

## AN EMPIRICAL STUDY OF OVERSEAS FINANCING BY INDIA INC THROUGH DEPOSITORY RECEIPTS AND FCCBS: ANALYSIS OF LINKAGES AMONG CRITICAL FACTORS AND IMPACT ON STOCK PRICE RETURNS

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### ABSTRACT

In recent times foreign financing has become an important source of raising capital by Indian Corporate firms. The internationalization of securities market has driven a large number of countries, both developed and developing, to open their stock market to foreign investors. Indian Corporate are taking an active role in this metamorphosis. Foreign funding by Indian Companies is characterized by a large number of companies accessing international capital markets through Depository Receipts (DR) or Foreign Currency Convertible Bonds (FCCB) or both.

This paper adopts Indian Companies who have issued Depository Receipts or Foreign Currency Convertible Bonds in year 2007 as a sample to address and examine various determinants of foreign financing instruments used. It further tries to investigate the impact of foreign financing through FCCB or DR on average stock price returns and volatility. The study covers a period of four years from 2004 to 2007. The determinants of type of foreign financing instruments used are: Number of years of incorporation, number of years of listing, EPS, current ratio, debt ratio, stock dividend payment, foreign holding ratio and managerial education. The study uses statistical techniques like – logit regression to test various hypothesis set.

**Keywords:** Foreign financing, FCCB, DR, Stock price return, Volatility

**JEL Classification Code:** F21, G15

### INTRODUCTION

The impact of liberalization of Asian economies is increasingly being felt in the 21st century with the increasing trend of globalization and internationalization. India has been one of the major Asian economies experiencing this era of internationalization both in terms of industry as well as capital markets. Earlier access of Indian companies to capital markets was characterized by a limited class of domestic investors. However, with internationalization these companies have grown in size and scale which has made it difficult for domestic market to satisfy their funding requirements for speedy expansions. In this situation Indian can satisfy their growing appetite by raising capital in form of debt and equity from foreign investors.

External capital can thus supplement domestic savings and stimulate economic growth. It can also even out fluctuations in income and smoothen out consumption. Raising of international capital also helps the investors to get higher return and better international diversification.

Among the two forms of external capital i.e. debt and equity; equity capital can be raised directly from foreign markets. However, such a direct raising of equity has a risk of low subscription. Therefore American Depository Receipts (ADR) and Global Depository receipts (GDR) have become two preferred routes of raising equity.

An American Depository Receipt (ADR) is an instrument, in whose form, the stock of most foreign

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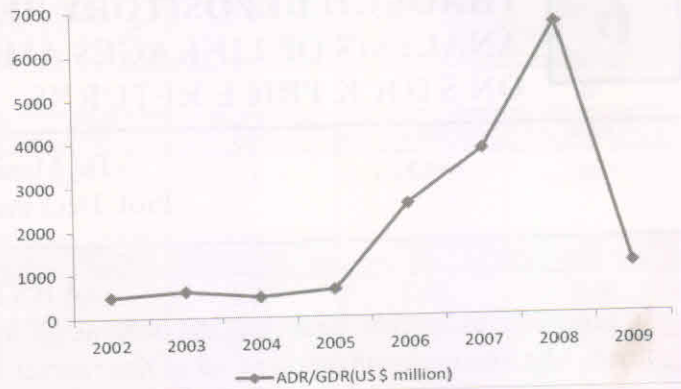
companies trades in United States stock markets. Each ADR is issued by a U.S. depository bank and represents one or more shares of a foreign stock or a fraction of a share. If investors own an ADR they have the right to obtain the foreign stock it represents, but U.S. investors usually find it more convenient to own the ADR. The price of an ADR is often close to the price of the foreign stock in its home market, adjusted for the ratio of ADRs to foreign company shares. Global Depository Receipt (GDR) is a certificate issued by an international bank, which can be subject of worldwide circulation on capital markets. GDR's are emitted by banks, which purchase shares of foreign companies and issue depository receipts backed by them. Global Depository Receipt facilitates trade of shares, especially those from emerging markets. Prices of GDR's are also often close to values of underlying shares.

Although equity investment is a lucrative option for foreign investors but with slump in valuations and increasing recognition of equity as an investment class, convertible bonds are attracting interest from investors across the world. An FCCB is a special type of convertible bond issued in a currency different to issuer's currency. As the Indian debt market is closed to foreign investors so FCCBs are one of the few ways to get exposure to this asset class. The reason for this increasing popularity of FCCBs among companies is their low cost in terms of low coupon rates compared to pure debt. Moreover they offer possibility of substantial accretion to reserves as conversion premium gets added to capital reserves and also do not involve front-end equity dilution as in the case of issue of new equity shares

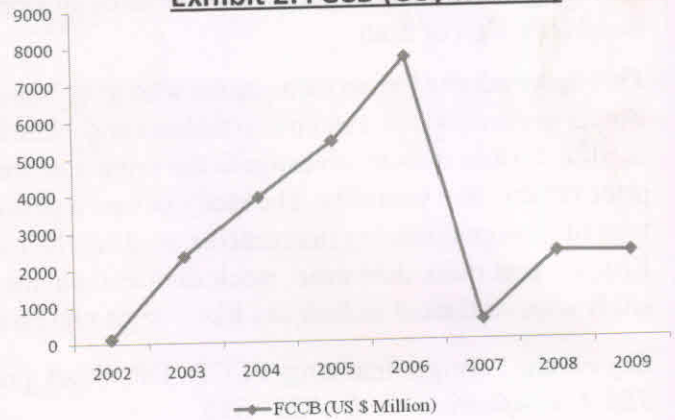
Foreign investors in the recent past have also shown increasing appetite for FCCBs as they allow investors to benefit from the upside of equity while providing the safety of debt. Moreover they also offer substantial yield-to-maturity to protect investors if issue does not get converted. Due to low coupon rates, tax liability of the investor is generally much lower in case of FCCBs.

The following graph show the trend of Depository receipts (ADRs & GDRs) as well as FCCBs for the last ten years.

**Exhibit 1: ADR/GDR(US \$ million)**



**Exhibit 2: FCCB (US\$ Million)**



From the above charts it can be said that there has been a phenomenal increase in DR issues over the past seven years till 2008. However in 2009 there was a sharp decline in the number of issues due to lowered valuations by the global financial crises. An increasing trend can be seen for FCCBs till 2006 but this trend started falling 2007 onwards which may be due to probable debt crises cropping up over the world.

A number of studies have been done in the past to study the reasons of international financing and their effects on equity shares valuation of the companies raising foreign capital:

**Deepak Devgan & Harpreet Dusanjh(2008)** studied various aspects of FCCBs like their features, reasons behind choice of FCCBs as funding instrument, regulations regarding same in Indian scenario, taxation aspects, changes in policy guidelines, pitfalls and problems related to FCCBs. They found that in order sustain development and faster the pace of growth, indian economy should decrease dependence on



government borrowings and shift towards corporate borrowing in form of FCCB as this route does not lay any international pressures on government apart from being cheaper and reliable source of funding.

**Li, Ming-Yuan Leon, Wang, Ming-Long, Yen, Meng-Feng (2007)** studied several behavioral determinants of the firms' overseas financing policies. The feasibility of the model is tested using the Taiwan's high-tech enterprises from 1998 to 2001. they found that the financial characters including the debt ratio, liquidity ratio and EPS do not pronounce consistent influences on the enterprises' overseas financing decisions. By contrast, most of the behavior characters such as persistent behavior, mental account and attractiveness effects as well as international investment effects do significant impact on the enterprises' overseas financing decisions.

**Doidge, Craig, A. Karolyi and R. Stulz (2004)** found that at the end of 1997, foreign companies with shares cross-listed in the U.S. had Tobin's q ratios that were 16.5% higher than the q ratios of non-cross-listed firms from the same country. The valuation difference was statistically significant and reaches 37% for those companies that list on major U.S. exchanges, even after controlling for a number of firm and country characteristics. They suggested that a U.S. listing reduces the extent to which controlling shareholders can engage in expropriation and thereby increases the firm's ability to take advantage of growth opportunities. They also showed that growth opportunities are more highly valued for firms that choose to cross-list in the U.S., particularly those from countries with poorer investor rights.

**Menbere Workie Tirunehr,(2004)** found out the reasons for the cause of the global debt crisis in the 1980s and 1990s. The research found that poverty (the savings gap), income instability, and external factors that include debt service payments and capital flight to be the main causes of overseas borrowing by developing countries in the 1980s and 1990s. the study by using panel data analysis gives a robust explanation for external indebtedness by allowing to incorporate country-specific factors as developing countries themselves are heterogeneous in terms of their colonial heritages, geopolitical and strategic significance, and creditworthiness, all affecting the level of indebtedness and the potential bargaining

power to manage the subsequent debt crisis.

**Vihang R. Errunza Darius P. Miller(2003)** examined the shareholder wealth effects associated with global equity offerings made by foreign firms after their initial cross-listing in the United States. It was found that the market reaction to seasoned global equity offerings is economically and statistically insignificant. However, it is 1.5% larger than the market reaction to offerings made on local exchanges only. In addition, it was found that the adverse market reaction to local equity offerings is mitigated as more capital is raised globally.

**Pagano, M., A.A. Roell & J.Zechner (2000)** document aggregate trends in the foreign listings of companies, and analyze their distinctive prelisting characteristics and post listing performance. It was found that many European companies were listed abroad, mainly on U.S. exchanges, while the number of U.S. companies listed in Europe decreased during 1986-1997,. European companies that cross-list tend to be large and recently privatized firms, and expand their foreign sales after listing abroad. They differ sharply depending on where they cross-list: The U.S. exchanges attract high-tech and export-oriented companies that expand rapidly without significant leveraging. Companies cross-listing within Europe do not grow unusually fast, and increase their leverage after cross-listing.

**Karolyi.A (1998)** studied the valuation and liquidity effects of the listing decision, and the impact of listing on the company's global risk exposure and its cost of equity capital. It was found that share prices react favorably to cross-border listings in the first month after listing; post-listing price performance up to one year is highly variable across companies and depends on various factors like the home and listing market, its capitalization, capital-raising needs and other company-specific factors. Further it was concluded that post-listing, trading volume increases on average, and, for many issues, home-market trading volume increases also; liquidity of trading in shares improves overall, but depends on the increase in total trading volume, the listing location and the scope of foreign ownership restrictions in the home market. American Depository Receipts represent an effective vehicle to diversify U.S.-based investment programs globally and stringent disclosure requirements are the most important impediment to cross-border listings.



**Froot, K.A. and E.M. Dabora, (1999)** examined pairs of large, 'Siamese twin' companies whose stocks are traded around the world but have different trading and ownership habitats. It was considered that with integrated markets, twin stocks should move together. However, the difference between the prices of twin stocks appears to be correlated with the markets on which they are traded most, i.e., a twin's relative price rises when the market on which it is traded relatively intensively rises. The reasons for this were given as the discretionary use of dividend income by parent companies: differences in parent expenditures; voting rights; currency fluctuations; ex-dividend date timing issues; and tax-induced investor heterogeneity. It was concluded that country-specific sentiment shocks might affect share intensity, investors are rational, but markets are segmented by frictions other than international transactions costs, such as agency problems.

**Saudagaran, S.M., (1988)** found that the growing internationalization of capital markets suggests that an increasing number of firms perceive the benefits of listing their stocks on foreign exchanges as outweighing the related costs. Many other firms, however, still limit listing their securities to their domestic exchanges. This study also investigated the motives for listing abroad. The empirical analyses, based on data on 481 multinationals, indicated significant association between the likelihood of listing abroad and the relative size of a firm in its domestic capital market, as well as the ratio of foreign to total sales.

Review of above studies indicates that these researches have been done on firms outside India and most of them have studied the macroeconomic and behavioral impacts of foreign financing. The studies quoted above focus on equity financing determinants but no literature related to FCCB issue and the cross linkages between these determinants in case of both equity and debt issue via FCCB, particularly in relation to Indian firms was found. The present paper takes the above into consideration and adopts Indian Companies having foreign financing via Depository Receipts or Foreign Currency Convertible Bonds as a sample to address and examine various determinants of foreign financing instruments used. It also checks the complete stock price sensitivity of the sample firms by considering the impact of foreign financing on both stock returns and

variance. The study covers a period of four years from 2004 to 2007.

**Section I** discusses the research methodology,

**Section II** tests the relationship between Depository Receipts (called DRs hereafter) and Foreign Currency Convertible Bonds (called FCCBs hereafter) and firm specific variables using Binomial logit regression;

**Section III** tests the impact of foreign financing via DRs and FCCBs on stock price returns and volatility; and the last section i.e Section IV brings out the results and conclusion of the paper

## SECTION I

### RESEARCH METHODOLOGY

#### Objectives:

The study was focused on the following objectives:

- To determine the impact of different financial as well as behavioral factors on the decision to raise foreign capital via DRs or FCCBs.
- To determine the impact of foreign financing on share price returns and volatility.

### DEVELOPMENT OF HYPOTHESIS

**H<sub>01</sub>: Firms which are older in terms of "year of incorporation" and "year of listing" are more likely to adopt foreign financing.**

The year of incorporation and the year of listing indicate how old a company is in the industry and capital markets respectively. Theoretical background has established that an older company which has a well known track record of profitability, debt repayment and stock returns finds it easier to raise debt or equity than a younger company. The above concept applies to national as well as international markets. This can be classified as behavioral factor as both domestic and foreign investors prefer to subscribe to older company's stock or debt than a younger company due to its perceived goodwill. It acts as a motivating factor for such firms to raise foreign capital to expand their investor base. So this leads to the hypothesis that "Firms either of these which are older in terms of year of incorporation and year of listing are more likely to adopt foreign financing."



**Ho2: Firms with higher Earnings per Share (EPS) are more likely to adopt foreign financing.**

EPS is an indicator of a firm's profitability. As per previous studies higher and increasing EPS not only shows higher wealth being created by the company for its shareholders but also indicates a better debt repaying capacity. Hence, a firm with higher EPS is able to attract both new creditors as well as shareholders. Following the above concept it is hypothesized that: "Firms with higher Earnings per Share are more likely to adopt foreign financing."

**Ho3: Firms with higher current ratio are more likely to adopt foreign financing.**

Current ratio is an indicator of firm solvency of a firm in short term. Past literature has indicated that firms with better short-term solvency are considered to be stable and are able to attract debt as well as equity investors (both domestic and foreign) than those with a poor solvency. So from the above it can be hypothesized that: "Firms with higher current ratio are more likely to adopt foreign financing."

**Ho4: Firms with higher Debt ratio are more likely to adopt foreign financing especially in form of FCCBs than DRs**

Debt ratio represents the firm's borrowings to total capital employed. Literature reviews suggest that high debt ratio in firms indicates the preference for debt capital as a cheaper and easier method to raise capital. Hence, these firms tend to discover avenues where low interest cost debt is available. As a result they tend to raise debt from those foreign markets which have low interest rates than domestic market. Hence it can be concluded that firms with higher (but optimal) Debt ratio are more likely to adopt foreign financing in form of FCCBs than DRs

**Ho5: Firms with higher foreign promoter ratio are more likely to adopt foreign financing**

Foreign promoters in a company are foreign institutional investors (FIIs) holding equity shares in it. Past studies have shown that foreign capital can serve as a leading indicator of positive valuation and growth to individual investors. This is because FIIs have been considered to possess professional skills and ability to find out firms worth of investing. Foreign holding

in a firm also makes it a representative of positive valuation for other firms in the industry. Hence it can be said that: Firms with higher foreign promoter ratio (%age equity investment by foreign promoters) are more likely to adopt foreign financing.

**H06: Firms with lower cash dividends are more likely to adopt foreign financing.**

Dividends are an outflow of cash from a firm and high cash dividends indicate lack of investment opportunities inside the firm. On the other hand low or zero dividends may either indicate poor profitability or a cash conservation strategy. This cash can be used to tap investment opportunities available. Moreover, the presence of investment opportunities may also motivate the firm to raise more money. So, low dividends by profitable firms signal future growth and not only necessitate but also make it easier for them to raise foreign capital.

**Ho7: Firms whose managers have a better educational background are more likely to adopt foreign financing.**

Past literature has established the role of managerial education in decision making. Mason (2001) has found that the level of education and international experience of managers significantly affect their decision making. Li, Ming-Yuan Leon, Wang, Ming-Long, Yen, Meng-Feng (2007) have found that in case of Taiwanese and Chinese firms professionalism of managers plays a significant role in foreign financing policy as well-educated managers especially those with international exposure, have a better understanding of risks and barriers of entering foreign markets. So from the above in case of Indian firms also it can be hypothesized that: Firms whose managers have a better educational background are more likely to adopt foreign financing.

**H08: There exists a significant relationship between presence of foreign financing and the return and volatility of their stocks.**

Foreign financing overall indicates growth opportunities and investor's faith in a company. Hence it is more likely that the stocks of these companies provide better returns and have less volatility. So from above it can be said that: There exists a significant relationship between presence of foreign financing and the return and volatility of their stocks.



## SAMPLE

Companies which had issued DRs or FCCBs in year 2007 and for whom data for all test variables was available were selected as a sample. There were 45 companies who issued FCCB and 22 companies who issued DR in 2007. A sample of 30 companies which comprised of 17 FCCB and 13DR companies was randomly selected.

## PERIOD OF STUDY

The period of study was from year 2004-2007.

## DATA

The study of foreign financing determinants was done on panel data which comprised of analysis of linkages between foreign financing and 8 determinants for a set of 30 companies and a period of 4 years.

Secondary data was extracted from CMIE Prowess database for the purpose of study. The eight determinants are: number of years since incorporation, number of years since listing, EPS, Current ratio, Debt ratio, holding of foreign promoters, cash dividend to industry dividend and managers education. Following is a brief description of each of the variables:

**Number of years since incorporation:** This variable indicates the number years since the firm was established upto the period of study i.e. 2004, 2005, 2006 and 2007.

**Number of years since listing:** This variable indicates the number years since the firm was listed on BSE upto the period of study i.e. 2004, 2005, 2006 and 2007.

**EPS:** Earnings per Share is calculated as the ratio of Profit after Tax to number of Shares outstanding for all the years from 2004-2007.

**Debt Ratio:** Debt Ratio is calculated as the ratio of borrowings to the total capital employed for all the years from 2004-2007. Debt ratio of all the sample firms was found to be optimal with an overall average of 0.46 over the years.

**Foreign promoter holding:** The percentage shareholding by foreign promoters in the company has been determined for the period of study.

**Cash dividend to Industry dividend:** This variable included the ratio of cash dividend paid by the company to the total dividend paid by the industry to which it belonged.

**Manager's Education:** This variable has been taken as a dummy variable and its data was extracted from annual reports of the companies. Various levels of education checked were: undergraduate, graduate, postgraduate, doctoral degree, or foreign degree. If a manager had any of undergraduate, graduate, postgraduate, doctoral qualification he was marked 1 under the respective head out of four and zero under rest three. If however he had a foreign degree then he was marked 1 under all the four heads.

The study of impact of foreign financing on stock price returns and volatility was done on cross-sectional data of 30 companies for a period of one year i.e. January to December 2007. Secondary data of 365 days average stock returns and variance was extracted from CMIE Prowess database for the purpose of study.

## TEST STATISTICS USED

The study uses binomial Logit regression model to examine the first seven hypotheses.

Logit model is a form of Generalized Linear model applicable to non-normally distributed dependent variable and is able to overcome the problems of assumptions of regular linear regression models. Binomial logistic model can be used to predict a dependent variable on the basis of continuous and/or categorical independents and to determine the percent of variance in the dependent variable explained by the independents; to rank the relative importance of independents; to assess interaction effects; and to understand the impact of covariate control variables. The impact of predictor variables is usually explained in terms of odds ratios. The model can be expressed as:

$$\theta = \frac{e^{(\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_i x_i)}}{1 + e^{(\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_i x_i)}}$$



An alternative form of the logistic regression equation is:

$$\text{logit} [\theta(x)] = \log \left[ \frac{\theta(x)}{1-\theta(x)} \right] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_i x_i$$

Where  $\alpha$  = the constant of the equation and,  $\beta$  = the coefficient of the predictor variables and  $\theta = 1$  for firm issuing FCCB and 0 for firm issuing DR

The study uses stepwise binomial logit forward likelihood ratio model to test the first seven hypotheses.

Logistic regression was applied using FCCB/DR as dependent and number of years since incorporation, no. of years since listing, EPS, debt ratio, current ratio, ratio of company to industry dividend, percentage holding by foreign promoters and managers education as independent predictor variables. On the other hand to check the impact of foreign financing on stock returns and volatility, two linear regression model were applied, one using stock returns and other using standard deviation of returns for year 2007 as dependent variable; while independent variables used were: type of foreign financing as a dummy variable with value 1 for FCCB and 0 for DR and control variables namely EPS and natural logarithm of dividends for the test year i.e. 2007.

For testing the eighth hypothesis regarding foreign financing impact the study uses linear regression with stock return (or volatility) as a dependent variable and foreign financing as a dummy independent variable assuming values 1 in case of FCCB and 0 in case of DR. Along with this the model also takes EPS, debt ratio and company to industry cash dividend as control variables to check the net effect of foreign financing on stock return (or volatility)

## SECTION II

### Impact of various financial as well as behavioral factors on the decision to raise foreign capital via DRs or FCCBs.

Results of logistic regression done by stepwise forward likelihood method led to formation of four models with the following findings:

**Table 1: Omnibus Tests of Model Coefficients**

		Chi-square	Df	Sig.
Step 1	Model	11.050	1	.001
Step 2	Model	21.530	2	.000
Step 3	Model	27.835	3	.000
Step 4	Model	33.422	4	.000

**Table 1 shows results of Omnibus tests of model coefficients.** This test finds if the model with the predictors is significantly different from the model with only the intercept. The omnibus test may be interpreted as a test of the capability of all predictors in the model jointly to predict the response (dependent) variable. The test gives significant chi-square value for all the four models. **This finding of significance corresponds to a conclusion that there is adequate fit of the data to the model, meaning that at least one of the predictors is significantly related to the response variable.** Although stepwise method is employed yet there is no difference in significance for all four models.

**Table 2: Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	153.166	.088	.118
2	142.686	.164	.220
3	136.380	.207	.278

**Table 2 shows -2LL statistic** which is the likelihood ratio. It is also called goodness of fit, deviance chi-square, scaled deviance, deviation chi-square In general, as the model becomes better, -2LL will decrease in magnitude. The results found indicate that Model 4 with lowest **-2LL statistic i.e. 130.794 is the best one in terms of goodness of fit. Further Cox and Snell's R<sup>2</sup> and Nagelkerke's R<sup>2</sup> being less than 1.0 are well within the limits for showing the deterministic strength of the model.**

**Table 3. Hosmer and Lemeshow Test**

Step	Chi-square	df	Sig.
1	32.895	8	.000
2	8.758	8	.363
3	14.506	8	.069
4	9.779	8	.281



**Table 3** shows the results of **Hosmer and Lemeshow chi-square test of goodness of fit.**: This test is recommended test for overall fit of a binary logistic regression model. This test is considered more robust than the traditional chi-square test, particularly if continuous covariates are in the model or sample size is small. The finding of non-significance, ( $p > 0.05$ ) in the model 2,3 and 4 leads to the conclusion that these models adequately fit the data.

**Table 4. Variables in the Equation (FCCB= 1, DR = 0)**

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	No. of yrs since listing	.160	.051	9.795	1	.002	1.173
	Constant	-1.074	.470	5.222	1	.022	.341
Step 2	No. of yrs since listing	.192	.055	12.117	1	.000	1.212
	Debt ratio	1.900	.654	8.429	1	.004	6.684
	Constant	-2.207	.637	11.991	1	.001	.110
Step 3	No. of yrs since listing	.214	.058	13.700	1	.000	1.239
	Debt ratio	2.258	.703	10.333	1	.001	9.568
	%age foreign promoter holding	-.046	.021	4.763	1	.029	.955
	Constant	-2.304	.659	12.213	1	.000	.100
Step 4	No. of yrs since incorporation	.028	.014	4.340	1	.037	1.029
	No. of yrs since listing	.223	.058	14.768	1	.000	1.250
	Debt ratio	2.511	.738	11.569	1	.001	12.315
	%age foreign promoter holding	-.049	.021	5.429	1	.020	.952
	Constant	-3.056	.756	16.324	1	.000	.047

**Table 5 Variables in the Equation (DR =1, FCCB= 0)**

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	No. of yrs since listing	-.160	.051	9.795	1	.002	.853
	Constant	1.074	.470	5.222	1	.022	2.928
Step 2	No. of yrs since listing	-.192	.055	12.117	1	.000	.825
	Debt ratio	-1.900	.654	8.429	1	.004	.150
	Constant	2.207	.637	11.991	1	.001	9.087
Step 3	No. of yrs since listing	-.214	.058	13.700	1	.000	.807
	Debt ratio	-2.258	.703	10.333	1	.001	.105
	%age foreign promoter holding	.046	.021	4.763	1	.029	1.047
	Constant	2.304	.659	12.213	1	.000	10.019
Step 4	No. of yrs since incorporation	-.028	.014	4.340	1	.037	.972
	No. of yrs since listing	-.223	.058	14.768	1	.000	.800
	Debt ratio	-2.511	.738	11.569	1	.001	.081
	%age foreign promoter holding	.049	.021	5.429	1	.020	1.050
	Constant	3.056	.756	16.324	1	.000	21.232



**Table 4 and 5** get into the heart of the results. Table 4 predicts foreign financing in terms of FCCB (Ln = 1) with reference to DR (LN = 0) while table 5 predicts DR( Ln =1) with reference to FCCB ( Ln= 0) These tables shows the coefficients (B), their standard errors, the Wald Chi-Square statistic, associated p-values, and odds ratio (Exp(B)). Model 4 with the lowest -2 LL ratio is the best fit in both the cases.

As indicated by the model number of years since incorporation, number of years since listing, debt ratio and percentage of foreign promoters are significant predictors of foreign financing.

Further analysis of results shows the following about each variable:

**No. of yrs since incorporation** is positively related to type of foreign financing, i.e. how old a company is significantly affects the decision of foreign financing and this affect is of positive nature i.e. motivates the firm to raise more foreign funds. Further the odds ratio of 1.029 and 0.972 associated with FCCB and DR respectively indicates that for a one unit increase in number of years of incorporation, the odds of foreign financing in form of FCCB increases by a factor of 1.029, and of DR are decreased by 0.972 or older firms prefer issuing FCCB than DRs

**No. of yrs since listing** is positively related to type of foreign financing, i.e. how long a company has been listed on BSE is significantly affects the decision of foreign financing. And this affect is of positive nature i.e. motivates the firm to raise more foreign funds. Further the odds ratio of 1.250 and 0.800 associated with with FCCB and DR respectively indicates that for a one unit increase in number of years of incorporation, the odds of foreign financing in form of FCCB increases by a factor of 1.250, and of DR are decreased by 0.800

or or firms listed on stock exchange for a longer period of time prefer issuing FCCB than DRs.

**Debt ratio** is positively related to type of foreign financing, i.e. the ratio of borrowings to total capital inside a company significantly affects the decision of foreign financing. and this affect is of positive nature i.e. motivates the firm to raise more foreign funds. Further the odds ratio of 12.315 and 0.081 associated with FCCB and DR respectively indicates that for a one unit increase in debt ratio, the odds of foreign financing in form of FCCB increases by a factor of 12.351, and of DR are decreased by 0.081 or firms with higher debt ratio prefer issuing FCCB than DRs.

**Percentage of foreign promoter holding** is negatively related to type of foreign financing, i.e. the percentage holding by foreign promoters inside a company significantly affects the decision of foreign financing but this affect is of negative nature i.e. these firms to raise less foreign funds. Further the odds ratio of 0.935 and 1.050 associated with it indicates that for a one unit increase in percentage foreign promoter holding, the odds of foreign financing in form of FCCB decreases by a factor of 0.935, and of DR are increased by 1.050 or firms with higher percentage of foreign promoter holding prefer to issue Depository receipts than FCCBs.

### SECTION III

Impact of Foreign Financing On Stock Returns And Volatility

**Table 6 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.359	.129	.028	.35466

a Predictors: (Constant), fintype, lndiv, eps

**Table 7 Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.507	.123		4.131	.000
	Foreign financing type	-.209	.132	-.293	-1.587	.098*
	EPS	.002	.004	.153	.623	.539
	Ln Dividends	-.039	.036	-.264	-1.080	.290

Dependent Variable: stock returns

\*significant at 10%



**Table 6 & 7;** show the result of linear regression model using stock returns as dependent variable. Model summary shows an R-square of 12.9% which may be on a lower side, but is acceptable for this model. this is because stock returns are affected by a number of other factors, and the present model was built in primarily to check the affect of foreign financing on stock returns. The coefficient table shows significant relationship between stock returns and foreign financing at a level of 10%

**Table 8: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.689	.475	.414	2.86024

**Table 9: Coefficients**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	13.766	.991		13.896	0.000
	Foreign financing type	-1.706	1.063	-.230	-1.605	.101*
	Ln dividends	-1.081	.290	-.708	-3.725	.001**
	EPS	.012	.029	.078	.408	.686

*Dependent Variable: standard deviation of returns*

*Significant at 10% and 5% respectively*

**Table 8 & 9;** show the result of linear regression model, using volatility of stock returns as dependent variable. Model summary shows an R-square of 47.5% better than stock returns model indicating better explanatory power of independent variables. Further, the coefficient table shows significant relationship between volatility of stock returns, foreign financing and dividends at a level of 10%. Thus it can be said that foreign financing is a significant factor affecting the returns and volatility of stocks of the companies using this method of capital raising either through DRs or FCCBs.

may be due to the reason that the above factor help in increasing international confidence in Indian debt markets and companies significantly bank upon this advantage to raise debt which is a cheaper source of finance than equity.

Further it was found that foreign promoter holding percentage was significant in affecting foreign financing decision but firms with higher foreign promoter ratio are less likely to adopt foreign financing in form of FCCBs than DRs. This is because the foreign promoters with equity holding in these firms are already foreign investment institutes with appetite for equity holding. Presence of foreign investors in form of promoters signals favorable valuation of a firm and hence further eases the firm to raise equity from other foreign investors. Hence, such firms prefer to raise foreign capital through equity than debt.

## SECTION IV

### CONCLUSION

Indian industry has shown a significant growth and development in the last few years and the same was facilitated to a large extent by the inflow of foreign capital. Taking into account the factors which play a key role in capital raising decision of Indian companies; it was found that foreign financing is **significantly affected by No. of yrs since incorporation, No. of yrs since listing, debt ratio and percentage of foreign promoter holding inside the firm.** Further study showed that all of the above factors except percentage holding by foreign promoters motivated the sample firms to raise capital through FCCB than DRs. This

**In addition to above it was found that, factors like EPS, current ratio, cash dividends of firm to industry and managers' educational qualification do not have any implication on decision to raise foreign funds.**

**The study of impact of foreign financing on share price returns and volatility shows that use of FCCB and DRs significantly affects both returns as well as volatility of share prices of the Indian companies.**



The trend towards internationalization of financial markets has gained impetus during last two decades. This is mainly due to developments in IT field, enhancement in role played by capital market participants and greater cooperation between different financial regulators. Also the lowering of capital barrier across national boundaries and liberalization of capital markets in emerging economies has added to accessibility to foreign capital. As a result, foreign financing is gaining attraction and popularity in context of Indian market but; ultimately it can be said that just

like any other investment the future popularity of these is inextricably linked to long term growth and strength of Indian economy. Although equity is a hot source of financing but the specific attraction of FCCBs has made them grow as an investment of choice for many fund houses. Investors across the globe have come to see that, inspite of presence of market volatility the potential rewards of investing in emerging markets like India are higher than the returns expected from developed markets.

## REFERENCES:

1. Bae, K.H., B. Cha, and Y.L. Cheung, (1999) "The transmission of pricing information of dually-listed stocks.", *Journal of Business Finance and Accounting* Vol. 27, pp 451-465.
2. Brennan, M. J. and Schwartz, E. S. (1980) "Analyzing convertible bonds, *Journal of Financial and Quantitative Analysis*", Vol. 15, pp 907-929.
3. Chakravarty, S., A. Sarkar, and L.Wu, (1998) "Information asymmetry and the pricing of cross-listed stocks: Evidence from Chinese A- and B-shares", *Journal of International Financial Markets, Institutions, and Money*, Vol. 8, pp 325-355.
4. Chen, G.M., B.S. Lee, and O. Rui, (2001) "Foreign ownership restrictions and market segmentation in China's stock markets", *Journal of Financial Research*, Vol.24, pp 133-155.
5. Chordia, T. and B.Swaminathan, (2000) "Trading volume and cross-autocorrelations in stock returns", *Journal of Finance* Vol 55, pp 913-935.
6. Chui, A.C.W. and C.C.Y.Kwok, (1998) "Cross-autocorrelation between A Shares and B shares in the Chinese stock market", *Journal of Financial Research* Vol. 21, pp 333-354.
7. Chin, C. H., (1998) American depository receipt (ADR) issued by Japanese corporation, *Journal and Financial and Quantitative Analysis*, Vol. 23, pp 45-54
8. Choi, Y. K. and Kim, D. (2000) Determinants of American depository receipts and their underlying stock return implications for international diversification, *International Review of Financial Analysis*, Vol. 9, 351-368
9. Devgan Deepak & Dusanjh Harpreet (2008), "Foreign Currency Convertible Bonds (FCCBs): Taking India Inc. to Global Financial Avenues"; *The Icfain University Journal of Financial Economics*, Vol. VI, No. 4, pp 86-97.
10. Dimson, E., (1979)." Risk measurement when shares are subject to infrequent trading", *Journal of Financial Economics* Vol. 7, pp 197-226.
11. Doidge, Craig, A. Karolyi and R. Stulz (2004), "Why are Foreign Firms Listed in the U.S. Worth More?" *Journal of Financial Economics*, vol. 71 , Issue 2, pp 205-238.
12. Foerster, S.R. and G.A. Karolyi, (1999) "The effects of market segmentation and investor recognition on asset prices: Evidence from foreign stocks listing in the U.S.", *Journal of Finance* Vol.54, pp 981-1013.
13. Froot, K.A. and E.M. Dabora, (1999). "How are stock prices affected by the location of trade?" *Journal of Financial Economics*, Vol. 53, pp 189-216.
14. Green, R. (1984) Investment incentives, debt and warrants, *Journal of Financial Economics*, Vol.13, 115-136



15. Menbere Workie Tiruneh (2004), "An Empirical Investigation into the Determinants of External Indebtedness", Prague Economic Papers, Issue 3, pp 261-277
16. Pagano, M., A.A. Roell & J.Zechner (2000) "The Geography of Equity Listing: Why Do Companies List Abroad?", The Journal of Finance, Vol. 57, pp. 2651-2694
17. Mason, A.C., Fredrickson, J.W. (2001) Top management teams, global strategic posture, and the moderating role of uncertainty, Academy of Management Journal, Vol. 44, pp 533-545.
18. Mayers, D. (1998) Why firms issue convertible bonds: The matching of financial and real investment options, Journal of Financial Economics, Vol.47, 83-102
19. Saudagaran, S.M., (1988), "An empirical study of selected factors influencing the decisions to list in foreign stock exchanges", Journal of International Business Studies, Spring, vol 19 Issue 1, pp 101-127.
20. Smith, C. W. and Smithson, C. W. (1993) On the determinants of corporate hedging, Journal of Finance, Vol. 48, p267-285
21. Vihang R. Errunza, Darius P. Miller (2003) "Valuation effects of seasoned global equity offerings", Journal of Banking & Finance, Vol.27 pp 1611-1623
22. Yuan Leon, Wang, Ming-Long, Yen, Meng-Feng (2007) "Determinants of Foreign Financing Policy Revisited-A Behavioral Finance Perspective" International Research Journal of Finance and Economics, Issue 12, pp 181-188