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Gradation of Financing and the Role of the type of Financing in Influencing the Growth of Sales at Each Stage: A Study of the Companies in India and Usa

Dr. Sonia Viswam
Research Scholar passed out in Finance Management
Dept. of Business Studies
Central University of Karnataka, Gulbarga 585367
soniaviswam11@gmail.com

Abstract

Pecking order theory predicts the gradation of financing of the companies but it does not explain how this gradation affect the growth of sales at each stage. The growth of sales which is possible by the prevalent type of financing at each stage is found out and the excess is attributed to the financing possible next; if Growth of sales possible by internal financing is found out then the excess Growth of sales is attributed to three other types, short-term debt, long-term debt and equity. The determinants of Growth of sales at each stage is found out Further these are analysed in the context of two countries, India and USA. Short-Term debt is found to influence Growth of sales in India whereas as in USA it is not a significant determinant when a firm reaches the level of long-term debt; it is not a significant determinant in the Growth of Sales in India and USA. The reasons behind this may the difference in the agency cots of short-term debt and long-term debt and difference in information asymmetry of short-term debt and long-term debt

Keywords: External Financing, Short Term Debt, Long Term Debt, Pecking Order theory

Introduction

The paper attempts to find the excess growth or thereby a fall behind in the sales and the determinants of the difference in the growth from the predicted growth. This is tested according to the Pecking order theory, in which financing of a firm move from Internal financing to Short-Term Debt to Long-Term Debt and Equity financing. This was analysed in the context of India and USA, This may reveal whether the presence of different methods of financing are realising into sales

Literature Review

Pecking order theory by Myers (1984) has stated that firms follow external financing in the order of Internal financing, Short-Term debt and Long-Term debt. This is also related to information asymmetry. There is less information asymmetry related to the Internal financing. so firms use them first. Then compared to Long-Term debt, Short-term debt is less risky as well as having less information asymmetry. Then they will move towards Long-term debt and Equity having highest information asymmetry is used as a last resort of financing.(Myers and Majluf ,1984) Myers (2001) stated that deficit firms use debt to finance their deficit. Surplus which is the surplus cash flow exceeding invested capital; firms do not use surplus to buy back shares or redemption of debt rather it is used to pay back the existing debt.

Jenson and Meckling (1976) have proposed the Agency cost theory. This states that when the owners or shareholders have given the powers of decision making to the managers; there will be a conflict of interests. Shareholders want to maximise their wealth by investing in long-term projects providing high returns whereas managers will try to make short term gains for raising their perks and salaries. It will affect the cost of capital and affect capital structure and sales.

In the research of Chaklader and Padmapriya (2021) the determinants of each type of financing were found out. The External Financing included Long Term Debt and Short-Term debt and Total Debt with the ratio to Total Assets. The Determinants considered were Price of Earnings ratio, Fixed Assets to Total Assets, Current Asset Inventories to Current Liabilities, “Surplusta” (Net Cash from Operating Activities-Net Cash from Investment Activities/Total Assets), Earnings Before Interest Taxes to Total Sales.

The research explains the effect of the surplus cash earnings on capital structure or leverage. The firms use less leverage when they have more earnings or surplus cash. In the case of small cap firms, the effect or surplus cash is more on Long Term Debt that is when surplus cash is higher. Long Term Debt tend to be far less than Short Term Debt. The researcher explains that it is due to the uncertain cash flows of the Small cap firms and higher chances for default. At the same time

mid cap firms have more stable cash flows and can resort to Long-Term Debt. So, when the surplus is higher Short-Term Debt is less and Long-Term debt is high. Long-Term Debt has an added advantage of low cost of capital than Short Term Debt. That is "Surplusta" is higher the Leverage is lesser". That means the firms rely on Internal Resources whenever they have a surplus in earnings. The research also states that the regression co-efficient is higher for the Long Term Debt than Short Term Debt in the case of the small cap companies. This is due to the fact that the SmallCap firms prefer to take less Long-Term Debt than the Short-Term Debt when they have surplus cash. This may be due to the fact that Short Term Debt is less risky because there is lesser chance for default. Long Term Debt is for Long Term and the chance for repayment is less. But in the case of the mid cap firms, they rely more on Long Term Debt; with a higher market capitalisation there is a guarantee of steady cash flow which can help them take Long Term Debt.

The author presents the methods for defining the optimum working capital and whether firms deviate from the working capital. The researcher had analysed the variables Inflation, GDP, Operating Income to Total Assets, Sales volatility and the lagged growth of the sales, Price to Book ratio, lagged growth of the Total Assets for analysing the optimum cash conversion cycle. He implemented discriminant analysis for finding the contributions of each variable to the optimum cash conversion cycle. The optimum working capital is related to shorter cash conversion cycle. The majority of the contribution was from lagged growth sales and sales volatility. Higher the liquidity, the optimum the working capital is. So, a shorter Cash conversion cycle is associated with higher liquidity. So shorter the Cash Conversion cycle, the optimum the Working capital. The behavioural impact of aspiring for optimum working capital during times of inflation as well as Growth of GDP is analysed. During both firms try to stick to the working capital they were having rather than moving towards the optimum capital structure. Total Assets is found to be an enabler for reaching an Optimum capital structure. Also, the effect of this will vary from industry to industry and according to the size of the firm. Larger firms are associated with optimum cash conversion cycles than smaller firms. Also, a reduction in the operating expenses can be an enabler for reaching an optimum cash conversion cycle. (Eldomiaty and Anwar, 2018)

The research stated that large firms tend to have higher Debt to Equity ratios than small firms. This is due to the facts that large firms have more access to credit due to their size which will help them to take Long-Term debt and they have higher investment needs for the large size firms. Irrespective of whether the firms are deficit or surplus firms, small cap firms have low Long Term debt to Equity ratios. At the same time Large-cap firms have high Long-term Debt to Equity ratios. The researcher also throws light on the fact that debt is used for deficit financing rather than new investments which will lead to increase in sales. They also state that debt redemptions are not used by the firms for deficit financing. (Bhama et al., 2015)

In the research of Arifa and Gyapong (2016) it was stated the association between trade credit and other variables. When a firm has got a surplus of cash flow it will invest more in trade credit. When a firm does not have surplus cash flow it will not invest in trade credit. At the same time the business environment is also influencing the propensity to invest in trade credit. The access to bank finance will increase the trade credit of firms. The firm size is directly proportional to the trade credit of the firms. The research also states that exporting firms tend to use more trade credit than domestic firms. The firms which are under financial distress will not use trade credit.

The research of Hill et al. (2012) states the behavioural approach of firms with a higher operating cash flow will result in the firms resorting to a conservative approach which is more credit to the consumers or customers whereas lesser credit from the suppliers. Banos Caballero et al. (2010,2013) has stated that the firm size and the Cash conversion cycle are inversely related. When the firms are larger, cash conversion cycle becomes shorter. This states the clear advantage of smaller firms over larger firms. He also stated an inverse relationship between Leverage ratio and Cash conversion cycle. When total debt to total assets ratio is higher, the cash conversion cycle is shorter. This points to the requirement of the funds which will expedite the process of collection of funds faster. This also points to the fact of larger cost of capital which will compel them to use the surplus cash or working capital for their investment activities.

The study analyses the variables which affect the profitability of the firms in Indonesia. The firm size is the first variable analysed and the relationship is significant. When the size is higher the profitability is lower. The profitability is measured by Earnings Per Share, Return on Assets and Return on Equity. Here Size of the firm is given by Log of Total Sales. There is a positive relationship between Return on Assets and Log of Total Sales. The Return on Assets will be higher when sales high. But Earnings per Share will high when the Total Sales is high. Whereas there is no effect of Total Sales on the Return on Equity. It also approves previous researches which states that there is an insignificant relationship between efficiency

which is Asset Turnover Ratio. The three ratios which measures Profitability Return on Assets, Return on Equity and Earnings per share shows insignificant relationship between Asset Turnover ratio. Efficiency does not lead to profitability. The Market Power is found out by the Lerner Index (Selling Price- Marginal Cost)/Selling Price. Market Power has a negative relationship with Earnings Per Share whereas there is a positive relationship between Return on Assets and Market Power. Market power increases Return on Assets and decreases Earnings per Share. There is a significant relationship between Return on Equity, Return on Assets and Earnings Per Share to the Growth in the sales and sustainable growth rate which is given by the growth in the retained earnings. (Rokhim, Wulandaro & Haryanto,2022)

Methodology

The research attempts to find whether the firms will exceed the Growth of sales as predicted by the model. Then the determinants of the excess growth of sales is found out using the model stated below

Excess Growth 1= Growth in sales by Short -Term debt+ Long-term debt + Equity

YES/NO (Excess Growth 1) = α+β1 Short Term Debt/Total Assets in previous period +β2 Long Term Debt/Total Assets in the previous period + β 3 Equity/Total Assets over the previous period + β4Net Fixed Assets/Total Assets+β5 Dividend/Total Assets +β6 Profitability+β7 Total Assets/GDP +β8Net Sales /Fixed Assets+β9Investment /Total Assets in the Previous Period. + β10 Market Capitalisation/GDP +Ɛ.
Profitability here is Earnings Before Interests and Taxes to Total Assets

(Ph.D. thesis submitted, Viswam, S (2021)
Growth Possible by Internal financing =
(Return on Assets at time t*Retention ratio) /(1- Return on Assets at time t)
(Demigurc-Kunt Maksomovic,1998)
Excess Growth 2= Growth in sales by Long-term debt + Equity

YES/NO (Excess Growth 2) = α+β1 Long Term Debt/Total Assets in the previous period + β 2 Equity/Total Assets over the previous period + β3Net Fixed Assets/Total Assets+β4Dividend/Total Assets +β5Profitability+β6 Total Assets/GDP +β7Net Sales /Fixed Assets+β8Investment /Total Assets in the Previous Period. + β9 Market Capitalisation/GDP+ +Ɛ. (Ph. D thesis submitted, Viswam, S (2021)

Growth of sales possible by Short-Term Debt= Return on Long Term capital/1- Return on Long-Term Capital (Demigurc-Kunt Maksomovic,1998)

The research finds the Growth in sales predicted by the model provided for Internal financing. If there is ‘Excess Growth in Sales’ then the presence of other types of financing is assumed. Here Growth 1 is the ‘Excess Growth of Sales possible by other types of financing except Internal financing that is Short-Term debt, Long-Term Debt and Equity financing. Here Growth 2 is the ‘Excess Growth of Sales possible by other types of financing except Internal financing and Short-Term Debt that is Long-Term Debt and Equity financing. In order to find the determinants of the ‘Excess Growth in Sales’ a linear regression model is used. If there is excess growth in sales Yes, if there is no excess growth in sales No is used. Binary Logistics Regression with the help of SPSS is used here.

Findings

Variables	Whole sector		USA		INDIA	
	B	Sig.	B	Sig.	B	Sig.
LTD/TA(t-1)	0.377	0.681	-2.62	0.145	-2.676	0.284
Eq/TA(t-1)	0.05	0.81	0.079	0.705	-2.514	0.128
STD/TA(t-1)	5.085	0.013	-1.834	0.908	6.988	0.009
NFA/TA	-0.808	0.411	-0.265	0.746	0.207	0.907
DIV/TA	-0.002	0.911	-0.207	0.377	-12.48	0.552

PROFIT/TA	10.691	0.002	27.357	0.004	12.288	0.012
TA/GDP	485.752	0.537	157.499	0.874		
Net Sales/FA	-0.049	0.138	-0.136	0.046	-0.035	0.894
Invst/TA(t-1)	-3.371	0.003	0.843	0.64	-2.906	0.147
MCAP/GDP	0	0.976	0	0.983	0.316	0.2
Constant	-1.591	0.053	-1.283	0.333	-0.867	0.601

Source Ph. D Thesis submitted (Viswam, Sonia,2021) Table 1 Determinants of 'Excess Growth in Sales' using Short-Term Debt, Long Term Debt and Equity

Profit to Total Assets (p value 0.004) and Net Sales to Fixed Assets (p value 0.046) are the significant determinants of the excess growth in the case of USA. In the case of India Short Term Debt to Total Assets (p value 0.009) and Profit to Total Assets (p value 0.012)

Whole sector		
CATEGORY	No of Cases	percentage
YES	112	70%
NO	48	30%
USA		
YES	58	72.50%
NO	22	27.50%
INDIA		
YES	54	67.50%
NO	26	32.50%

Source Ph. D Thesis submitted (Viswam, Sonia, 2021) Table 2 Percentage of Yes/No for firms using Short-Term Debt, Long Term Debt and Equity

Variables	**Whole sector**		**USA**		**INDIA**	
	B	Sig.	B	Sig.	B	Sig.
LTD/TA(t-1)	0.185	0.802	1.649	0.368	0.641	0.571
Eq/TA(t-1)	0.167	0.356	1.9	0.196	0.197	0.282
NFA/TA	-0.821	0.286	0.061	0.966	-0.324	0.656
DIV/TA	0.227	0.254	15.501	0.358	0.201	0.321
PROFIT/TA	1.069	0.468	-3.797	0.253	4.994	0.339
TA/GDP	-357.963	0.605			-199.548	0.801
Net Sales/FA	-0.008	0.267	0.343	0.127	-0.006	0.594
Invst/TA(t-1)	-0.351	0.526	-1.846	0.178	-0.051	0.96
MCAP/GDP	0	0.979	0.079	0.739	0	0.98
Constant	-0.052	0.916	-1.773	0.201	-1.056	0.196

Source Ph. D Thesis submitted (Viswam, Sonia,2021) Table 3 Determinants of Excess Growth in sales using Long-Term Debt, Equity financing

There are no significant determinants for the excess growth in India and USA. Even though Long-Term Debt is present it is not a significant determinant whether the growth will exceed or not

Whole sector		
CATEGORY	No of Cases	percentage
YES	90	56.25%
NO	70	43.75%
USA		
YES	44	55.00%
NO	36	45.00%
INDIA		
YES	46	57.50%
NO	34	42.50%

Source Ph. D Thesis submitted (Viswam, Sonia,2021) Table 4 Percentage of Yes/No for firms using Long-Term Debt and Equity

Analysis and Interpretations

The determinants of Excess Growth in sales are Profitability and Short-Term Debt. From this we can assume that Profitability and Short-Term Debt are leading to more investments leading to increase in sales. While we move towards the Long-Term Debt from Short-Term Debt it is not a significant factor in influencing whether growth will exceed or not. So, the behavioural pattern of financing is changing when the external financing is moving from Short-Term Debt to Long-Term Debt. Even though Long-Term Debt is present it is not influencing whether Growth of sales is Exceeding or falling behind. So, among Long-Term Debt and Short-Term Debt, Short-Term debt is having more decisive role in determining the Growth of sales. Short-Term Debt is having a decisive role in the context of India whereas in the context of USA Profitability and Net Sales becoming important. But when the firm moves away from the Short-Term Debt to Long-Term Debt none of the determinants are significant in deciding whether the firm will exceed or fall behind in the growth of sales. So though the Long-Term Debt is not directly affecting the 'Excess Growth of Sales' ,but when a firm moves from one method of financing to another method of financing then the factors which affect excess growth of sales vary. The determinants which affect the growth of sales are also different for India and USA

As stated by Jenson and Meckling (1976) the agency of a firm will change according to the stakeholders. This includes the type of the lenders and the relationship of the firm or the company with the lenders. When a company moves away from Short-Term Debt to Long-Term debt the type of the lenders change and thereby producing change in the agency costs. This might be impacting the determinants of the 'Excess Growth of Sales'. The influence of Short-Term Debt on 'Excess Growth of sales' may be due to the difference in the agency costs.

Eldomiaty and Anwar (2018) states that lagged growth of sales and sales volatility are determining whether a firm will reach optimum cash conversion cycle easily. The presence of Short-Term Debt is influencing the Growth of Sales in India whereas as Long-Term Debt is not found to have any influence. In such a case firms should give more focus to Short Term Debt for increasing their earnings rather than Long-Term debt.

The fact whether the Growth of the Sales or otherwise simply stated, the Growth of the Company will be greater than or exceedingly as predicted by the level of Financing allowable and what are the determinants of Exceeding or Falling behind is very significant. This is very significant because this shows whether the type of the External Financing they resorted to helped them in achieving sufficient growth by that type of financing and moving further to other types of Financing in addition to that how much that gradation of financing is impacting the sales. The existence of an excess growth shows the presence of the type of financing at the next level and this shows the role of the type of financing in generating sales. This is stated in the research of Bhama et al. (2015) which states that the behavioural approach of surplus and deficit firms differ and the deficit firms use debt for deficit financing.

The Pecking Order theory by Myers (1984) states that the gradation of the External Financing is followed. When we move from the Short -Term Debt to the Long Term Debt, the impact of the type of Financing on the Growth of the company (Growth of Sales) is further explored. Then whether the Growth of Sales will exceed the type of Financing. Investment to Total Assets over the period is significant for both India and USA. The type of financing is not significant for both the

countries. This should be analysed from the viewpoint whether the companies are exceeding in Growth or not. The companies in USA which exceeds the Growth are 55 and 57.5 for USA and India.

Even though more than 50 % of the companies are exceeding the growth possible by the Short-Term Debt, the excess growth is not determined by the excess growth is not explained by any of the factors of the model. That is Investment to Total Assets over the previous period, Net Fixed Assets to Total Assets, Dividend to Total Assets, Total Assets to GDP and Net Sales to Fixed Assets. The same results repeat for USA. The type of financing is not the determinant in these companies may be due to the reason that the retained Earnings over the previous year might be higher than expected and generated sufficient resources for Investment

Conclusions

Short-Term debt is having more influence on the excess Growth of sales in India. Long-Term debt is not showing any significant influence on the excess growth of sales in India and USA. This may be due to deficit financing, difference in the agency costs of short-term debt and long-term debt stated by other researches. I may be due to difference in information asymmetry related to short-term debt and long-term debt. But even though more than fifty percentage of the companies are showing excess growth of sales Long-term debt is not a significant factor in creating sales.

Further Research

The reason of the companies is falling behind in the sale may be due to the absence of the External Financing. This can be further clarified by the whether these companies are exceeding or falling behind the allowable External Financing with the particular level of the assets. The reasons for the lack of Growth can be over financing or under financing. The companies which fall behind from the Growth of Sales predicted and shows the presence of the other types of financing which shows that they are over financed which can be a further indication of the diversion of financing for other purposes rather than generating sales. Companies can be categorised as deficit and surplus firms and can be analysed further

References

1. Arifa, G.A & Gyapong,E.(2016).Net trade credit: what are the determinants?.The Business School ,Canterbury Christ Church University ,Canterbury,UK
2. Banos-Caballero, S., Garcıa- Teruel, P.J. and Martınez- Solano, P. (2010).Working capital management in SMEs. Accounting and Finance, Vol. 50 No. 3, pp. 511-527.
3. Banos-Caballero, S., Garcıa-Teruel, P.J. and Martınez-Solano, P. (2013).The speed of adjustment in working capital requirement.The European Journal of Finance, Vol. 19 No. 10, pp. 978-992,
4. Chaklader, B., & Padmapriya, B. (2021). Impact of cash surplus on firm's capital structure: validation of pecking order theory. *Managerial Finance*, *47*(12), 1801–1816. https://doi.org/10.1108/MF-08-2020-0417
5. Demigurc-Kunt, A., & Maksimovic, V. (1998). Institutions, Financial markets & Firm Debt Maturity. *Journal of Financial Economics*.54(3).295-336
6. Eldomiaty, T. & Anwar, M. (2018) How can firms monitor the move toward optimal working capital? Faculty of Business Administration, Economics and Political Science. British University in Egypt. Cairo, Egypt.
7. Hill, M.D., Kelly, G.W. and Lockhart, G.B. (2012). Shareholder returns from supplying trade credit. *Financial Management*, Vol. 41 No. 1, pp. 255-280
8. Jensen, M.C. and Meckling, W.H. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360
9. Myers (2001). Capital Structure. *Journal of Economic Perspective*. Vol 15(2).pp1-102
10. Myers, S.C(1984) The capital structure puzzle. *The Journal of Finance*.Vol39(3).pp575-592
11. Myers, S.C & Majluf, N.S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*. Vol 13(2).pp187-221
12. Rokhim, R., Mayasari, I., Wulandari, P., & Haryanto, H. C. (2022). Analysis of the extrinsic and intrinsic aspects of the technology acceptance model associated with the learning management system during the COVID-19 pandemic. *VINE Journal of Information and Knowledge Management Systems*.
13. Viswam, Sonia (2021). Analysis of the pattern of External Financing and its effect on Solvency: A study of select companies in India and USA. Ph.D thesis submitted. Central University of Karnataka