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Study on Macroeconomic Factor's Impact on Initial Public Offerings (IPO) in India

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Abstract – This paper looks at Effect of initial public bids on the market share (IPOs) in India between 1993/94 and 2015/16 of macro-economic variables such as the interest rate, the bursary index and remittances. Factors like stock price index and transfer of goods are more important the interest rate in comparison to IPOs has a lower impact. The issue of a greater number of IPOs has also been linked to increasing secondary equity exchange operation, increased cash flow and a company declining market interest rate.

Keywords – Macro-Economic Factors, Firm Specific Factors, Stock Market Index, Remittance

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INTRODUCTION

For the last ten years, business expansion by initial public offerings has been growing globally (IPOs). The financial theory of public decision-making was thoroughly explored under the constraints of mature capital markets. On the basis of the literature review, some main internal and external factors influence the financing of companies through IPOs. A wide sample of autonomous businesses in Italy, owned publicly and privately, is analysed by Pagano. The authors found that the major internal variables influencing the probabilities of an IPO are firstly the connection between competition and the book at which businesses operate in the same branch and secondly the scale of the business. At the time an average Italian company was 8 times bigger and 6 times bigger than its US equivalent. A small range of experiments have the connection between examined IPO number and the macroeconomic variables (i.e. external conditions).

In comparison to inflation-adjusted Bond and Bond indexes GDP growth rates, Loughran investigates the pacing of IPOs across fifteen countries. The findings show the volume of BPIs and market prices are positive, but that the period shift is not positively related. For a family business sample in Sweden and eleven European countries, Rydqvist and Högholm compare results. They find that "most public activities have been carried out after an unusually rapid rise in asset prices, and that public activity are linked not to the economic cycle." Ljungqvist suggests that large numbers of IPOs equate favourably with strong inventory index ratios, and healthy market circumstances. Through reviewing a series of annual IPO volumes for six continental European industrialised countries over an 18-year timeframe Breinlinger and Glogova are examining the explanatory influence of selected macro-economic factors affecting IPOs. The authors also asked if there is stable evidence that IPOs are dependent on returns for the stock market for what they have called combined cycles. The findings reveal that the "logarithmic transform of IPO volumes (which is the assumption by the writers that IPO volumes are nonlinear to market index returns) is consistently a leading factor in meaningful estimates both for pooled and individual country regression." Empirical data could not accept The assumption that percentage increases in saving, GDP development and interest rates had explaining influence for IPO volumes.

LITERATURE REVIEW

K. S. Manu et. al. (2020) Short-term investors are unable to decide which avenue for investing in today's fast-moving and competitive environment. Investors see stock investing as a very precarious path for potential movement of securities values because of VUCA (Volatility, unsafeness, complexity and ambiguousness). The research was conducted to analyse the results of many businesses that became public in 2017 utilising the methodologies of case studies after an initial public officer (IPO). This study also seeks to determine whether these IPOs were short-term prices and identifies several factors which affect short-term movement of these IPOs. The study finds that approximately 70.0% of the chosen IPOs are short-term lower prices and the short-term movement of these IPOs does not depend on the age of the enterprise, the scale of the IPO, the propriety field and the holdings of the promoter.

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H. N. Archana et. al. (2019) In this article, an initial public bid listing (IPO) output was evaluated using raw return (RR) computation and excess market-adjusted return adjusted (MAER). The report also established the variables affecting IPOs' success and assessed them. Over the time from 2016–2018, we used a dataset of 239 IPOs and analysed efficiency by using considerations like the price bid, problem size and price process. The analysis showed that the bid price had a positive relation to the initial performance of IPOs in listing and showed a negative link towards the performance of IPOs as a result of the issue, demand return and listing retardation. Furthermore, In the event of underpricing, the analysis showed that there was a large degree of low pricing on Indian markets in the fixed price process of IPO issuance compared to the book building system for IPOs issuance. The initial listing output for IPOs with differing price of offers, various problem sizes, selling process, and different sectors also was seen to be a significant link.

Hawaldar, T et. al. (2018) This research explores IPOs' day-list results, book-built IPOs and fixed-price IPO's, IPOs' after-listing performance on the Indian stock exchange as well as book-built and fixed-prices IPOs. We investigate the price and long-term success of 464 Indian IPOs (365 IPOs and 99 IPOs with set prices from 2001 to 2011). The work spans the period from 2001 to 2015 for 15 years. Results analysis shows that book-built IPOs are less expensive in comparison with fixed-price IP Os. In addition, book-based IPOs are linked for an irregular average negative cumulative (CAAR) return up to five and beyond years and are continued to be optimistic in one and a half years for negative CAARs correlated with fixed-price IPOs.

Phadke et. al. (2018) this paper sets forth the meaning and consequences for subscription, initial trading and post-IPO ownership arrangement of the public initial bid. The primary market in India offers a specific framework to estimate the impact of different initial public offer prices (IPO) and IPO variables on investors' initial IPO demand, as determined by IPO subscription/over subscription, initial turnover (liquidity) and investors' listing structure after IPO (ownership). In this analysis, the impact of different price ranges (low to high) of the IPO bid and various IPO-emitted factores on complete subscription/oversubscription of an IPO is evaluated by means of the firma logistic regression for the IPO pre-listing stage. The OLS regression was used for the post-IPO listing period to calculate the impact on the initial trading ratio (IPO trading day) and the proportion of ownership of institutional and individual investors between different price levels (low to high) and various IPO issues. We believe that both types of investors are more unlikely fully subscribe or to oversubscribe to an IPO problem at the lowest IPO price level. The findings indicate a varied range of prices offered by IPOs at the post-listing level, where persons and entities optimise the respective holdings after the IPO listing. The findings also indicate that lower holding promoters diffuse higher ownership by pursuing lower IPO price levels among individual shareholders, thus increasing monitoring.

Narang et. al. (2017) an economy's main business operation is dependent on different macro variables. Growth of the Brutto social Product is a leading player variables. This work is an effort to define a relationship model between GDP growth rate and IPO activity. The target IPOs of Indian and GDP growth rates were taken into account between 2010-2011 and 2015-16.

METHODOLOGY OF THE STUDY

Data collection

For analysis of variables, this research used secondary data from several source. The training of Apex regulatory body SEBON marked the start of a proper primary business operation in India in 1993 A.D. Therefore, the study covered the annual data on IPOs, iPonum and the macro Economic variables: GDP, inflation [inflation rate for proxy (INF))], the interest rate [by bank loan rate proxy (BLR), stock market index [NEPSE proxy] and remission (REM) of the fiscal rate. The report included annual IPOs (proxy by Number of IPOs, IPOTP, IPOTP, and Average IPO Proceeds of IPOs, IPOAP).

Quantitative data

The results have been analysed using descriptive, joint and multi-regression analyses inside the framework of quantitative testing techniques. The data sets included SEBON's multi-year annual reports, World Bank publications of multi-years, Indian Rastra Bank quarterly economic newsletters, and Ministry of Finance's economic survey, India. Except the inflation and interest rates The factors include drawn from the normal logarithm of all variables In addition, for correlation and regression analysis, one order difference is drawn in the natural logarithmic GDP transformed results. Consideration of the variable GDP differential in the first order, the effect on current years of the IPO is analysed in the analysis of shifts in the previous year's GDP rate of increase. The linear functional structure implies that the coefficients can be interpreted as elasticity points. For the analyses of association between variables, the Pearson correlation coefficient is used. Furthermore, some regressions between the dependent variables and the proxies of independent variables were carried out. Correlation and regression analysis of the transformed variables is performed.

Model Specification and Hypotheses

The models used in this analysis include the following functional shape: Public initial offer = disbursement (real gross domestic product, inflation, the stock price index, inflation rate, remittance). In particular, the proxies the vector based and normal translation in the variables of that model into models have been segmented:

$$lnIPONUM = \alpha_1 + \beta_1 lndGDP + \beta_2 INF + \beta_3 BLR + \beta_4 lnNEPSE + \beta_5 lnREM + \varepsilon_1 ..$$

Model 1

$$lnIPOTP = \alpha_2 + \beta_1 lndGDP + \beta_2 INF + \beta_3 BLR + \beta_4 lnNEPSE + \beta_5 lnREM + \varepsilon_2 \quad ....$$

Model 2

$$lnIPOAP = \alpha_3 + \beta_1 lndGDP + \beta_2 INF + \beta_3 BLR + \beta_4 lnNEPSE + \beta_5 lnREM + \varepsilon_3 ...$$

Model 3

Where,

$$lnIPONUM=log(IPONUM);$$

Variable amount of IPO's natural logarithm

$$lnIPOTP=log(IPOTP);$$

Elevated natural logarithm of the overall vector IPO revenue,

$$lnIPOAP=log(IPOAP);$$

Average vector IPO revenue increased natural logarithm

$$lndGDP=[log(GDP_{t+1})–log(GDP_t)];$$

First order deviation the Log of the varying gross domestic product, natural type of the vector gross domestic product, INF=Inflation rate, BLR = Bank loan rate, lnNEPSE=log (NEPSE); the natural form of logarithm of the variable stock index, LnREM = log (REM);

Initial Public Offering (IPO)

The initial public offer (IPO) concerns the process for selling private shareholdings to the public in a new share issue. The issuing of public shares helps a corporation to increase institutional investors' equity capital. The move from a private to a public enterprise will be a significant moment for private investors to make maximum profit from acquisition when equity premiums for new private investors are generally included. In the meantime, it also permits the participation of public investors in the bid.

Number of IPO: The IPO amount corresponds to SEBON's annual IPO number. In general, the IPO amount the calculates the annual frequency of IPOs on the stock exchange. In their investigations, Loughram, Ameer found IPO no. as the IPO proxy.

Total IPO Proceeds Raised: The gains from the IPO apply to the capital balance that the corporation collects From selling its securities to the public. Therefore, the overall income is the quantity gross revenue collected in a year from all the IPO-issuing firms. The overall number of proceeds relates in the present analysis to the amount received in India from all the IPOs given in one year. This value is the total IPO value every year on the industry. As the numerical value and the number of the IPO on the market are the gross IPO proceeds earned by Breinlinger and by Glogova as their important proxy for the IPO.

Average IPO Proceeds Raised: By splitting the overall IPO's revenues by the number of IPOs each year, average IPOs are obtained. This importance calculates the total business share of the IPO.

GDP: Gross national product reflects the economic cycle which represents the level of potential market activity favourably. As a consequence, higher GDP-related growth in the economy leads to higher productivity and economic expansion, leading to more companies issue IPOs to support their development. In terms the amount of new business IPOs, López-De-Silanes, La Porta, Vishny and Ljungqvist recorded strong positive effects GDP rates of development. Likewise, Rees stated a positive link between the GNP growth rate and the IPO number, namely the to maximise the total IPO revenue. The following theory is based on this study:

H1: The causal association between the GDP and the Gross Inland Product IPO is significantly favourable, as well as between GDP and all IPO officials.

Inflation: In this analysis, inflation is used as an inflation proxy. In their research, Omran and Point used inflation as an inflation proxy. Increasing inflation also ensures that consumers demand greater returns on new spending, which would increase companies' costs and deter companies from becoming public. Investors also expect more. The increase in the premium risk increases the hurdles used for companies to evaluate potential investment that would exclude them from further investment and thus fund requirements. The following theory is based on this study:

H2: The cause of INF and IPO inflation INF is important and there are both INF and all IPO officials.

Interest Rate: The rate of interest current analysis refers to the credit rate for the bank. In the current analysis, this vector is the business situation. Ameer observed the tools of monetary policy such as interest rates had a negative relationship to the IPO number, and spread the IPO cycle. A higher interest rate discourages companies from issuing IPOs, since companies' potential incomes are significantly reduced by the higher rate. In the background of the US, Kaya noted that the improvement interest rate at

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levels over the previous four quarters represented in the last quarter the dimensions of the initial corporate bid the audience and also reported that companies issue larger IPOs at low interest rates in relation to previous quarters. The following theory is based on this study:

H3: There is a strong causal association between the BLR and the IPO, as well as between BLR and all IPO representatives.

Stock Market Index: The bond index is a sum of the value generated when various inventories or other investment vehicles are combined. As reference for stock market success measures, the analysis presented uses the India Stock Exchange Index (NEPSE). The window of opportunity principle and the market time hypowork indicate that an inventor's perception of the stock index influenced the cost of floating shares and eventually led to a fluctuation of the IPO volume. This allows companies to make the most of public access, given that equity values are rising through these times when public costs are comparatively minimal. Loughran observed a significant positive inventory index relationship with IPO amount. The following theory is based on this study:

H4: The causal connection between the NEPSE and the IPO is significantly positive; and between NEPSE and the IPO representatives.

Remittance: Khan and Islam observed that transfer raises overall demand Economics and sales, leading to improved companies' productivity, which in turn increases the need for the companies' funds. Likewise, Phuyal observed in the Indian scenario that the transfer and stock market prices represented by NEPSE have a substantial positive relationship. The remittance in the current analysis is therefore assumed to be positively related to the dependent variables and the hypowork suggested is:

H4: The causal association between Remittance (REM) and the IPO and between REM and all IPO officials is significantly positive.

RESULTS AND DISCUSSION

Table 1 provides the detailed statistical information for the period 1993/94 to 2012/16 on selected contingent and independent variables.

Table 1: shows the descriptive statistics of the dependent and independent variables

Variables	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
IPONUM (in number)	26.0	2.0	28.0	11.7	6.1	37.7
IPOTP (in million rupees)	3,130.4	57.0	3,187.4	867.5	904.0	817,268.8
IPOAP (in million rupees)	253.8	14.9	268.7	68.3	58.3	3,400.7
GDP (in million rupees)	462,220.9	297,693.7	759,914.7	500,872.8	138,181.7	1,909,4172,732.7
INF (in percent)	8.8	2.5	11.2	7.2	2.7	7.3
BLR (in percent)	6.7	3.6	10.30	6.65	2.25	5.07
NEPSE (index number)	1,554.8	163.4	1,718.2	480.9	382.7	146467.4
REM (in million rupees)	678,777.0	223.0	679,000.0	168,998.4	213,005.9	45,371,511,876.1

Correlation Analysis: Table 2 presents the coefficients of correlation between the dependent and separate variables.

Table 2: the correlation coefficients among the independent, contingent variables

lnIPONUM	1							
lnIPOTP	0.724**	1						
lnIPOAP	0.186	0.812**	1					
lndGDP	0.059	0.285	0.355	1				
INF	0.147	0.326	0.340	0.356	1			
BLR	-0.514*	-0.509*	-0.290	-0.048	0.227	1		
lnNEPSE	0.440*	0.727**	0.664**	0.383	0.273	-0.576**	1	
lnREM	0.516*	0.839**	0.759**	0.281	0.148	-0.649**	0.761**	1

* Correlation at 0.01 levels is significant (2- tailed). * Correlation at level 0.05 is significant (2-tailed).

The correlation study reveals there's stronger positive link between the independent stock market measure and remittance of factors and the whole proxy of the original public service variable. Furthermore, the variable bank loan rate has a considerable negative association to all contingent variable proxies. It shows that a positive Shift of bond index and a positive change in cash inflows also show a positive change in the percentage of initial bids issued and volume of initial bids issued. In addition, an incremental change in the Bank lending rate shows a decline in the amount and value of initial public offers initial public bids issued. The statistical importance of all relationships is 5 percent.

Regression Analysis: Table 4 presents the regression analysis between the dependency variable proxies and the separate variables.

Table 3: Regression analysis between IPO number and separate variables

Model	Intercept	Regression coefficients of					Adj R^2	SEE	F
		lnIGP	INF	BLR	lnNEPE	lnREM			
1	1.1903 (-0.295)	0.0467 (-0.2731)					-0.044	0.668	0.075
2	2.0321 (5.0187)**		0.036 (-0.6813)				-0.025	0.662	0.464
3	3.284 (8.636)**			-0.149 (-2.749)*			0.229	0.573	7.559
4	-0.2618 (-0.2287)				0.4298 (2.2439)*		0.155	0.601	5.035
5	-1.492 (-1.0834)					0.1544 (2.7579)**	0.2309	0.573	7.606
6	1.8222 (-0.4927)	-0.1005 (-0.5936)			0.4778 (2.2678)*		0.1281	0.61	2.616
7	0.0377 (-0.9916)	-0.073 (-0.6446)				0.1622 (2.7286)**	0.2012	0.584	3.771
8	-1.5407 (-1.0910)		0.0176 (-0.3737)			0.1512 (2.6155)**	0.1981	0.585	3.717
9	2.519 (-1.446)		0.062 (-1.133)	-0.155 (-2.049)*	0.061 (-0.235)		0.236	0.569	3.313
10	2.1427 (-0.547)	-0.1165 (-0.6452)	0.017 (-0.3141)		0.4669 (2.1383)*		0.0869	0.624	1.698
11	4.341 (-1.185)	-0.062 (-0.392)	0.075 (-1.498)	-0.171 (-3.051)*			0.236	0.573	3.263
12	3.073	-0.089	0.062	-0.125	-0.023	0.0743	0.184	0.59	1.994
		(-0.753)	(-0.545)	(-1.079)	(-1.445)	(-0.069)	(-0.76)		

Notes: the parenthetic figures are t-value; the asterisk markers (**) and (*) show significant results respectively at 1 percent and 5 percent levels. The results of Model 1 show that was shown significant positive causal change in the index of equity and stock markets in the inflow of payment with changes in amount of initial offers to the public issued each year, whereas inflation and the gross domestic product of other variables do not affect the number of original public bids offered on the securities market. The model is 10% significant and explains 18, 40% changes in the dependent variable as the R^2 value shows.

Table 4: Regression analysis between total IPO proceeds raised and separate variables

Model	Intercept	Regression coefficients of					Adj R^2	SEE	F
		lnIGDP	INF	BLR	lnNEPSE	lnREM			
1	11.171 (1.712)	0.376 (1.360)					0.037	1.08	1.851
2	19.074 (29.272)		0.134 (1.581)				0.064	1.07	2.501
3	21.696 (33.759)*			-0.249 (-2.711)*			0.224	0.97	7.349
4	12.936 (8.776)				1.196 (4.849)**		0.506	0.77	23.52
5	9.679 (6.569)**					0.423 (7.059)**	0.689	0.61	49.84
6	13.529 (2.338)*	0.345 (1.419)		-0.243 (-2.704)*			0.26	0.95	4.86
7	12.747 (2.654)**	0.009 (0.042)			1.192 (4.5569)**		0.481	0.79	11.2
8	8.219 (2.1582)*	0.069 (0.417)				0.415 (6.522)**	0.677	0.63	24.01
9	13.897 (2.778)**	-0.049 (-0.210)	0.061 (0.884)		1.153 (4.137)**		0.475	0.8	7.647
10	9.989 (2.643)**	-0.0263 (-0.156)	0.088 (1.715)			0.409 (6.729)**	0.705	0.6	18.55
11	15.566 (6.617)*		0.105 (1.451)	-0.138 (-1.363)	0.814 (2.360)*		0.521	0.76	8.979
12	15.687 (3.078)*	-0.016 (-0.071)	0.106 (1.398)	-0.137 (-1.312)	0.822 (2.209)*		0.495	0.78	6.383
13	10.637 (2.517)*	-0.023 (-0.133)	0.096 (1.689)	-0.032 (-0.380)		0.386 (4.413)*	0.691	0.61	13.32
14	10.753 (2.506)*	-0.053 (-0.291)	0.084 (-1.380)	-0.012 (-0.123)	0.237 (-0.696)	0.35 (3.411)*	0.682	0.62	10.45

Notes: The figures are T-values in parenwork; asterisk indications (**) and (*) show that the findings at 1 percent and 5 percent respectively are important. The findings of Model 2 reveal the statistically important, negative causal association of interest rate proxy through bank lending with shifts in the general initial proceeds of the bond market public bidding proxy.

Table 5: Regression analysis between average IPO proceeds raised and separate variables

Mode l	Intercept	Regression coefficients of					Adj R^2	SE E	F
		lnIGD P	INF	BLR	lnNEPSE	lnREM			
1	9.98 (2.235)*	0.33 (-1.741)					0.085	0.74	3.03 1
2	17.041 (37.462)**		0.098 (-1.659)				0.074	0.74	2.75 2
3	18.183 (66.621)*			-0.102 (-1.909)*			0.107 2	0.73	3.64 3
4	13.198 (11.710)**				0.766 (4.064)* *		0.414	0.59	16.5 2
5	11.171 (9.029)**					0.268 (5.338)* *	0.556	0.52	28.5
6	12.338 (7.252)*			0.047 (-0.682)	1.068 (3.675)*		0.398	0.6	8.28
7	8.406 (4.663)*			-0.12 (2.001) *		0.349 (5.640)*	0.611	0.48	18.2 9
8	13.228 (2.698)*	0.088 (-0.507)		0.039 (-0.535)	0.799 (3.022)*		0.375	0.61	5.48 1
9	6.534 (2.107)*	0.099 (-0.746)		0.111 (-1.807)		0.332 (5.021)*	0.602	0.49	12.1 1
10	8.019 (4.491)*			0.134 (2.246) *	0.324 (-1.378)	0.282 (3.652)*	0.628	0.47	13.3 7
11	9.654 (2.922)**	0.064 (-0.429)	0.056 (-1.258)		0.119 (-0.445)	0.224 (2.881)* *	0.558	0.51	7.94 8
12	11.567 (2.864)*	0.065 (-0.358)	0.039 (-0.651)	0.014 (-0.174)	0.721 (2.444)*		0.356	0.62	4.03 4
13	8.373 (4.301)*		0.024 (-0.516)	0.116 (-1.66)	0.276 (-1.074)	0.227 (3.490)*	0.613	0.48	9.70 9
14	7.68 (2.246)*	0.036 (-0.250)	0.021 (-0.444)	0.114 (-1.574)	0.26 (-0.958)	0.276 (-3.378)*	0.592	0.49	7.37 5

Remarks: the parenwork figure is t-; the asterisk indications (**) and (*) provide important findings at 1 percent and 5 percent respectively.

Furthermore, improvements in inventory price index and the major causal beneficial association between remittance inflows and changes in overall initial annual proceeds of public bonds have increased, although the other inflation variables and gross domestic products have little impact on the amount of initial public bids released on the stock market. The model is important at 5 percent, shown by the 10,451 F ratio and the predictor variables studied in the model have an explanatory capacity of 68.20 percent in order to justify the changed R^2 value to the dependent variable. The findings in Model 3 show that the rate proxy of bank loans has a statistically significant and negative causal link in relation to the changes in average IPO revenue from the different companies on the stock market. The changes in the stock market index, NEPSE and transfer influx are causally significantly more positive in relation to changes in average IPO revenues. The model is substantial at 5 percent level as shown in the F-ratio of 7,375, and explains why the model predictor variables have a 59, 2 percent explanatory power for the adjusted R^2 value.

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CONCLUSION:

The study finds that stock market index, cash flow and interest rate are among the key macroeconomic variables that explain the movement in India's IPO activities. A statistically important positive effect on the amount of issuing IPOs, the gross IPO revenues and IPO average revenues have risen in terms of the stock market index and refund inflows. On the other hand, the IPO operations are negatively affected by the interest rate, because of the major, adverse causality with the amount of IPOs that were released and the increase in the overall IPO income and in the average IPO revenue, the increase in the primary market of India.

REFERENCES:

K. S. Manu, Chhavi Saini (2020). Valuation Analysis of Initial Public Offer (IPO): The Case of India International Journal of Commerce and Management Research First Published May 28, 2020 Research Article https://doi.org/10.1177/0971890720914100

H. N. Archana, D. Srilaskhmi (2019). "an Empirical Study on Initial Listing Performance of IPOs in India" Volume 6, Issue 3, July-September 2019 – Articles

Hawaldar, T., Naveen Kumar, K. R., Mallikarjunappa, T. (2018). Pricing and performance of IPOs: Evidence from Indian stock market. Cogent Economics & Finance, 6, pp. 1–20.

Narang, S. (2017) A model of relationship between IPOs activity and GDP growth rate International Journal of Commerce and Management Research, 3(6), pp. 65–68.

Laohakosol, Wilaiporn and Sharma, Ayush and Sthapit, Arhan (2018). Macroeconomic Factors and Their Influences on Initial Public Offering (IPO) in India (June 26, 2018). International Journal of Research, Volume 05, Issue 16, June 2018, Available at SSRN: https://ssrn.com/abstract=3255536

Acedo Ramírez, M.Á., & Ruiz - Cabestre, F.J. (2017). IPO characteristics and underpricing in the alternative investment market. Applied Economics Letters, 24(7), pp. 485 - 489.DOI: 10.1080/13504851.2016.1205713

Pu, D., & Wang, S. (2015). The impact of pricing mechanism reform on underpricing of initial public offerings in China. Applied Economics Letters, 22 (14), pp. 1144 -1149.DOI: 10.1080/13504851.2015.1011303

Tran, A.L., & Jeon, B.N. (2011). The dynamic impact of macroeconomic factors on initial public offerings: Evidence from time-series analysis. Applied Economics, 43(23), pp. 3187-3201.DOI: 10.1080/00036840903493267

Xu, Z., Wang, L., & Long, J. (2017) the impact of directors' heterogeneity on IPO underpricing Chinese Management Studies, 11(2), pp. 230-247 DOI: 10.1108/CMS-05-2016-0095

Zouari, S.B. S., Boudriga, A., & Boulila, N.T. (2011). Determinants of IPO underpricing: Evidence from Tunisia. The International Journal of Business and Finance Research, 5 (1), pp. 13-32.

Phadke, K. M., & Kamat, M. S. (2018). Impacts of macroeconomic and IPO factors on underpricing on Initial public offerings on NSE in India International Journal of Management Studies, 5(1(4)), pp. 46-52

.Archana, H. N., Jayanna, S., & Hiremath, V. (2015). Impact of bond rating changes on stock prices in India: Rating agency wise analysis. Indian Journal of Research in Capital Markets, 2(4), pp. 20-32.

Das, S. (2013). Analyzing the trend of market prices of IPOs: A study based on some selected Indian companies (Published work). The University of Burdwan, Golapbag, Burdwan.

Dhall, H. S. (2017). Pricing determinants of selected fixed price IPOs issued in India. IOSR Journal of Business and Management (IOSR-JBM), 19(7), pp. 113-121.

Bruce A and Thilakaratne P (2014). IPO stock performance imperfection: a review of models and empirical works American Journal of industrial and Business Management 4 pp. 155-66.

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