



## The Impact of Financial Signaling and Information Asymmetries of Macroeconomic Covariates and Debt vs. Equity

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ARTICLE DETAILS	ABSTRACT
<p><b>History</b>            Revised format: 30 Nov 2019            Available Online: 31 Dec 2019</p>	<p>Present study investigates the existence of macroeconomic variables effect on capital structure and to evaluate the behavioral aspects of financial signaling and asymmetry of information on the non-financial sector of Pakistan. Extreme bounds analysis an econometric technique is used to analyze the robustness of financial signaling and information asymmetry covariates of macroeconomic factors on capital structure policies and to compute the empirical findings. The results conclude that interest rate is significantly influencing the decisions of the managers regarding to the composition of long run financing decisions. Hence it is identified that corporate non-financial sector has lesser signaling effect generated by the macroeconomic forces in financial decisions. However the null hypothesis cannot be rejected as this study identified. This study is meaning full and leads toward the practical version of financing decisions by the corporate sectors with the changing policies of the macroeconomic forces in Pakistan. There must be coherence between the macroeconomic policies and corporate sector policies, therefore information asymmetries may overcome.</p>
<p><b>Keywords</b>            Financial Signaling, Asymmetries, Debt vs Equity</p>	
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### 1. Introduction

The major concern of the financial managers of companies is to take capital structure decision to minimize the cost of capital. These decisions must be made in order to increase the value of its assets, which may increase the wealth of shareholders. The theoretical underpinning of financial management is desired to optimize the capital structure by minimizing the cost of financing and to ultimately maximize the firm value.

The optimal capital structure has a significant impact on capital market behavior. There are various important factors that may have significant importance with reference to the relationship of the capital structure and the economic factors. However the major economic factors may have significant influence

on the strategic capital structure decisions. Most of theories are based on internal structure of the company which may base on stability and smoothness of economic factors and variables.

All theories of capital structure have significance importance to answer the questions regarding to tax saving combination of capital structure, minimize cost of capital. All these concepts and constructs of the theories are relevant to the internal factors of the company such as managerial factors, buy and sell decisions etc may be controlled by companies but the external factors of the companies are less considered but found significant in previous studies.

The changes in macroeconomic variables such as money supply, inflation rate, interest rate, exchange rate, gross domestic product, industrial production, reserves and accounting variables such as amount of dividend, short term debt ratio and long term debt ratio may have significant effect on capital structure and ultimately to financial resources. These financial resources are highly sensitive to the situations of economic.

The investor's decision making will lead to market situations and represent to economy of the country. Thus we motivate to explore the impact of economic conditions on decisions and composition of financial resources among companies listed on KSE. The capital structure is extensive to provide answers to the aspects that affect the decisions against changing firm's capital structure. However we cannot deny some important economic explanatory variables, which may play a significant role for corporate choices and decision making.

This study is contributing in the empirical literature of capital structure studies by deploying new methodology along with macroeconomic variables in the model for identification of financial signaling and market information asymmetries at the same state and to identify the robustness of factors together on capital structure decision in non-financial sector of Pakistan to overcome the gap in the previous researches.

## **2. Literature Review**

The transitional and emerging countries require special focus to financial factors which support at level of economy. The asymmetric behavior in transitional economies is very high as compared to the developed market.

Modigliani and Miller (1958) established that trade off different tax and other financial benefits with debt against financial distress cost can be used to find optimal capital structure. Jensen and Meckling (1976) also described that financial distress cost, agency cost and bankruptcy cost can be used to establish trade of theory. This will create the equilibrium between advantages - tax cost and disadvantages - bankruptcy cost and financial distress to choice the capital structure.

Gertler and Hubbard (1993) documented that equity finance reduces the spread that firms insulate against aggregate risks due to tax bias. This can proceeded the prediction regarding dividends may varied with macroeconomic conditions.

Harris et al. (1994) indicated that the financial liberalization and reforms have an impact on investment decisions and credit allocation. The effect may differ due to change in type of firms. The results showed that shift in administrative to market dependent credit allocation stay increased borrowing costs of small firms particularly. This should be beneficial at the same time to provide widened access to finance.

Lamont (1995) explained a model of corporate debt overhang can be used to create multiple equilibriums in which economic activity may determined by expectations. Corporate financial structure has impact on macroeconomic performance by debt overhang when debtors make new investments. In conclusion the debt can create multiple expectation equilibrium and economic activity.

Kochhar (1997) explained that the management of the company decides about financing decision to reach the optimal market value of stocks. The maximization of shareholders value is possible by optimal maximum efficiency and selecting appropriate risk for the company. Michaelas et al. (1999) presented that capital structure is time and industry dependent. The changes in economic growth pattern have positive relationship with long term debt. Harris and Raviv (2002) described that reduction in cost of financing can enhance the market price of the share.

Ju and Ou-Yang (2006) developed that the interest rate in long run is the key determinant of optimal capital structure and debt maturity. Kohher (2007) explored highest market value is used for financial resources to obtain optimal level of maximum efficiency at selected appropriate level of risk of the company. There are various theories of optimal capital structure to find the basic truth about the optimal capital structure or not and cost of capital.

Niu (2008) doing theoretical and practical preview of capital structure and its determinants, firstly drew attention towards different theories of capital structure and then suggested seven different determinant factors from practical aspect i.e. a negative linkage of leverage with growth opportunities, liquidity and volatility and both positive and negative relationship with Profitability and Tax.

Bokpin (2009) proposed a study model on macroeconomic development and capital structure decisions. The Gross domestic product (GDP) per capita and choice of capital structure have negative significant relationship. Inflation has positive significant impact on choice of short term debt and equity. The stock market development has insignificant impact on choice of capital structure. The control variables – asset tangibility, return on equity (ROE), return on asset (ROA) and Tobin's Q are the significant predictors of corporate financial structure.

Chadegani et al (2011) investigated the effects economic and accounting variables on capital structure of listed companies initial data between 2001-2008 of Tehran Stock Exchange are used multivariate regression model seemingly unrelated regression equations. The results represents the positive relationship between exchange rate, dividend, long term debt ratio, short term debt ratio and bank credit and negative relationship between inflation, interest rate and GDP with capital structure in TSE.

Doukas et al (2011) found that a perceived capital market may favorable. The indication of market timing and cost of equity adverse selection – Asymmetry of information are important frictions. This can lead to issue more debt in hot – debt market period than cold-debt market periods. It is described that the firms with equity adverse selection of more (less) debt where market conditions considered as hot (cold). The evidence provided that the hot-debt market effect on the capital structure. The issuance in hot debt market may not rebalance actively to leverage to stay within the range of choice optimal capital structure.

Artikis and Nifora (2012) investigated that the market risk premium, the size, and the momentum idiosyncratic factors had a statistically significant positive relationship with equity returns. The leverage and value risk factors had a statistically significant negative relationship with equity returns. The leverage is priced as a risk factor by constructing a leverage factor contains significant information content. It has a smaller magnitude but still considerable portion as compared to the size and value risk factors.

Lemma and Negash (2013) indicated that the economy growth rate and inflation influenced the choice of capital structure. This signified the role of the probability of bankruptcy, transaction cost, agency cost, tax and asymmetry of information's, finance to access and timing of the market associated in decisions of the capital structure of firms.

Matemilola et al (2013) described unobservable firm's specific effects i.e. marginal skills and marginal ability. The mis-specification may occur due to firm specific factors i.e. marginal skills and marginal ability. These factors have significant relationship with capital structure decisions. The low level of debt advised to manager to increase in debt level.

Ahmad and Abdullah (2013) investigated optimal level of debt to maximize the value of the firms. The results estimators reflect the single threshold of debt ratio level 64.33 percent impacts on firm's value. The addition in debt beyond the threshold may not increase in value of the firms. More level of debt could proceed to a debt overhang and insolvency to microeconomic level of the firms. This might be cause vulnerability in financial system of the firms. It should lead to financial catastrophes.

### **3. Theoretical Framework**

#### **3.1 Theories of Financial Signaling and Asymmetric Information**

The information asymmetry which is basically resolved through the best decision making of management. The decision of debt and equity reflects change the behavior of the investors and creditors which leads to signals in market. The confidence and trust is based on favorable signals due to market value excellence and lack due to unfavorable signals and asymmetry of information. Fama and French (1988) was not agreed to the notion that the more profits of firms no need more debt. The more debt may producer of poor signals. The interest charges and future development are being depended on earnings.

#### **3.2 Agency Cost Theory (ACT)**

The agent - managers and principals - owners may lead agency behavior due to financial signaling and asymmetries. This may be between shareholders and manages and shareholders and creditors. Jensen and Meckling (1976) described agency cost of monitoring expenditure by principal, bonding expenditures by the agents and residual loss.

#### **3.3 Static Trade off Theory (TOT)**

Myers (1984) indicated the static tradeoff theory (STT) to explain a firm used targeted debt to equity ratio. The benefit and cost associated with the selection of debt choices debt equity. The taxes, agency cost and cost of financial distress may lead to doubtful situation on achievement of target. The bankruptcy cost that may be raised due to financial distress.

Pecking Order Theory (Pot):

Myers and Majluf (1984) explored the pecking order theory (POT) to financial decisions of capital structure. The firms have a preference to finance through use of internal fund, i.e. retained earnings, external financing means a bank loan and then equity to finance. The reluctance to issue equity to avoid asymmetric information between manager and investor.

#### **3.4 Signaling and Information Asymmetry Theory**

Ross (1977) documented signaling and information asymmetry model to convey the information quality of the company to market due to selection of capital structure choice. The misalignment information of company returns between management and investor may lead unfavorable signals and information Asymmetry. Then management can have enjoyed more returns but are penalized in case of bankruptcy.

#### **3.5 Transaction Cost Economics (TCE)**

Williamson (1988) described the transaction cost economics approach concerned to debt which is more valuable due to excellent collateral of general assets and more liquidity. The liquidity and security may increase capacity to meet the payments of debt. Ronald (1937) documented transaction cost economics due to difference between market to buy and to make based on decision to use markets. Kochhar (1996) described debt concerned to buy and equity concerned to make.

### 3.6 Life Stage Theory

Frielinghaus, Mostret and Firer (2005) presented that the fundamental premise of life stage of organization and living in the organisms in a similar fashion. The firms can utilize more debt as to mature. Bender and Ward (1993) showed that the choice of capital structure may effected by life stage of firm. These are used to manage the business risk and to increase financial risk. Adizes (1979) resulted that life stage is used to describe the typical pattern of behavior. Adizes (1996) as the interrelationship of flexibility and control.

### 3.7 Market Timing Theory

Baker and Wurgler (2002) provided that the choices of capital structure are positively and strongly related to the timing of the market. The capital structure showed the cumulative effects to time the equity of olds attempts. The stocks issued when the stock is overpriced and buy back when the stock underpriced. It argued that macroeconomic and accounting factors affect the capital structure of the firm. Frank and Goyal (2004) provided that there is no empirical sufficient support to validate this theory and unable to define the optimal capital structure.

## 4. Data and Methodology

### 4.1 Data

The study is an attempt to identify the effect of financial signaling of macroeconomic variables on choice between financing decisions of debt vs. equity. This study is based upon the secondary financial data of firms from the period 2001 - 2018. The data of firm's income statement and balance sheets is obtained from balance sheet analysis of joint stock companies listed on the Karachi stock exchange.

The Macroeconomic variables data is taken from International Financial Statistics which is published by IMF. This study has focused on the companies of five non-financial sectors that are listed on the Karachi Stock Exchange. A balanced panel data has been taken for analysis purposes.

Section -1: Macro asymmetric behavior, Theory /Hypothesis and Examples:

Macrocconomic Covariates	Theory /Hypothesis	Literature justification of variables
Money supply	Money supply cause to increase in the price levels of goods and services. Ultimately inflation that will reduce the purchasing power. It should increases the retained earnings to reduce the financial leverage or debt.	(Drobetz et al., 2007).
Inflation rate	Inflation rate is the increasing levels of goods and services price to reduce the purchasing power. Inflation rate has influence on management decisions of financing to increases the retained earnings to reduce the financial leverage.	(Drobetz et al., 2007).
Interest rate	Increase in interest rate will cause increase in investor and creditors expected rates. Since financial managers are seeking to achieve the lowest cost sources of financing to increase in interest rates and cost of financing to eliminate this way of financing.	(Bokpin, 2009).

Exchange rate	Exchange rate can be effective on the capital structure of those companies which use foreign funds. Increasing the exchange rate will lead to decrease in cash and increases interest expense and finally increases the debts ratio.	(Fanelli and Keifman, 2002).
Industrial production	The increase in industrial production improves strength of cash flows and earnings ultimately to GDP and it leads to reduction in the debt to equity ratio.	(Bokpin, 2009).
Reserves	The increase in reserves improves strength of cash flows and earnings ultimately to GDP and it leads to reduction in the debt to equity ratio.	(Bokpin, 2009).
Gross Domestic Product	Gross Domestic Product (GDP) is the total monetary value of goods and services produced in a given year. Based on literature review, the increase in GDP improves cash flows and earnings and it leads to reduction in the debt to equity ratio.	(Bokpin, 2009).

Section -II: Direction of the Effect & Empirical Findings of Macroeconomic Variables:

Covariates	Measure (proxy)	Theoretical Findings	Empirical Findings
Money supply	MS (M2)	Negative	Negative
Inflation rate	IF (CP Index)	Negative	Negative
Interest rate	IR (T-bill rate-6M)	Negative	Negative
Exchange rate	ER (Dollar rate)	Positive	Positive
Industrial production	IP (IP Index)	Negative	Negative
Reserves	RE(Gold+Forex)	Negative	Negative
Gross domestic product	GDP (GDP Deflator)	Negative	Negative

**4.2 Methodology**

The methodology is used to examine the effects of change of macroeconomic and accounting determinants in the debt vs. equity. The panel data studies of the determinants of debt vs. equity are typically based on regression equation

$$Y_{ct} = \alpha_t + \sum_{f=1}^n \beta_{fc} X_{ntc} + \epsilon_{ct}$$

Where t = 1,....., 10

c = number of the firms in each group

The desired change in debt vs. equity is measured as  $Y_{ct} = \Delta D/E = (D/E_t - D/E_{t-1})$

This study makes use of robust multiple regression analysis. The robust regression model is run over this kind of data. The robust regression model is as under

$$Y_{tk} = \alpha t + \beta_1 \text{ Macroeconomic} + \varepsilon_{ct}$$

Where

$Y_{tk}$  = Debt vs. Equity  
 $MS$  = Money Supply  
 $IF$  = Inflation Rate  
 $IR$  = Interest Rate  
 $ER$  = Exchange Rate  
 $IP$  = Industrial Production  
 $RE$  = Reserves  
 $GDP$  = Gross Domestic Product  
 $\varepsilon_{ct}$  = Error term

$$Y_{tk} = \alpha t + \beta_1 (MS) + \beta_2 (IF) + \beta_3 (IR) + \beta_4 (ER) + \beta_5 (IP) + \beta_6 (RE) + \beta_7 (GDP) + \varepsilon_{ct}$$

This model is a base model considering the impact of seven time-varying financial covariate of macroeconomic determinants makes changes on the capital structure.

$$Y_{tc} = \alpha t + \sum_{f=1}^n \beta_{nc} (\text{Macroeconomic Financial covariates})_{ntc} + \varepsilon_{ct}$$

Where, for the model as defined above,

$Y_{ctk}$  = Capital structure response for company  $c$  in year  $t$  ( $t=1, \dots, 10$ ).

$FC_{nct}$  = Time-varying macroeconomic financial covariate  $f$  ( $f=1, \dots, 7$ )

for company  $c$  in year  $t$  ( $t=1, \dots, 10$ ).

$\beta$  = Intercepts and slope coefficients for fixed effects (for which explicit individual estimates are produced)

$\varepsilon_{ct}$  = random error for company  $c$  in year  $t$ .

It can be expressed in an expanded form as follows:

$$Y_{ct} = \alpha t + \beta_1 \text{ Macroeconomic} + \varepsilon_{ct}$$

$$Y_{ctk} = \alpha t + \beta_1 (\text{Money Supply}) + \beta_2 (\text{Inflation}) + \beta_3 (\text{Interest rate}) + \beta_4 (\text{Exchange rate}) + \beta_5 (\text{Industrial production}) + \beta_6 (\text{Reserves}) + \beta_7 (\text{Gross Domestic Product}) + \varepsilon_{ct}$$

$Y_{ctk}$  = Capital structure response for company  $c$  in year  $t$  ( $t=1, \dots, 10$ ).

$\beta_1$  to  $\beta_7$  = Coefficients of fifteen time-varying macroeconomic financial covariates.

Extreme Bounds Analysis Issues In Methodology:

It is an alternative of parameters of simple regression. The simple regression is an emerged Bayesian solution due to model mis-specification and biasness in choice of variable. The parameters in simple regression may not be best representative and interpreted one. The Leamer (1978, 1983, 1985) and Leamer & Herman (1983) developed Bayesian econometric technique - Extreme Bounds Analysis (EBA). Levine & Runlet (1992) and Levine & Zervos (1993) showed the usefulness of Extreme Bounds Analysis (EBA). The extreme bounds analysis has power of reporting and assessing sensitivity of the estimated results where change in specification of model.

Xaviar X.Sala-I-Martin (1996, 1997) argued that a particular variables coefficient of a growth regression is not pessimistic criteria. The coefficients density function is important to resolve this problem by option of coefficients robustness and fragility. There is no theoretical justification for a specific combination of variables. Moreover there may be some theoretical justification is available for specific countries or group of countries but it may not be valid to all countries. It may used to explain that this is poor goodness of fit of the particular model where we used cross – sectional data set. These large numbers of explanatory variables encountered through sensitivity analysis.

The extreme bounds analysis (EBA) is used for sensitivity analysis. This extreme bounds analysis (EBA) can be used to avoid the pitfall of selective reporting. This also proceeds by direct incorporation of prior information's and followed a systematic approach to test the fragility of the coefficient estimates. So, Leamer,s Extreme Bounds Analysis (EBA) helped to resolve the big phenomena of classical econometric i.e mis-specification of model and biased criteria of inclusion or exclusion of variables in study.

It is evident that growth regression of panal data is caused number of statical and theoretical problems. The basic problem is inclusion or exclusion of the variables in the particular regression construct. It is evident that different economies are unacceptable econometric biased fundamentally due to regression model design of panal data. Secondly, the problem of choice of single equation model or double equation model. Moreover, the parametres alerts where related variables included or excluded in regression construct. It is obvious that at factual required and desired variable is sensitive regarding to minor changes in the model. It is actually the matter of fact of great concern to ascertain that which value of parameter is reliable and valid for policy making.

The simple regression coefficients or parametres are objectionable ultimately economic research pursuits to policy making. In this regard, doubtfulness of fulfillment of ultimate aim, the research endeavurers become more reliable and valid for a futile activity. The modified approach of Extreme Bounds Analysis (EBA) searched the maximum and minimum bounds to estimate the upper and lower bounds from series of parameter or coefficients of M combination which is used to satisfied the condition for selection criteria of coefficients robustness. It is used to stat that coefficients must be statically significant at 5% level of significance and entailed that do not to reflect the opposite sign. The parametres at 50% of significance are used to obtain by incorporation of M variables combinations. The upper and lower bounds which are used to maintain identical in sign will inferred to result in robust otherwise fragile.

## 5. Results and Discussion:

### 5.1 Macro level Signaling and Asymmetric Covariates

The high exchange rate (ER) may lead to low in cash and high interest expense. Table 3 indicates that the exchange rate (ER) has negative insignificant relation to financing decisions (debt vs equity) which means reduction in debt to equity ratio. The managers required to establish the minimum cost sources to decrease in debt. The negative significant relation of interest rate (IR) means reduction in debt vs. equity.

**Table 3:** The Sensitivity and Validity of Macroeconomic Financial Covariates:

Variables	Coefficients	t value
MS	-5.43221	-1.54
INF	4.61453	1.46
IR	-0.29614	-2.63**
ER	-3.69121	-1.52
IP	0.82421	0.95
RE	-2.43216	-1.58
GDP	-5.23752	-1.49

\*\*\* Significant at 1% level,

\*\* Significant at 5% level

\* Significant at 10% level



The interest rate does not support the tax shield benefit due to negative impact with debt vs. equity. The financial managers also feel threat of bankruptcy. The bankruptcy supports the transaction cost, asymmetric information and agency assumption due to the negative impact of interest rate. The high interest rate will increase the investor expected rate of return. The industrial production (IP) improved strength of cash flows and earnings to make reduction in debt. Industrial production (IP) has positive insignificant impact on debt vs. equity. It is used to lead more debt. The cash flows of the company can be strengthened by increase in Gross Domestic Product (GDP) and reserves (RE). The Gross Domestic Product (GDP) and reserves (RE) has negative insignificant impact on debt vs. equity. The result of sensitivity is reflected in the Table 4. The results showed the range values of parameters of variables of interest. The  $\beta_{max}$  and  $\beta_{min}$  are used in respect to significance level in percentage at 5% level of significance. These maximum and minimum bounds can be required to measure signaling sensitivity of the debt vs. equity (DE) and macro variables. The fragility and robustness indicates the extent of signaling and change in debt vs. equity in the reported variables. The results represent the negative insignificant relationship of inflation (INF), interest rate (IR), exchange rate (ER), reserve (RE) and gross domestic product (GDP) have fragile relationship and no sensitivity to debt vs. equity.

**Table: 4** EBA of the Coefficients Sensitivity: Modified Approach

Dependent Variable: DE					
M variables Included: TG PF SZ					
Variables	$\beta$ base	$\beta$ max	$\beta$ min	Sign $\beta$ ,s (%)	EBA Results
MS	-0.117	0.000	-0.117	0%	Fragile
INF	0.053	0.069	0.053	0%	Fragile
IR	-0.007	0.000	-0.007	0%	Fragile
ER	0.049	0.000	0.049	0%	Fragile
IP	0.009	0.000	0.009	0%	Fragile
RE	-0.007	0.000	-0.007	0%	Fragile
GDP	0.113	0.118	0.103	0%	Fragile
Robust Relationships in the Group				0 %	Globally Robust

The results presented in Table 5 also showed the range values of  $\beta$  upper bound and  $\beta$  lower bound of variables of interest with respect to level of significance at 5%. The results also represent the negative insignificant relationship of inflation (INF), interest rate (IR), exchange rate (ER), reserve (RE) and gross domestic product (GDP) are fragile variables.

**Table: 5** EBA of the Coefficients Sensitivity: Leamer Approach

Dependent Variable: DE					
M variables Included: TG PF SZ					
Variables	Mean $\mu$	Upper bound ( $\mu+2s$ )	Lower bound ( $\mu-2s$ )	Cases Sign. at 5%	Leamer EBA Results
MS	0.000	0.000	0.000	0%	Fragile
INF	0.000	0.000	0.000	0%	Fragile
IR	0.000	0.000	0.000	0%	Fragile

ER	0.000	0.000	0.000	0%	Fragile	
IP	0.000	0.000	0.000	0%	Fragile	
RE	0.000	0.000	0.000	0%	Fragile	
GDP	0.000	0.000	0.000	0%	Fragile	
Robust Relationships in the Group				0 %	Globally Robust	

**Table: 6** EBA of the Coefficients Sensitivity (Trimmed OLS @2% M.D): Modified Approach

Dependent Variable: DE						
M variables Included: TG PF SZ						
Variables	$\beta$ base	$\beta$ max	$\beta$ min	Sign $\beta_s$ (%)	EBA Results	
MS	-0.059	-0.059	-0.083	0%	Fragile	
INF	-.119	-0.119	-0.173	0%	Fragile	
IR	-0.079	0.079	-0.102	75.2%	Robust	
ER	-0.331	-0.331	-0.457	0%	Fragile	
IP	-0.097	0.000	- 0.097	0%	Fragile	
RE	-0.001	0.000	-0.001	0%	Fragile	
GDP	-0.107	-0.069	-0.110	0%	Fragile	
Robust Relationships in the Group				16.8 %	Globally Robust	

**Table: 7** EBA of the Coefficients Sensitivity (Trimmed OLS @2% M.D ): Leamer Approach

<b>Dependent Variable: DE</b>						
<b>M variables Included: TG PF SZ</b>						
Variables	Mean $\mu$	Upper bound ( $\mu+2s$ )	Lower bound ( $\mu-2s$ )	Cases Sign. at 5%	Leamer EBA Results	
MS	0.000	0.000	0.000	0%	Fragile	
INF	0.000	0.000	0.000	0%	Fragile	
IR	- 0.098	-0.096	-0.110	75.2%	Robust	
ER	0.000	0.000	0.000	0%	Fragile	
IP	0.000	0.000	0.000	0%	Fragile	
RE	0.000	0.000	0.000	0%	Fragile	
GDP	0.000	0.000	0.000	0%	Fragile	
Robust Relationships in the Group				16.8 %	Globally Robust	

Mahalanobis distance is used for trimming which is meant for exclusion of the outliers. The results also represent the negative robust and signaling relationship of variables. The interest rate sensitivity is more as presented in table 6 and table 7 respectively. The Money supply (MS), inflation (INF) , exchange rate (ER), industrial production (IP), Reserve (RE) and GDP have negative insignificant signaling relation to debt vs. equity.

The negative significant relation of interest rate (IR) is used to make decrease in debt vs. equity. Industrial production (IP), reserve (RE) and GDP improved strength of cash flows and earnings to make reduction in debt. Industrial production (IP), reserve (RE) and GDP has negative insignificant with debt vs. equity. Hypothesis hence proved due to significant negative relation of interest rate (IR). It is used to decrease in debt vs. equity due to high agency cost and also consistent with the objective. The interest rate (IR) has 73.3% robust and sensitive relationship to debt vs. equity.

## 6. Conclusion

This study finally concluded that all theories of capital structure identified that financial signaling and asymmetries of information changed the behavior of investors and lenders in a perspective where borrowing signals provides a positive impact and equity financing generates negative signals to the stock market investors but still there is a need to realize this impact that must have an index of capital structure based upon industrial average and the return anomaly or we may can visualize the impact of financial signals and change in capital structure parameters by analyzing cross section of various industry of non-financial sector that either the movement of capital from one industrial sector to another appealing industrial sector have caused an increase the return or not.

The study concluded that financial signaling and information asymmetries of macroeconomic variables indicate that interest rate (IR) has the most significant negative impact which cause to an increase in debt vs. equity and after while decrease in interest rate (IR). The financial managers should require achieving the lowest cost sources and reduction in debt composition. The economic and financial policy makers should definitely consider the impact of macroeconomic factors on financing to facilitate the non financial sector in Pakistan in a more dynamic way.

The debt vs. equity is the main concern among contributing factors as shown in the financial crises history. The borrowing of money is utilized for investment and industrial production. The failing in investment and industrial production should be the main reason of bankruptcy. The degree of bankruptcy is mostly used to increase the financial crises. The real and growth oriented utilization of borrowing of money for investments can better handle the financial crises. This asymmetry of information affects the psychology and perception of investor in decision of investments. The imperfections can misprice the value of the firm. There should be improvements in trust and confidence of investors to make the market more proficient and frictionless to reduce the anomalous behavior and mis-presentation of the market. The only efficient capital markets can have the practical implications to fair market value of firm.

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