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DETERMINANTS OF PROFITABILITY OF HOUSING FINANCE COMPANIES WITH SPECIAL REFERENCE TO HOUSING DEVELOPMENT FINANCE CORPORATION LIMITED.

KEYWORDS

Determinants of profitability, Growth rate of sales, Vertical integration, Operating expenses to sales ratio, growth rates of sales revenue.

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ABSTRACT *Shelter is one of the three basic necessities of a human being, the other two being food and clothing. Of these, housing is not only a basic need but it also provides a sustainable base for the upgradation of the economic status and quality of the life of people. Home is the second womb of human beings. A set of all financial arrangements that are made available by Housing Finance Companies (HFCs) to meet the requirements of housing is called 'Housing Finance'.*

In this research, the researcher has focused on examine the determinants of profitability of Housing Finance companies with reference to Housing Development Finance Corporation. For this purpose of the study, the researcher has collected 10years financial data from 2005-06 to 2014-15.

Introduction

The determination of profit is of great importance because profit is a very important aspect of business. The task of management is maximization of profits and the efficiency of a business is measured by the amount of profit earned. A business is considered to be more efficient only if it earns more profit. The profit of a business may be measured by studying the profitability of investments in it. Profitability is the ability of a given investment to earn a return from its use. This ability is referred to as learning power or operating performance of the concerned investment. Profitability is a relative term and its measurement can be achieved by profit and its relation with the other objects by which the profit is affected. The profitability is the most powerful motivational factor in any business. It is the test of efficiency and the measure of control.

The main changes in the housing industry environment include variation in partial decontrol, number of new entrants, substantial addition of capacity by existing firms and changing technology, etc.

The profitability of a firm is determined mainly by three factors, namely structure of the firm and the market, goals of the management and government policies and other external constraints. There are a number of cross-sectional studies which provide direct evidence about the determinants of profitability. These studies broadly support the view that two variables, namely, growth rate of sales and vertical integration are important determinants of the profitability. However, in addition to the above cited and empirically tested, three more variables, namely, the current ratio and operating expenses to sales ratio are also present.

Methodology

The objective of this study is to examine the determinants of profitability in HDFC. Determinants of profitability are analysed using the technique of ordinary least squares. Based on existing theories and relevant econometric empirical works, variables are selected. While using regression technique, efforts are made to reduce the problem of multi-collinearity and auto-correlation. On the basis of the theoretical foundation, the present study aims at testing the following hypotheses.

1. There is a positive relationship between the growth rate of sales of the firm and profitability ratio.
2. There is a positive relationship between vertical integration and profitability.
3. Profitability is negatively correlated with the current ratio and operating expenses to sales ratio.

The basic data relating to a sample of HDFC over the period 2005-06 to 2014-15were collected from the company's Compiled and Calculated from CAPITALINE Database.

The Variables and their measurement

Based on earlier empirical study, certain variables are chosen for analysing determinants of profitability in the HDFC. Since there are a number of factors which explain profitability and measurements of variables employed are also different, it is important to mention the variables and how they are measured. Some of the variables may be significant over a period of time while others may be prominent in cross-sectional studies. The object of this study is to identify the factors which explain profitability during the period 2005-06 to 2014-15. The analysis is based on simple linear models wherein the profitability of a firm is determined by a series of variables chosen both for their importance in our context and in the case of measurement. The variables occurring in the models and their measurement are described under here.

Profitability

Return on assets and return on sales are widely used as measures of profitability. It is assumed that management may be concerned with effective utilisation of all resources and these two measures could be proper in this line of argument. The profit rates measured by sales will give a short-term perspective of profitability because sales are annual flows. On the other hand, the return on assets will give us long-term perspective of profitability. In this sense, both the measures of profitability are used in the study.

Growth rate of sales

Growth is essential to a firm even if it is not among major objectives of the firm. The reason is that growth helps in providing the firm finances for attaining its objectives by increasing the size of its profit growth, by providing room for initiative and exercise. Managerial ability stimulates managerial efficiency leading to a lower capital-output ratio and consequently a higher profit rate. It is thus likely to have a positive association with profitability. Growth rate is measured in this study by the ratio of simple growth rate of sales of the firm and Management.

Vertical Integration

Firm-specific vertical integration, motivated by considerations such as the avoidance of costs incurred in using the market of organised production, government policies and also consider-ation of market power are the important determinant of profitability. The costs of using the market alternatively known as transaction costs include search cost, cost of drawing up

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contracts, monitoring costs, etc. The government policies are assuming an important role in determining Vertical Integration. The degree of Vertical Integration is sought to be measured by the value-added sales ratio in the analysis. Value added is defined as total sales revenue less costs of purchased inputs, customs and excise duty.

Current ratio

The management of working capital involves decisions about the amount and composition of current assets and how they are financed. Such decisions involve a tradeoff between solvency and profitability. In inter-firm comparison, the firm with higher current ratio has better liquidity. A high ratio of current assets to current liabilities may be indicative of slack management practices, as it may signal poor credit management in terms of overextended account receivables. A low ratio is also not desirable since there will be an inadequate margin of safety.

Operating expenses to sales ratio

Apart from the above discussed factors, operating expenses ratio is included as an explanatory variable in this study. A low operating ratio is by and large a test of operational efficiency. The implication of low operating expenses ratio is that relatively a high percentage share of sales is available for meeting financial liabilities like interest, taxes and dividends. Therefore, a negative relationship is expected with operating expenses and profitability.

The Models

The models to be estimated using firm specific cross-section data are proposed as follows:

1ˆ*P*= $b_0 + b_1$GROS + b_2VI + b_3CR + b_4OPES + e

Where

1ˆ*P* is the ratio of net profits to total sales revenue
GROS is the simple growth rates of sales revenue
VI is the degree of Vertical Integration
CR is the Current Ratio
OPES is the Operating Expenses to Sales ratio
b_0 Constant
b_1, b_2, b_3, & b_4 Regression Co-efficients.
e is the error component

The models were estimated using the ordinary least squares method, while estimating, checks were made for model violations such as multicollinearity. By using model the following regression analysis was examined and presented.

DETERMINANTS OF PROFITABILITY

Table No:1 DETERMINANTS OF PROFITABILITY

S. No.	Variables	Beta Co-efficients	't' Value	Result
	Constant	-0.0943		
1	Growth rate of Sales	0.0016 (0.000)	4.749	1% level
2	Vertical Integration	-0.2950 (0.168)	1.758	Not Sig.
3	Current Ratio	0.0032 (0.091)	0.035	Not Sig.
4	Operating Expenses to Sales Ratio	0.7690 (0.667)	1.154	Not Sig.
	R^2 value	**0.982**		
	Adj. R^2 value	**0.964**		
	Overall F	**21.658**		

Source : Compiled and Calculated from CAPITALINE Database.
Note: Figures in parentheses are standard errors.

Table No: 2 CORRELATION ANALYSIS

Variables	F1	F2	F3	F4
F1	1.000			
F2	-0.758	1.000		
F3	-0.391	0.639	1.000	
F4	0.144	0.215	0.773	1.000

Source : Compiled and Calculated from CAPITALINE Database.
F1 – Current Ratio; F2 – Growth rate of sales;
F3 – Vertical Integration; F4 – Operating Expenses to Sales Ratio

RESULTS

The profitability function 1ˆ*P* is defined as
1ˆ*P* = -0.0943 + 0.0016 GROS -0.2950 VI + 0.0032 CR + 0.7690 OPES

The estimated regression coefficients, their standard error and 't'-values are presented in the Table No. 1.

The value of the regression co-efficient of growth rate of sales is positive and its 't' value is significant at 1 per cent level. Therefore, the null hypothesis which states that there is no relationship between growth rate of sales and profitability is rejected. Hence, this variable turned out to be one of the important variables to influence the profitability of the concern.

It is evident from the results that the null hypothesis of no relationship between the second independent variable namely, vertical Integration and profitability is accepted at 5 per cent level and 1 per cent level. It is clear from the results that the co-efficient also shows a decrease of 2.9 per cent points in the degree of vertical integration. Given price ceilings, firms will have to internalise production to improve their profit on sales. Thus, the more integrated the firms are the more profitable they will be. However, the vertical integration is not very strong.

The third independent variable is current ratio. It is found from the results that the current ratio has only a small effect on profitability although its co-efficient is not significant at the 5 per cent and 1 per cent level. The co-efficient of current ratio where it is not significant shows that for a 1 per cent point increase in profitability, 0.30 per cent point increase in current ratio would be necessary.

The value of the regression co-efficient of operating ratio is positive and its 't' value is not significant at 5 per cent and 1 per cent level. The null hypothesis of no relationship between operating expenses to sales ratio and profitability is accepted. It is apparent from the results that the strongest structural determinant of profitability appears to be operating ratio. The co-efficients also show that an increase of 7.7 per cent points in the operating ratio can result in a 1 per cent point increase in profitability.

The overall explanatory power of the regression appears to be high. It is inferred from the co-efficient of determination (R^2), which is a measure of the extent of movement in the dependent variable and is explained by the independent variables. It is quite high i.e. 98 per cent and the adjusted explanation is around 96 per cent which is highly significant.

Here, it is important to state that the estimators of the co-efficient would not be biased with the problem of multicolinearity. This problem arises when at least one of the independent variables is a linear combination of the others. A high degree of multicolinearity will result in low 't'- ratios and, hence, it adversely affects the precision of the estimators. Therefore, this problem is examined by construction of par-wise correlation matrix of all the four independent variables. It shows that none of the selected variable is highly correlated with other independent variables.

The regression analysis shows that growth rate of sales, vertical integration, current ratio and operating expenses to sales are prominent variables in explaining profitability of firms in this industry. The significance of operating expenses ratio with a positive co-efficient and Vertical Integration and with a

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negative co-efficient indicates the firm has to concentrate more on these variables. It is important to note that efficiency in inventory management and current assets are very essential to improve profitability.

Conclusion

The four independent variables Growth rate of sales, Vertical Integration, Current ratio, Operating expenses to sales ratio are able to account for over 98 per cent of the variation in the observed values of profitability in the Housing Development Finance Corporation Limited. In a nutshell, it can be noted that the company has to consider all these possible Determinants while considering its profitability.

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