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INTERNAL & EXTERNAL DETERMINANT OF CAPITAL STRUCTURE: A STUDY OF NON-FINANCIAL COMPANIES LISTED AT KARACHI STOCK EXCHANGE

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Abstract

The aim of this study is to investigate the elements influencing the financial performance of non-monetary area organizations in Pakistan. Different parts of the organizations and the general macroeconomics of the nation are inspected to decide the elements influencing everything. Several regression models, including collective regression, static consequence, and random effect models, are utilized to investigate the determinants of the debt ratio, short-term debt ratio, and leverage proportion, and influence extent. It is found that the proper impact model is the best in making sense of the debt proportion and short-term debt ratio. The result of the review shows that elements like the return on assets, size, and liquidity have an opposite relationship with the debt ratio, while substantial quality, unfamiliar direct speculation, and money supply have a positive relationship with the debt ratio. Because of the short-run debt ratio, liquidity, substantial-quality tangibility, and money supply have a positive relationship. Other organization explicit and macroeconomic factors were viewed as unimportant in deciding the debt ratio and short-run debt ratio. Moreover, the investigation discovers that on account of the leverage ratio, all organization's explicit and macroeconomic factors are inconsequential. The result of this study might give helpful bits of knowledge to policymakers and professionals in the non-monetary area of Pakistan.

Keywords: Capital structure, Company specific variables, Macroeconomic Variables, Pooled Regression model, Fixed effect model & Random effect model.

Introduction

Composition of capital structure be situated the significantly imperative area of corporate finance. The capital composition be situated the combination of small term debt, extended term debt in addition the owner's equity (Nizam and Liaqat, 2022). The Capital structure defines us the way in which a firm can finance and run its overall operational activity and accomplish growth by using different sources of funds (Mahmood, Herani, Rajar & Farooqi, 2009). A large number of theories such as the modigliani & miller theorem, striking order theory, capital signaling principle, theory's off trade, agency theory has been turned out in the direction of be known to explain the choice of the financing mix, however none of the above theories are accepted universally (Bokpin, 2009).

Few studies have been carried out to find out the affiliation of external factor (macroeconomic variables) to the high-quality of assets resources domain.

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Debt ratios in developing countries are more or less affected in the same pattern and a variety of variables which are also valid for advanced countries (Nizam and Liaqat, 2022), however differences exist in the manner of these variables are influenced by dissimilar country's dynamics, like gross domestic product (GDP), rate of inflation, in addition the advancement of the capital marketplaces etc. (Booth, Aivazian, Demirguc-Kunt, & Maksimovic, 2001).

Shah and Hijazi (2004) have found 25 percent variation in the capital structure due to the company specific variables. For this study we have consider both corporations exact in addition macroeconomic variables over-the choice of assets domain.

Pakistan is an underdeveloped economy with few stock exchanges (i.e. Karachi, Lahore and Islamabad), and the Karachi stock market is the biggest among all. There are 410 non-financial companies (according to the data available in the balance sheet analysis 2005-2010) are listed in stock exchange. There is a vital divergence present between the structure of the capital composition of the financial and non-financial companies, for this reason KSE listed non-financial sector companies are selected.

Capital Structure

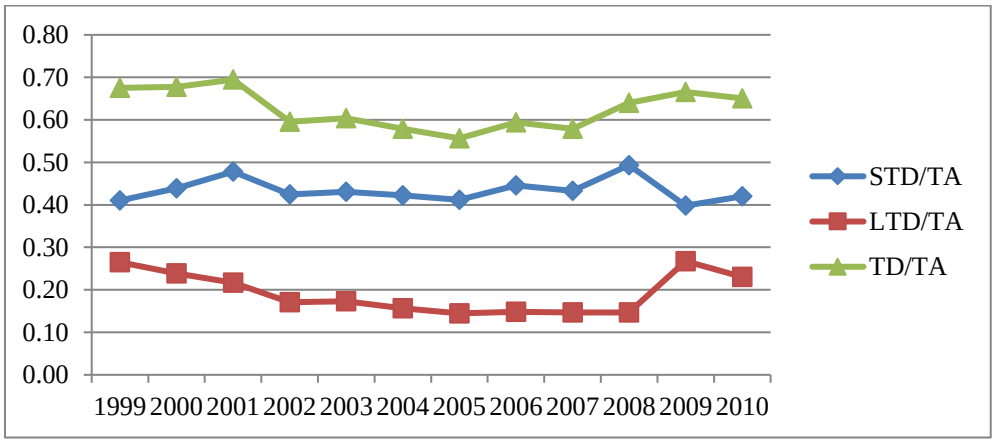
Following debt ratios are computed for the assessment of the capital structure.

Debt Ratio

Small term debt (proportion)

Leverage ratio

Figure 1.1



The above figure reflects the trend of debt ratios of non-financial companies listed in KSE during 1999-2010, from 2002 to 2007 industry debt ratios are nearly consistent, whereas for two specific periods i. e. 1999 to 2001 and 2008 to 2010 the leverage ratio in addition small means debt proportion is moving inversely.

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Hypotheses

This study is prepared to establish the following effects:

H_1: Determination for capital structure as internal factors influence.

H_2: Determination for capital structure as external factors influence.

Literature Review

The purpose of the study is to compare these theories to the manufacturing sector data in Pakistan. Situated biting order, vocation contaminated theory, and intervention philosophy are capital composition theories that were adopted from western nations (Nizam et al. (2022). The results clearly show how these ideas were combined. Because the liquidity and cost-effectiveness are positioned incorrectly in relation to the debit ratios, the result supports the pecking order theory. The trade-off theory is supported by the inverse link between earnings volatility and debt ratios. The Pakistani manufacturing firms greatly be dependent on happening small tenure debt in place of a supernumerary of extended tenure debt and it is because of the undeveloped bond market and the huge cost of long-term debt (Sheikh & Wang, 2011).

Chinese companies used the least amount of long-term debt in their capitalization—less than 10%—compared to the other nations that have been the subject of previous research. Results show that profitability and company growth are inextricably linked to debt ratio, whereas debt proportion is directly linked to the firm's tangibility as well as company scale. The China bond market was roughly 30% of GDP at the end of 2000, which is significantly less than other Asian emerging countries. (Bhabra, Liu, & Tirtiroglu, 2008).

Unique or specialized product firms have relatively low employees quit rates and those firms have lesser amount of debt. Because firms having unique or specialized product line have an edge over those firms that have a common product line. (Titman & Wessels, 1988).

A qualitative and quantitative, both aspects are considered for the prediction of the principal investment assets or resources domain. The qualitative aspect of the principal investment assets or resources domain, which is a cross sectional property of the leverages is considered for finding out the affect over high-quality of resource or assets arrangement domain. The leverage of firms is different at the time of readjustment of the leverage ratios. Profitable and stable organizations employment less debt cutting-edge their assets composition. Further the firm has a low debt ratio react differently to economic shocks as compared to those firms that have large amount of debt financing (Strebulaev, 2007).

The firms adjust their capital composition when they come across with deficit/surplus in their cash flow, both pecking order & trade off theory should be viewed as a complement. A firm adjusts their capital towards targeted composition when the firms are over the set debt with financial superfluous, due to the low cost of

adjustment and when they are above their target debt as compared to the firm which is facing below target debt because of the high cost of adjustment. (Byoun, 2008).

A sample of French firms during the phase of 1987-96 is considered to check responsiveness of the changes in capital composition over the firm's value. The primary motive of the working is to investigate the association between the influence of the change in the financial composition and the worth of the firm. Results reveal that there is no such evidence to elucidate the alteration in the capital composition affect the change in the worth of the firm. Furthermore the profitability and the firm's size are positively (significantly) associated to the firm's value (Carpentier, 2006).

Capital structure of Jordanian firms reveals that 30% of the capital composition is comprises of debt financing that minimizes the likelihood of bankruptcy. For example low dividend payment (0.064 to 1 Jordanian dinars per share), very high percentage of institutional ownership (68.18%) and low profitability (on average around 1% of share holder's equity). The results of the research reveal that the ownership composition illustrates inverse relation with the leverage of the firm. Furthermore an ownership structure is defined by asset composition, liquidity, growth opportunity and the business risk. The results illustrate that the company's magnitude, asset tangibility, company's development in addition professional jeopardy are important for both ownership composition and capital composition (Al-Najjar & Taylor, 2008).

The end product of proprietorship composition in addition the business supremacy of Ghana Stock exchange over the firms' financing decision from 2002 to 2007. The result reveals that the managerial shareholding in ownership is positively affecting the option of long term debt over evenhandedness. And the Board magnitude is positively related to the alternative of capital composition (Nizam et al. (2022). Firm earning volatility, advantage perceptibility, bonus disbursement ratio in addition return (cost-effectiveness) are the most important determining factor of principal assets resources composition. However BOD autonomy and CEO duality are not significant to clarify the alternatives of capital composition (Bokpin & Arko, 2009).

The capital structure of Ghana's industry classification of SME sector suggested the alteration across the industry; the firms that have huge amount of fixed assets usually consider extended term debt cutting-edge lieu of small term debit. Agriculture, medical and pharmaceutical industry employs more of extended term debt in addition small term debit than the industrial engineering trade or work subdivision. Communication, wholesale, retail in addition Information sector employ supplementary of a small term debt (Abor, 2007).

The research consequence of the Greek firm's recommended that the business or company or organization dimensions in definitely linked in the direction of capital arrangement. Liquidity, interest coverage ratio, growth of the firm (change in earning) is negatively connected in the direction of the principal investment composition of an organization or business. Conferring in the direction of the results the firm that uses more than 50 out of each hundred of debt trendy their principal wealth assets structure is different with those firms that use less than 50 percent of

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debt cutting-edge their principal wealth assets arrangement (Eriotis, Vasiliou, & Ventoura-Neokosmidi, 2007).

The factors elements of the principal wealth edifice of the tourism and lodging industry of Istanbul stock exchange (Turkish) reveal that they invest a great amount of fixed assets and because of this they require great quantities of capital. Principally at the time of initial investment even though the replacement and expansion is the mandatory part of the tourism industry. (Karadeniz, Kandir, Balcilar, & Onal, 2009).

The Comparison is made among the difference in the capital structure of four sectors and these are food, heavy industry, contracting and services industries in Egypt. Result suggests that the high business risk does not lower the long term capital composition across industries. Assets tangibility was positively related to heavy industry. Size (earnings), growth (earnings) and assets all are interconnected to short term financing distinctively in the services sector and heavy industries. The contracting sector was extensively different from other sector in the determination of short term financing and interest ratios (Omran & Pointon, 2009).

The small & medium enterprises (SME) participation in the development of the Ghana's economy is a vital one. SME sector reflects that the firm's growth and the extended term debt proportion are positively connected in addition the outcome point toward that at the time of growth, SME sector needs financing in shape of lengthy term debt as a supernumerary intended for small term debt and equity (Abor & Biekpe, 2009).

Research Methodology

The following company specific & macroeconomic variables are consider as an explanatory variables:

- Company Specific: Return on Assets, Return on Equity, Liquidity, Tangibility, Business's Size and Firm's Growth.
- Macroeconomics variables: Money Supply, Inflation rate, Interest Rate & Foreign direct investment.

Data Collection

The main research data set is used in this paper is accounted on or after "Balance sheet analysis" of non-financial businesses registered at K.S.E and "Handbook of statistic on Pakistan economy". The data are considered for the period of 1999 to 2010. In addition to this few of the parameters are taken from the monetary policy document -State Bank of Pakistan and from the World Bank website.

Following internal variables have been considered to test the hypothesis. All the variables are considered on their book value.

- Short term debt (ratio) – The proportion of the short-term debt to the total assets (STD / TA) and

- Leverage ratio – The proportion of the Long-Term Debt to the Total Assets (LTD/TA)
- Debt Ratio – The proportion of the Total Debts to the Total Assets (TD/TA)
- Return on Assets (the proportion of Earnings before tax / Total Assets) – ROA
- Return on Equity (the proportion of the Earnings before tax/Shareholders' equity) - ROE
- Liquidity (Current Assets/Current Liability) - LIQ
- Tangibility (Gross Fixed Possessions/Total Assets) - TNG
- Firm's Scope (Sale's natural log) - SZ
- Company's Growth (annualized proportion alteration of the Total of Assets) – GWT

In addition to internal variables external variables are also consider in the direction of bargain on sale the mark over the choice of principal arrangement. Following external factors have been collected from "Handbook of Statistic on Pakistan Economy", monetary policy document - State Bank of Pakistan and the World Bank website:

- Foreign direct investment (FDI's natural log) - FDI
- Interest proportion (annualized average of the discount rate announced by the State Bank of Pakistan) - INR
- Inflation rate (annualized average of Consumer price index) - INFL
- Money supply (natural log of the yearly average of the money supply - M2) - MS

Sample Size

The year nineteen hundred nit nine has been left out from the analysis because of the change factor required to calculate growth rate (in total assets). Internal and external data is taken from the passé of 2000 to 2010. Finally, we have an eleven-year data which is comprised of 365 companies registered next to the K.S.E. Those years' statistics are also excluded on or after the analysis which cannot contain the observation of the independent variables (all the debt ratios). To validate the hypothesis 4,033 firms - year data is available.

Research Model

Following underneath given statistical models are developed to identify the best model to interpret results.

$$DR_{it} = \beta_0 + \beta' X_{it} + \mu_{it} \qquad \text{(Pooled OSL model)}$$

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$DR_{it} = \beta_{0i} + \beta' X_{it} + \mu_{it}$ (Error component model or random effect model)

$DR_{it} = \beta_{0i} + \beta' X_{it} + \mu_{it}$ (Fixed effect model)

In **error component model / random effect model** we assume β_{0i} be situated a haphazard adjustable by means of a mean value of β_0 (with not any sub-script of *i*). In addition, the interrupt worth of a discrete business be able to be situated uttered by means of

$$\beta_{0i} = \beta_0 + \varepsilon_i$$

Whereas i = 1,2,3,…., N

Where ε_i is a haphazard fault term by way of a mean worth of nil in addition modification of σ_E^2 (Gujarati, 2003).

In **fixed effect model** we place subscript *i* with the intercept term, suggested that intercept of the firms may be different; these differences are because of the special features associated with each company such as managerial philosophy or it policies (Gujarati, 2003).

Whereas:

DR_{it} is the debt ratios, we consider below mentioned three debt ratios to check the hypothesis:

$DR(STD/TA)_{it}$ = the short term debt (ratio) of firm's i at time t.

$DR(LTD/TA)_{it}$ = the Leverage ratio of firm's i at time t.

$DR(TD/TA)_{it}$ = the Debt ratio of firm's i at time t.

X_{it} = column vector of the following financial variables for firm i at time t.

ROA_{it} = Return on Assets of firm's i at time t

ROE_{it} = Return on Equity of firm's i at time t

LIQ_{it} = Liquidity ratio of firm's i at time t

TNG_{it} = Tangibility of firm's i at time t

SZ_{it} = Size of firm's i at time t

GW_{it} = Growth of firm's i at time t

FDI_{it} = Foreign direct investment at time t

INT_{it} = Interest rate at time t

$INFL_{it}$ = Inflation rate at time t

MS_{it} = Money Supply at time t

Slope coefficient and the error terms

β' = Row vector of slope coefficient of regressors.

β_0 = Y intercept

μ_{it} = the term stochastic error of the firm i at time t.

Statistical Technique

Pooled regression analysis, Error component model or random result prototypical(Model) in addition fixed consequence models be situated functional in the direction of estimate best model.

Results

Finding and Interpretation of the Results

Correlation

Correlations

		Debt Ratio	Short Term Debt	Leverage Ratio	Tangibility	Firm's Size	Firm's Growth	Return on Assets	Return on Equity	Liquidity	Inflation rate	Interest rate	Foreign direct investment	Money Supply
Debt Ratio	Pearson Corr.	1												
	Sig.													
Short Term Debt	Pearson Corr.	.395**	1											
	Sig.	.000												
Leverage Ratio	Pearson Corr.	.210**	-.039*	1										
	Sig.	.000	.014											
Tangibility	Pearson Corr.	.322**	.287**	-.078**	1									
	Sig.	.000	.000	.000										
Firm's Size	Pearson Corr.	-.243**	-.157**	.042*	-.293**	1								
	Sig.	.000	.000	.010	.000									
Firm's Growth	Pearson Corr.	-.006	-.007	-.009	-.017	.025	1							
	Sig.	.703	.660	.570	.274	.128								
Return on Assets	Pearson Corr.	-.161**	-.106**	.028	.051**	.230**	.003	1						
	Sig.	.000	.000	.072	.001	.000	.859							
Return on Equity	Pearson Corr.	-.002	-.003	-.003	-.008	.013	-.001	.047**	1					
	Sig.	.921	.829	.869	.605	.435	.958	.003						
Liquidity	Pearson Corr.	-.030	.112**	-.011	-.004	-.049**	-.002	.033*	.001	1				
	Sig.	.058	.000	.477	.802	.002	.911	.035	.962					
Inflation rate	Pearson Corr.	-.004	.040*	-.016	-.044**	.160**	-.001	-.056**	.023	.033*	1			
	Sig.	.805	.012	.313	.005	.000	.974	.000	.148	.039				
Interest rate	Pearson Corr.	-.008	.025	.007	-.015	.078**	-.009	-.045**	.026	.031*	.632**	1		
	Sig.	.630	.108	.661	.351	.000	.552	.004	.101	.048	.000			
Foreign direct investment	Pearson Corr.	.014	-.007	-.002	.015	-.053**	.006	-.007	-.014	-.023	-.369**	-.354**	1	
	Sig.	.385	.672	.889	.347	.001	.699	.653	.369	.139	.000	.000		
Money Supply	Pearson Corr.	.006	.044**	-.017	-.057**	.195**	.015	-.038*	.014	.035*	.813**	.310**	-.258**	1
	Sig.	.722	.006	.283	.000	.000	.330	.016	.372	.027	.000	.000	.000	

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

Correlation table reflect interesting results. The perceptibility be situated meaningfully definitely connected by means of petite means debt proportion and the debt ratio; therefore, those companies which have employed more of immovable possessions by way of a amount of over-all possessions are easily accessible to debt financing (because assets are available for hypothecation). The scope of the business be situated significantly and inversely connected by means of obligation proportion in addition little tenure debt proportion, therefore those firms which are large in size did not go for debt financing, instead of debt financing they utilized their own internally generated funds because of the economies of scale.

The ROA is significantly and inversely related with the debt proportion in addition the small period balance proportion, meaning that the money-spinning companies use a smaller amount of a debt and more of on the inside produced reserves (excess funds cutting-edge procedure of booked pays). Short term debt in

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addition liquidity have a significantly positive relationship, indicate that those firms which are highly liquid, borrow more in form of short term debts. Tangibility and size has a negative relationship, means large firms have lesser amount of fixed assets as compared to small firms. It is because of the fact that large firms usually have large amount of fixed assets but proportionately it is smaller as compare to small firms. Size and ROA have positive relationship, meaning that the huge companies enjoy additional profits by way of likened in the direction of trivial businesses.

Business's dimensions have a positive relationship with money supply & rate of inflation. Money supply, & inflation rate causes to increase the amount of sales revenue of the firms therefore those variables are positively related with the size of the firm. Money supply and inflation causes to increase the nominal amount of money in the economy. Therefore, proportionate amount of revenue increases more than the cost of production.

Descriptive Table

		Debt Ratio	Short Term Debt	Leverage Ratio	Tangibility	Firm's Size	Firm's Growth	ROA	ROE	Liquidity	Inflation rate	Interest rate	Foreign direct investment	Money supply
N	Valid	4033	4033	4033	4026	3845	4019	4033	4032	4020	4033	4033	4033	4033
	Missing	0	0	0	7	188	14	0	1	13	0	0	0	0
Mean		0.79	0.76	1.70	0.90	6.99	0.25	0.04	0.14	1.65	8.08	10.29	6.03	14.91
Median		0.65	0.48	0.29	0.85	7.00	0.05	0.03	0.11	0.98	7.77	9.63	6.15	14.94
Mode		.74	.42[a]	.00	.87	7	.00	.01	.04	.91[a]	7.92[a]	7.50	5.02[a]	14.94[a]
Std. Deviation		1.42	1.38	2.87	0.66	1.86	7.00	0.21	5.41	15.26	5.06	2.22	0.50	0.47
Skewness		29.16	6.51	4.13	9.37	-0.36	62.26	1.60	6.33	51.00	1.23	0.28	-0.33	-0.13
Std. Error of		0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Kurtosis		1244.99	55.53	61.83	158.79	1.51	3917.98	94.38	734.46	2780.75	0.90	-1.27	-0.37	-1.36
Std. Error of		0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Minimum		.00	.00	.00	.00	-2	-1.00	-3.05	-168.57	.00	3.10	7.50	5.02	14.18
Maximum		67.63	22.00	65.63	14.44	14	440.80	4.56	187.79	875.04	20.77	14.25	6.86	15.57

a Multiple modes exist, The smallest value is shown.

Descriptive statistics reflect that on an average 79 percent of the entire possessions of the company have been funded with obligation. In addition, out of total debt 74 percent comprises of small period debt in addition the remaining 26 out of hundred comprises by way of the extended period obligation. The aforementioned reflects that companies are more inclined in the direction of short tenure debt as an alternative of long tenure debt because of the cost that is associated cutting-edge the issuance of the extended time debt or undeveloped bond market. So the firms are more inclined to borrow from banking industry instead of issuing long term debt.

Debt Ratio

	Pooled Regression Model			Fixed Effect Model			Random Effect Model		
Variable	**Coefficient**	**t-Statistic**	**Prob.**	**Coefficient**	**t-Statistic**	**Prob.**	**Coefficient**	**t-Statistic**	**Prob.**
Liquidity	-0.0555	-15.08	0.00	-0.0281	-10.56	0.00	-0.0306	-11.71	0.00
Return on Assets	-0.1729	-3.85	0.00	-0.2680	-9.51	0.00	-0.2119	-7.63	0.00
Size	-0.0325	-7.86	0.00	-0.0153	-2.82	0.00	-0.0202	-4.15	0.00
Tangibility	0.0051	32.80	0.00	0.0027	17.55	0.00	0.0042	30.22	0.00
Return on Equity	0.0006	0.45	0.66	0.0009	1.30	0.19	0.0009	1.35	0.18
Firm's Growth	0.0006	0.58	0.56	0.0000	-0.07	0.94	0.0001	0.12	0.90
Foreign Direct Investment	0.0111	0.73	0.46	0.0164	2.13	0.03	0.0168	2.18	0.03
Money Supply	0.0511	1.75	0.08	0.0356	2.32	0.02	0.0421	2.76	0.01
Inflation Rate	0.0011	0.33	0.74	0.0008	0.49	0.62	0.0010	0.62	0.54
Interest Rate	0.0030	0.65	0.52	0.0005	0.20	0.84	0.0011	0.46	0.65
Constant	-0.3013	-0.68	0.50	-0.0212	-0.09	0.93	-0.1957	-0.85	0.39
Dependent Variable	***Debt Ratio***								
R-squared	0.34			0.85			0.23		
Adjusted R-squared	0.34			0.83			0.22		
S.E. of regression	0.43			0.22			0.24		
F-statistic	197.20			49.59			111.64		
Prob(F-statistic)	0.00			0.00			0.00		

Redundant Fixed Effects Tests			
Test cross-section fixed effects			
Effects Test	**Statistic**	**d.f.**	**Prob.**
Cross-section F	30.36	-3,683,437	0.00
Cross-section Chi-square	5522.10	368	0.00

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Correlated Random Effects - Hausman Test				
Test cross-section random effects				
Test Summary	**Chi-Sq. Statistic**		**Chi-Sq. d.f.**	**Prob.**
Cross-section random	479.68		10	0.00
Cross-section random effects test comparisons:				
Variable	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
Growth	0.0000	0.0001	0.0000	0.2573
Inflation Rate	0.0008	0.0010	0.0000	0.0000
Interest Rate	0.0005	0.0011	0.0000	0.0000
Liquidity	-0.0281	-0.0306	0.0000	0.0000
Foreign Direct Investment	0.0164	0.0168	0.0000	0.0176
Money Supply	0.0356	0.0421	0.0000	0.0001
Return on assets	-0.2680	-0.2119	0.0000	0.0000
Return on Equity	0.0009	0.0009	0.0000	0.4388
Size	-0.0153	-0.0202	0.0000	0.0377
Tangibility	0.0027	0.0042	0.0000	0.0000

Lagrange multiplier (LM) test for panel data			
Probability in ()			
Null (no rand. effect)	Cross-section	Period	Both
Alternative	One-sided	One-sided	
Breusch-Pagan	6387.85	4.87	6392.72
	0.00	-0.03	0.00
Honda	79.92	-2.21	54.95
	0.00	-0.99	0.00

On the basis of the following three tests i.e *"Redundant fixed assessment", "Hausman test" & "Lagrange multiplier (LM) test for panel data"*, we concluded that *fixed end product prototypical* be situated the unsurpassed classical through which we will interpret results.

Consequence of fixed effect model explain 83% (adjusted R square) difference cutting-edge debt ratio. Both business precise in addition macroeconomic explanatory variables be situated important is the strength of mind of the petite duration responsibility ratio. F statistic be situated important by means of low standard error of the regression model. Out of six four internal variables are statistically significant. And out of four, two macroeconomic variables are statistically significant.

Results suggest that the tangibility be situated meaningfully definitely accompanying by means of the debt relation the same result was found by Matemilola, Ariffin & McGowan (2013), meaning that the firm which have high amount of fixed assets are conveniently borrow more because of the assets backing is

available for hypothecation. An asset backing is usually required to borrow from banking channel and it also decreases the cost of borrowing.

Dimensions be situated damagingly connected in the direction of obligation proportion, the same result was also found by Shyu (2013) and Benkraiem & Gurau (2013). Meaning that huge well-founded uses less of debt and more of internally generated funds by means of associated in the direction of minor companies. In general large companies have more avenues to finance their need as compared to small firms. Large companies have retained earnings as well as strong footing on ground to attain sustainable earning over the face of time therefore large companies usually do not go for debt financing.

Return on resources takes a negative association by means of responsibility quotient, Shyu (2013), Benkraiem & Gurau (2013) and Zani. J, Leites. E.T, Macagnan.C.B & Portal.M.T(2014) found the same result in the determination of debt ratio in the capacity of profitability. This reflects profitable firms use less of debt and more of internally generated funds and it definitely because of huge quantity of cash inflows. Profitable firms are making money and therefore they do not go for peripheral put money into in addition utilize on the inside produced reserves to fulfill their financing needs.

Liquidity consumes a undesirable affiliation by means of dues relation. This indicates that those companies that are highly liquid using less of debt and more of the internal excess money. All other internal (company specific) variables are insignificant in the determination of the debt ratio.

Foreign direct investment & money supply consumes a positive association by means of obligation relation. Usually FDI decrease the cost's borrowing therefore firms go for debt financing whereas in the time of monetary ease money supply increases which means firms have easy excess for debt financing. All other macroeconomic variables are not plying any role in the determination of the debt ratio.

Explanatory Variables	Collinearity Statistics	
	Tolerance	VIF
Tangibility	.869	1.150
Size	.817	1.224
Growth	.999	1.001
Return on Assets	.926	1.080
Return on Equity	.997	1.003
Liquidity	.940	1.064
Inflation rate	.176	5.691
Interest rate	.473	2.116
Foreign Direct Investment	.838	1.194
Money Supply	.262	3.814

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Altogether the given variables have variance inflation factors (VIF) values are less than 10, meaning that in attendance be situated on no account perfect linear relationship prevails among the explanatory variables in other words there is no problem of multicollinearity.

Short Term Debt

	Pooled Regression Model			Fixed Effect Model			Random Effect Model		
Variable	**Coefficient**	**t-Statistic**	**Prob.**	**Coefficient**	**t-Statistic**	**Prob.**	**Coefficient**	**t-Statistic**	**Prob.**
Liquidity	0.1893	21.6377	0.0000	0.1446	12.8004	0.0000	0.1652	16.9916	0.0000
Tangibility	0.0042	11.4385	0.0000	0.0041	6.1244	0.0000	0.0042	9.7002	0.0000
Firm's Growth	0.0004	0.1854	0.8529	0.0001	0.0416	0.9668	0.0003	0.1306	0.8961
Return on Assets	-0.1438	-1.3457	0.1785	-0.1785	-1.4931	0.1355	-0.1426	-1.3062	0.1916
Return on Equity	-0.0002	-0.0787	0.9373	0.0004	0.1243	0.9011	0.0001	0.0519	0.9586
Firm's Size	-0.0573	-5.8321	0.0000	-0.0228	-0.9940	0.3203	-0.0534	-4.0188	0.0001
Money Supply	0.1341	1.9347	0.0531	0.1326	2.0379	0.0416	0.1435	2.2535	0.0243
Inflation Rate	0.0019	0.2353	0.8140	0.0015	0.2057	0.8370	0.0015	0.2138	0.8307
Interest Rate	0.0087	0.7941	0.4272	0.0085	0.8478	0.3966	0.0090	0.8996	0.3684
Foreign Direct Investment	0.0243	0.6786	0.4974	0.0296	0.9026	0.3668	0.0274	0.8384	0.4018
Constant	-1.7864	-1.6954	0.0901	-1.9550	-2.0183	0.0436	-1.9386	-2.0126	0.0442
Dependent Variable	***Short Term Debt Ratio***								
R-squared	0.1476			0.3613			0.1004		
Adjusted R-squared	0.1453			0.2911			0.0980		
S.E. of regression	1.0217			0.9305			0.9334		
F-statistic	65.8743			5.1442			42.4703		
Prob(F-statistic)	0.0000			0.0000			0.0000		

Redundant Fixed Effects Tests			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.13	-3683437.00	0.00
Cross-section Chi-square	1101.68	368.00	0.00

Correlated Random Effects - Hausman Test				
Test cross-section random effects				
Test Summary	**Chi-Sq. Statistic**		**Chi-Sq. d.f.**	**Prob.**
Cross-section random	27.90		10.00	0.00
Cross-section random effects test comparisons:				
Variable	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
Growth	0.0001	0.0003	0.0000	0.8431
Inflation Rate	0.0015	0.0015	0.0000	0.8698
Interest Rate	0.0085	0.0090	0.0000	0.5163
Liquidity	0.1446	0.1652	0.0000	0.0003
Foreign direct Investment	0.0296	0.0274	0.0000	0.2123
Money Supply	0.1326	0.1435	0.0002	0.4163
Return on assets	-0.1785	-0.1426	0.0024	0.4611
Return on Equity	0.0004	0.0001	0.0000	0.6739
Size	-0.0228	-0.0534	0.0004	0.1032
Tangibility	0.0041	0.0042	0.0000	0.7391

Lagrange multiplier (LM) test for panel data			
Probability in ()			
Null (no rand. effect)	Cross-section	Period	Both
Alternative	One-sided	One-sided	
Breusch-Pagan	473.06	2.43	475.49
	0.00	-0.12	0.00
Honda	21.75	-1.56	14.28
	0.00	-0.94	0.00
GHM	--	--	473.06
	--	--	0.00

On the basis of the following three tests i.e *"Redundant fixed test", "Hausman test" & "Lagrange multiplier (LM) test for panel data"*, we concluded that *fixed effect model* is the best model through which we will interpret results.

Consequence of fixed effect model explain 29% (adjusted R square) variation in short term debt ratio. Both company specific and macroeconomic explanatory variables are important is the determination of the small period liability ratio. F statistic be situated important by means of low standard error of the regression model. Out of six two internal variables are statistically significant. And out of four, one macroeconomic variable is statistically significant.

The outcome indicates that the concreteness be located meaningfully in addition absolutely associated by means of the little period responsibility proportion, which means those firms that have a large amount of fixed assets borrows more small time obligation. This stands for the reason that of the company has more viable position to avail financing facility in shape of fixed assets.

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Liquidity remains definitely accompanying through the small tenure obligation proportion and this is because of the fact that the company that has more liquidity employs more of short term debt and less of the internally generated funds. It is because of the fact that highly liquid firms can feasibly pay their liability when it is matured.

Money supply is positively accompanying by means of petite period obligation meaning that if money supply increases (in the time monetary ease) firms consume easy excess to borrow more of a short term debt. All other internal and external variables be situated immaterial in addition see to not production in the least part cutting-edge the strength of character of short term debt ratio.

Collinearity Statistics		
	Tolerance	**VIF**
Tangibility	.869	1.150
Size	.817	1.224
Growth	.999	1.001
Return on Assets	.926	1.080
Return on Equity	.997	1.003
Liquidity	.940	1.064
Inflation rate	.176	5.691
Interest rate	.473	2.116
Foreign direct Investment	.838	1.194
Money Supply	.262	3.814

Altogether the given variables have variance inflation factors (VIF) values are less than 10, meaning that in attendance remains not at all perfect in lines connection prevails among the explanatory variables in other words there is no problem of multicollinearity.

Leverage Ratios

	Pooled Regression Model			Fixed Effect Model			Random Effect Model		
Variable	**Coefficient**	**t-Statistic**	**Prob.**	**Coefficient**	**t-Statistic**	**Prob.**	**Coefficient**	**t-Statistic**	**Prob.**
Firm's Growth	0.00	-0.64	0.53	0.00	-0.01	0.99	0.00	-0.42	0.68
Liquidity	-0.01	-0.42	0.68	0.00	0.01	0.99	0.00	0.07	0.94
Return on Assets	0.71	2.50	0.01	0.23	0.71	0.48	0.49	1.70	0.09
Return on Equity	0.00	-0.39	0.70	0.00	-0.13	0.89	0.00	-0.25	0.80
Firm's Size	0.03	0.98	0.33	0.05	0.75	0.45	0.04	1.21	0.23
Tangibility	0.00	-3.79	0.00	0.00	-0.36	0.72	0.00	-1.36	0.17
Inflation Rate	-0.02	-0.94	0.35	-0.02	-0.87	0.39	-0.02	-0.90	0.37
Interest Rate	0.04	1.44	0.15	0.04	1.52	0.13	0.04	1.54	0.12
Foreign Direct Investment	-0.02	-0.25	0.80	-0.02	-0.28	0.78	-0.02	-0.27	0.78
Money Supply	-0.01	-0.04	0.97	-0.02	-0.10	0.92	-0.02	-0.10	0.92
Constant	1.83	0.66	0.51	1.56	0.60	0.55	1.67	0.65	0.52
Dependent Variable	***Leverage Ratio***								
R-squared	0.01			0.24			0.00		
Adjusted R-squared	0.01			0.16			0.00		
S.E. of regression	2.70			2.48			2.48		
F-statistic	3.22			2.94			1.20		
Prob(F-statistic)	0.00			0.00			0.29		

Redundant Fixed Effects Tests			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.915541	-3,683,437	0
Cross-section Chi-square	1036.7317	368	0

Correlated Random Effects - Hausman Test				
Test cross-section random effects				
Test Summary	Chi-Sq. Statistic		Chi-Sq. d.f.	Prob.
Cross-section random	11.673626		10	0.3075
Cross-section random effects test comparisons:				
Variable	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
Growth	-0.0001	-0.0025	0.0000	0.3566
Inflation Rate	-0.0166	-0.0173	0.0000	0.4728
Interest Rate	0.0405	0.0409	0.0000	0.8317
Liquidity	0.0004	0.0019	0.0002	0.9263
Foreign Direct Investment	-0.0246	-0.0240	0.0000	0.8943
Money Supply	-0.0166	-0.0173	0.0013	0.9843
Return on Assets	0.2250	0.4927	0.0173	0.0421
Return on Equity	-0.0010	-0.0019	0.0000	0.5078
Size	0.0461	0.0421	0.0025	0.9367
Tangibility	-0.0006	-0.0016	0.0000	0.4847

Lagrange multiplier (LM) test for panel data			
Probability in ()			
Null (no rand. effect)	Cross-section	Period	Both
Alternative	One-sided	One-sided	
Breusch-Pagan	409.1100	2.0877	411.1977
	0.0000	-0.1485	0.0000
Honda	20.2265	-1.4449	13.2806
	0.0000	-0.9258	0.0000

On the basis of the following three tests i.e *"Redundant fixed test", "Hausman test" & "Lagrange multiplier (LM) test for panel data"*, we concluded that *unsystematic consequence model* be situated the greatest perfect in the direction of interpret results. But F statistics of random effect model is insignificant and the

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coefficients of explanatory variables are also insignificant. Therefore we cannot predict the leverage ratio model.

Discussions

Return on assets is inversely associated with debt ratio meaning that profitable firms employ less of debt. The firm's size is significantly inversely associated with debt ratio and short term debt (not significant), meaning large firms use less of debt and more of the internally generated funds in form of revenue. Liquidity is inversely associated to debt ratio whereas positively associated through diminutive period obligation. This income liquid company's employment a smaller amount of the entire obligation but then again proportionately employ more of the small tenure obligation by way of likened toward extended tenancy obligation. The perceptibility remains extensively definitely associated through the debt ratio & small period obligation relation. The aforementioned revenue that the companies consuming additional of fixed assets employ additional of obligation in the form of the short-term debt. Money supply be located absolutely associated by means of obligation relation in addition small period obligation relation, meaning that by means of the increase of money supply (monetary easing) debt increases in form of small period obligation.

Conclusion

This study sheds light on the determinants of capital structure for non-financial companies listed on the Karachi Stock Exchange. The outcomes conclude that the companies specific and macroeconomic (both type of variables) remain vital cutting-edge the willpower of prosperity assembly. Whereas growth rate, interest rate, inflation rate is not playing any significant part in the fortification of the capital composition. The results suggest that both internal and external factors have a significant impact on a company's financing decisions. Specifically, the findings indicate that profitability, tangibility, and liquidity are important internal determinants, while firm size, growth opportunities, and market conditions are crucial external determinants. These findings have important implications for managers and investors in terms of understanding the factors that influence a company's capital structure decisions. Moreover, the study highlights the need for further research to investigate the determinants of capital structure in different industries and economic environments.

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