

## PRE RECESSION STUDY ON FINANCIAL LEVERAGE IN REAL ESTATE INDUSTRY AND ITS RELATIVE IMPACT ON SHAREHOLDERS RETURN

**DR S.M.TARIQ ZAFAR\*; DR ADEEL MAQBOOL\*\***

\*DIRECTOR,  
CHARAK INSTITUTE OF BUSINESS MANAGEMENT,  
LUCKNOW, U.P

\*\*ASSOCIATE PROFESSOR & HEAD,  
INTEGRAL UNIVERSITY, LUCKHNOW

---

### ABSTRACT

In this present dynamic and unpredictable business environment companies' performance changes day by day. To meet out its commitment of growth and return to its shareholders companies require regular flow of funds which can be obtained in form of debt. Thus leverages are debt fund used judiciously by the companies in futuristic hope of multiplying and maximizing shareholder's return EPS and ROE. It is a systematic fixed obligation with fixed cost. It is generated through the goodwill produced by the company by utilizing its overall resources efficiently and effectively. Generally investors like to invest in those companies which may give them maximum return with lesser risk. In business world from an operational point of view, earning per share are perhaps the most important and trusted index of financial performance. Thus it is very much imperative that real estate companies must realize the importance of leverages, Cost of Capital, EPS and ROE and their collective impact on shareholder return. This paper aims to know the effect of various financial ratios upon the bearing of shareholder's return and to analyze the impact of real asset ownership on the systematic risk (beta) and the risk-adjusted return of corporations. In addition study will examine that if real assets provide diversification benefit, then can firms with real assets will be in position to achieve a higher rate-of-return for a given level of risk or a lower level of risk for a given rate-of-return during the period. The study as a whole is categorized into understanding of study, methodology adopted and learning's from the study. The first part gives an insight about the financial ratios and its understandings. And also how many ratios are applied, in order to find out the relationship among them. Second part signifies the kind of method and model adopted in order to understand the study. For this reason we have analyzed thirty companies of real estate industry on the basis of ratios and model like regression, so that it would help the investor to choose the right company for the purpose of investment. In last finding and conclusive remarks are given.

**Jel Classifications:** G20, G22, G28, G29, G33, G39

**KEY WORDS:** Investors; Rational; ROCE; DPR; GS; ICR; GEPS; GDPS; GTA;ROE; EPS; Risk; EBIT; DFL;

---

## **INTRODUCTION**

For the survival in competitive economic environment and to maintain growth companies induct debts (leverages) in their capital structure. Thus it became paramount for the companies to define the risk undertaken by the shareholders which in general arise due to variability of EBIT (*Operating Risk, due to variability of sales and variability of expenses*) and Variability of EPS or ROE (*Financial Risk, due to the impact of interest charges*). Generally leverage means, meeting out fixed assets or paying out fixed return for employing borrowed resources or funds for high profitability to shareholders trading on thin equity. It is a reliable device to force the company to generate and pay out cash through use of fixed charge securities raised on the strength of net worth. It work as an instrument to reduce the agency costs and is generally used by business firms to quantify the risk–return relationship of different alternative capital structures. When companies include securities with fixed cost (debt) in its capital structure along with other source of funds (equity) and pay fixed financial charges, it is considered that company is working on leverage. These fixed financial charges do not vary but are to be paid irrespective of any level of EBIT. Degree of financial leverages depends on the magnitude of interest and fixed financial charges. DFL will be high if costs of financial charges are high and company will be in risk if it continued for long period and vice-versa. It measures the impact of change in EBIT on EPS, and an increase in EBIT lead to a higher percentage increase in EPS. It is considered favorable when it earns more on its total investment than what it pays towards debt capital, means ROCE should be greater than fixed financial charges or rate of interest on debt. It is also termed as “Trading on Equity”. Shareholders will be in advantage if the company earns a high rate of return and pays a lower rate of return to the supplier of long term debt funds. Their earning enhance with positive difference between the return (EBIT) and the cost of debt funds. In addition, in case of debt funds the interest cost is also tax deductible. Return from DFL increases due to excess of return on investment over effective cost of debt and reduction in the number of shares issued due to the use of debt funds.

### **Objective of the Study:**

The research work aims to examine the effect of various financial ratios upon the bearing of shareholder’s return in real estate industry. To determine the factors that have a bearing on firm’s financial leverage, to determine the relationship between leverage and cost of capital and to find out the effect of financial leverage on shareholder’s return.

### **Methodology:**

The study is based on the secondary data collected from various government records and published national document, websites of respective companies, moneycontrol and adopts analytical and descriptive research design with random sampling technique. Thirty BSE listed companies from various categories have been selected for the purpose. Pre recession period from 2001 to 2008 is taken for study and all the data have been well analyzed with the help of ratios and regression model.

### **Method of analysis:**

To achieve the above stated objectives, Firstly ratios were calculated like financial leverage, return on capital employed, interest coverage ratio, dividend payout ratio, growth in sales, growth in earning per share, cost of capital. Secondly, model was adopted which on individually

company data as well as compositely apply the regression model. And thus further analysis was conducted.

### **The Model**

The classical regression model is used for the study to formulate the differences in the behavior of the cross-section elements is

$$y_{it} = X_{it} \beta + Z'_{it} \alpha + \varepsilon_{it}$$

The firm does not wish to change dramatically its capital structure. Given the capital structure of the previous year, the firm adjusts this year's leverage in order to accomplish a long run target capital structure. The hypothesis that will be tested in this paper is that each year's financial leverage depends upon the return on capital employed, dividend per share, interest coverage ratio, growth in sales, growth in earning per share, growth in dividend per share and growth in total assets.

$$F.L_{it} = \alpha + \beta_1 ROCE_{it} + \beta_2 DPR_{it} + \beta_3 GS_{it} + \beta_4 ICR_{it} + \beta_5 GEPS_{it} + \beta_6 GDPS_{it} + \beta_7 GTA_{it} + \varepsilon_{it}$$

#### **Where:**

ROCE <sub>it</sub>	= return on capital employed of the firm I at time t.
DPR <sub>it</sub>	= dividend payout ration of the firm I at time t.
ICR <sub>it</sub>	= interest coverage ratio of the firm I at time t.
GS <sub>it</sub>	= growth in sales of the firm I at time t.
GEPS <sub>it</sub>	= growth in earning per share of the firm I at time t.
GDPS <sub>it</sub>	= growth in dividend per share of the firm I at time t.
GTA <sub>it</sub>	= growth in total assets of the firm I at time t.
E <sub>it</sub>	=the error term.

### **Hypothesis of the study**

1. There exists strong relationship between dividend policy and financial leverage.
2. There exists strongly negative relationship between debt service capacity and financial leverage.
3. There exists a weak relationship between growth of sales and financial leverage.
4. There is a weak and insignificant relationship between growth in EPS and financial leverage.
5. There is a weak and insignificant relationship between growth in DPS and financial leverage.
6. There is weak and insignificant relationship between growth in total assets and financial leverage.
7. There is a strong and positive relationship between shareholder's return and financial leverage.
8. There is a strong and negative relationship between cost of capital and financial leverage.

## **LITERATURE REVIEW**

Infrastructure and real estate industry are always dear to all nations, and play significant role in nation overall growth and development. It play strategic role for overall employment in the nation. Their modernization, advancement and development reflect the nation's growth. Being a strategic economic instrument it require massive investment which are largely borrowed funds. With inducting debt (leverage financing) it have obligation to satisfy the investor in respect to risk and return. Real estate industry in India have been experiencing positive growth in its different sectors with the development of urbanization and increasing involvement of foreign investments in this field. A home is the ultimate security that every individual wants. Before recession prices of house were on it zenith but soon economic slowdown forced the price to come down. Due to economic decline, the Indian real estate sector undergone massive change following the crash in the stock market and the financial slowdown in June 2008. It gave investors an EPS strokes, and due to this unprecedented decline BSE Realty Index became the year's worst performer. It is found that India's and world largest property firm DLF lost 54 per cent of its stock value during the period. Unitech shed 64 per cent, Parsvnath and Omaxe lost 68 per cent each, Satyam stock price fall 30%. The ultimate loser in this entire economic slowdown melodrama was the consumer and people who had invested their hard earned money in the realty sector.

A survey of literature shows that throughout the world large numbers of financial analysts, research scholars and academicians, like *Ezra Solomon, Barnes, Baum, David Durand, Miller & Modigliani, J.V. Elliot Haley and Schell, I.M.Pandey, S.M.Tariq Zafar* have carried out extensive research in the field of Capital Structure, Cost of Capital, and Cost of Financial Leverages and explored the obscure truth and came up with diversified assumptions and important findings which became paramount in this arena. However most of the studies are carried out in advance and capitalist economies like UK, USA, etc. It is also been found that most of the studies are insignificant in Asian environment and no organized and systematic study has yet been carried out in India to test the authentic validity of these important concepts and thus the present paper seeks to make a humble beginning in these respects.

*Shell and Haley*, define Financial Leverage as, "the effect of debt financing on shareholder's income or financing the firm's development projects with outside debt, *James E Walter*" Leverage may be defined as percentage return on equity to percentage return on capitalization. *Modigliani and Miller* in (1963) proposes firms should use as much debt capital as possible in order to maximize their value along with corporate taxation and its advantages. "*Solomon, June (1963)* revealed that" Leverage is the ratio of the net rate of return on shareholders, equity and the net rate of return on total capitalization. *Modigliani and Miller (1985)* conclude that the theory of "capital structure irrelevance" where financial leverage does not affect the firm's market value. *Weston & Brigham*" In general usage, the leverage is defined as the ratio of total debt on total assets. *Nourse (1987)* defines There are many ways to invest. But the investor should be prudent enough to select a proper area; *DiLuia, Shlaes and Tapajna (1991)*, in their study found that the ownership of significant amounts of real estate by corporations in the United States is well documented. *Johnson and Keasler, (1993), and Rodriguez and Sirmans, (1996)*, in their study tried to examine the effect of real asset ownership (including real estate, but also plant and equipment) on the market performance of these same companies. Generally modern portfolio theory produce that real assets must provide a diversified opportunity when it is held in a portfolio since real estate's major portion of assets generally has a low correlation with common stock returns. Conversely, it could be hypothesized that real assets may not offer a

diversification benefit because the economic risk of the business may be incorporated into the returns from them, *Thomas E. McCue and Jhon L. King (1994)*, in his study examines the relationship between macroeconomic and real estate returns. For the study equity REIT data are used as a proxy for real estate returns. The outcome of the study shows that prices, nominal rates, output and investment all directly influence the real estate series. Nominal interest rate, moreover, explain the majority of the variation in the real estate series. “*Charles Ellis*” observes that a favorable financial leverage occurs when a firm earns more by investing the borrowed fund in the business than the fixed paid for their use, *Steven R. Grendier (1995)*, in his study tried to explain the underlying causes of the prolonged cycles observed in real estate markets. In addition characterizes the features that make some property types more prone to such boom- and bust behavior. *Stephen A. Pyhrr, Stephen E. Roulac and Waldo L. Born (1999)*, in their study synthesizes relevant research and commentary on real estate cycles in a micro- decision making context and discusses their strategic implications for investors and portfolio manners. *Peter M. Mazonas et al- Patent, (2000)*, in his study tried to determine an appropriate balance of credit parameters associated with the issuance of Reverse Equity Mortgage Financing. *Myers (2001)* points out “perfect alignment is implausible in theory and impossible in practice”. *David C. Ling and Andy Naranjo (2003)*, in their study examine that whether commercial real estate markets are integrated with stock markets using multifactor asset pricing models. The result of the study support the hypothesis that the market for exchange traded real estate companies, include REITs, is integrated with the for exchange traded non real estate stocks. However when appraisal based returns are used to construct real estate portfolio returns, the results fail to support the integration hypothesis. *Chun-Chang Lee, Shu-Zhange Lin, Shu-Man You and Jui-Kou Shang (2012)*, in their study tried to analyze the operating efficiency of Taiwan’s real estate brokerage firms and provides a reference for inefficient firms.

Growing population and business has created tremendous opportunities in real estate sector. Under the shadow of economic downfall investment has become complex phenomena and require technically and fundamentally expert investment advisors. It is a sector which requires massive investment and contrary the sale of property requires a long time comply with the legal requirements like verification of land use according to existing local laws, floor area ratio, time to time restriction on sale for some period, and many more laws, rules, etc, depending upon the socio - political environment. Thus with changing infra scenario new studies are to be carried out in order to compensate the real estate sector and to console the investors and consumers.

### **Financial Risk on Shareholders Return**

Generally real estate needs massive investment which requires balance capital structure depending upon industry and market situation. Financial Leverage is an important component of the capital structure and is an approach of financial valuation of a firm as well as of investor. It is the additional risk placed on the common stockholders as a result of the decision to finance with debt. If a firm obtains the fixed charges securities at a cost higher than the rate of return on the company’s investments, EPS or ROE will fall and vice versa. Conceptually, real estate stockholders face a certain explicit and implicit amount of risk that is inherent in a firm’s operations. Unpredictable tax rules and rates, which change every year, annual property tax which increased every year by self-assessment or capital based assessment. Rental income also subject to annual tax; sale and purchase of property subject to capital gains and attracts stamp duty and registration charges. Property tax and stamp duty which vary from state to state, verification and use of land according to local laws, floor area ratio, unexpected restriction on

sale for some period, and many more laws, rules, etc, depending upon the socio- political environment. This is its business risk, which is defined as the uncertainty inherent in projections of future operating income. If a firm uses debt, this concentrates the business risk on common stockholders. This concentration of business risk occurs because debt holders, who receive fixed interest payment, bear none of the business risk. Further leverage will reduce the amount of possible remaining cash flows, after the investment decisions, debt presupposes interest payments which are compulsory and ultimately results in cash outflows. Typically, financing with debt increases the expected rate of return for an investment, but debt also increases the riskiness of the investment to the common stockholders. It is essential to define the risk undertaken by the shareholders. Critically it is observed that earnings available to shareholders fluctuate on account of two risks. Firstly “Variability of EBIT” it is because operating risk arises due to variability of sales and variability of expenses. Secondly “Variability of EPS or ROE” it is because financial risk arises due to the impact of interest charges. In real estate return fluctuates according to the type of assets thus the yield in the real estate market has to be calculated on the capital invested and annual rental returns, less property tax, income tax and annual maintenance charges. The risk of demand and supply position of each sector needs to be minutely evaluated. Real estate sector specifically offers two types of returns monthly rentals, or the returns on the lease amount invested in bank, securities or in business. The other type is returns on sale of the property, thus required efficient valuation and evaluation to minimize the uncertain risk. In real estate the optimal capital structure will be derived by the balance between the costs of debt against the benefits of debt; the firm has to choose amount of debt which will minimize its total agency costs which arises when there is a risk of default to a void dissatisfaction among the investors.

Sales does not give a clear picture of operating efficiency when price of real estate are rising or decreasing on account of inflation or trade depression. It is possible that profits may be more or less not because of efficiency or inefficiency but because inflation or trade depression. However earning per share get influenced by changes in output or revenues through change and implementation of positive efforts and by available obligatory defensive finance. To understand this complicated relationship we have to analyze the leverages found in financial statements.

### **Calculation of Ratios and Their Results:**

For the study ratios are calculated and their analysis is follows.

- Study revealed that financial leverage ratio of simplex realty shows the highest average among all of the companies. Whereas can fin financials, jmc project, DB intt are there in the line subsequently.
- Study revealed that Return on Capital Employed ratio of canfin financials shows the highest average among all of the companies. Whereas cholamandulum, UB engg, alfalaval are there in the line subsequently.
- Study revealed that idfc have highest average Dividend Payout Ratio among of all the companies. Whereas ivrcl reflects second highest, A.K capital, can fin financial are in the line subsequently.
- Study revealed that bajaj holdings have the highest average Interest Coverage Ratio among all of the companies. Whereas unitech reflects second highest, then A.K capital, GG dandekar are in the line subsequently

- Study revealed that IVRCL and Ansal buildwell have the highest average Earning Per Share among all of the companies. Whereas rest of the companies reflects near to 1 and slightly above.
- Study revealed that ace integration have the highest average Growth In Sales whereas basil infra reflects second highest, era infra are there in the line subsequently.
- Study revealed that A.K capital have the highest average Growth in Earning Per Share just engg shows second highest. Similarly geojits, arihant, basil infra, simplex are in the line subsequently.
- Study revealed that simplex have highest average Growth in Dividend per Share among all of the companies, DB intt, geojits financial are in the line subsequently.
- Study revealed that pratibha infrastructure have the highest average Growth in Total Assets, followed by era infrastructure, geojits financials subsequently.
- Study revealed that UB engg, geojits, simplex Cost of Capital are in the line consecutively.

### Analyzing Financial Leverage and Its Relative Impact through Regression

#### MODEL BUILDING AND TESTING

##### 1. ARIHANT CAPITAL

##### Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.924	.854	-.168	.1988606

a Predictors: (Constant), DP, ICR, GTA, GEPS, ROCE, GDPS, GS

##### ANOVA

Model		Sum Squares	of df	Mean Square	F	Sig.
1	Regression	.231	7	3.306E-02	.836	.690
	Residual	3.955E02-	1	3.955E-02		
	Total	.271	8			

A. Predictors: (Constant), DP, ICR, GTA, GEPS, ROCE, GDPS, GS

B Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients		Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.085	.271		3.997	.156
	ROCE	2.713E-03	.010	.221	.265	.835
	ICR	-2.385E-03	.002	-1.882	-1.494	.376
	GS	1.090E-02	.007	5.854	1.566	.362
	GEPS	-2.169E-03	.001	-4.565	-1.556	.364
	GDPS	-4.553E-03	.004	-1.418	-1.044	.486
	GTA	-4.653E-03	.003	-2.054	-1.739	.332
	DP	-2.808E-02	.017	-.946	-1.678	.342

a Dependent Variable: F.L

## MODEL

$$F.L = 2.713 + (-2.385) + 1.090 + (-2.169) + (-4.55) + (-4.65) + (-2.808)$$

The above model shows that none of the variable contributes significantly in determining the value of financial leverage. The value of each variable lies within the range of 1.55 to -1.739. Whereas value of R<sup>2</sup> Square is .854 which is strong, but then also none of the variable significantly contributes.

## 2. CHOLAMANDALAM

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.919	.844	-.249	1.6661783

a Predictors: (Constant), DP, ROCE, ICR, GDPS, GEPS, GTA, GS

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.003	7	2.143	.772	.707
	Residual	2.776	1	2.776		
	Total	17.779	8			

a Predictors: (Constant), DP, ROCE, ICR, GDPS, GEPS, GTA, GS

b Dependent Variable: F.L



## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	21.033	12.893		1.631	.350
	ROCE	.117	.128	2.012	.911	.530
	ICR	-12.572	11.080	-1.714	-1.135	.460
	GS	-6.535E-02	.078	-2.210	-.838	.556
	GEPS	-1.883E-02	.044	-.440	-.424	.745
	GDPS	.125	.080	1.706	1.562	.362
	GTA	-4.312E-02	.108	-.754	-.399	.758
	DP	-2.914	1.687	-1.195	-1.728	.334

a Dependent Variable: F.L

## MODEL

$$F.L = .117 + (-12.572) + (-6.535) + (-1.88) + .125 + (-4.312) + (-2.914)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 1.562 to -1.728. Whereas value of  $R^2$  is .844 but then also none of the variable contributes significantly.

## 3. CHARTERED CAPITAL

### Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.770	.593	-.085	.3721311

a Predictors: (Constant), GTA, GS, ICR, GEPS, ROCE

## ANOVA

Model		Sum Squares	ofdf	Mean Square	F	Sig.
1	Regression	.606	5	.121	.875	.583
	Residual	.415	3	.138		
	Total	1.021	8			

a Predictors: (Constant), GTA, GS, ICR, GEPS, ROCE

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
Model		B		Beta		
1	(Constant)	.692	.171		4.060	.027
	ROCE	-7.130E-02	.077	-.3374	-.924	.424
	ICR	9.965E-03	.014	.956	.699	.535
	GS	2.107E-03	.003	.531	.722	.522
	GEPS	-.186	.358	-1.673	-.519	.640
	GTA	2.109E-02	.088	1.141	.239	.827

a Dependent Variable: F.L

## MODEL

$$F.L = (-7.13) + 9.965 + 2.107 + (-.186) + 2.109$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of .722 to -.924, whereas, value of  $R^2$  is .593 which is not so strong and does not show perfect model

## 4. PATEL ENGINEERING

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000	1.000	1.000	.

a Predictors: (Constant), DP, GEPS, GS, GTA, ICR, GDPS, ROCE

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.209	7	2.986E-02	.	.
	Residual	2.321E-17	0	.		
	Total	.209	7			

a Predictors: (Constant), DP, GEPS, GS, GTA, ICR, GDPS, ROCE

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.525	.000		.	.
	ROCE	2.114E-02	.000	2.769	.	.
	ICR	.184	.000	1.336	.	.
	GS	-1.063E-03	.000	-.148	.	.
	GEPS	-1.142E-03	.000	-.325	.	.
	GDPS	1.990E-03	.000	.442	.	.
	GTA	-8.113E-03	.000	-1.896	.	.
	DP	-4.684	.000	-2.180	.	.

a Dependent Variable: F.L

## MODEL

$$F.L = 2.114 + .184 + (-1.063) + (-1.142) + 1.990 + (-8.11) + (-4.684)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Whereas value of  $R^2$  is 1.00 which says that model is perfect in predicting the value of financial leverage. Which is rare to find in practical scenario?

## 5. ACE INTEGRATED FINANCIAL

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.701	.491	-.188	3.0492749

a Predictors: (Constant), GTA, GEPS, ROCE, GS

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.906	4	6.726	.723	.631
	Residual	27.894	3	9.298		
	Total	54.800	7			

a Predictors: (Constant), GTA, GEPS, ROCE, GS

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	-.714	1.179		-.606	.588
	ROCE	1.178	.811	.893	1.453	.242
	GS	5.410E-03	.005	1.267	1.197	.317
	GEPS	1.298E-03	.005	.125	.274	.802
	GTA	-.583	.482	-1.415	-1.21	.313

a Dependent Variable: F.L

## MODEL

$$F.L = 1.178 + 5.410 + 1.298 + (-.583)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 1.453 to .274. Whereas value of  $R^2$  is .493 which is not significant rather weak in predicting the value of financial leverage.

## 6. ANEON INVESTMENT

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.639	.409	-1.365	.7260636

a Predictors: (Constant), DP, GTA, GS, GEPS, GDPS, ROCE

### ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.729	6	.121	.230	.932
	Residual	1.054	2	.527		
	Total	1.783	8			

a Predictors: (Constant), DP, GTA, GS, GEPS, GDPS, ROCE

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.249	1.778		.140	.901
	ROCE	5.604E-02	.304	1.213	.184	.871
	GS	2.985E-04	.009	.112	.035	.975
	GEPS	-5.027E-04	.006	-.329	-.081	.943
	GDPS	7.236E-04	.012	.234	.061	.957
	GTA	-3.043E-02	.280	-.578	-.109	.923
	DP	2.467E-02	.951	.018	.026	.982

a Dependent Variable: F.L

## MODEL

$$F.L = 5.604 + 2.985 + (-5.027) + 7.236 + (-3.043) + 2.467$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 0.184 to -.081. Whereas value of  $R^2$  is .409 which is not significant rather weak in predicting the value of financial leverage

## 7. BAJAJ HOLDINGS

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.980	.960	.678	7.022277E-02

a Predictors: (Constant), DP, ICR, GDPS, ROCE, GTA, GEPS, GS

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.117	7	1.677E-02	3.402	.395
	Residual	4.931E-03	1	4.931E-03		
	Total	.122	8			

a Predictors: (Constant), DP, ICR, GDPS, ROCE, GTA, GEPS, GS

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.277	.345		3.700	.168
	ROCE	-2.887E-02	.012	-1.887	-2.505	.242
	ICR	-1.704E-05	.000	-.224	-.659	.629
	GS	-8.640E-04	.003	-.270	-.249	.845
	GEPS	-1.185E-03	.002	-.479	-.633	.641
	GDPS	2.006E-03	.002	.726	1.180	.448
	GTA	1.607E-02	.006	3.142	2.859	.214
	DP	9.887E-04	.000	1.020	1.979	.298

a Dependent Variable: F.L

## MODEL

$$F.L = (-2.887 + (-1.704) + (-8.640) + (-1.185) + 2.006 + 1.607 + 9.887)$$

The above model shows that ROCE and GTA of the variables contribute significantly in predicting the value of financial leverage. Thus the values of all the variables within the range - 2.505 and 2.859. Whereas value of  $R^2$  is .960 which is significant in predicting the value of financial leverage

## 8. AD MANUM FINANCIALS

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.770	.593	-.629	.9609588

a Predictors: (Constant), DP, GTA, ICR, GEPS, ROCE, GS

## ANOVA

Model		Sum Squares	ofdf	Mean Square	F	Sig.
1	Regression	2.687	6	.448	.485	.792
	Residual	1.847	2	.923		
	Total	4.534	8			

a Predictors: (Constant), DP, GTA, ICR, GEPS, ROCE, GS

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	3.211	1.937		1.658	.239
	ROCE	-3.776E-02	.063	-.802	-.595	.612
	ICR	-.237	.304	-.475	-.780	.517
	GS	3.722E-02	.059	1.213	.634	.591
	GEPS	-3.097E-03	.005	-.403	-.646	.584
	GTA	-2.700E-02	.039	-1.091	-.697	.558
	DP	.202	.244	1.200	.830	.494

a Dependent Variable: F.L

## MODEL

$$F.L = (-3.776) + (-.237) + 3.722 + (-3.097) + (2.700) + .202$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of -.780 to .830. Whereas value of  $R^2$  is .593 which is not significant rather weak in predicting the value of financial leverage

## 9 A.K CAPITAL

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000	1.000	1.000	.

a Predictors: (Constant), GTA, GS, DP, ICR, GDPS, ROCE, GEPS

### ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.171	7	.167	.	.
	Residual	.000	0	.		
	Total	1.171	7			

a Predictors: (Constant), GTA, GS, DP, ICR, GDPS, ROCE, GEPS

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.439	.000		.	.
	ROCE	3.696	.000	1.262	.	.
	DP	-.001	.000	-.228	.	.
	ICR	.000	.000	-.031	.	.
	GS	.003	.000	.506	.	.
	GEPS	.001	.000	12.365	.	.
	GDPS	.003	.000	.333	.	.
	GTA	-.033	.000	-12.693	.	.

a Dependent Variable: F.L

## MODEL

$$F.L = 1.262 + (-.228) + (-.031) + .506 + 12.365 + .333 + (-12.693)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Whereas value of  $R^2$  is 1.00 which is significant in predicting the value of financial leverage

## 10. ALFA LAVAL

### Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	1.000	1.000	1.000	.

a Predictors: (Constant), GDPS, ROCE, GEPS, DP, ICR, GA, GS

## ANOVA

Model		Sum Squares	of Df	Mean Square	F	Sig.
1	Regression	.126	7	.018	.	.
	Residual	.000	0	.		
	Total	.126	7			

a Predictors: (Constant), GDPS, ROCE, GEPS, DP, ICR, GA, GS

b Dependent Variable: F.L



## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.198	.000		.	.
	ROCE	.010	.000	.617	.	.
	DP	.005	.000	.909	.	.
	ICR	-.007	.000	-.945	.	.
	GS	-.001	.000	-.095	.	.
	GEPS	.000	.000	-.027	.	.
	GA	.003	.000	.160	.	.
	GDPS	.001	.000	.242	.	.

a Dependent Variable: F.L

## MODEL

$$F.L = .010 + .005 + (-.007) + (-.001) + .000 + .003 + .001$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Whereas the value of  $R^2$  is 1.0 which is significant and strong in predicting the value

## 11. GGDANDEKAR

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.944	.892	.136	.36266157

a Predictors: (Constant), GTA, DP, ICR, GDPS, ROCE, GS, GEPS

## ANOVA

Model		Sum Squares	of df	Mean Square	F	Sig.
1	Regression	1.087	7	.155	1.181	.612
	Residual	.132	1	.132		
	Total	1.218	8			

a Predictors: (Constant), GTA, DP, ICR, GDPS, ROCE, GS, GEPS

b Dependent Variable: F.L

**Coefficients**

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	-.018	.707		-.025	.984
	ROCE	.049	.042	1.151	1.184	.447
	ICR	.000	.001	-.174	-.158	.900
	DP	.006	.017	.208	.347	.788
	GS	-.020	.029	-.745	-.684	.618
	GDPS	.015	.006	1.218	2.426	.249
	GEPS	.003	.002	1.780	1.135	.460
	GTA	-.009	.011	-1.643	-.806	.568

a Dependent Variable: F.L

**MODEL**

$$F.L = .049 + .000 + .006 + (-.020) + .015 + .003 + (-.009)$$

The above model shows that GDPS contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 2.426 to -.806, whereas value of  $R^2$  is .892 which is significant in predicting the value of financial leverage

**12. IVRCL****Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990	.979	.835	.14253753

a Predictors: (Constant), GTA, G.E.P.S, ICR, GDPS, GS, R.O.CE, DIV

**ANOVA**

Model		Sum Squares	ofdf	Mean Square	F	Sig.
1	Regression	.967	7	.138	6.797	.287
	Residual	.020	1	.020		
	Total	.987	8			

a Predictors: (Constant), GTA, G.E.P.S, ICR, GDPS, GS, R.O.CE, DIV

b Dependent Variable: F.L

## Coefficients

		Unstandardize d Coefficients		Standardize d Coefficients	t	Sig.
Model		B	Std. Error	Beta		
	(Constant)	3.315	.974		3.404	.182
	R.O.CE	.005	.006	.268	.883	.540
	DIV	.001	.003	.097	.211	.868
	ICR	-.795	.362	-.998	-2.198	.272
	GS	.001	.005	.082	.227	.858
	G.E.P.S	.000	.002	.041	.126	.920
	GDPS	-.001	.002	-.078	-.301	.814
	GTA	.002	.003	.160	.737	.596

a Dependent Variable: F.L

## MODEL

$$F.L = .005 + .001 + (-.795) + .001 + .000 + (-.001) + .002$$

The above model shows that ICR contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of -2.198 to .883, whereas value of  $R^2$  is .979 which is not significant rather weak in predicting the value of financial leverage

## 13. JOST ENGINEERS

### Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	1.000	1.000	1.000	.

a Predictors: (Constant), GTA, GEPS, GDPS, DP, ROCE, ICR, GS

### ANOVA

Model		Sum Squares	ofdf	Mean Square	F	Sig.
1	Regression	14.921	7	2.132	.	.
	Residual	.000	0	.		
	Total	14.921	7			

a Predictors: (Constant), GTA, GEPS, GDPS, DP, ROCE, ICR, GS

b Dependent Variable: F.L

**Coefficients**

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.829	.000		.	.
	ROCE	-.084	.000	-5.669	.	.
	DP	3.036	.000	3.495	.	.
	ICR	-1.232	.000	-3.998	.	.
	GS	-.403	.000	-6.404	.	.
	GDPS	.143	.000	9.391	.	.
	GEPS	.007	.000	5.675	.	.
	GTA	.157	.000	1.493	.	.

a Dependent Variable: F.L

**MODEL**

$$F.L = (-.084)+3.036+(-1.232)+(-.403)+.143+.007+.157$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Whereas value of  $R^2$  is 1.00 which is significant in predicting the value of financial leverage

**14. BASIL INFRA****Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.572	.327	-.795	1.95361317

a Predictors: (Constant), GTA, GEPS, ROCE, ICR, GS

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.561	5	1.112	.291	.891
	Residual	11.450	3	3.817		
	Total	17.011	8			

a Predictors: (Constant), GTA, GEPS, ROCE, ICR, GS

b Dependent Variable: F.L

## Coefficients

		Unstandardize d Coefficients		Standardize d Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.014	1.155		.012	.991
	ROCE	.009	.046	.100	.193	.860
	ICR	.031	.046	.391	.676	.547
	GS	-.007	.010	-1.687	-.655	.559
	GEPS	.002	.003	.535	.764	.501
	GTA	.046	.087	1.339	.531	.632

a Dependent Variable: F.L

## MODEL

$$F.L = .009 + .031 + (-.007) + .002 + .046$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of -.655 to .764. Whereas value of  $R^2$  is .327 which is not significant rather very weak in predicting the value of financial leverage

## 15. ERA INFRA

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	1.000	1.000	1.000	.00200744

a Predictors: (Constant), GTA, ROCE, GEPS, DP, ICR, GDPS, GS

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.576	7	.225	55881.252	.003
	Residual	.000	1	.000		
	Total	1.576	8			

a Predictors: (Constant), GTA, ROCE, GEPS, DP, ICR, GDPS, GS

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	3.994	.009		435.988	.001
	ROCE	-.021	.000	-.643	-73.781	.009
	ICR	-.562	.002	-1.434	-297.390	.002
	DP	-.006	.001	-.105	-9.158	.069
	GS	.009	.000	.971	87.545	.007
	GEPS	.003	.000	.461	108.203	.006
	GDPS	.012	.000	.877	105.730	.006
	GTA	-.004	.000	-1.160	-69.358	.009

a Dependent Variable: F.L

## MODEL

$$F.L = (-.021) + (-.562) + (-.006) + .009 + .003 + .012 + (-.004)$$

The above model shows that all of the variables contribute significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 108.203 to -297.390 Whereas value of  $R^2$  is 1.0 which is significant rather very strong in predicting the value of financial leverage. Hence it is a perfect model.

## 16 .JMC PROJECT

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.968	.937	.497	1.88699371

a Predictors: (Constant), gta, ROCE, GDPS, DP, GEPS, ICR, GS

### ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.075	7	7.582	2.129	.485
	Residual	3.561	1	3.561		
	Total	56.635	8			

a Predictors: (Constant), gta, ROCE, GDPS, DP, GEPS, ICR, GS

b Dependent Variable: F.L

## Coefficients

		Unstandardize d Coefficients		Standardize d Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	5.407	2.550		2.121	.280
	ROCE	.007	.044	.067	.167	.895
	ICR	-2.911	1.637	-1.669	-1.779	.326
	DP	.285	.112	1.080	2.554	.238
	GS	-.129	.076	-4.427	-1.695	.339
	GEPS	.019	.008	1.907	2.247	.267
	GDPS	.015	.026	.313	.588	.662
	GTA	.206	.190	2.701	1.086	.474

a Dependent Variable: F.L

## MODEL:

$$F.L = .167 + (-1.779) + 2.554 + (-1.695) + 2.247 + .588 + 1.086$$

The above model shows that Dividend payout ratio and GEPS contributes significantly in predicting the value of financial leverage. Thus, the values of all the variables are within the range of 2.554 to -1.779. Whereas value of  $R^2$  is .937 which is not significant rather weak in predicting the value of financial leverage

## 17. PBA INFRA

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000	.999	.995	.64402715

a Predictors: (Constant), GTA, ROCE, GS, GDPS, GEPS, ICR, DP

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	641.734	7	91.676	221.029	.052
	Residual	.415	1	.415		
	Total	642.148	8			

a Predictors: (Constant), GTA, ROCE, GS, GDPS, GEPS, ICR, DP

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
	(Constant)	50.485	1.991		25.355	.025
	ROCE	-.197	.033	-.171	-6.013	.105
	ICR	-12.568	.899	-.605	-13.980	.045
	DP	-.537	.052	-.637	-10.320	.061
	GS	.039	.010	.237	3.932	.159
	GEPS	-.009	.001	-.666	-11.998	.053
	GDPS	.101	.021	.207	4.911	.128
	GTA	-.051	.026	-.112	-1.942	.303

a Dependent Variable: F.L

## MODEL

$$F.L = (-.197) + (-12.568) + (-.537) + .039 + (-.009) + .101 + (-.051)$$

The above model shows that, all the variables contribute significantly in predicting the value of financial leverage. Thus, the values of all the variables are within the range of -13.980 to 4.911. Whereas the value of R<sup>2</sup> is 0.993, which is significant rather very strong in predicting the value of financial leverage. Hence the model is perfect.

## 18. SIMPLEX REALTY

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.989	.979	.916	5.48335565

a Predictors: (Constant), GTA, R.O.CE, GS, DIV, G.E.P.S, ICR

## ANOVA

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	2806.448	6	467.741	15.557	.062
	Residual	60.134	2	30.067		
	Total	2866.583	8			

a Predictors: (Constant), GTA, R.O.CE, GS, DIV, G.E.P.S, ICR

b Dependent Variable: F.L



**Coefficients**

		Unstandardize d Coefficients		Standardize d Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	26.978	3.251		8.297	.014
	R.O.CE	-.502	.058	-2.271	-8.723	.013
	DIV	39.765	9.428	8.756	4.218	.052
	ICR	-9.958	2.537	-8.418	-3.925	.059
	GS	.521	.091	.983	5.717	.029
	G.E.P.S	-.046	.005	-2.824	-8.363	.014
	GTA	1.059	.190	1.725	5.567	.031

a Dependent Variable: F.L

**MODEL**

$$F.L = (-.502) + 39.765 + (-9.958) + .521 + (-.046) + 1.059$$

The above model shows that all of the variables contribute significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of -8.723 to 5.567. Whereas value of R<sup>2</sup> is .979 which is significant rather strong in predicting the value of financial leverage. Hence it is almost near to perfect model.

**19. (DB) INTT****Model Summary**

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.447	.200	-1.133	4.40421660

a Predictors: (Constant), GTA, ICR, G.E.P.S, GS, R.O.CE

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.550	5	2.910	.150	.966
	Residual	58.191	3	19.397		
	Total	72.742	8			

a Predictors: (Constant), GTA, ICR, G.E.P.S, GS, R.O.CE

b Dependent Variable: F.L

## Coefficients

		Unstandardiz ed Coefficients		Standardizet d Coefficients		Sig.
Model		B	Std. Error	Beta		
	(Constant)	2.652	2.522		1.052	.370
	R.O.CE	.065	.286	.585	.228	.834
	ICR	-.014	.037	-.293	-.369	.736
	GS	-.029	.057	-.609	-.514	.643
	G.E.P.S	-.001	.011	-.052	-.065	.952
	GTA	-.020	.189	-.249	-.107	.921

a Dependent Variable: F.L

## MODEL

$$F.L = .065 + (-.014) + (-.029) + (-.001) + (-.020)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of .228 to -.514. Whereas value of  $R^2$  is .222 which is not significant rather weak in predicting the value of financial leverage.

## 20. PRATIBHA INFRA

### Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	1.000	1.000	1.000	.

a Predictors: (Constant), GTA, GDPS, GS, GEPS, ICR, DP, ROCE

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.584	7	.083	.	.
	Residual	.000	0	.		
	Total	.584	7			

a Predictors: (Constant), GTA, GDPS, GS, GEPS, ICR, DP, ROCE

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	3.985	.000		.	.
	ROCE	-.014	.000	-.658	.	.
	ICR	-.475	.000	-.784	.	.
	DP	.028	.000	.831	.	.
	GS	-.008	.000	-.848	.	.
	GEPS	-.002	.000	-.485	.	.
	GDPS	-2.983	.000	-.055	.	.
	GTA	-.001	.000	-.618	.	.

a Dependent Variable: F.L

## MODEL

$$F.L = (-.014)+(-.475)+.028+(-.008)+(-.002)+(-2.983)+(-.001)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Whereas value of  $R^2$  is 1.0 which is significant rather very strong in predicting the value of financial leverage

## 21. ANSAL HOUSING

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.997	.995	.957	.15910467

a Predictors: (Constant), GTA, DIV, G.E.P.S, GDPS, R.O.CE, ICR, GS

### ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.637	7	.662	26.170	.149
	Residual	.025	1	.025		
	Total	4.663	8			

a Predictors: (Constant), GTA, DIV, G.E.P.S, GDPS, R.O.CE, ICR, GS

b Dependent Variable: F.L

## Coefficients

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
1	(Constant)	2.076	.418		4.971	.126
	R.O.CE	.051	.028	.514	1.815	.321
	DIV	.063	.039	.802	1.641	.348
	ICR	-1.529	.341	-2.399	-4.480	.140
	GS	-.068	.043	-.2109	-1.573	.361
	G.E.P.S	-.007	.003	-.744	-2.126	.280
	GDPS	.068	.025	1.467	2.683	.227
	GTA	.048	.019	2.170	2.478	.244

a Dependent Variable: F.L

## MODEL

$$F.L = .051 + .063 + (-1.529) + (-.068) + (-.007) + .068 + .048$$

The above model shows that ICR, GEPS, GDPS, GTA contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of -4.480 to -2.126. Whereas value of  $R^2$  is .993 which is significant rather very strong in predicting the value of financial leverage. Hence the model is perfect.

## 22. GEOJIT FINANCIALS

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.970	.941	.525	.72142948

a Predictors: (Constant), GTA, GEPS, ICR, ROCE, GS, DP, GDPS

### ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	8.239	7	1.177	2.261	.473
	Residual	.520	1	.520		
	Total	8.760	8			

a Predictors: (Constant), GTA, GEPS, ICR, ROCE, GS, DP, GDPS

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	3.905	.823		4.744	.132
	ROCE	-.038	.013	-1.130	-2.932	.209
	ICR	.004	.005	.314	.775	.580
	DP	-.006	.002	-1.627	-2.665	.229
	GS	-.038	.024	-1.556	-1.585	.358
	GDPS	.033	.017	4.787	1.957	.301
	GEPS	-.003	.002	-2.933	-1.980	.298
	GTA	.012	.007	1.412	1.731	.333

a Dependent Variable: F.L

## MODEL

$$F.L = -.038 + .004 + (-.006) + (-.038) + .033 + (-.003) + .012$$

The above model shows that ROCE, DP contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of -2.932 to 1.731. Whereas value of  $R^2$  is .941 which is not significant rather weak in predicting the value of financial leverage.

## 23. UNITECH

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	1.000	1.000	.996	.02421515

a Predictors: (Constant), GTA, GDPS, DP, GEPS, GS, ICR, ROCE

## ANOVA

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	1.331	7	.190	324.269	.043
	Residual	.001	1	.001		
	Total	1.332	8			

a Predictors: (Constant), GTA, GDPS, DP, GEPS, GS, ICR, ROCE

b Dependent Variable: FL

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.768	.065		42.871	.015
	ROCE	.005	.003	.451	1.580	.359
	ICR	-.006	.000	-.2785	-15.554	.041
	DP	.000	.000	.018	.240	.850
	GS	.003	.001	.720	4.915	.128
	GEPS	-.004	.000	-.798	-12.887	.049
	GDPS	.003	.000	.577	7.305	.087
	GTA	.003	.001	.950	3.051	.202

a Dependent Variable: FL

## MODEL

$$F.L = .005 + (-.006) + .000 + .003 + (-.004) + .003 + .003$$

The above model shows that ICR, GS, GEPS, GDPS and GTA contribute significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of -15.554 to 7.305. Whereas value of  $R^2$  is 1.00 which is significant rather very strong in predicting the value of financial leverage.

## 24. CHOICE FINANCIALS

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.538	.290	-.894	5.81542216

a Predictors: (Constant), GTA, G.E.P.S, ICR, R.O.CE, GS

### ANOVA

Model		Sum Squares	ofdf	Mean Square	F	Sig.
1	Regression	41.379	5	8.276	.245	.918
	Residual	101.457	3	33.819		
	Total	142.836	8			

a Predictors: (Constant), GTA, G.E.P.S, ICR, R.O.CE, GS

b Dependent Variable: F.L

## Coefficients

		Unstandardiz ed Coefficients	Std. Error	Standardizet d Coefficients		Sig.
Model		B		Beta		
1	(Constant)	.290	2.540		.114	.916
	R.O.CE	.641	.613	.598	1.045	.373
	ICR	44.110	60.748	1.160	.726	.520
	GS	.030	.048	1.063	.632	.572
	G.E.P.S	-.002	.003	-.334	-.503	.650
	GTA	-.009	.060	-.070	-.141	.897

a Dependent Variable: F.L

## MODEL

$$F.L = .641 + 44.110 + .030 + (-.002) + (-.009)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 1.045 to -.503. Whereas value of R<sup>2</sup> is .493 which is not significant rather weak in predicting the value of financial leverage.

## 25. UB ENGG

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712	.507	-.315	12.92378839

a Predictors: (Constant), GTA, GEPS, GS, ICR, ROCE

## ANOVA

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	514.900	5	102.980	.617	.703
	Residual	501.073	3	167.024		
	Total	1015.972	8			

a Predictors: (Constant), GTA, GEPS, GS, ICR, ROCE

b Dependent Variable: FL

## Coefficients

		Unstandardize d Coefficients	Std. Error	Standardized Coefficients	t	Sig.
Model		B		Beta		
1	(Constant)	4.415	5.804		.761	.502
	ROCE	.046	.075	.850	.611	.585
	ICR	-9.216	10.183	-1.124	-.905	.432
	GS	-.196	.209	-.755	-.937	.418
	GEPS	-.001	.004	-.141	-.332	.762
	GTA	.548	.497	1.718	1.103	.350

a Dependent Variable: FL

## MODEL

$$F.L = .046 + (-9.216) + (-.196) + (-.001) + .548$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 1.103 to -.905. whereas value of  $R^2$  is .507 which is not significant rather weak in predicting the value of financial leverage.

## 26. CAN FIN FINANCE

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.993	.986	.892	.20605767

a Predictors: (Constant), GTA, DIV, GDPS, GS, G.E.P.S, ICR, R.O.CE

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.093	7	.442	10.406	.234
	Residual	.042	1	.042		
	Total	3.135	8			

a Predictors: (Constant), GTA, DIV, GDPS, GS, G.E.P.S, ICR, R.O.CE

b Dependent Variable: F.L



## Coefficients

		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
Model		B		Beta		
1	(Constant)	7.899	4.762		1.659	.345
	R.O.CE	.005	.048	.133	.101	.936
	DIV	-.002	.053	-.034	-.042	.973
	ICR	-12.652	9.867	-.981	-1.282	.422
	GS	.000	.026	-.003	-.007	.995
	G.E.P.S	-.008	.047	-.145	-.175	.889
	GDPS	-.020	.062	-.094	-.324	.801
	GTA	.011	.038	.193	.300	.814

a Dependent Variable: F.L

## MODEL

$$F.L = .101 + (-.042) + (-1.282) + (-.007) + (-.175) + (-.324) + .300$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 1.562 to -1.728. Whereas value of  $R^2$  is .986 which is strong significant rather in predicting the value of financial leverage.

## 27. RAJESHWARI GRAPHICS

### Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.629	.396	-1.416	10.42336860

a Predictors: (Constant), GTA, ICR, ROCE, GEPS, GS, DP

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	142.462	6	23.744	.219	.938
	Residual	217.293	2	108.647		
	Total	359.755	8			

a Predictors: (Constant), GTA, ICR, ROCE, GEPS, GS, DP

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	-9.869	14.359		-.687	.563
	ROCE	.360	1.112	.381	.324	.777
	ICR	.278	.428	.556	.651	.582
	DP	-.009	.396	-.029	-.023	.983
	GS	-.020	.138	-.139	-.142	.900
	GEPS	-.011	.011	-.677	-.993	.426
	GTA	.125	.417	.269	.300	.792

a Dependent Variable: F.L

## MODEL

$$F.L = .360 + .278 + (-.009) + (-.020) + (-.011) + .125$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of .654 to -.677. Whereas value of  $R^2$  is .396 which is not significant rather very weak in predicting the value of financial leverage

## 28. CENLUB

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.713	.509	-.310	2.17356333

a Predictors: (Constant), GTA, GS, G.E.P.S, ICR, R.O.CE

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.682	5	2.936	.622	.701
	Residual	14.173	3	4.724		
	Total	28.855	8			

a Predictors: (Constant), GTA, GS, G.E.P.S, ICR, R.O.CE

b Dependent Variable: F.L

**Coefficients**

		Unstanda rdized Coefficie nts		Standard t ized Coefficie nts		Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.303	1.533		.198	.856
	R.O.CE	.042	.215	.237	.198	.856
	ICR	-.003	.273	-.013	-.011	.992
	GS	.037	.040	.644	.926	.423
	G.E.P.S	-.003	.004	-.337	-.684	.543
	GTA	-.052	.142	-.318	-.369	.736

a Dependent Variable: F.L

**MODEL**

$$F.L = .042 + (-.003) + .037 + (-.003) + (-.052)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of .926 to -.013. Whereas value of  $R^2$  is .509 which is not significant rather weak in predicting the value of financial leverage.

**29. IDFC****Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000	1.000	1.000	.

a Predictors: (Constant), GTA, R.O.CE, GDPS, GS, ICR, G.E.P.S, DIV

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.845	7	.121	.	.
	Residual	.000	0	.		
	Total	.845	7			

a Predictors: (Constant), GTA, R.O.CE, GDPS, GS, ICR, G.E.P.S, DIV  
b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients		Sig.
Model		B	Std. Error	Beta		
1	(Constant)	21.001	.000		.	.
	R.O.CE	-420.723	.000	-3.918	.	.
	DIV	-.004	.000	-11.266	.	.
	ICR	3.287	.000	2.619	.	.
	GS	-.026	.000	-9.093	.	.
	G.E.P.S	.064	.000	3.149	.	.
	GDPS	-.088	.000	-3.998	.	.
	GTA	-.074	.000	-4.515	.	.

a Dependent Variable: F.L

## MODEL

$$F.L = (-420.723) + (-.004) + 3.287 + (-.026) + .064 + (-.088) + (-.074)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Thus the values of all the variables within the range of 1.562 to -1.728. Whereas value of  $R^2$  is 1.0 which is significant rather strong in predicting the value of financial leverage.

## 30 ANSAL BUILDWELL

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000	1.000	1.000	.

a Predictors: (Constant), GTA, DIV, GS, G.E.P.S, R.O.CE, GDPS, ICR

## ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.114	7	2.016	.	.
	Residual	.000	0	.		
	Total	14.114	7			

a Predictors: (Constant), GTA, DIV, GS, G.E.P.S, R.O.CE, GDPS, ICR

b Dependent Variable: F.L

## Coefficients

		Unstandardized Coefficients		Standardized Coefficients		Sig.
Model		B	Std. Error	Beta		
1	(Constant)	4.682	.000		.	.
	R.O.CE	.224	.000	2.662	.	.
	DIV	-.017	.000	-.010	.	.
	ICR	-.051	.000	-2.594	.	.
	GS	-.048	.000	-.428	.	.
	G.E.P.S	-.026	.000	-2.018	.	.
	GDPS	-.082	.000	-1.025	.	.
	GTA	-.027	.000	-.546	.	.

a Dependent Variable: F.L

## MODEL

$$F.L = .224 + (-.017) + (-.051) + (-.048) + (-.026) + (-.082) + (-.027)$$

The above model shows that none of the variables contributes significantly in predicting the value of financial leverage. Whereas value of  $R^2$  is 1.0 which is significant rather strong in predicting the value of financial leverage.

## Result of composite data of thirty companies as follows:

## MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.910(a)	.828	.827	.35534658
2	.915(b)	.838	.837	.34529016
3	.919(c)	.845	.844	.33798920

a Predictors: (Constant), ROCE

b Predictors: (Constant), ROCE, GSALES

c Predictors: (Constant), ROCE, GSALES, ICR

**ANOVA (d)**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	204.411	1	204.411	1618.828	.000(a)
	Residual	42.553	337	.126		
	Total	246.965	338			
2	Regression	206.905	2	103.453	867.706	.000(b)
	Residual	40.060	336	.119		
	Total	246.965	338			
3	Regression	208.695	3	69.565	608.956	.000(c)
	Residual	38.269	335	.114		
	Total	246.965	338			

a Predictors: (Constant), ROCE

b Predictors: (Constant), ROCE, GSALES

c Predictors: (Constant), ROCE, GSALES, ICR

d Dependent Variable: FL

**COEFFICIENTS (A)**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.848	.042		20.096	.000
	ROCE	.016	.000	.910	40.235	.000
2	(Constant)	.960	.048		20.112	.000
	ROCE	.015	.000	.860	34.995	.000
	GSALES	-.001	.000	-.112	-4.573	.000
3	(Constant)	1.081	.056		19.341	.000
	ROCE	.014	.000	.833	33.377	.000
	GSALES	-.001	.000	-.114	-4.722	.000
	ICR	-.002	.000	-.089	-3.959	.000

a Dependent Variable: FL

**EXCLUDED VARIABLES (D)**

Model		Beta In	T	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	ICR	-.088(a)	-3.781	.000	-.202	.915
	DP	-.015(a)	-.644	.520	-.035	.998
	GSAL ES	-.112(a)	-4.573	.000	-.242	.800
	GDPS	-.041(a)	-1.162	.246	-.063	.408
	GEPS	-.032(a)	-.728	.467	-.040	.262
	GTA	.067(a)	1.445	.149	.079	.234
2	ICR	-.089(b)	-3.959	.000	-.211	.915
	DP	-.019(b)	-.860	.390	-.047	.997
	GDPS	-.040(b)	-1.153	.250	-.063	.408
	GEPS	.016(b)	.360	.719	.020	.247
	GTA	.113(b)	2.461	.014	.133	.225
3	DP	-.023(c)	-1.056	.292	-.058	.995
	GDPS	-.042(c)	-1.256	.210	-.069	.408
	GEPS	-.017(c)	-.391	.696	-.021	.238
	GTA	.078(c)	1.673	.095	.091	.214

a Predictors in the Model: (Constant), ROCE

b Predictors in the Model: (Constant), ROCE, GSALES

c Predictors in the Model: (Constant), ROCE, GSALES, ICR

d Dependent Variable: FL

The results shown in the above table, reflects the composite results of thirty companies chosen for the study. It can be inferred from the results that the entire three model has its value of  $R^2$  above .8 and thus the last model is the perfect model with the value of  $R^2$  0.845 as the highest among all. And among all of the variables, only return on capital employed, growth in sales and interest coverage ratio contribute significantly in predicting the value of financial leverage.

**Finding of the analysis:**

For the purpose of the study, balance sheet and profit & loss account from (2000-2008) of thirty real estate companies listed on BSE has been taken. Calculation of various financial ratios like return on capital employed (ROCE), interest coverage ratio and cost of capital has been taken into consideration. The investor reaction to market and non market events and subsequent investor's reaction. To test the relationship of thirty companies and their reaction to the model applied. The results of all ratios are then grouped together and the average of respective company is calculated. Thus a comparison among all the companies with regard to single ratios has been done. As per the results, company with the highest average is ranked one and vice-versa. To

understand the impact on return's the regression model has been applied in to two parts. Firstly model is applied to each company's compiled data of nine years. And secondly, model is applied to whole composite data. Therefore analysis has been done on both the parts; from there we inferred that few ratios of all contribute significantly in predicting the value of financial leverage. The study found that entire three model has its value of  $R^2$  above .8 and the last model is the perfect model with the value of  $R^2$  0.845 as the highest among all. It is also been found that only return on capital employed, growth in sales and interest coverage ratio has contributed significantly in predicting the value of financial leverage. The study also produced the fact that financial leverage impacts its shareholder's return.

### **Conclusion:**

Consumers saving and investor risk taking appetite will direct the growth and development of Real Estate Industry. During the period financial market was on boom and due to globalization earning of common man has increased and led to extra saving and investment accordingly. In the study develop model explains how the financial leverage of the Real Estate Industry is determined by some factors. The data used is derived by the financial statement of thirty BSE listed firms; regression analysis has been used to analyze the extracted data of respective competitive real estate companies. The dependent variable is financial leverage.

The finding of the study revealed that the leverage ratio is positively related to its profitability and growth parameters of the firms and simultaneously the findings of the study reflect that the profitability of the firm is positively related to its financial leverage. The profitability of the firms has been measured as the ratio of earnings before taxes dividend by total assets. The study produced significant fact and it can be considered as a judicious indication for future course of action that firms generally finance their activities following the financing procedure implied by pecking order theory. It is also been found that firms with higher profitability ratios tend to use less debt than firms that do not generate high profits. The study found that among the selected firms those who have high profitability have generated high internal cash flows and have used generated cash flow primarily to finance their investments. Therefore, they have not used much debt capital in comparison with firms that are not so profitable. Debt funds are justified only when ROCE is more than rate of interest. Companies with high ROCE due to efficient use of financial resources supported by effective capital structure with leverage must adopt liberal dividend policy to encourage and intact their present and future investors

### **References**

- A.I Scott, J.J, "Bankruptcy, Secured Debt and Optimal capital Structure", Journal of Finance (March, 1977)
- Barnes, A. James "A Pedagogic Note on Cost of Capital." Journal of Finance (March 1964)
- Baumol, William and Durton G. Michael. "The Firm's Optimal Debt Equity Combination and the Cost of Capital". Quarterly Journal of Economics (November, 1967)
- Chun-Chang Lee, Shu-Zhange Lin, Shu-Man You and Jui-Kou Shang (2012), A comparison of regular and franchise systems in the real estate brokerage industry in terms of operating efficiency—Application of the data envelopment analysis, African Journal



of Business Management Vol. 6(25), pp. 7431-7438, 27 June, 2012, ISSN 1993-8233  
©2012 Academic Journals

- David C. Ling and Andy Naranjo (2003), The Integration of Commercial Real Estate Markets and Stock Markets, Vol. 27, Issue 3, page 483-515
- David Durand, The use of Debt and Equity Fund in Business: Trends and problems of measurement”, (ED) The Management of Corporate Capital. New York, The Free Press of Glencoe, 1960 pp.230-45”
- Ezra Solomon, ”Leverage and the Cost of Capital: Journal of Finance (may, 1963)pp,330-65,
- Eugene F.Brigham, Michael C.Ehrhardt, “Financial Management, Theory and Practice 10<sup>th</sup> Edition
- Haley, Charles W., “A Note on the Cost of Debt”, Journal of Finance and statically Analysis (December, 1966)
- International Journal of management Science (December 2008)
- J.V. Elliot, Elliot, J., “The cost of Capital and U.S Capital Investment: A test of Alternative Concepts, “Journal of Finance (September, 1980)
- Kulkarni, “P.N.Financial Management Bombay: Himalaya Publishing House, 1985
- Miller & Modigliani, “Corporate Income Taxes and the Cost of Capital: A correction,” American Economic Review 53, June 1963
- Peter M. Mazonas et al- Patent, (2000), Reverse mortgage processing system, Issue Date- Jan 4- 2000
- Steven R. Grendier (1995), The Journal of Real Estate Finance and Economics, Volume 10, Issue 2, pp 95-119
- Sharma, M.Y Khans and P.K Jain. “Financial Management. New Delhi, Tata Mc-Graw-Hill Publishing Co Ltd, 1986
- Stephen A. Pyhrr, Stephen E. Roulac and Waldo L. Born (1999), Real Estate Cycles and Their Strategic Implications for Investors and Portfolio Managers in the Global Economy, Journal of Real Estate Research, Vol. 18, Issue 1, pp 7-68
- Thomas E. McCue and Jhon L. Kling, (1994), Real Estate Returns and the Macroeconomy: Some Emperical Evidence from Real Estate Investment Trust, Volume 9, Issue 3, pp- 277-288.

### **Books**

- Ravi. M. Kishore (Tax Man Publication 2008 edition)
- I.M Panday (Vidya Prakashan 2008)
- Khan & Jain (Tata MaCgrahills 2008)
- Lal Bagwan (Toppers Publication, Daryagan, N.D, 2008)

### Website

- [www.moneycontrol.com](http://www.moneycontrol.com)
- [www.bseindia.com](http://www.bseindia.com)
- [www.nseindia.com](http://www.nseindia.com)

### Each company's respective website

- December 2, 2008 – 8:30 am, **WWW.INDIANREALTYNEWS.COM**).
- December 4, 2008 – 12:40 am Banks want RBI to ease realty NPA norms
- December 5, 2008 – 6:10 am Sahara to defy realty slowdown
- December 6, 2008 – 1:42 am What makes India a good investment hub?
- December 9, 2008 – 12:51 am Unitech is close to finalizing hotel deal
- December 8, 2008 – 2:08 am RBI cuts repo to help Real Estate
- December 9, 2008 – 5:41 am Transparency in Real Estates is improving
- December 11, 2008 – 6:05 am Indian investment property show gets new date
- December 11, 2008 – 6:08 am Govt to miss indirect tax collection targets
- December 11, 2008 – 11:48 pm Dubai is showing symptoms of acute financial strain
- December 12, 2008 – 5:58 am Mumbai rental market hit hard
- December 13, 2008 – 12:17 am Rate-cut campaign in full swing
- December 15, 2008 – 4:28 am Realty stocks in demand on special home loan plan
- December 16, 2008 – 2:33 am Real estate cos hope govt help will revive demand
- December 17, 2008 – 2:56 am December 18, 2008 – 2:04 am NBO to launch housing index by March'09
- December 18, 2008 – 2:04 am Investors ask Satyam to call off acquisitions