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The Financial factors that Influence the Profitability of SMEs

Alexandru-Emil Popa
Bucharest University of Economic Studies
Email: Alexandrue.popa@gmail.com

Radu Ciobanu
Bucharest University of Economic Studies
Email: Radu_ciobanu_86@yahoo.com

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Abstract

The main objective of this paper is to identify the financial factors that impact on the functionality and profitability of SMEs (Small and Medium-sized Enterprises). Our research has been applied to small and medium enterprises from Romania taken into consideration the financial indicators from 2009 to 2012 in order to test the correlation between them and the profitability of the invested capital. We chose SMEs because in the last decade there have been significant developments in this sector which have increased its importance. Our study results showed that managerial decisions on investment can influence decisively the profitability of SMEs especially in a period of economic instability. The importance of SMEs in a developing country like Romania is crucial, the development of this sector has direct effects on the development of the country mainly because SMEs represent about 99% of all firms in Romania, providing approximately 50% of GDP and also providing approximately 65% of the jobs.

Keywords: Profitability, SME, Managerial Decision

Introduction

Economic and social transformations caused changes in the way of doing business. At international level there are more lively and frequent public debates on the factors which influences the activities of the companies. The factors that influence the activity of a company can be divided into two main groups: micro or internal (company-specific factors) and macro factors or external (often specific to the state or region where the company operates).

Small and Medium-sized Enterprises are considered the heart of the economy in every state of the world and their importance is increasing, SMEs were recognized as the heart of economic restructuring plan in USA in 2013. These companies have a lot of specific advantages: creates new jobs, produce products and services at lower cost, generates over half of GDP and about 60% of the country's exports etc. (Nicolescu, 2001). Yet, the main argument we have in elaborating this study on SMEs is that they represent more than 95% of all companies (OECD, 2004).

Other reasons which prompted the choice of the research subject were the global economic changes in the recent years that have increasingly affected the performance of SMEs and here we mention the global economic crisis and the recent crisis of indebtedness of the Euro area. It is well known that small and medium-sized enterprises are facing increasingly more financing constraints and this affects the profitability of the firms. It is a great challenge for a SME to access loans or to attract investment which slows their growth and therefore SMEs must use other methods to assure their profitability. In our country these processes are hampered due to the characteristics of SMEs, over 99% have less than 10 employees (Nicolescu, 2012) and are therefore less attractive for the investors.

Even in this economic context, one of the main objectives of each SME remains to increase the value of investments and this can be observed by studying the rates of performance. Performance rates of firms are influenced primarily by the company's accounting results. Thus an increase in turnover often leads to an increase in profitability and the same can be said if thus a decrease of production costs, so a reduction in variable or fixed costs. But is the company's performance is not only influenced by these internal factors.

Literature review

A considerable number of studies approach the issue of performance of the SMEs both at microeconomic and macroeconomic level and proves the importance of financial management issues in terms of improved results and competitiveness of companies. This was also the main concern of managers and entrepreneurs because the company's performance is directly correlated with the SMEs chance of survival. Company's performance reflects the effectiveness and efficiency of resource utilization and ultimately contributes to the economic development of the country.

Brush, Bromiley, and Hendrickx (1999) note that the industry to which a company belongs can influence the profitability and the internal factors have an important influence. They found a significant effect of microeconomic factors on enterprise performance, an effect that appears to be greater than the effect of the industry.

Recent studies use regression analysis to shape the company's performance using as functional dependency the economic and financial indicators. Modelling of the economic performance aims to increase the efficiency by improving the efficiency by improving the interventions and adaptability of SMEs in different economic cycles (Campbell et al., 2001).

Recent literature examines the profitability of companies in different countries and sectors of the economy through indicators such as return on total assets (ROA) (Deloof, 2003), financial return (Padachi, 2006), invested capital (ROIC), return on assets (ROA) (Narware, 2010). In these cases, the elements considered in the analysis of profitability, independent variables, are financial indicators expressing working capital. The profitability at the micro level was also studied based on indicators such as turnover, working capital etc.

Additional studies that evaluates the performance of SMEs considered profit before interests and taxes (EBIT) and risk arising from the influence of using a certain financing structure (Akintoye, 2008) or economic value added (EVA), return on equity (ROE) and operating profit margin (OPM) (Goh and Ryan, 2008).

There aren't numerous studies on the factors that influence financial performance only on SMEs. Even if these companies have certain issues, however financial factors influence does not differ much from those observed among large companies. (Hakinson et al, 1997; Woldie et.al, 2008).

For Romania, some econometric models for performance analysis were used for companies listed on the Bucharest Stock Exchange. They emphasize the relationship between intangible assets and the company's performance expressed by the average annual market price, price earnings ratio and earnings per share (Purcarea and Stancu, 2011). Also, is important to take into consideration that the Romanian market has some particularities (Oprea, 2013)

Database and methodology

The database used in this study includes small and medium enterprises from Romania for the period 2009-2012. The number of companies analyzed was originally 50 and finally after successive eliminations, the database contained only 35 companies. The companies that were removed were those reporting losses for all years taken into account. Given that we must observe an influence on the SMEs profitability that companies were not relevant. We have also eliminated companies for which equity was negative, because, for example, it can come to situations where a negative equity and a net loss, get a positive financial return. Also we eliminated companies for which we did not have enough information to perform a rigorous study.

All this information was obtained from the following sources: Internet sites that provide such information, such as website of the Ministry of Finance or the financial statements (profit and loss account and balance sheet) published on the SMEs websites.

The indicators used in this study that quantifies the performance of the company are return on equity (ROE), return on invested capital (ROIC). Also to see their influence factors we considered indicators that will be presented below.

Averages of these indicators considered in the study years 2009 - 2012 are as follows. Each indicator shows the average of the variables for each of the 35 companies studied (Table 1).

Tabel 1.

Mean values regarding the performance of companies

Year	ROE	ROIC
2009	4.09%	6.77%
2010	5.96%	7.56%
2011	6.82%	8.43%
2012	7.02%	8.53%

It can be seen that in all four years, return on equity is positive and increasing, but is lower than the return on capital invested, which shows that the cost of debt is high, even higher that the profits obtained by the shareholders. This is mainly due to the financial crisis that started in 2008.

Return on invested capital measure the efficiency of resource allocation and also the quality of management in SMEs. It is an indicator to quantify the effectiveness of the company's assets. The entrepreneurs and managers measure the total performance of a SME by dividing total income by total assets. Because income is measured as the net profit and interest expense, we can take into account the entire profitability of the company's capital structure function. It is better to use net income, adding interest, as this would show the return on all assets of the company, not just capital investment by the shareholders:

$$ROIC = \frac{Net\ profit + Interest(1-taxation\ ratio)}{Permanent\ capitals},$$

This indicator highlights the performance of using the total assets of a business, namely of the capital invested in order to achieve this performance. Economic profitability level should allow compensation of shareholders and creditors, in accordance with the risk assumed.
Also ROIC is defined as measuring the efficiency in generating profits from its assets before the effects of financing. Earnings before interest and taxes (EBIT) are the accounting revenue of all operating activities.
Return on equity (ROE) is one of the major indicators followed by investors and entrepreneurs. With this rate, investors and entrepreneurs can assess whether their investment is profitable or not. In analyzing the global efficiency rates, we detach the idea of creating additional value for shareholders.

$$ROE = \frac{net\ profit}{eqiuty},$$

Return on equity analyzes the profitability on the equity investor's perspective on its net profits (net profit after tax and interest expenses) relative to book value of equity investments.
To verify which are the determinants of SME performance we reported on the literature studies globally (Narware, 2010) or those made for Romania (Dobre et al., 2012). If in these studies were used indicators such as tangible assets, company size, liquidity and growth opportunities (market to book ratio and price earnings ratio), etc., we added others besides them to capture and influence of other factors on performance of SMEs.
Factors of influence for the analysis of financial return and return on equity invested in the SMEs are shown in Table 2.

Tabel 2.
Determinants of profitability in SMEs

Determinant factor	**Formula**	**Explanation**
Tangible assets ratio	$Tang = \frac{Tangible\ assets}{total\ assets}$	Tangible assets include both fixed assets such as machinery, buildings and land, and current assets like inventory property
Growth opportunities	$M/BR = \frac{Market\ value\ of\ the\ firm}{Book\ value\ of\ the\ firm}$ $P/ER = \frac{Share\ price}{EPS}$	The company's growth opportunities are measured by market indicators such as price to book value (PBV), or price earning ratio (PER).
Solvability ratio	$Solvability\ ratio = \frac{Long\ term\ debt}{Equity}$	Creditworthiness determines constraints on cash management and hence a decrease in profitability.
Current asset turnover	$Current\ assets\ turnover = \frac{current\ assets}{revenues} * 360$	On how many days are valued current assets into cash.
Coverage of Interest	$\text{Coverage of Interest ratio} = \frac{EBIT}{Interests}$	This indicator shows how often debt costs may be covered by operating activities of the SME. This indicator is directly linked to profitability, a great value will have to lead to high profitability.

As a dependent variable we used the financial return and return on equity invested. In order to verify the impact of these factors considered independent variables on the profitability of the company we used OLS (ordinary least squares). We removed from original records the situations where there is a net loss because the indicator PER would have no relevance. We have also removed the situations where there were very high values for the solvability ratio, over 300%, because they are not relevant to the study, most of the time this situations are random.
First we checked the stationarity of the data, because this is necessary because we are talking about time series. Then, to test the multicolinearity of data we made the correlation matrix for the indicators taken into account.

Table 3.
The correlation matrix of the explanatory variables

	Tangible assets ratio	Revenues	Solvability ratio	Current asset turnover	Coverage ofInterest	Growth opportunities
Tangible assets ratio	1					
Revenues	0.34	1				
Solvability ratio	-0.32	0.008	1			
Current asset turnover	-0.24	-0.21	-0.08	1		
Coverage ofInterest	-0.03	-0.05	-0.30	0.20	1	
Growth opportunities	0.27	-0.08	0.08	-0.22	-0.24	1

We note that most variables aren't highly correlated allowing us to use them all in the same regression. We considered a strong correlation higher than 0.4.

Results
In this section we will present the results of the research and we will show the financial factors that determine the performance of SMEs. In order to prove that we used the OLS model to analyse whether the profitability can be influenced by the factors found in the previous section. It should be noted that we considered the linear dependencies between the variables considered. The results are shown in Table 4.
To estimate the influence of the financial factors on the profitability ratios we used the OLS regression model. The regression uses 35 observations on Romanian SME companies between 2009 and 2012. We did not consider in the same regression the variables correlated at a higher level than 0.4. T-statistics are in parentheses. The symbols *, **, *** represent significance levels of 10%, 5% and 1%.

Table 4.
The Model Estimated Results

Dependent variable Variable	ROE	ROIC
TANG	**-0.07**** **(-2.32)**	0.04 (1.02)
LNRevenues	**0.02***** **(4.39)**	**0.02***** **(4.56)**
Solvability ratio	**-0.02**** **(-2.39)**	**-0.01*** **(-0.74)**
Coverage of interest	**0.002***** **(5.76)**	**0.006***** **(7.49)**
Current asset turnover	0.002 (1.19)	**0.001**** **(3.53)**
Growth opportunities	-0.01 (-1.53)	**-0.001***** **(-2.23)**
Intercept	**-0.21***** **(-3.82)**	**-0.21***** **(-3.75)**
R-squared	**66.20%**	**72.16%**

From an economic point of view, financial returns are positively influenced by the turnover and interest coverage and negative by the leverage and the share of fixed assets in total assets. This last indicator negatively affects mainly due to the period of the analysis. In general SMEs with a large number of assets are acting in a industry sector hit by the financial crisis. Turnover on the other hand has a positive influence, which was expected. If the SME sells more, the profit will be higher which means a higher return.
If solvency ratio is higher, than the amount of debt is higher and this leads to higher costs for the company. These costs will negatively impact the net income and profitability which can be seen from our results.
The coverage of the cost of debt (interest) shows the company's ability to pay external investors. If a SME succeeds to cover many times their cost it means that it has a profitable operating activity and the investment brings profitability for the SME and low risk for banks.
Return on invested capital is positively influenced by turnover, interest coverage and current assets turnover and negatively by the leverage and surprising by the growth opportunities. Turnover, as in the case of ROE, has a positive influence, which was expected given that both rates take into account the net income and capital invested by shareholders. In the case of return ratios is normal for a company that has a high level of coverage of the cost of debt to generate greater confidence to shareholders.
The leverage has a negative influence overall, because a high value of it can mean a high cost of debt and therefore higher interest rates and an increase of ROIC. The result recorded on growth opportunities it is surprising. Given the economic situation in recent years this indicator reached high levels due to interest on loans which is added in the determination of the indicator. Thus, excessive debt it is unreliable for the shareholders.

Conclusion

The purpose of this study was to identify the determinants of profitability of SMEs from Romania. Finding what financial and accounting factors estimate the full performance is an approach quite difficult. The profitability of a company cannot be explained only by microeconomic factors or the trend of a particular industry. We should consider some macroeconomic factors such as inflation, unemployment, economic crises, changes in GDP, etc., and qualitative factors such as innovation capacity of companies, the knowledge embedded in the business, etc.

To quantify the performance we considered two rates, the return on equity and the return on invested capital. For each of them we verified the influence of fixed assets, turnover, price earnings ratio, duration of current assets by turnover and leverage. The results were significant for most of them, and the regression models were valid with a coefficient of determination of more than 60%.

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