

Financial Signaling and Information Asymmetries of Debt Vs. Equity in Emerging and Transitional Economies: An Application of EBA -Approach

Rana Shahid Imdad Akash ^{1*}, Muhammad Mudasar Ghafoor ², Majid Imdad Khan ³

¹ School of business Management, NFC-IEFR, Faisalabad, Pakistan

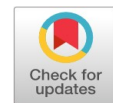
² Director General, University of the Punjab, Gujranwala Campus, Punjab, Pakistan

³ Ph. D Finance, Department of Management Sciences,
COMSATS University Islamabad (CUI) Lahore Campus, Punjab, Pakistan

Abstract: This paper examines the sensitivity and validity of debt signaling hypothesis by application of extreme bound analysis is rare in this field. Better and accurate coefficients regarding debt vs. equity could be attained by this technique. Further, the study based on capital structure theories which explore Asset Tangibility (AT), Profitability (PF), Size (SZ), Growth (GR), Investment Growth Opportunities (IG) and Size (SZ), Bankruptcy Risk (BR), Agency Cost (AC), Uniqueness (UN), Industry Classification (IC) Liquidity Position (LP), Financial Flexibility (FF), Transaction Cost (TC), Timing Effect (TE), Relative Tax Effect (RTE), And Free Cash Flows (FCF). The choice of sample covered all sectoral companies listed in Pakistan Stock Exchange for the period from 2012 to 2022. The analysis reveals that Agency Cost (AC), Liquidity (CR), Investment Growth Opportunity (IGO), Financial Flexibility (FF), Free Cash Flows (FCF), Relative Tax Effect (RTE) And Interest Rate (IR) reflecting the robustness and sensitivity of Debt Vs. Equity. The particular research is very helpful for researchers, fund managers, financial analysts and investors to important investment decisions. The empirical findings are may also have unique importance to manage the risk of firms. It should also imply to practice the good management theories for optimal capital structure and ultimately maximization of the wealth.

Keywords: Optimal capital structure, Capital structure determinants, Information asymmetry, Size, Free cash flow, Investment growth opportunity

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INTRODUCTION

The financial variation and rising patterns of orientation of markets explore signaling and asymmetric effect which have an influence on the corporate growth and development. The corporate development is ascertained through nature of knowledge, capital structure mechanism, and institutional reforms (Harvie & Naughton, 2000, and Hovey & Naughton, 2007). The financial decisions regarding fast economic environment, ownership structure, and diversity in business model expose puzzles. Moreover, the firm's value depends upon these decisions and professional aspects of employees enhanced (Raza et al., 2019). The fundamental values of corporate sector and best future dimension of overall economy are based on efficient market hypothesis. The variation in economies may be helpful to appreciate decisions regarding prevailing relations between corporate governance, signaling, and capital structure.

The economy of Pakistan concerned with level of debt and equity regarding institutional and transitional change. By this way, the relation can explore minimum capital cost and maximum benefits from asset's value. The firm's value remained the hot issue for investors (Khan et al., 2011). The attention of investors explored signals to markets and further the firms are focusing on estimated positive cash flows (Khan, Akhter, & Bhutta, 2020). The information asymmetry is observed by applying the Modigliani and Miller model of Signaling theory. The market misrepresentation and signal for the investors may be drawn through information asymmetry of economy (Khan, Akhter, & Bhutta, 2020). The investors have to utilize their financial resources and select a best choice resultantly they are typically affected. The information asymmetry is prevailing in both developed and developing economies.

*Corresponding author: Rana Shahid Imdad Akash

†Email: shahid.imdad@yahoo.com

So, the market efficiency is questionable. Low price of stock occurs in case of the firms sell stock in market instead of debt, and it is signaling dynamics (Akash & Abbas, 2015). This scenario will create agency problem. This will be the negative in the view of investors. The managerial behavior, governance structure mechanisms of corporate institution and markets have been emerged the slope of change in developed economies (Modigliani & Miller; 1958 Durand, 1952). This emergence of change may also be reflected in Pakistan corporate institutions. The markets are dominated by debt to outlays of stock market to affect the business position (Akash, Khan, & Shear, 2023; Suendarti, 2023). So, this will enhance the importance of discussion of institutional factors in Pakistan.

The institutional aspects that explore capital structure, and reflecting financial signals and information asymmetries. It should also be used to contribute the validity and sensitivity of capital structure of Pakistani listed firms of PSE. The robustness and sensitivity analysis of the results of previous studies may not be reliable due to use of no optimum methodology. The model specification is considerable and inclusion and exclusion of variables are important. The capital structure literature needs to be expanding in the sense of robustness examination. The selective reporting of capital structure has large number of explanatory variables. These variables may be encountered through sensitivity analysis. Extreme Bond analysis is a better technique for sensitivity analysis. This avoids the selective reporting pitfalls. The analysis is conducted to expose the fragility of the coefficients. By using Leamer's EBA we can avoid misspecification of the model and biased criteria regarding the selection of variables.

The study explored the capital structure with reference to financial signaling, and asymmetric information by considering the risk through estimation of EBA Analysis. The robustness and fragility regarding analysis explored the market of Pakistan. As proposed the following question is highlighted as follows.

Do Emerging and Transitional economies are influenced by robustness and sensitivity regarding companies listed in Pakistan Stock Exchange (PSE)?

The remainder part of the work is explored as follows. Section-2 states overview captured by literature, Section-3 explains data and methodologies, section-4 provides a look on analysis and explored the results discussion, and final section elucidated the conclusions and implication, limitation, and future directions. As per the discussion, the next step is to explain literature review as under.

THEORIES OF CAPITAL STRUCTURE

Relevance Theory

Durand (1952) argued that the value of the firm is influenced by the variation in combined ratio of Debt and equity. In other words, the capital structure determined the value of the business. The increase in financial leverage is necessarily associated with a decline in the value of the business. It is assumed that equity share hold by external investor relatively small in projects. It is also assumed that the interesting properties are exhibited in debt modeling financing. It is done under unique equilibrium but pooling equilibrium explored irrelevant and not existed (Rothschild & Stiglitz, 1976).

Irrelevance Theory

A theorem proposed by Miller and Modigliani (1958) states that when debt and equity are combined the firm value does not change. However, the market must be perfect as it is assumed that there are no income tax and distress costs present in firm's environment. The expected returns for firm's explored the independency for capital structure and is perceived as the investor's mood. The signaling expression is improved in this dilemma and known as signaling equilibrium that depends upon firm's capital structure. This above discussion can also be exposed as asymmetric information.

Static Trade off Theory

Static trade off theory of capital structure proposed by Mayers (1984) indicated reversion of actual debt ratio to the optimal ratio as a result of a firm selecting the combination of debt financing with equity financing to minimize debt cost. Moreover, he further explored the tax shield relevancy with acquisition of debt. More the tax benefits courage more debt and increase firm's profits. Miller and Modigliani (1963) argued that the tax explored more fraud and tax saving further service debt. The disadvantages of tax in relation to debt and equity cost is further elucidated by Jensen and Meckling (1976). This phenomenon provided a loop to agency conflict. By this way, firm's value decreases and exposes the asymmetric information.

Pecking Order Theory

Mayers and Majluf (1984) explored that the managers are the key players of markets and they have full access over internal information of firm's future concern that is called as asymmetric information. The priorities of managers should be for shareholder's interest. The firm's value declines due to asymmetric information regarding equities. The priority may change the preference for equity and consider the debt instead of it. The firm's value exposes the preferences either equity or debt. Consistent with the pecking order theory the financing operations of the companies are prioritized by way of the managers at the grounds of hierarchy. They observe already set possibilities along with they use retained profits first then comply with debt financing and after that pass in the direction of fairness.

Market Timing Theory

The selections of financing beneath this idea could comply with the marketplace conditions. This theory is in comparison with trade off theory and pecking order concept. While the charges of shares are excessive in marketplace the stocks are issued to get the gain of excessive prices. Alternatively, whilst the charges are low no shares are issued financing is made from different aspect. This theory is explored by Baker and Wurgler, 2002, and elucidated that market timings expose the financing decisions and have strong positive relation. Cumulative results can be enhanced through equity timing financing led by debt and equity selection. Over/under price stock behavior follow the decision to sale and buy.

Life Stage Theory

The theory elaborated by the Bender and Ward (1993, 2013) that how organizational existence stage to capital structure. At the different degree of existence of a company setting how a business enterprise select the selection of financing. On the basis of above discussion, following literature review is considered to explore the idea. It is comprehensively and in broader sense explored that firm's life stages are dependent to financing decision. The business risk became the part of firm's life stages. More the stages explore the more financial risk in relation to firm's life stages. The behavioral patterns actually the life stages of firms (Adizes, 1979).

Signaling and Transaction Cost theory

Transaction Cost Economies (TCE) was revitalized during 20 years ago by Williamson (1975, 1985) that has become the base for organizational, legal and economic theoretically. He argued that transaction regarding asset specificity ascertained the frequency interaction and degree of uncertainty. Moreover, the governance structure is adopted to parties of transaction. By this way, the prediction and signaling validity somewhat explored empirical evidence and theory extend the structure apparently as anomalous (Robins, 1987). Chiles and McMackin (1996) elucidated that risk neutrality, bounded rationality, firm's governance structure, and opportunism to explore the behavioral assumptions for Transaction Cost Economies (TCE). He argued that trust is an element of unifying perspective that integrate the behavioral and appraisal assumptions. Moreover, it also exposes the subjective cost, and relative ease and shortcomings are taken into consideration form risk and trust in Transaction Cost (TC) model. On the basis of above discussion and theoretical framework, following literature review is conducted to explore the idea further as under.

LITERATURE REVIEW

This section explains the previous studies. Finance research mature optimal capital structure regarding corporate finance. Cost regarding debt and equity influence firm's value & capital structure dilemma (Durand, 1952). Modigliani and Miller (1958) conducted a study named as Irrelevance or commonly known as MM theory. The study proposed efficiency of market for firm's activities that assumes information fully reflect capital structure choices (Akash, Khan, & Shear, 2023). The debt signaling premise suggested that the significant influence on the perception and decision of the investor (Khan, Amir & Bilal, 2023). The positive and negative signals lead to underpricing and overpricing of securities. The alignment of signaling effect provides the space to adjustment towards the efficient market. The creation of the situation i.e., efficient markets is the guarantee for best market values in transitional markets (Khan, Bashir & Amir, 2023). Hatfield (1994) explored leverage for industry average low and high move at time of new debt announcement. The market value for the shareholders may be influenced

(Khan, Hussain & Akash, 2023). The study concluded that level of debt and industry average has no concern about market change.

The change in market efficiency explore question regarding conditions of institutions, markets, economies, and countries (Hall, Hutchinson, & Michaels, 2004 & Khan et al., 2021). With reference to Pakistan the markets conditions are not only perfect but particular condition resultantly explore distortion. Constraint highlighted the difference in time which explore negative significant reaction for high debt firms. Niu (2008) documented research on Capital structure's determinants, and reviewed its theories then the facets of it. The results explored that Tax, and Profitability elucidated tangibility, and size positive, and negative, and have positive relation respectively regarding creating linkages between growth opportunities, and leverage. The signalers became players of markets regarding to use signal tool, and heterogeneity found in capital structure that resulted less or more insider ownership (Tse, 2007). Akash et al. (2019) examined the agency cost and information asymmetries which may leads to financial distress. The bankruptcy and financial distress lead to unfavorable signals and its effect on the orientation of market economies. The favorable signaling may produce the fair pricing of transitional market. Elldomiaty (2008) explained that determinants of capital structure have significant effects on firms. The overall result explored systematic risk classes, market value dependent to robust signaling impact for interest rates, and unflexed financial tools. This research is relevant to the negative signaling and corporate governance expose agency drawbacks Firm's performance is key tool for corporate governance. The best development of portfolio can be useful for reduction in risk asymmetries and signaling cost in transitional markets.

Harris and Raviv (1990) explored dynamic, and static models. The results explored the decisions regarding implementation of operations efficiently, and management monitoring tool generated information for investors allowing debt role (Amir, Bilal, & Khan, 2023). Buferna (2005) concluded the slope from asymmetric information theoretically which predicts significant positive roots for explaining the variables, and coefficients regarding trade off also found positive and significant. Bharath (2009) found that U.S firms explored decisions regarding capital structure, and asymmetric information. Finally, it is also explored that decisions regarding capital structure partially exposed successful for firms under pecking order theory. Dutham, J. Benson (2010) resulted that evaluation of sensitivity of explanatory variables in hypothesis to other conditioning in formations sets is advantage of Extreme Bounds Analysis (EBA). Xavier X. Sala-I-Martin (1996, 1997) researched the coefficients regarding certain variables that implicated for policy variation, and estimated the criterion for regression growth. The density in coefficients is significant to explore the issue regarding robust coefficients and fragility. The Leamer (1978, 1983, 1985) and Leamer & Herman (1983) explored that a Bayesian solution as an econometric technique – EBA-Extreme Bounds Analysis. Levine & Runlet (1992) and Levine & Zervos (1993) assessed the usefulness of EBA - Extreme Bounds Analysis. The further extension in EBA was made by Granger and Uhlig (1990). Akash, et.al. (2020). analyzed the financial suffering and debt costs unanimously are significant psychological factors in the development of financial market. The optimal level of capital structure choice can have implications to decrease the risk and agency cost. The risk and agency cost due to best choice of capital structure led to growth in transitional markets. On the basis of above literature review, following hypothesis is highlighted in the study as under.

H1: Emerging and transitional economies are exploring the robustness and sensitivity from companies listed in Pakistan Stock Exchange (PSE).

H2: Emerging and transitional economies are not exploring the robustness and sensitivity from companies listed in Pakistan Stock Exchange (PSE).

H3: Risk and Agency Cost are exposing capital structure choices in relation to debt Vs. Equity for growth in emerging and transitional markets.

H4: Risk and Agency Cost are not exposing capital structure choices in relation to debt Vs. Equity for growth in emerging and transitional markets.

DATA AND METHODOLOGY

Data

This financial data of firms for the period of 2012 – 2022 is gained from balance sheet analysis of listed companies of all non-financial sectors under the Pakistan Stock Exchange (PSX). The data of interest rate is

collected from IFS - International Financial Statistics of International Monetary Fund (IMF) which. The Data of the Market values of listed companies is gathered from the website of Business recorder. The data selection of the companies with complete data set included for analysis, and we were left the firms who have incomplete data.

Methodology

The effect of the slope of change is examined by the traditional and Bayesian solution to sensitivity of debt vs. equity determinants. Regression equation is applied to determine the debt vs. equity given as.

$$X_{ct} = \alpha_t + \sum_{f=1}^n \beta_{c0} Y_{tc} + \varepsilon_t \quad (1)$$

Whereas $t = 1-10$

$c =$ no of firms in a group.

The required slope regarding to change in debt vs. equity estimated as $X_{ct} = \Delta D$ vs. $E = D$ vs. $E_t - D$ Vs. E_{t-1} This debt vs. equity model is considering the impact of fourteen time-varying determinants which the makes slope of changes.

$$X_{D \text{ vs. } E} = \alpha_t + \sum_{f=1}^n \beta_c (\text{Financial signaling and information asymmetries covariates})_{tc} + \varepsilon_t \quad (2)$$

Asset Tangibility = TG Size = SZ Growth = GR Profitability = PF Investment Growth Opportunities = IGO Bankruptcy Risk = BCR Agency Cost = AC Uniqueness = UQ Financial Flexibility = FF Liquidity = LQ Timing Effect = TE Transaction Cost = TC Free Cash Flows = FCF Relative Tax Effect = RTE

It can be expressed as follows:

$$X_{D \text{ vs. } E} = \alpha_t + \beta_1(\text{TG}) + \beta_2(\text{SZ}) + \beta_3(\text{GR}) + \beta_4(\text{PF}) + \beta_5(\text{IGO}) + \beta_6(\text{BCR}) + \beta_7(\text{AC}) + \beta_8(\text{UQ}) + \beta_9(\text{FF}) + \beta_{10}(\text{LQ}) + \beta_{11}(\text{TE}) + \beta_{12}(\text{TC}) + \beta_{13}(\text{FCF}) + \beta_{14}(\text{RTE}) \quad (3)$$

The robustness and sensitivity analysis of the results of previous studies may not be reliable due to use of no optimum methodology. The model specification is considerable and inclusion and exclusion of variables are important. The capital structure literature needs to be expanding in the sense of robustness examination. The selective reporting of capital structure has large number of explanatory variables. These variables may be encountered through sensitivity analysis. Extreme Bond analysis is a better technique for sensitivity analysis. This avoids the selective reporting pitfalls. The analysis is conducted to explore the fragility of the coefficients. By using Leamer's EBA we can avoid misspecification of the model and biased criteria of selection of variables.

The E. views 8 is used for programming. EBA is used through OLS by using linear model.

$$\log(DE) = \beta_{1ji} + \beta_{2ji} \log(Ij) + \beta_{3ji} \log(M) + Vji \quad (4)$$

Where debt and equity denoted as DE, I is the important group of related explanatory variables which are determinants of Debt vs. Equity as indicated in previous literature and always included in every regression model. M – These are the variables of interest due to statically significant. The statically significance insists to test the robustness and to include in results. The M is the variables directly or indirectly related to DE and I variables.

RESULTS AND DISCUSSION

Table 1: Coefficients to Determine effects of Debt vs. Equity

Variables	Coefficients	t value	Variables	Coefficients	t value
TG	-0.08734	-2.79***	CR	-0.00056	-3.52***
PF	-1.83267	-36.54***	FF	0.07654	3.82***
SZ	0.432678	16.34***	PE	-.000003	-0.96
GR	0.000367	1.98	FCF	-7.68793	-8.14***
IGO	0.000845	7.67***	TE	0.56834	0.99
BCR	-0.00018	-4.98**	DPR	-.000020	-0.07
AC	0.084963	4.24***	IR	-0.00065	-0.98
UQ	-0.04834	-3.36**	C	-0.76864	-5.7***

This particular research is exploring the debt and equity estimation. It determines the significance of results regarding debt and equity. The capital structure represented a relative base by the three basic theories of capital structure. The research is an effort to explore the choices regarding debt and equity. The tax has positive impact on debt vs. equity while the bankruptcy has negative impact and explains the trade off theory (TOT). The significance of the profitability (PF) is negatively related whereas financial flexibility (FF) is also significantly positively related which confirm the pecking order theory (POT). The negative impact of asset tangibility (AT), profitability (PF), Uniqueness, Liquidity (UL), timing effect (TE), transaction cost (TC), bankruptcy risk (BR) and interest rate (IR) are expressing the information asymmetries and negative signals as to theory of agency cost. The EBA – Extreme Bound Analysis by the (Leamer & Leonard, 1983; Leamer, 1983; 1985; Levine Renelt, 1992), estimation regarding financial signaling and information asymmetries (Akash et al., 2011).

Table 2: EBA-Coefficients Sensitivity

Variables	Base.	Max. Bound	Min. Bound	Sign. at 5%	EBA Results
LOG(GR)	0.003	0.063	0.004	13.3%	Fragile
LOG(IGO)	0.088	0.123	0.088	100%	Robust
LOG(BCR)	0.093	0.081	0.051	20%	Fragile
LOG(AC)	0.017	0.381	0.016	73.3%	Robust
LOG(UQ)	0.006	0.000	0.006	6.66%	Fragile
LOG(CR)	-0.758	-0.614	-0.779	100%	Robust
LOG(FF)	0.502	0.321	0.552	100%	Robust
LOG(PE)	0.015	0.000	0.015	0%	Fragile
LOG(FCF)	-0.054	-0.034	-0.343	86.6%	Robust
LOG(TE)	0.071	0.077	0.071	0%	Fragile
LOG(RTE)	-0.087	-0.076	-0.102	100%	Robust
LOG(IR)	-0.086	-0.050	-0.086	100%	Robust
Robust Relationships in the Group			59.4 %		Globally Robust

The results reflected the coefficients of interest variables. The β_{max} and β_{min} are the measure of respective level of significance at 5% in percentage. The coefficient of variable of interest is β . The extreme maximum and minimum β is maximum and minimum bounds. These both bounds are used to estimate that how the growth sensitive to Bankruptcy Risk (BR), Investment Growth Opportunities (IGO), Liquidity (LQ), Agency Cost (AC), Financial Flexibility (FF), Transaction Cost (TC), Uniqueness (UQ), Timing Effect (TE), Free Cash Flow (CF), Relative Tax Effect (RTE) and Interest Rate (IR). This bound is used to explain the relationship as robust and fragile. This robust and fragile explains the level of change in Debt vs. equity.

Table 3: EBA-Coefficients Sensitivity: Leamer Approach

Variables	Mean μ	Upper bound ($\mu+2s$)	Lower bound ($\mu-2s$)	Cases Sign. at 5%	Leamer EBA Results
LOG(GR)	0.042	0.042	0.042	13.3%	Fragile
LOG(IGO)	0.120	0.153	0.078	100%	Robust
LOG(BCR)	0.099	0.082	0.096	20%	Fragile
LOG(AC)	0.355	0.366	0.344	73.3%	Robust
LOG(UQ)	-0.044	-0.044	-0.044	6.66%	Fragile
LOG(CR)	-0.654	-0.560	-0.768	100%	Robust
LOG(FF)	0.234	0.435	0.052	100%	Robust
LOG(PE)	0.000	0.000	0.000	0%	Fragile
LOG(FCF)	-0.121	0.035	-0.298	86.6%	Fragile
LOG(TE)	0.000	0.000	0.000	0%	Fragile
LOG(RTE)	-0.111	-0.051	-0.140	100%	Robust
LOG(IR)	-0.078	-0.026	-0.110	100%	Robust
Robust Relationships in the Group			51 %		Globally Robust

As per the results reflected at above Table 3 the agency cost (AC), liquidity (LQ), financial flexibility (FF), investment growth opportunity (IGO), relative tax effect (RTE) and interest rate (IR) showed the significance of robustness.

Table 4: BA -Coefficients Sensitivity (trimmed OLS @2% M.D.): Modified Approach

Variables	β_{base}	β_{max}	β_{min}	Sign β , s (%)	EBA Results
LOG(GR)	0.003	0.066	0.004	73.3%	Robust
LOG(IGO)	0.088	0.154	0.088	100%	Robust
LOG(BCR)	0.033	0.063	0.084	0%	Fragile
LOG(AC)	0.038	0.338	0.038	78.5%	Robust
LOG(UQ)	0.007	0.000	0.007	0%	Fragile
LOG(CR)	-0.728	-0.549	-0.728	100%	Robust
LOG(FF)	0.502	0.432	0.240	100%	Robust
LOG(PE)	0.071	0.018	0.071	26.6%	Fragile
LOG(FCF)	-0.067	-0.044	-0.324	80%	Robust
LOG(TE)	0.058	0.000	0.058	0%	Fragile
LOG(RTE)	-0.078	-0.075	-0.107	100%	Robust
LOG(IR)	-0.069	-0.050	-0.069	100%	Robust
Robust Relationships in the Group			67.8 %		Globally Robust

MD - Mahalanobis distance measure is used to account for the trimming. The trimming is meant to exclude the outliers. The Growth (GR), Investment Growth Opportunity (IGO), Liquidity (CR), Financial Flexibility (FF), agency cost (AC), relative tax effect (RTE), free cash flows (FCF) and interest rate (IR) are the variables of robustness. The consistency and level of not to change the significance enhance the reliability and policy consideration in future.

Table 5: EBA of the Coefficients Sensitivity

Variables	Mean μ	Upper bound ($\mu+2s$)	Lower bound ($\mu-2s$)	Cases Sign. at 5% Leamer	EBA Results
LOG(GR)	0.056	0.057	0.059	73.3%	Robust
LOG(IGO)	0.130	0.170	0.091	100%	Robust
LOG(BCR)	0.000	0.000	0.000	0%	Fragile
LOG(AC)	0.329	0.342	0.296	78.5%	Robust
LOG(UQ)	0.000	0.000	0.000	0%	Fragile
LOG(CR)	-0.700	-0.670	-0.810	100%	Robust
LOG(FF)	0.317	0.430	0.022	100%	Robust
LOG(PE)	0.048	0.049	0.046	26.6%	Fragile
LOG(FCF)	-0.354	-0.064	-0.463	80%	Robust
LOG(TE)	0.000	0.000	0.000	0%	Fragile
LOG(DP)	-0.083	-0.074	-0.222	100%	Robust
LOG(IR)	-0.048	-0.026	-0.200	100%	Robust
Robust Relationships in the Group			67.8 %		Globally Robust

The results of trimming are captured through β lower bound and β upper bound of interest variables with respect to significance at level 5%. The agency cost (AC), financial flexibility (FF), growth (GR), investment growth opportunity (IGO), free cash flows (FCF), Liquidity (CR), relative tax effect (RTE) and interest rate (IR) the variable of robustness. The consistency and level of not to change the significance enhance the reliability and policy consideration in future. The study organized the manager's, and stakeholder's interest, and announced the rewards practice from highlighting these issues of agency that would facilitate the firms in their payments to shareholders. The issues are neglectable in the firms, and are severe in nature for investment opportunities and the make the firm profitable and large free cash flow determination.

CONCLUSION

The signaling hypothesis of the capital structure is a valid and sensitive tool of measurement to support the findings. It is concluded that the facts of capital structure and significance of factors of capital structure. The significance proved the assumptions of the theories of capital structure. The research of financial signaling of capital structure and overall results of asset tangibility (AT), timing effect (TE), agency cost (AC), profitability (PF) and relative tax (RTE), may not be costless due to the signaling significance. The financial, signaling, and information asymmetry are more critical issues, based on the facts detected during this research. The pecking order theory (POT) explored the choices in accordance to it in finance, and reference to company's listed in Pakistan Stock Exchange (PSE). It's very important that information asymmetries must be avoided by using the best practices of corporate governance (Akash, Ghafoor & Siddique, 2020). The governance structure and business strategies may have best implications to optimal capital structure management. This may enhance the reliability of stakeholders through the proper implementation of corporate governance and business practices. This will also be used to adjust the signals and information asymmetries. For proper decisions it is necessary there would be better results which will only be gotten by applying better technique i.e. (EBA). The EBA - extreme bounds analysis a Bayesian solution to sensitivity and information asymmetries.

Implication, Limitation, and Future Directions

It is implicated that it is the best practice and procedure to capture the reliable estimate of the coefficients as compared to a selective reporting process and favorable outcomes. The EBA may have implication to enlarge the efficient research and reporting the standard results. This question is only possible to solve truly by EBA rather than to prove a pre convinced idea with its expected biased results. The EBA is considered to eliminate the biased which based on the theories and empirics of study on debt vs. equity. The study could be conducted on other equity markets in all over the world in future.

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