

Determinants of Corporate Debt Maturity of Indian Firms

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ABSTRACT

This study empirically investigates the factors influencing the debt maturity structure of Indian companies. Debt and equity obligations of a firm is clearly portrayed in the capital structure of the firm. Equity tend to remain in business for a long period of time. Now the composition of debt and its maturity is to be decided at the time of designing capital structure, as it helps the firm to make a wise choice between its assets and liabilities, thereby it helps to reduce the cost of capital and other agency costs involved. Certain factors influencing the firm and certain other factors influencing country are identified and investigated in this study. 41 non-financial firms listed on The National Stock Exchange during the period of 2012-19 is considered as sample for the study. A Fixed Effects panel regression analysis is done and the findings state that Firm Size, Operational Cycle, Firm Liquidity, Firm Leverage, and Base Rate are identified as active factors influencing debt maturity structure of Indian firms, whereas Firm Quality and Tax Rates do not influence to a large extent in Indian firms.

Keywords: *Firm Size, Operational Cycle, Leverage, Firm Quality, Tax Rate.*

JEL Classification

C23, G20, G32

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Introduction

In Corporate Finance, when it comes to decision making, there are two main areas which are considered. One is confined with Capital Structure, where companies need to take a wise decision in choosing the composition of capital between Equity and Debt. The other one is confined regarding the debt maturity structure where the companies need to take decisions regarding a choice between time of debt either it is short term or long-term. It is evidenced that firms in developing countries, usually face difficulties in obtaining long term debt, as capital markets as a prime source of finance, are not fully established and is reflected in the instability

of interest rates prevailing in market. On the other hand, developed countries, the firms find it easy to choose amongst short term debt and long-term debt as capital markets coupled with banking systems are financially very sound in nature.

Modigliani and Miller (1958) had presented in his corporate finance theorem, financing pattern is not influenced either because of existing tax structure, costs for bankruptcy, agency costs and distorted information nor maturity structure of the debt has little or no influence in determining value of the firm.

But the scenario is completely upside down in emerging countries, where capital markets is not fully developed. In such a situation deciding about debt maturity structure is pivotal to determine firm's liabilities to its asset structure to avoid the mismatch. Determining an appropriate debt structure is essential to avoid or reduce firm's cost of capital, bankruptcy costs, problems related to agency costs. In turn it can send signals to stake holders about the earning quality of the firm. Maturity structure of debt of a firm enables to have an idea about impact the credit supply on the performance of the firm. On the whole debt maturity structure gives major inferences about the financial stability among firms in developing economies (Schmukler and Vesperoni, 2006). Hence, trying to understand about how firms, manage their debt is very important for practicing executives and strategy makers.

Though decisions regarding choice among short term and long-term debt is equally important at the time of determining capital structure, but there is very little amount of empirical research is done about the debt maturity structure, particularly in developing economies like India. When we look upon the existing literature, theories such as Agency Cost theory, Liquidity Risk Theory, Tax theory which corresponds to firm level factors and there are also macroeconomic factors that are related with debt maturity structure of firms. However, there are no consistent results regarding these theories and the influence of factors, as they tend to vary with time to time. Also, not many studies were done in the context of India.

Hence, an attempt is made by identifying 41 non-financial firms listed in National Stock Exchange (NSE) during the period 2012-2019 is taken as sample to identify the factors influencing debt maturity structure of the firms in India.

Literature Review

Theoretical Framework

Agency cost theory, Tax theory, Signaling and Liquidity theory throws a lot of insights while studying about maturity structure of debt of a firm. There are also other macroeconomic variables also play a pivotal role in influencing the maturity structure debt of a firm. In this section, we try to present details about the existing theoretical literature regarding the study about maturity structure of debt among firms in India.

Agency Cost Theory

Agency costs result from the presence of differences of opinion among the management and the shareholders of a firm. Profits earned are distributed among its equity holders and debt holders. At times debt holders might be returned with large amounts which in turn will reduce the share of profit to equity holders. Because of this uneven situation, there are possibilities that equity holders may discard a project even when it has positive Net Present Value. This situation is identified as underinvestment problem by Myers (1977). To overcome the underinvestment problem, there are chances that firms are likely to raise capital by bringing in more short-term debt as there are more possibilities for it to mature formerly the exercise of

the growth options by the firm to its shareholders. Also, an attempt of maturity matching of liabilities and assets can to certain extent helps in reducing the underinvestment problem. Again, firms with a high operating cycle tend to use more short-term debt to finance its sales, as an act of maturity matching (Gul.et.al, 2011). Firms in small size are largely prone to agency problems. The same is proved in the following hypothesis, Firm size has positive effect and operating cycle has negative impact on debt maturity (Smith and Warner, 1979).

Signalling and Liquidity Risk Theories

Flannery (1996) says that more informed insiders use debt maturity as a signalling tool. Low quality firms in most cases are not able to opt for short term debt as they were not able to repay the debt within the stipulated time. On the contrary high-quality firms willingly discloses themselves to debt renegotiations risk, as they disseminate lot of information to their shareholders and in turn anticipate the disseminated evidence to turn optimistic regarding the performance of the firm and its earnings quality.

Diamond (1991) Liquidity risk is linked with debt capital when it is raised for short time if it is not renegotiated even after the positive news about the firm is signalled. At times firms uses this debt capital raised for short time even to repay their long-period debt.

Leland.et.al, (1996) in their study reveals, leverage decides about the time of debt. Firms issue long period debt when they have high debt ratio which is proven in the following hypothesis in his study. Firm quality tends to have adverse effect on maturity of debt, Firm liquidity, Firm leverage have got optimistic impact on the firm.

Tax Theory

Kane et.al, (1985) in their study on debt maturity, found that optimum debt maturity structure has a balance among corporate levy, insolvency, and floatation costs. Also found that when there is low tax rate, chances are there for firms to issue more debt for a long period. This was proved with the hypothesis that tax rates tend to come up with pessimistic effect on maturity structure of firms.

Empirical Review of Literature

Korner (2007) in their study among firms in Czech found that size of the firm, asset structure, level of leverage determines to a large extent the debt maturity structure. The analysis done using panel regression for a period of 2000 to 2004 revealed that the other determinants such as earnings growth, tax rate, volatility had no influence on maturity structure of debt.

Cai.et.al, (2008) studied about 1159 firms listed in stock exchanges from 1999 to 2004. Firm size, asset structure, corporate equity ownership and liquidity influences the maturity structure of debt to a large extent among firms.

Majumdar (2010) examined about various factors influencing debt maturity among firms listed in Bombay Stock Exchange. Results revealed collateralizable assets, leverage, firm size, and quality of firm tend to have an influence on maturity of debt by using fixed effects model. Also, the study found impact of tax rate, asset maturity and growth prospects had no testimony on the firm.

Gul et.al, (2011) studied 23 banks that was listed in Karachi Stock Exchange from 2005 to 2009. Results revealed long term debt ratio, company size and operating cycle are the major factors influencing debt by means of panel regression analysis.

Krishnankutty et al (2014) in their study found that debt maturity during the past year, leverage and earnings growth have positive influence and liquidity, tax rate and prime lending rate tend to have negative effect on using debt in Indian firms.

Correia (2014) investigated firm level factors and institutional variables was analysed 3306 non-financial firms across 13 European countries. Results revealed that legal system, size of banking industry have got influence on debt maturity. Influence of firm level factors were on par with the existing theories.

Orman and Koksal (2015) studied about the non-financial firms in Turkey. Results revealed that medium and large sized firms are closely associated with Agency theory and liquidity risk theory was found to be partially applicable to them. On the other hand, signalling theory was found to be more appropriate for publicly traded firms. Data collected for a period of 2004 to 2013 from non-financial firms were analysed using fixed effects panel regression.

Awartani et al, (2016) studied about firms in MENA region for 444 firms from 2003 to 2011. Leverage, firm size, asset structure was found to have a considerable influence on debt raised for long term. Better quality institutions with strong compliance requirements are the other factors which influence the debt maturity structure of the firm.

Kalsie and Nagpal (2016) studied about the firm level factors and macroeconomic indicators that impact debt maturity from 29 non-financial companies listed in NSE by using fixed effects panel regression. Size of the firm, Liquidity position of the firm, maturity of asset and interest rate are found to be major influencers.

Etudaiye-Muhtar et al, (2017) showed the presence of conflicting results among cost theory and signalling theory, while matching principles theory hold to be true in determining debt maturity structure also, found that long term debt is favoured by developed institutions in the economy.

Costa (2017) in their study revealed that variables such as inflation, banking size had a little significance, while firm level factors tend to exercise great significance in influencing the debt maturity of firms. Study was carried during 2007 to 2015 in Euro Zone countries and was analysed by using fixed effects regression model.

Manuelli (2019) in their study found that firms with higher earnings and growth prospectus prefer debt for long period, while debt for short period is preferred by firms operating in volatile environment. Yield to maturity is another poor indicator in deciding about the debt maturity structure of firms.

Research Methodology

Design and Objectives of this Research

This research is of a descriptive nature. The Objective pertaining to this study is to empirically find out which among the selected variables impact the term period of the Debt borrowed by companies in India, i.e., to find out the determinants of Corporate Debt Maturity of Indian Firms.

Variables measured in this research study

In this work, the Debt Maturity is the Dependent Variable. Other than the dependent variable Debt Maturity, 7 other independent variables are defined, among which 6 variables are associated with a firm, and 1 variable includes the base rate or prime lending rate which is

a Country level variable which is common for the entire nation. All these variables employed here are selected based on the previous research works. A detailed summary of all the variables with their description is described under in Table 1.

Table 1. Variable Description

VARIABLE	SYMBOL	HOW IS IT CALCULATED?	EXPECTED EFFECT ON DEBT MATURITY
Debt Maturity	LTDR	Value of Debt maturing for a period of more than 1 year /Total value of debt employed in a firm.	NA
Firm Size	SZ	Natural Logarithm of Total Assets	Positive (+)
Operational Cycle	OPERCY	Volume of Sales / Total Assets	Negative (-)
Firm Quality	QLTY	Value of Profits Before Taxes / Sales	Negative (-)
Firm Liquidity	LQTY	Value of Current Assets/Value of Current Liabilities	Positive (+)
Firm Leverage	LEV	Value of Total Debt / Total Assets employed	Positive (+)
Tax rate	TR	Current Year Taxes / Profits Before Tax	Negative (-)
Base rate (prime lending rate has been replaced by base rate in July 2010)	BR	This is the rate decided by the Reserve Bank of India and below this rate, banks cannot lend money as loans. (It is considered since banks are the principal contributor of debt capital to firms.)	Negative (-)

Source: Author's formulation based on review of literature.

Among the variables present in Table 1, Debt Maturity is the Dependent Variable. Firm Size, Operational Cycle, Firm Quality, Firm Liquidity, Firm Leverage, and Tax Rate are the firm specific independent variables, and Base Rate is the Macroeconomic or Country level independent variable.

Data

To find out the factors which are the determinants of the Debt Maturity period in firms in India, 41 non-financial firms listed on the Nifty 50 Index corresponding to the National Stock Exchange (NSE) is considered as the sample in the study. This study considers an 8-year period ranging from the years 2011-2019. Hence, this study employs a panel data approach consisting of 41 companies over a 8 year period ranging from 2011-2019.

The data regarding the 6 variables relating to firms and the dependent variable (Long Term Debt Ratio) of the selected 41 firms, have been obtained from the respective companies' annual reports which have been published officially. The data pertaining to the Base Rate has been extracted from the officially published Statistics in the World Bank Website.

Hypothesis formulated

The Hypothesis formulated in this study to proceed for empirical testing are mentioned below.

- H₁** - Firm Size positively effects Debt Maturity pattern of firms.
- H₂** - Operational Cycle negatively effects Debt Maturity pattern of firms.
- H₃** - Firm Quality negatively effects Debt Maturity pattern of firms.
- H₄** - Firm Liquidity positively effects Debt Maturity pattern of firms.
- H₅** - Firm Leverage positively effects Debt Maturity pattern of firms.
- H₆** - Tax rate negatively effects Debt Maturity pattern of firms.
- H₇** - Base Rate negatively effects Debt Maturity pattern of firms.

Software tools used for analysis

The software tools used for the analysis include Microsoft Excel 2019, E-views 11 Student Version and SPSS 16.

Analysis and Interpretation Of Results

Descriptive analysis of the Panel Variables

A basic descriptive analysis relating to the panel variables has been done and its results are presented in Table 2.

Table 2. Descriptive Statistics - Panel Variables

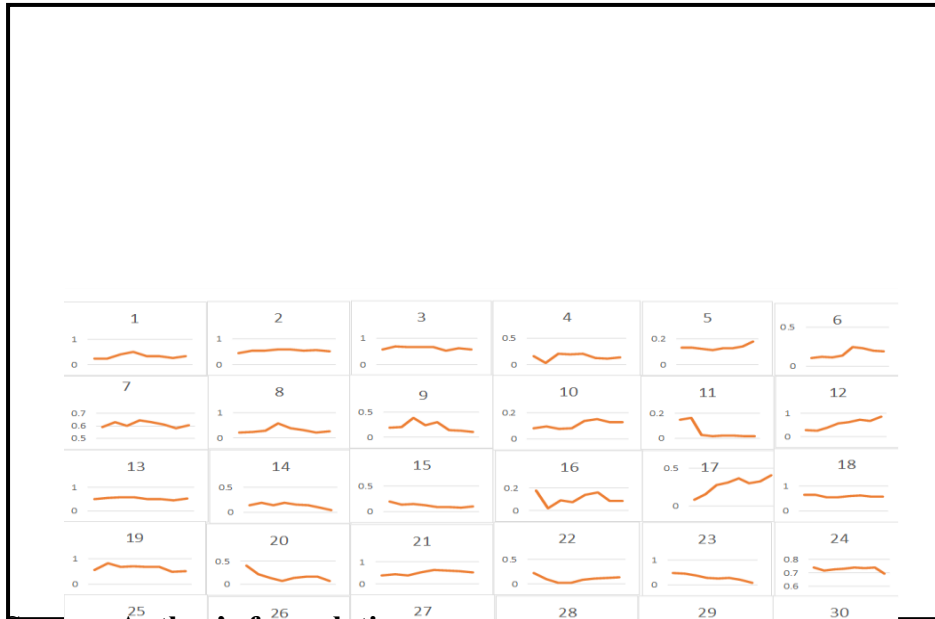
Variables	Number of Observations	Arithmetic Mean	Standard Deviation	Minimum Value	Maximum Value
LTDR	328	0.3224	0.2374	0.0022	0.8728
SZ	328	4.8591	0.6834	3.0104	6.4803
OPERCY	328	4.2519	3.9601	0.1302	22.4565
QLTY	328	1.0848	6.9705	-0.9902	94.6500
LQTY	328	1.7035	1.0583	0.3194	6.4124
LEV	328	0.4125	0.1688	0.0587	0.7727
TR	328	0.2238	0.0983	0	0.7732
BR	328	9.9068	0.4153	9.4540	10.6040

Source: Author’s Calculation and working using SPSS 16.0

From the above table (Table 2), the dependent variable LTDR (Debt Maturity) ranges from 0.0022 to 0.8728, with an average or mean value of 0.3224. Its standard deviation value is 0.2374, which states that there is not much variation in it. Among the other variables, OPERCY (Operational Cycle) and QLTY (Firm Quality), have more variation in the selected 41 companies. The rest of the variables do not have much variation in the selected 41 firms.

Basic Analysis of The Debt Maturity Structure

Figure 1. Visualisation of LTDR (Long term debt ratio) of the 41 firms in the sample corresponding to the period 2011-19



Source: Author's formulation

A basic visualisation of the dependent variable Debt.maturity (LTDR) of the selected 41 companies during the period 2011-19 is presented in Figure 1. Figure 1 depicts that the Long-term debt ratio of the companies range from 0 to 1. It is to be noted that in many companies, the ratio has decreased over the years, and in some companies the ratio has increased over the years.

Variance Analysis of the Variables employed

A Variance analysis is done for all the variables and its results are mentioned below in Table 3.

Table 3. Variance Analysis of the Variables

VARIABLES	MEASURE	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
LTDR	Overall	0.3224	0.2374	0.0022	0.8728
	Between		0.2396	0.0111	0.8328
	Within		0.0683	0.2338	0.4279
SZ	Overall	4.8591	0.6834	3.0104	6.4803
	Between		0.6798	3.4111	6.3484
	Within		0.1481	4.6531	5.061
OPERCY	Overall	4.2519	3.9601	0.1302	22.4565
	Between		3.9881	0.1515	17.4073
	Within		0.8566	3.2733	5.6483
QLTY	Overall	1.0848	6.9705	-0.9902	94.65
	Between		5.7616	-0.2403	37.0563
	Within		0.7337	0.3222	2.5824
LQTY	Overall	1.7035	1.0583	0.3194	6.4124

	Between		1.06	0.3691	4.8354
	Within		0.4993	1.0918	2.5203
LEV	Overall	0.4125	0.1688	0.0587	0.7727
	Between		0.1683	0.133	0.74
	Within		0.0678	0.3243	0.5066
TR	Overall	0.2238	0.0983	0	0.7732
	Between		0.0968	0.0038	0.4896
	Within		0.0506	0.1635	0.3102
BR	Overall	9.9068	0.4153	9.4540	10.6040
	Between		0	9.9069	9.9069
	Within		0.41465	9.4540	10.6040

Source: Author's Computation using MS Excel 2019 and SPSS 16.0

The variance analysis of the Panel Variables is carried out on 3 measures- 'Overall', 'Between', and 'Within'. Overall Variance analysis is the usually done variance analysis by considering all the panel variables of the 41 firms over the period of 8 years. 'Between' Variance Analysis is done to know about how the variables vary with respect to time across the firms. 'Within' Variance Analysis is done to check on how the variables show variance within companies across different periods.

In Table 3, when considering LTDR (Debt Maturity), its 'Between' Variance is 0.2396, whereas its 'Within' Variance is 0.0683. Its 'Between' Variance is slightly higher which states that the LTDR varies more across different firms.

When considering the firm Specific Variables SZ (Firm Size), OPERCY (Operational Cycle), QLTY (Firm Quality), LQTY (Firm Liquidity), LEV (Firm Leverage), and TR (Tax Rate), for all these variables, they're 'Between' Variance is higher than the 'Within' Variance which confirms that all these factors are firm specific in nature and they vary more across firms.

When considering the Macroeconomic or Country level Variable of BR (Base Rate which is common for the whole country), its 'Within' variation is higher than the 'Between' Variation, which confirms that this variable varies across time and not across firms and hence not a firm specific factor.

Panel Regression

The Panel Regression is a modelling method which is adapted to panel data. When estimating the Regression coefficients, Panel Regression makes it possible to control for both panel unit effect and time effect. Before going on to run a panel regression, a Panel Unit Root test is done to examine if there are any unit roots in the dataset collected.

Panel unit root testing

In this study, the Levin, Lin and Chu Panel Unit Root test is done to check if there are any unit roots in the data set. The stationarity of the panel data is checked. Here,

- i. The Null Hypothesis states that the Panel Data Set has Unit Root
- ii. The Alternate Hypothesis states that the Panel Data Set has no unit root.

The results corresponding to the Levin, Lin and Chu Panel Unit Root test are mentioned below in Table 4.

Table 4. Results of the LLC Panel Unit Root test

Variables	Statistic	P value
LTDR	-61.5465	0.0000
SZ	-5.91407	0.0000
OPERCY	-3.61899	0.0001
QLTY	-10.3053	0.0000
LQTY	-17.8451	0.0000
LEV	-26.1861	0.0000
TR	-44.1175	0.0000
BR	-5.15600	0.0000

Source: Author's Computation using E-views 11 Student Version

As presented in Table 4, the LLC test states that all the variables in the panel are stationary at level and there is no unit root as the p value for all the variables obtained is less than 0.05. Hence, all the variables are eligible to undergo a panel regression.

Panel Fixed Effects Regression – Least Square Dummy Variable Model

In this study, the Fixed Effects Panel Regression is carried out. This study empirically tests a panel data which is balanced in nature. Here, there is a possibility that the dependent variable Debt Maturity (LTDR) could be determined by some more variables which are not considered in this study. Some other variables which may impact the debt maturity pattern of the firms may include company goals and policies, company reputation or goodwill, strategies followed by the companies etc. Because of this, there is a possibility that the estimates in the regression model could be inconsistent. Hence in cases like these where there are some omitted variables and these omitted variables have a correlation with the other selected variables in the model, the fixed effects regression is carried out to control the omitted variable bias.

Generally, Fixed effects are usually employed to examine or investigate the reasons for changes within an organisation or a unit. A characteristic which is time invariant in nature cannot have an impact because it is always constant for every firm or company. One common method to run the fixed effects regression is by introducing dummy variables. After introducing the dummy variables, the equation depicting the Fixed effects model is as follows:

$$LTDR_{it} = B_0 + B_1(SZ_{it}) + B_2(OPERCY_{it}) + B_3(QLTY_{it}) + B_4(LQTY_{it}) + B_5(LEV_{it}) + B_6(TR_{it}) + B_7(BKSHZ_{it}) + B_8(CORRIN_{it}) + B_9(SCKSHZ_{it}) + y_1(DC_1) + y_2(DC_2) + \dots + y_{39}(DC_{39}) + y_{40}(DC_{40}) + E.$$

1. i corresponds to the company and t corresponds to the time
2. y_i refers to the coefficient corresponding to the dummy variable DC_i for i th firm
3. B_0 relates to the intercept and B_n refers to the coefficients corresponding to the independent variables, x_{it} ;
4. E refers to the error term.

The results of the Panel Fixed Effects Regression which is carried out using the Least Squares Dummy Variables model is presented in Table 5.

Table 5. Panel Fixed Effects Regression using the Dummy Variables model- Results

Variables	Coefficient	Standard Error	t Statistic	Prob.
SZ	-0.088	0.041	-2.164	0.031
OPERCY	-0.017	0.004	-3.974	0.000

QLTY	0.000	0.001	-0.767	0.444
LQTY	0.043	0.009	4.968	0.000
LEV	0.449	0.073	6.117	0.000
TR	0.022	0.071	0.311	0.756
BR	-0.048	0.017	-2.911	0.004
R squared	0.905		F statistic	56.766
Adjusted R squared	0.889		Probability (F statistic)	0.000

Source: Author's Computation and working through SPSS 16.0

Table 5 shows the results of the Fixed Effects Regression which is carried out using the Least Squares Dummy Variables model. In the modal, the R squared value obtained is 0.905 and the adjusted R squared value obtained is 0.889. This implies that more than about 88 % of the variance in the dependent variable- LTDR (Debt maturity) can be caused by the variables which are employed.

Firm Size (SZ) is considered to be statistically significant in determining Debt Maturity (LTDR) of firms as predicted, but, here, the findings depict that Firm Size (SZ) negatively effects Maturity of Debt (LTDR), which is not as expected. Gul, Sajid, Mumtaz and Murtaza (2012), Kalsie and Nagpal (2016), also get similar results. This implies that Larger firms borrow more of debts which have a short maturity periods while smaller firms borrow more of debt which have longer maturity periods.

Operational Cycle (OPERCY) is statistically significant in determining Debt Maturity (LTDR) of firms as predicted. Also, here an inverse effect of Operational Cycle (OPERCY) on Debt Maturity (LTDR) is found, which is as predicted. Gul, Sajid, Mumtaz and Murtaza (2012) also get similar results. This implies that firms employ more of short-term debt when there is a high operating cycle where more sales need to be financed.

Firm Quality (QLTY) is not considered to be statistically significant in determining Debt Maturity (LTDR) of the companies. Gul, Sajid, Mumtaz and Murtaza (2012), Kalsie and Nagpal (2016), also get similar results. This states that a firm's earnings and profits have no impact on a firm's decisions related to maturity structure of its debt.

Firm Liquidity (LQTY) is statistically significant in determining Debt Maturity (LTDR) of firms as predicted, Also, here, the results state that Firm Liquidity (LQTY) positively effects Debt Maturity (LTDR) of firms which is as expected. Cai, Fairchild and Guney (2008), Kalsie and Nagpal (2016) also get similar results. Hence, this states that firms which enjoy a good liquidity position raise more of long-term debt using their liquid assets, and it is a fact that liquid assets because of their nature of getting easily converted into cash have a great value.

Firm Leverage (LEV) is statistically significant in determining Debt Maturity (LTDR) of firms as predicted. Also, here, the results state that the Firm Leverage (LEV) positively effects the Debt Maturity (LTDR) of firms which is as expected. Korner (2007), Correia, Brito and Brandao (2014), Awartani, Belkhir, Boubaker and Maghyereh (2016) also get similar results.

This implies that firms which are more leveraged, employ debt with a longer maturity period to reduce the risks of liquidity and postpone the bankruptcy risks.

Tax Rate (TR) is not considered to be statistically significant in determining Debt Maturity (LTDR) of firms. Also, here, the results states that Tax Rate (TR) positively effects the Debt Maturity (LTDR) of firms, which is not as expected. Korner (2007), Correia, Brito and Brandao (2014) also get similar results where the tax rates do not cause any change in the maturity period of debt borrowed by firms. This implies that the tax theory hypothesised is not holding true for the firms.

Base Rate (BR) is statistically significant in determining Debt Maturity (LTDR) of firms. Also, here as a negative effect of Banking Industry Size (BKSZ) on Debt Maturity (LTDR) is found, which is as predicted. Krishnankutty and Chakraborty (2014) also get similar results where Base rate negatively effects Debt maturity of firms. Hence this implies that when the base rate is low, loans become cheaper and hence firms borrow more of debt which have longer maturity dates.

In a nutshell, the following are the Key findings.

- Firm Size, Operational Cycle, Firm Liquidity, Firm Leverage, and Base Rate (prevailing in the country) determine the Debt Maturity Structure or Debt Maturity period of Indian Firms. However, Firm Size does not have the predicted effect on the Debt maturity period of firms.
- Firm Quality and Tax Rate do not determine the Debt Maturity periods in Indian firms.

Conclusion

This study empirically examines the factors which determine the debt Maturity period of firms in India. 41 firms which are non-financial in nature, listed on the Nifty 50 Index of the National Stock exchange (NSE) during the period 2011-2019 is considered as a sample for the empirical testing.

The findings of this study state that Firm Size, Operational Cycle, Firm Liquidity, Firm Leverage, and Base Rate (prevailing in the country), determine the Debt Maturity of Indian Firms. This supports the findings of previous works like Korner (2007), Cai, Fairchild and Guney (2008), Gul, Sajid, Mumtaz and Murtaza (2012), Krishnankutty and Chakraborty (2014), Correia, Brito and Brandao (2014), Kalsie and Nagpal (2016), Awartani, Belkhir, Boubaker and Maghyereh (2016) etc. This study also states that firm Quality and the tax rates do not determine the Debt maturity period of firms in India. This supports the findings of previous works like Gul, Sajid, Mumtaz and Murtaza (2012), Correia, Brito and Brandao, Kalsie and Nagpal (2016) etc.

Certain theories relating to the debt maturity period in firms, are not holding true in the present Indian firms. Hence, more of Research is required in the Corporate finance area of Indian Firms, to test if the various existing theories are holding true in Indian Firms, which will be useful for the economic policy makers as the debt maturity structure is an important aspect which has several salient implications for the macroeconomic and financial stability in emerging and developing countries.

Bibliography

Awartani, B., Belkhir, M., Boubaker, S., & Maghyereh, A. (2016). Corporate debt maturity in

- the MENA region: Does institutional quality matter? *International Review of Financial Analysis*, 46(1), 309–325.
- Cai, K., Fairchild, R., & Guney, Y. (2008). Debt maturity structure of Chinese companies. *Pacific-Basin Finance Journal*, 16(3), 268–297.
- Correia, S., Brito, P., & Brandão, E. (2014). Corporate debt maturity: An international comparison of firm debt maturity choices. (*Working Paper No. 544*). *Universidade do Porto, Faculdade de Economia do Porto*.
- Costa, E.A.R. (2017). Determinants of Corporate Debt Maturity Structure: A Study in Euro Zone Countries.
- Diamond, D. W. (1991). Debt maturity structure and liquidity risk. *The Quarterly Journal of Economics*, 106(3), 709–737.
- Etudaiye-Muhtar, O. F., Ahmad, R., & Matemilola, B. T. (2017). Corporate debt maturity structure: The role of firm level and institutional determinants in selected African countries. *Global Economic Review*, 46(4), 422–440.
- Flannery, M. J. (1986). Asymmetric information and risky debt maturity choice. *The Journal of Finance*, 41(1), 19–37.
- Gul, S., Sajid, M., Mumtaz, R., & Murtaza, G. (2012). The determinants of corporate debt maturity structure: A case study of Pakistan. *African Journal of Business Management*, 6(14), 4998-5003.
- Kalsie, A., & Nagpal, A. (2016). The Determinants of Corporate Debt Maturity for NSE-Listed Corporates. *FIIB Business Review*, 7(1), 43–56.
- Kane, A., Marcus, A. J., & McDonald, R. L. (1985, December). Debt policy and the rate of return premium to leverage. *Journal of Financial and Quantitative Analysis*, 20(4), 479–499.
- Korner, P. (2007). The determinants of corporate debt maturity structure: Evidence from Czech firms. *Czech Journal of Economics and Finance*, 57(3–4), 142–158.
- Krishnankutty, R., & Chakraborty, K.S. (2014). The Determinants of Corporate debt maturity: a study on listed companies of Bombay Stock Exchange 500 index. *Romanian Economic Journal*, 17(51), 67-90.
- Leland, H.E., & Toft, K.B. (1996). Optimal Capital Structure, Endogenous Bankruptcy, and the Term Structure of Credit Spreads. *The Journal of Finance*, 51(3), 987 – 1019.
- Majumdar, R. (2010). The Determinants of Corporate Debt Maturity: A Study of Indian Firms. *The IUP Journal of Applied Finance*, 16(2), 70-80.

- Manuelli, R.E. (2019). What Determines Debt Maturity? *Federal Reserve Bank of St. Louis Review*, 101(3), 155-76.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American economic review*, 48(3), 261–297.
- Morris, J.R. (1992). Factors affecting the maturity structure of corporate debt. *Working Paper, College of Business and Administration, University of Colorado at Denver*.
- Myers, S.C. (1977). Determinants of corporate borrowing. *Journal of financial economics*, 5(2), 147–175.
- Orman, C., & Köksal, B. (2015). Structure of debt maturity across the firm type spectrum. *University Library of Munich, Germany*.
- Schmukler, S. L., & Vesperoni, E. (2006). Financial globalization and debt maturity in emerging economies. *Journal of Development Economics*, 79(1), 183–207.
- Smith, C. W., & Warner, J.B. (1979). On Financial Contracting: An Analysis of Bond Covenants. *Journal of Financial Economics*, 7(2), 117-161.