Testing The Pecking Order Theory Of Capital Structure: A Comparative Study Of India And China

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by

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CERTIFICATE

The thesis entitled, **"Testing the Pecking Order Theory of Capital Structure: A Comparative Study of India and China"**, being submitted by **Ms. Vandana Bhama (Nee Verma)** to the **Indian Institute of Technology Delhi,** for the award of the degree of **Doctor of Philosophy** is a record of bonafide research work carried out by her. She has worked under our guidance and supervision, and has fulfilled all the requirements for the submission of this thesis, which has attained the standard required for a Ph.D. degree of this institute. The results presented in this thesis have not been submitted elsewhere for the award of any degree or diploma.

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ABSTRACT

Capital structure has proved to be a lasting puzzle in corporate finance (Myers, 1984). The pecking order theory outlines the most desired financing hierarchy – internal funds, debt and equity. In general, firms prefer internal to external funds and debt issues to equity (Myers, 1984). Most often, firms either have funds deficiency or availability of surpluses. Pecking order theory proposes that firms should give preference to debt issues during deficiency and when the limits are exhausted, equity should be the last resort. In surplus situations, the preference should be given to retire debt using surpluses instead of equity buybacks.

In literature, most studies tested the pecking order for whole set of firms using net debt issues. They find a common homogenous pecking order coefficient value. Evidently, a common coefficient exhibits a distorted picture of firm's financing hierarchy. During deficit situation, preference should be given to gross debt issues and in surplus conditions, firms should retire debt than equity (as suggested by pecking order theory). This approach provides a better picture on the firms' extent to issue or retire debt in both situations.

Based on the above perspective and limited literature on the pecking order theory of emerging economies, a comprehensive study has been carried out to test the pecking order theory of Indian and Chinese firms during deficit and surplus situations separately. The study also examines the extent to which deficit firms redeem existing debt during deficiency using new proceeds and issue new debt in surplus conditions either to retire old debt or retain funds for future needs. The study has used secondary as well as primary data to analyze the financing patterns as outlined by the pecking order theory (POT). The secondary data analysis has been carried out using a

conceptual framework to classify firms into deficit and surplus groups. Further, both a basic and an extended model of pecking order have been used in the present study. Ordinary least square regression and other descriptive statistics have been used to test the results. Besides, a survey amongst the corporate finance managers from India has also been conducted to supplement the findings from the secondary data analysis.

The notable findings of the secondary data is that Indian as well as Chinese firms issue debt when deficiency arises, indicating adherence to the pecking order. The debt issues are exceptionally higher in the case of China. Chinese firms prefer more short-term debt, while Indian firms generally keep more long-term debt in their capital structure. Despite large debt issues, Indian and Chinese firms have satisfactory debt ratios. Thus, both set of firms during deficit conditions follow a 'modified pecking order' where both the pecking order and trade-off theory are followed. A major chunk of new debt proceeds is used to finance deficits in the case of India. Whereas, Chinese firms redeem debt faster (using new debt proceeds) due to shorter tenure of most of the debt.

In surplus conditions, the pecking order adherence is strong among Chinese firms but weak in the case of Indian firms. Chinese firms do not retain sizeable funds; the overwhelming proportion of these funds is more often utilised to retire the existing debt (short-term debt). In contrast, Indian firms are reluctant to retire debt at a fast pace when they have surpluses. The reasons are: (i) surplus firms typically have low debt to equity ratios, and (ii) due to more long-term debt in their capital structure, firms may prefer to redeem debt at the time of maturity and therefore retain most of the funds for future investments.

The survey findings indicate that Indian firms have marked preference for internal to external funds and banks constitute the second important source to finance their needs. Between sources of external financing, deficit firms as well as firms with both deficit and surpluses prefer debt to equity, while majority of surplus firms prefer equity. The major reasons of debt preference are its being cheaper than equity, flexibility in debt component and easier to raise. During deficiency, firms avoid future capital expenditures and issue long-term debt. In contrast, surplus firms primarily prefer to deposit surpluses with banks for a short-period for their future financing requirements and then, redeem debt (to some extent) to reduce their existing debt levels. Majority of the firms indicate their preference to maintain target capital structure by keeping their debt-equity ratios equal to or less than 1.

Based on the findings of the research, the following recommendations have been made: (i) There is a need of redemption clause in debt agreements between banks and corporate firms. In the case of China, liquidity risks should be assessed while granting additional loans (ii) Indian firms to finance deficits should opt for equity financing during very high or extremely high debt levels. (iii) Chinese firms should opt for more long-term debt to decrease their liquidity risks (iv) The initiatives should be taken by government to encourage equities and should also strengthen corporate bond markets in the financial system of both countries.

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ABBREVIATIONS

ADR	American Depository Receipts
ANOVA	Analysis of Variance
BSE	Bombay Stock Exchange
CAS	Chinese Accounting Standard
CEO	Chief Executive Officer
CFO	Chief Financial Officer
DEF	Deficit
DI	Debt Issues
DR	Debt Redemption
GDR	Global Depository Receipt
IAS	Indian Accounting Standard
IFRS	International Financial Reporting System
LTD	Long-term Debt
MCA	Ministry of Corporate Affairs
MFI	Micro Finance Institutions
NBFC	Non-Banking Finance Companies
NSE	National Stock Exchange
OLS	Ordinary Least Square
POT	Pecking Order Theory
PSD	Performance Sensitive Debt
PSE	Public Sector Enterprises
SDF	Surplus and Debt Funds
SEBI	Securities and Exchange Board of India
SME	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
SSE	Shanghai Stock Exchange
STD	Short-term Debt

SUR	Surplus
TD	Total Debt
TFA	Total Funds Available
TFI	Total Funds Issued
TFR	Total Funds Required
UK	United Kingdom
USA/US	United States of America