above, including, five years, from 2017 to 2021, number of observation for every year, current assets, current liabilities, equity of owners, total debts and net profit.

Descriptive Analysis

In the following, we can present a descriptive statistical analysis table, which includes the number of observation, the statistical average, the standard deviation, (Table **2**).

Hypothesis Testing

Significance of the Correlation Coefficient

Correlative and significant relationships between them can be seen from the correlation analysis. The working capital has a correlation with the net profit with the coefficients r=0.542**, while the significance is p=0.000<0.01.

The solvency ratios has a correlation with the net profit with the coefficients r=-0.036, while the significance is p=0.781>0.05.

The liquidity ratios has a correlation with the net profit with the coefficients r=0.066, while the significance is p=0.611>0.05.

Table 1. Data from Annual Financial Reports (Source: Author's Calculation).

Years	Number of Observation	Current Assets	Current Liabilities	Equity	Total Debt	Net profit
2017	9	53,941,166.00€	29,095,922.00€	33,968,738.00€	53,421,651.00€	8,535,297.00€
2018	19	115,215,875.00€	63,720,076.00€	92,819,223.00€	107,011,569.00€	14,931,148.00€
2019	9	40,937,143.00€	30,028,730.00€	68,115,255.00€	45,002,242.00€	13,123,714.00€
2020	11	124,567,441.00€	89,129,499.00€	10,890,0027.00€	123,291,764.00€	13,784,062.00€
2021	12	153,684,014.00€	112,254,768.00€	154,313,423.00€	165,141,792.00€	23,516,205.00€

Table 2. Descriptive Statistics (Source: Authors' Calculation).

	N	Minimum	Maximum	Mean	Std. Deviation
Solvency Rations	61	-.25	99.90	5.15	15.24
Liquidity Rations	61	.14	67.28	5.02	10.11
Working Capital	61	-6440000.00	17922963.00	2690436.78	4118675.05
Amount of Net Profit (after tax)	61	-3295181.0	8595822.0	1211318.45	2130594.34
Valid N (listwise)	61				

Table 3. Correlations Matrix Table (Source: Authors' Calculation).

		Working Capital	Solvability Rations	Liquidity Rations	Amount of Net Profit (after tax)
Working Capital	Pearson Correlation	1	.134	.315*	.542**
	Sig. (2-tailed)		.304	.013	.000
	N	61	61	61	61
Solvency Rations	Pearson Correlation	.134	1	.946**	-.036
	Sig. (2-tailed)	.304		.000	.781
	N	61	61	61	61
Liquidity Rations	Pearson Correlation	.315*	.946**	1	.066
	Sig. (2-tailed)	.013	.000		.611
	N	61	61	61	61
Amount of Net Profit (after tax)	Pearson Correlation	.542**	-.036	.066	1
	Sig. (2-tailed)	.000	.781	.611	
	N	61	61	61	61

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Based on the results that descript above, it can be shows as follows in the table:

Linear Regression Analysis

In order to shed more light on the relationship of working capital on firms' profit amount we use regression analysis.

As knows, linear regression is the most basic and commonly used predictive analysis. In this case, regression estimates describe data and explain the relationship between one dependent variable and three independent variables. Following is presented the regression equation:

R-Value represents the correlation between the dependent variable and independent variables, and R-Square shows the total variation for the dependent variable that the independent variables could explain. In this case, R-Value is 0.553, and the R-Square or coefficient of determination is 0.306; otherwise, around 30.6 % of the dependent variables' variations are explained through the variables of independence.

$Y_i = \beta_0 + \beta_1 x_1 + ... + \beta_k x_k$ Y1 = Amount Net Profit, after tax (ANP) X1 = Working Capital (WoC) X2 = Liquidity Rations (LiR) X3 = Solvency Rations (SoR)	Information : β0 = Constanta Y = Dependent Variable Q Value X1 = 1^{st} Independent Variable X2 = 2^{nd} Independent Variable X3 = 3^{rd} Independent Variable

Table 4. Model Summary (Source: Authors' Calculation).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.553a	.306	.270	1820927.56

a. Predictors: (Constant), Liquidity rations, Working capital, Solvability rations.

Table 5. ANOVA[a].

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.34	3	2.78	8.38	.000[b]
	Residual	1.89	57	3.32		
	Total	2.72	60			

a. Dependent Variable: Amount of net profit (after tax)
b. Predictors: (Constant), Liquidity rations, Working capital, Solvability rations.

Table 6. Regression Coefficients of the Independent Variables (Source: Authors' Calculation).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	524325.907	290581.84		1.80	.076
	Working Capital	.294	.071	.569	4.13	.000
	Solvability Rations	-7266.306	56523.352	-.052	-.13	.898
	Liquidity Rations	-13444.796	89029.92	-.064	-.15	.880

a. Dependent Variable: Amount of Net Profit (after tax).

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is 0.000, (p = .000), which is below 0.05.

CONLUSIONS

This study' purpose was to test whether there is any effect of liquidity, solvency and working capital on net profit. Based on the results of testing in this study, we show the conclusions from the above working and calculation by analyzing the data that taken from financial statement and balance sheet to private companies in Kosovo, from period 2017-2022. It can be concluded as follows:

- Result of this study found through correlation and regression result that working capital has significantly positive effect on net profit of company.
- Based on data analysis through correlation and regression result that liquidity does not affect net profit of company.
- Data analysis through correlation and regression result that Solvency by debt to assets ratio does not affect net profit company.

The managers can create value for stockholders. The managers must look for methods to be effective on net profit of the companies. In this way to improve the performance of companies. The good managing of the working capital will have significant impact on net profit of the company. We have found a significant a positive relationship between net profit and working capital, that it means that was good managing of the working capital, in this way the managers have creating value for their companies.

Management of working capital means "management of current assets and current liabilities and financing these current assets", (Raheman A. 2007, 294).

Should to be consideration, that the higher the liquidity value indicates that the lower the potential for financial difficulties. When the company is able to fund and pay of its short-term obligation so that it can avoid financial difficulties.

The higher the level of profit or profitability the company has, the lower potential for financial difficulties experiences by the company, because it shows the company is able to generate profit by using its assets so that it avoid financial difficulties (Dwiantari R. 2021, 371).

The research has some limitations, because there does not taken a large number of companies, and does not separate as types of business, but mixed company of types and different activities.

Further research suggest to add more samples, to separate companies based in different type of activities, and to add more independent variables that can affect profit of company.

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