Determinants Of Capital Structure Media Of Nifty

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Abstract

The study is focused on determinants of capital structure of media companies listed on NIFTY. Eleven independent variables Profitability, Tangibility, Firm Size, Growth, Risk, Liquidity, TAX, Dividend, Interest cover, GDP and Inflation taken as determinants and leverage ratio is taken as capital structure. Media companies listed on NIFTY are considered as representation of entire media phenomena period in between 2013-14 to 2017-18. The result indicates that profitability, tangibility, size and growth have positive impact where GDP has negative impact.

Keywords: Debt-equity ratio, Financial leverage, Econometrical, Capital structure

1- INTRODUCTION

Indian companies' faces extreme challenges to acquire funds for last many decades. As developing nation it's important to lessen the behavior of investors and owners while raising funds in different circumstances. History enlightens various success as well as failure stories of companies nationally and internationally. Funding issues are more important issue to make firm potentially strong to compete and survive. Strong financial structure reflects sound health and increase the value of firm. Somehow, pertaining to the situation optimum financial structure to be selected. Various studies are conducted to provide the guideline in selection of funds. After the long way still there is scope of investigation in selection of capital structure. Capital structure is mix of long-term funds to balance the risk .Capital structure is part of financial structure where long term funds considered. Optimum capital structure is debated my many theorist and place the landmark .various theories were developed to explore the relationship between debt financing and market value of firm. Value of firm is market value of firm rose earlier and can be calculated by market value of debt and market value of equity. firstly, MM (1958) introduced the theory of irrelevancy and try to prove that capital structure decisions never affect value of firm with live proof theory was drawn but again after years MM realized that financial decisions do affect the value of firm MM (1963) also explained how existence of taxes decrease the cost on debt and increase the value of firm as its very controversial issue with study empirically it might said that debt ratio can be close to actual objective of business. Perhaps, various cross sectional studies are conducted to secure the benefit of shareholder and the creditors. Therefore can say that financial decisions are governs by both the demand and supply of fund. Main purpose of study is to understand the determinants' of capital structure in media firm.

2- INDIAN MEDIA SECTOR

The Indian media and entertainment sectortouchedRs1.5 trillion in 2017 with the growth of arround13%over the year of 2016 and expected to be 2 trillion by 2020 with compound growth of 11.6%. As

growing industry media has large potential but prior history of earning was very crucial. The media and entertainment can be divided into many parts as print, electronic media and films. Each has its own characteristics and growth rate i.e. 3 percent of media growth indicates struggle still exist where electronic media growth rate recorded as 11.2 % where films has 27 percent growth recorded.

3- RESEARCH METHODOLOGY
3.1 POPULATION AND SAMPLE
The secondary data is obtained from money control database, panel data consisting of selected sample of 6 Indian media and entertainment industry companies listed on Nifty over a period of 5 years from 2013-14 to 2017-18. In this study we investigate the choice of leverage.

The previous empirical and theoretical study explores various variables which has noticeable impact on financial structure choice decision..

3.2 DATA AND SOURCES OF DATA
The panel data is set for five years to investigate the linkage between leverage and specific factors. The panel data analysis done for observations of five consecutive years. In this way, the sample of the study consists of 24 firm's year observation. The study consist of following set of nine variable and form the model to examined the relationship among dependent and independent variables.

3.3 THEORETICAL FRAMEWORK
Empirically capital structure decisions findings are explained and explore:

Profitability. According to interest tax shield hypothesis formed by Modigilani and Miller (1963), firms with higher profit employ higher debt to gain the tax benefit. On the other hand pecking order theory, asymmetric information hypothesis of Mayers (1984) and Mayers and Majluf (1984) refers that companies prefer internal financing than equity than debt.firm with higher profitability employ more retained earnings than issuing debt.

Most empirical study confirms pecking ordertheory and found negative relation between profitability and leverage.(Kester, 1986; Titman and Wessels, 1988; Rajan and Zingales, 1995; Michaelas et. al., 1999, Jayaraman 2013, kartik 2017, Chandrasekharan, 2012) , Friend and Lang (1988), Titman andWessels (1988), Barton et al. (1989), Rajan andZingales (1995), Griner and Gordon (1995), Shyam-Sunder and Myers (1999), Michaelas et al. (1999),Booth et al. (2001), Chen (2004), and Murinde et al.(2004). On the other hand Bowen et al. (1982), Dammon and Senbet (1988), Givoly et al. (1992) and Petersen and Rajan (1994) have concluded that the relationship between profitability and leverage is positive confirming the static tradeoff theory. With more profitability leading to higher retained earnings firms would use internal funds first, and then issue debt and then issue equity as a last resort. Hence, with higher profitability the firm value should increase.

Ho. There is a statistically significant relationship between use of debt and profitability of firm.

Tangibility According to tradeoff theory assets act as collateral and provide security to the lenders in event of financial distress and expected to have positive relation. Collaterality also protects lenders from shareholders conflict (Jensen and Mekling, 1976). Thus, firm with higher tangiable assets expected to have high level of debt (Titman and Wessels, 1988; Rajan and Zingales, 1995). Marsh (1982) and Walsh and Ryan (1997) Bennet and Donnelly (1993) debt Scott, 1977), Titman and Wessels (1988), Harris and Raviv (1990), Rajan and Zingales (1995), Ozkan (2001), Wiwattanakantang (1999), Frank and Goyal (2003),Chen (2004), Gaud et al. (2005) . Moreover some studies also reflect negative relations opposite to earlier evidence drawn by Booth et al. (2001) and Huang and Song (2004).

Ho. There is a statistically significant relationship between use of debt and tangibility of firm.

Liquidity shows the availability of current assets to deal against the expected obligation. According to trade off theory high cash flow creates agency problem in organization. After meeting debt obligation manager has less cash flows and it is expected that company should have high liquidity in order to meet high debt obligation. Hence, leverage positively related to liquidity. On other way, according to pecking order theory more Measures

liquid firm being possession of more internal funds and tends to borrow less. Therefore, leverage is expected as negative relation rates caused change in discount rate so discount rate increase due to increase in inflation rate and increase in discount rate leads to decrease the cash flow's present value. The purchasing power of money decreased due to inflation, and due to which the investors demand high rate of return, and the prices decreased with increase in required rate of return (Iqbal et al, 2010).

	Formula	Theoretically	Empirically
Dependent variable			
DEBT TO EQUITY	(DE) = Debt/equity		
Independent variable			
PROFITABILITY	[Earnings Before Interest and Tax (EBIT) /Total Assets]	+ (trade-off) -(pecking order)	Positive or negative
TANGIBILITY	Fixed assets/total assets	+ (trade-off) +(pecking order)	Positive or negative
LIQUIDITY	Current assets/current liability	+ (trade-off) -(pecking order)	
SIZE	Log(Total assets)	+ (trade-off) +(pecking order)	Positive
GROW_OPP	Percentage change in operating profit	-(trade off) +(pecking order)	Negative
RISK	Log (% change in profit)	-(trade off) +(pecking order)	Negative
GDP	Growth rate of GDP		positive

3.4 STATISTICAL TOOLS AND ECONOMETRIC MODELS

This section elaborates the proper statistical/econometric/financial models which are being used to forward the study from data towards inferences. The detail of methodology is given as follows.

DRit = α + β1 *PROF* it + β2 *TAN* it + β3 *LIQ* it + β4 *RISK* it + β5 *GROW* it +β6 *GDP* it +β7 *SIZE* it + εit

Here, PROF= Profitability, TAN= Tangibility LIQ= Liquidity ,GROW= Growth opportunities , SIZE=log(total Assets).

4- RESULTS AND DISCUSSION
4.1 RESULTS OF DESCRIPTIVE STATICS OF STUDY VARIABLES

The preliminary analysis consist of descriptive statistics is given on table. it fives surprising result. the mean value of debt ratio is 1.69, profitability is 0 .45 liquidity -0.6 tangibility 0.35 size ,52 risk 3.67 gdp 7.3 growth is 0.30. jarque-bera test statistics fails the rejection of null hypothesis as not a normal distribution of all the variable expect GDP.

	Debt ratio	Profitability	Liquidity	Tangibility	Size	Risk	Gdp	Grw_1
Mean	1.690478	0.452861	-0.659024	0.355702	0.523250	3.674137	7.399400	0.300998
Median	1.405829	0.500910	0.541692	0.314123	0.530000	3.788393	7.410000	0.305119
Maximum	4.836723	0.991561	2.211275	3.078567	0.590000	4.079001	8.154000	0.342347
Minimum	1.000000	-2.254073	-51.06612	-5.507674	0.380000	2.469835	6.620000	0.235250
Std. Dev.	0.931528	0.447028	8.211979	1.123554	0.037852	0.380382	0.526115	0.020839
Skewness	1.917044	-5.714352	-5.997894	-3.117495	-1.548119	-1.325010	-0.057205	-1.278598
Kurtosis	5.681300	35.41689	37.33617	20.79358	6.782135	4.354428	1.944565	6.067776
Jarque-Bera	36.48266	1969.117	2204.786	592.4778	39.81871	14.76179	1.878387	26.58418
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000623	0.390943	0.000002
Observation	40	40	40	40	40	40	40	40

(TABLE 1)

After collection of various data its necessary to test the hypothesis formed .In way of testing we used E-views. E views provide you variety of powerful tools for testing series. Firstly, it is necessary to check the stationary. The series is said to be stationary when mean and auto covariance do not depend on time. All variable of unit root study it is found that only growth opportunity has unit root data and we drop this variable from study.

For unit root test Levin, Lin & Chu t conducted. The hypothesis of this test are Null hypothesis process has unit root and Alternative hypothesis process has no unit root. Since our test has significant p-value as less than .05 indicates the rejection of Null Hypothesis which means data in not unit root and result is desirable. As Debt ratio has stationary data and can go for regression Analysis.

After unit root test it is found that DEBT RATIO, PROFITABILITY, LIQUIDITY, TANGIBILITY, SIZE, RISK GDP, and GROWTH has stationary data and proceed for regression.

TABLE describes the result of Housman (1978) test for the selection of fixed effect model or random effects model. Housman test for cross section random effect has Chi-square test statistics=210.6 Chi-square d.f. =7 with p-value= 0.000. The null hypothesis of cross section random effect is rejected. In this case fixed effect estimations preferred to random effect model. The fixed effect regression equation can be expressed as:

The three methods are used for panel data regression i.e. pooled-ordinary least squares (OLS) method, fixed effects method and random effects method can be employed to estimate the model of leverage. The pooled least square method assumes that no firm is time specific effect if they are, then not a good predictor for cross section. The redundant fixed assets

method is used to test null hypothesis on no fixed effect on cross- section units over a period of time. The result in table found to be non significant. Thus simple pooled OLS regression model is not appropriate for panel data.

Independent variable	Pooled OLS			Fixed Effect			Random Effect		
	Coefficient	t-statistics	P value	Coefficient	t-statistics	P value	Coefficient	t-statistics	P value
C	-6.314126	-1.267299	0.2142	-3.656524	-1.104208	0.2800	-3.882938	-1.167642	0.2516
P1	-0.163090	-0.151808	0.8803	-2.519314	-3.373487	0.0024	-2.458974	3.327183	0.0022
LIQUIDITY	0.002052	0.105625	0.9165	-0.001573	-0.195414	0.8466	-0.001538	-0.191283	0.8495
TANGIBILITY	0.140976	0.371559	0.7127	0.943336	3.444155	0.0020	0.921151	3.401602	0.0018
S1	2.623242	0.467561	0.6433	7.734109	2.488859	0.0198	7.696832	2.487815	0.0183
GRW_1	13.07346	1.637278	0.1114	7.969739	2.030933	0.0530	8.058774	2.061220	0.0475
R1	0.946886	2.297567	0.0283	0.331572	0.559479	0.5808	0.383489	0.675565	0.5042
GDP	-0.102308	-0.334884	0.7399	-0.204431	-1.727311	0.0964	-0.203221	-1.718178	0.0954
R-squared	0.187265			0.910510			0.449434		
Adjusted R2	0.009480			0.860395			0.328997		
F-statistic	1.053321			18.16858			3.731708		
Prob (F-statistic)	0.415128			0.000000			0.004615		
D-W statistics	0.264785			1.887505			1.759117		
F test									
Hausman test	P value-0.9994As fail to reject null hypothesis and random is best fit and we will use random effect model.								

(TABLE 2)

The result found that profitability, tangibility, sizes, risk, growth, GDP are found significant. Where profitability and GDP are negatively associated while others are positive association. We can say that study supports pecking order theory aas well as tradeoff theory. Media sector is growing firm and has traditional approach to prefer retained earnings than debt. Tangibility has positive relation with debt as higher collateral value leads to higher debt. Similarly growth opportunity attracts more funds and lager size approach higher debt. In addition, GDP growth rate negatively associated.

Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in residuals

Equation: Untitled
Periods included: 5
Cross-sections included: 8
Total panel observations: 40
Note: non-zero cross-section means detected in data
Cross-section means were removed during computation of correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	59.29163	28	0.0005
Pesaran scaled LM	3.112475		0.0019
Pesaran CD	0.577176		0.5638

(TABLE 3)

Table displays the result of the estimated regression model. The result shows that profitability, tangibility, size and growth are significant at 5% whereas GDP is significant at 10% level. Somehow profit and GDP has negative association whereas tangibility, size growth shown positive association.

Cross sectional analysis has advantage of avoiding various complications of data drawn from various point of time. It investigates the different effect of demographic factors. This study shows no cross section data means prediction has no overlaps over the time period. (TABLE 3)

5- CONCLUSION

Capital structure represents the portion on which various long term component employed and over the period of time recognized very important decision. This paper examines the relevance of capital structure in selected Media and Entertainment firm of NIFTY. Study observed that Indian Media and entertainment industry has expected result as pecking order theory. The companies need special focus as these are growing companies and still need concentration from government. Print media was always taken as underdeveloped and nonprofit organization and also show low profit than the other companies but also has record growth since last decade. In further study we can include some more company and group them with their characteristics. This study will give some more clarity of emerging sector. Perhaps, GDP found negative result as due to market timeing and GST implication in Indian market some dilemma has been faced by the industry.

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APPENDIX

	DR1	P1	LIQUIDITY	TANGIBILITY	S1	R1	GDP	GRW_1
Mean	1.690478	0.452861	-0.659024	0.355702	0.523250	3.674137	7.399400	0.300998
Median	1.405829	0.500910	0.541692	0.314123	0.530000	3.788393	7.410000	0.305119
Maximum	4.836723	0.991561	2.211275	3.078567	0.590000	4.079001	8.154000	0.342347
Minimum	1.000000	-2.254073	-51.06612	-5.507674	0.380000	2.469835	6.620000	0.235250
Std. Dev.	0.931528	0.447028	8.211979	1.123554	0.037852	0.380382	0.526115	0.020839
Skewness	1.917044	-5.714352	-5.997894	-3.117495	-1.548119	-1.325010	-0.057205	-1.278598
Kurtosis	5.681300	35.41689	37.33617	20.79358	6.782135	4.354428	1.944565	6.067776
Jarque-Bera	36.48266	1969.117	2204.786	592.4778	39.81871	14.76179	1.878387	26.58418
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000623	0.390943	0.000002
Sum	67.61911	18.11445	-26.36098	14.22809	20.93000	146.9655	295.9760	12.03992
Sum Sq. Dev.	33.84201	7.793520	2630.027	49.23257	0.055878	5.642928	10.79507	0.016937
Observations	40	40	40	40	40	40	40	40

Dependent Variable: DR1

Method: Panel Least Squares

Date: 10/13/18   Time: 17:14

Sample: 2014 2018

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.314126	4.982349	-1.267299	0.2142
P1	-0.163090	1.074316	-0.151808	0.8803
LIQUIDITY	0.002052	0.019429	0.105625	0.9165
TANGIBILITY	0.140976	0.379418	0.371559	0.7127
S1	2.623242	5.610481	0.467561	0.6433
GRW_1	13.07346	7.984873	1.637278	0.1114
R1	0.946886	0.412126	2.297567	0.0283
GDP	-0.102308	0.305503	-0.334884	0.7399

R-squared	0.187265	Mean dependent var		1.690478
Adjusted R-squared	0.009480	S.D. dependent var		0.931528
S.E. of regression	0.927102	Akaike info criterion		2.863350
Sum squared resid	27.50457	Schwarz criterion		3.201126
Log likelihood	-49.26699	Hannan-Quinn criter.		2.985479
F-statistic	1.053321	Durbin-Watson stat		0.264785
Prob(F-statistic)	0.415128			

Dependent Variable: DR1

Method: Panel Least Squares

Date: 10/13/18   Time: 17:14

Sample: 2014 2018

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.656524	3.311445	-1.104208	0.2800
P1	-2.519314	0.746798	-3.373487	0.0024
LIQUIDITY	-0.001573	0.008051	-0.195414	0.8466
TANGIBILITY	0.943336	0.273895	3.444155	0.0020
S1	7.734109	3.107492	2.488859	0.0198
GRW_1	7.969739	3.924177	2.030933	0.0530
R1	0.331572	0.592644	0.559479	0.5808
GDP	-0.204431	0.118352	-1.727311	0.0964

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.910510	Mean dependent var	1.690478
Adjusted R-squared	0.860395	S.D. dependent var	0.931528
S.E. of regression	0.348053	Akaike info criterion	1.007074
Sum squared resid	3.028528	Schwarz criterion	1.640404
Log likelihood	-5.141486	Hannan-Quinn criter.	1.236066
F-statistic	18.16858	Durbin-Watson stat	1.887505
Prob(F-statistic)	0.000000		

Dependent Variable: DR1

Method: Panel EGLS (Cross-section random effects)

Date: 10/13/18   Time: 17:15

Sample: 2014 2018

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.882938	3.325452	-1.167642	0.2516
P1	-2.458974	0.739056	-3.327183	0.0022
LIQUIDITY	-0.001538	0.008043	-0.191283	0.8495
TANGIBILITY	0.921151	0.270799	3.401602	0.0018
S1	7.696832	3.093812	2.487815	0.0183
GRW_1	8.058774	3.909710	2.061220	0.0475
R1	0.383489	0.567657	0.675565	0.5042
GDP	-0.203221	0.118277	-1.718178	0.0954

Effects Specification

	S.D.	Rho
Cross-section random	1.995327	0.9705
Idiosyncratic random	0.348053	0.0295

Weighted Statistics

R-squared	0.449434	Mean dependent var	0.131474
Adjusted R-squared	0.328997	S.D. dependent var	0.386783
S.E. of regression	0.316832	Sum squared resid	3.212251

F-statistic	3.731708	Durbin-Watson stat	1.759117
Prob(F-statistic)	0.004615		

<div align="center">Unweighted Statistics</div>

R-squared	0.020091	Mean dependent var	1.690478
Sum squared resid	33.16210	Durbin-Watson stat	0.170397

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.516601	7	0.9994

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
P1	-2.519314	-2.458974	0.011504	0.5737
LIQUIDITY	-0.001573	-0.001538	0.000000	0.9234
TANGIBILITY	0.943336	0.921151	0.001686	0.5890
S1	7.734109	7.696832	0.084831	0.8982
GRW_1	7.969739	8.058774	0.113330	0.7914
R1	0.331572	0.383489	0.028992	0.7604
GDP	-0.204431	-0.203221	0.000018	0.7744

Cross-section random effects test equation:

Dependent Variable: DR1

Method: Panel Least Squares

Date: 10/13/18   Time: 17:15

Sample: 2014 2018

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.656524	3.311445	-1.104208	0.2800
P1	-2.519314	0.746798	-3.373487	0.0024
LIQUIDITY	-0.001573	0.008051	-0.195414	0.8466
TANGIBILITY	0.943336	0.273895	3.444155	0.0020
S1	7.734109	3.107492	2.488859	0.0198
GRW_1	7.969739	3.924177	2.030933	0.0530
R1	0.331572	0.592644	0.559479	0.5808
GDP	-0.204431	0.118352	-1.727311	0.0964

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.910510	Mean dependent var	1.690478
Adjusted R-squared	0.860395	S.D. dependent var	0.931528
S.E. of regression	0.348053	Akaike info criterion	1.007074
Sum squared resid	3.028528	Schwarz criterion	1.640404
Log likelihood	-5.141486	Hannan-Quinn criter.	1.236066
F-statistic	18.16858	Durbin-Watson stat	1.887505

Prob(F-statistic)   0.000000

Residual Cross-Section Dependence Test

Null hypothesis: No cross-section dependence (correlation) in residuals

Equation: Untitled

Periods included: 5

Cross-sections included: 8

Total panel observations: 40

Note: non-zero cross-section means detected in data

Cross-section means were removed during computation of correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	59.29163	28	0.0005
Pesaran scaled LM	3.112475		0.0019
Pesaran CD	0.577176		0.5638