Long-Run Operating Performance of Indian Firms Offering Seasoned Equity

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Abstract

The present study examines the behavior of firms offering seasoned equity during the period 1996 to 1999 in India. The long-term operating performance of equity issuers does not support the view that earnings are managed to time the equity offerings. This result contradicts the findings of Rangan (1998) and Teoh et, al (1998). Pre issue period operating performance does not have any impact on the decision to issue seasoned equity, thus contradicting the view that seasoned offerings are timed to exploit better operating performance. Rather we find that information asymmetry has significant influence on the decision to issue seasoned equity.

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1. Introduction

It is well known in finance literature that seasoned equity offerings elicit negative stock price reactions. Information based models of Miller and Rock (1985) and Myers and Majluf (1984) postulate that announcements of capital raisings convey negative information about future prospects of the firm to which rational investors respond by adjusting the share price downwards. Following the initial announcement period, empirical studies have confirmed poor stock market performance over the long run (3 to 5 years) of firms conducting seasoned equity offerings[1].

This article extends the empirical literature in the seasoned equity offerings by examining the long run operating performance of equity issuers in India. In an Indian context, this paper investigates the information content of seasoned equity offerings by analyzing the post issue operating performance of a set of issuers relative to that of comparable non-issuing firms. In a setting similar to that of McLaughlin, Safieddine and Vasudevan (1998) we examine if the negative information interpretation of firm value is borne out later by subsequent operating performance of the firm.

Although research in seasoned capital offerings have advanced knowledge in this area, most empirical research is limited to stock market performance subsequent to equity offerings and the extant literature so far is reliant on data from developed countries. Given the incomplete nature of markets in developing countries, there is a greater need for supplementing research on stock market performance along with analysis of operating performance of firms so as to lend credence to the arguments advanced with regard to financing policies of firms in general and the use of seasoned capital in particular. To our knowledge, this paper is the first to examine post issue performance of Indian companies in an emerging market context[2].

Our study builds on earlier works in capital offerings by examining the relationships between the decision to issue equity and post issue changes in operating

[1] The long run poor stock price performance is evident in Japan (Cai and Loughran, 1998), United Kingdom (Levis, 1995) and in US (Loughran and Ritter, 1997).

[2] Yoon and Miller (2002) examine operating performance of Korean firms and find evidence of earnings management.

performances of a sample of Indian firms between 1996 and 2001. Matched with a sample of firms for pre offer level of operating performance and size, we provide evidence that seasoned equity issuers experience negative performance in the pre and post-issue periods. We find that run up in pre issue operating performance is followed by negative operating performance during the post issue period for seasoned equity issuers. Contrary to prior evidence in the US market, however, changes in cash flow and performance run up do not affect the probability of issuing equity. It appears that the degree of information asymmetry plays a significant role for seasoned equity issuers in their decision and timing to issue equity.

The study is organized as follows. In the next Section we review the relevant literature and present the context under which corporate firms are operating in India, followed by a description of database and methodology in Section 3. We provide a discussion of empirical findings in Section 4 and Section 5 concludes the study and discusses the implications of findings.

2 Review of Literature and the Indian Scenario

2.1 Stock market Reaction to Announcement of Seasoned Offerings

Healey and Palepu (1990) analyze 93 seasoned equity offerings of firms listed on NYSE and AMEX and find increased risk following the issues. However, they find no change in analysts' earnings forecasts. Spiess and Affleck-Graves (1995) and Loughran and Ritter (1997) document abnormally low stock returns over the five-year period following seasoned equity offerings.

Cai and Loughran (1998) analyze the performance of 1389 SEOs of Japanese firms during the period 1971 to 1992. They find evidence of underperformance in the 5 year period following SEO. Their analysis suggests that ownership structure and Keiretsu affiliation have no influence on the poor performance of issuing firms. They also find evidence of no influence of agency costs prior to the issue on the post issue performance changes. Thus their results contradict the agency explanation of the new issue puzzle.

Eckbo, Masulis and Norli (2000) analyze over 7000 firms that issued seasoned equity and debt issues during the period 1963 to 1995. They document underperformance of these firms as a reflection of their lower systematic risk as

compared to their non-issuer counterparts. According to them, seasoned equity issues strengthen the capital base of companies there by reducing the leverage. The consequence of lower levels of leverage is that the exposure of firms to unexpected inflation and default decreases, leading to a lower required rate of return relative to matched firms. The study also identifies the positive liquidity impact of seasoned equity offerings which further reduces expected returns relative to non-issuers.

Foerster and Karolyi (2000) analyze the long-run performance of 333 non-US firms raising equity capital in US markets over the period 1982 to 1996 over three following issue of capital. They find under performance in the range of 8 percent to 15 percent over comparable local market benchmarks over the three years following equity offering. They also find evidence of influence of investment barriers on their performance. The study also finds that firms from markets with significant investment barriers for foreigners outperform their benchmarks where as firms from segmented markets significantly underperform.

Mathew (2002) analyzes the long-run performance of seasoned equity offerings of firms in Japan, Korea, Hong Kong using the PACAP database. His sample includes 744 seasoned equity offerings by 631 different Japanese firms with 113 firms issuing equity twice during the sample period of 1977 – 1992. 415 seasoned equity offerings by 344 different Korean firms with 71 firms issuing equity twice and the remaining issuing once during the period 1979 to 1992. For Hong Kong, 313 seasoned equity offerings of 209 different firms with 104 firms issuing equity twice and the remaining issuing equity once for the period 1982 to 1992. His findings are mixed. He finds evidence of Japanese and Hong Kong firms underperforming following seasoned equity offering. However, the Korean firms show no such underpeformance following seasoned equity offerings. He concludes that the asymmetric information argument advanced in the US and Japanese markets need not hold in other markets with varying structures.

Yoon and Miller (2002) analyze the linkages between earnings management and operating performance of seasoned equity offerings of 249 Korean firms for the period 1995 – 1997. They find evidence of earnings management by firms one year preceding the offer and further they observe that earnings management is resorted to particularly by firms that have relatively lower performance. However, they find no difference in the operating performance between issuers and non-issuers. They also

find evidence that the market correctly analyzes earnings management and reacts positively to net income and negatively to discretionary accruals.

Chen and Wu (2002) document the issuing costs of SEOs in Hong Kong and find that the direct costs during the period 1991 to 1996 amount to 10.44 percent of gross proceeds for IPOs and 2.95 percent of gross proceeds for SEOs. They estimate the indirect cost to be 15.14 percent for IPOs and 6.26 percent of SEOs. They conclude that the cost of SEOs are lower in Hong Kong compared to that of the US.

Hertzel et al. (2002) study the investor behavior and expectations around equity issues by analyzing the stock price and operating performance following private placement of equity by a sample of 619 publicly traded firms during the period 1980 to 1996. The study finds that positive announcement returns are followed by abnormally low post-announcement stock price performance. The finding imply that investors are optimistic about the future of firms that issue equity irrespective of method of issue. Thus contradicting the underreaction hypothesis.

Thiripalraju and Sahadevan (1995) discuss the regulatory aspect of private placement in the Indian context. They examine the regulatory models of various countries and suggest that SEBI qualify some institutional buyers including mutual funds for resale of privately placed equity. They also prod the regulator to take appropriate steps to remove the obstacles in facilitating revitalising private placement market in India.

Wu (2001) examines the stock price behavior of firms offering seasoned equity around their issue date. An analysis of a sample of 5180 seasoned offerings of firms listed on American Stock Exchange (AMEX), the NASDAQ, and the New York Stock Exchange (NYSE) during the period 1986-1998 finds that the SEOs are underpriced. The degree of underpricing varies with the size of the firm, industry, listing and finally timing. The study finds that small firms have more pronounced underpricing, and clustering of more issues results in more underpricing.

Chaplinsky and Hansen (1993) suggest that the indifferent stock market reaction is partly on account of market expectation of debt issues. They find significant negative stock price reaction to debt issue announcement after controlling for market expectations. However, the fall in price in case of debt issue announcements has been found to be lower than that of fall in the case of stock issue offerings. Akhigbe,

Easterwood, and Pettit (1997) analyze the impact of motivation of debt issues on stock price response and find that issue of debt to meet unexpected shortfall in cash flow results in negative reaction. They, however, find no influence of unexpected refinancing of debt, unexpected increase in leverage, and unexpected increase in capital expenditure on stock prices of the firms issuing debt.

2.2 Long-Run Operating Performance

Patel, Emery and Lee (1993) analyze the influence of firms offering straight debt, convertible debt or common stock on the long-term cash flow performance. They find decline in performance of issuers, though the performance of issuers has been relatively better compared to non-issuers in similar industries. They also find that firms that offered larger issues have registered larger declines.

McLaughlin, Safieddine and Vasudevan (1996) analyze the operating performance of seasoned equity offerings of a large sample of 1,296 firms listed on the New York Stock Exchange (NYSE), American Stock Exchange (AMEX), and NASDAQ that raised capital through subsequent offerings during the period 1980-1991. They also analyze the determinants of subsequent performance and the factors influencing the decision to issue equity. The study reveals that the SEO firms had a significant increase in operating performance prior to the issue and that they register a considerable decline in profitability in post-offering period.

Lee (1997) analyzes the influence of growth opportunities on the post offering earnings performance of 144 NYSE and AMEX firms that made seasoned equity offerings during the period 1977 to 1986. He finds deterioration in the performance of growth firms following a seasoned equity offering. Lee (1998) analyzes the impact of amount of free cash flow on the stock market reaction to announcement of seasoned equity offerings by 144 NYSE / AMEX firms for the period 1977 to 1986. The study finds evidence of growth opportunities having significant positive impact on the negative stock price reaction to seasoned equity offering announcements. The study also finds issue size, and the pre-offer cash flow level to have significant negative impact on stock price reaction for mature firms and not for growth firms.

McLaughlin, Safieddine and Vasudevan (1998) study the information content of seasoned capital offerings by 1,967 firms that issued equity and 960 firms that issued debt during the 1980 – 1993 period. The sample for the study is taken from the

Securities Data Company database. Their analysis finds that operating performance has declined both in the case of debt and equity offerings and that the results are robust even when controlled for firm size and operating performance. Their study also finds that equity issuers with greater information asymmetry have larger declines in operating performance and that the declines are small in the case of debt offering firms.

Teoh, Welch and Wong (1998) analyze earnings management and subsequent operating performance of 1,265 seasoned equity issues of firms listed in Securities Data Corporation during the period January 1970 to September 1989. The study finds that firms who manage their earnings before equity offering through discretionary accruals have lower post-issue stock returns and declining operating performance. They also find a persistent relationship between discretionary accruals of firms that issued seasoned equity and their future returns even after controlling for firm size and book-to-market ratio.

Lee and Loughran (1998) analyze the stock and operating performance of 986 firms that issued convertible bonds during the period 1975 – 1990. They find evidence of poor stock return and decline in operating performance following the issue of convertible bonds. Further, they find no influence of new issue activity or seasoned equity offering on the performance of convertible debt issuers.

Rangan (1998) analyzes the influence of earnings management around the seasoned equity offering period on the subsequent underperformance. His sample includes 230 offerings during the period 1987 – 1990. The study finds evidence of earnings management around the offering date and that earnings management has influence on subsequent underperformance and on market adjusted stock returns in the following year. The finding imply that stock market overvalues firms in response to increase in discretionary earnings and the market is disappointed by poor earnings and leading to negative reaction of stock prices.

Jagadeesh (2000) analyzes the benchmarks employed in studying the underperformance of SEOs using equal weighted and value weighted indexes, benchmarks on the basis of firms specific characteristics and benchmarks based on factors models finds that SEO firms significantly underperform benchmark firms over the five years following equity issues. He also finds that small and large firms as well

as growth and value stocks have similar levels of underperformance. He also shows that factor model benchmarks are misspecified. His study also finds that the SEO firms underperform their benchmark firms twice in the window period of announcement event compared to outside window period.

Brous, Datar and Kini (2001), attempts to assess the expectations of investors on the announcement of seasoned equity offerings. They examine investor's reaction to quarterly earnings announcements over a five-year post-offering period for a sample of 1,475 firms during the period 1977 – 1990. The study finds evidence suggesting no disappointment on the part of investors on earnings announcements following seasoned equity offerings. Hertzel et al. (2002) finds evidence of poor operating performance following private placement of equity.

2.3 Indian Scenario

The decade of 1990s unfolded several dramatic changes in the Indian capital markets[3]. The office of controller of capital Issues (CCI) was abolished and the powers to oversee the primary market brought under the purview of Securities and Exchange Board of India (SEBI). The issue and pricing of capital offerings has been largely left to the issuing companies after their due compliance of the procedure laid down by SEBI. The 1990s have also ushered in new methods of pricing capital offerings particularly with the adoption of book building. However, for most part the late 1990s witnessed a lackluster primary market with very few public offerings of capital.

Many in the markets believe that the higher valuations of stocks at the peak of mid 1990s allowed many firms to tap capital at lower yields and the subsequent underperformance affected investor sentiment leading to a lackluster market. Varma (2002) emphasizes the need for reforming the system of corporate filings, improvements in accounting standards and enhanced real time disclosure to thwart emergence of an 'Enron-like' situation in India. However, it is not apparent whether earnings are managed in the Indian context or issuers are just choosing the right time to market their seasoned capital offerings.

[3] Shah and Thomas (2001) elucidate the critical developments in Indian securities markets during the 1990s.

No study to the knowledge of this researcher has analyzed seasoned capital offerings in Indian context. Only Thiripalraju and Sahadevan (1995) discuss the private placement market and the regulatory initiates needed for its revival. Hence the present study makes an attempt to fill this important gap in literature. Specifically the study focuses on issue of long-term operating performance of firms issuing seasoned capital offerings.

3 Data and Methodology

3.1 Database

The study encompasses all seasoned capital offerings of firms between April 1995 and March 1999. The study period encompasses the second-generation reforms in India following the initial structural adjustment program and macroeconomic stabilization policies adopted in 1991. This period also reflects consolidation phase in primary and secondary securities markets. In the primary markets, SEBI has established itself as a regulator and the investment banking intermediaries have gone through a maturing phase. In secondary markets, The National Stock Exchange (NSE) has come to provide a competitive alternative to the Bombay Stock Exchange (BSE). This period therefore offers important insights about the transformation of Indian capital markets and in particular about their ability to function according to the semi-strong form efficient market hypothesis.

A preliminary analysis of aggregate data on capital issues published by SEBI and RBI shows that the number of issues and amounts raised have declined over the study period (Table 1 and 2). Further, as far as equity issues are concerned, firms have used more of rights or private placement routes rather than public issues, either due to lackluster market conditions or due to earnings dilutions concerns. It can also be observed from this information that banking and FIs and finance companies appear to account for a large share of capital raised (Table 2).

The number of issues through private placement has gone up over the study period though in terms of amounts raised the public issue route continue to account for a larger share.

We draw our sample from the data available from Prowess Database of Centre for Monitoring Indian Economy (CMIE). The sample firms are included on the basis

of the following criteria: (i) The offer is recorded in the Prowess database of the Center for Monitoring Indian Economy; (ii) the firm is listed either on the National Stock Exchange (NSE) or on the Bombay Stock Exchange (BSE); (iii) balance sheet data are available from prowess database; (iv) only first issue in any year is included; (v) only individual issues are included – bundled issues of debt and equity are excluded, and (iv) the firm is in manufacturing sector or in services sector with offerings of public sector entities and financial services being excluded as changes in these firms are largely driven by regulatory requirements. Only one issue in any year by a firm is considered in order to avoid using overlapping data to estimate the accruals.

The final sample of seasoned capital offerings includes 783 equity issues. Analysis of distribution of firms in terms of industry affiliation shows that a large number of firms in chemicals and plastics have issued seasoned equity followed by firms in other services and textiles (Table 3). 532 companies have issued equity in 1996 where as only 55 firms issued in 1999. Distribution of mode of issue shows that a large number of firms have issued seasoned equity through public issue in 1996 though in subsequent years private placement appears to be the preferred route.

3.2 Methodology

3.2.1 Information Asymmetry

We use two measures to capture the information asymmetry between the market and the managers of the firm: firm size and market value to book value of equity. Smaller firms are expected to have more information asymmetry problems compared to larger firms[4]. This could be on account of less following by financial analysts and the absence of wider distribution of shareholding.

Similarly growth opportunities may also influence on the degree of information asymmetry. Managers of firms experiencing growth may have more accurate information about the prospects of firms than outsiders. Myers (1977) characterization of growth opportunities can be captured with the help of the ratio of market value to book value as the growth opportunities should account for the difference between market value and book value of a firm. Information asymmetry

[4] See Opler and Titman (1995) as an example of size as a measure of information asymmetry.

problems are expected to have less severe impact on debt issuers compared to equity issuers.

A dummy variable for information asymmetry is calculated on the basis of comparison of market value to book value of a firm to its industry average market value to book value. The dummy variable takes the value of 1 if a firm's market value to book value exceeds that of industry average and a value of 0 if the market value to book value is less than or equal to industry average. Natural logarithm of book value or net worth is also considered as a measure of size in order to capture the degree of information asymmetry[5].

3.2.2 Measurement of Operating Performance

Operating performance of firms is measured with the help of pretax operating cash flow. According to Barber and Lyon (1996), operating cash flow, in comparision to earnings, is a better measure of operating performance as they represent economic value generated by a firm and as a pretax measure as they are unaffected by changes in tax status or capital structure. Earnings may not yield accurate results as they are influenced by interest expense, special items, and taxes which could obscure operating performance.

We adjust the raw pre tax operating cash flow according to the procedure based on the control portfolio methodology suggested by Barber and Lyon (1996). Control portfolios are formed with firms that have not issued debt or equity during the study period. Firms belonging to the same industry as that of issuing firm form part of a control portfolio. To account for the size factor, all firms are categorized into size groups and firms who do not fall into the same size group as that of issuer prior to the year of issue are excluded from the analysis. Similarly, to account for performance related issues, all firms whose performance does not fall in the same group as that of the issuer firm's ratio of cash flow to book value of assets in the year prior to the issue

[5] In addition, age and affiliation to business group are also considered for measurement of degree of information asymmetry. However, non-availability of data on a large number of companies with regard to year of incorporation, age could not be used. Similarly, in the absence of holding pattern data relating to affiliation to business group for all years during the study period for a large number of companies forced consideration of alternative measures.

[6] The recently formed Electronic Data Information Filing and Retrieval (EDIFAR) System initiative of SEBI appears promising in making holding pattern data available for a large number of companies on a more frequent basis. See http://sebiedifar.nic.in/ for details. The EDIFAR initiative is similar to

are excluded. The performance of the control portfolio is measured as the equal weighted average of the performance of the remaining firms.

To examine the influence of information asymmetry on operating performance of debt issuers and equity issuers, we employ regression analysis with independent variables as identified in Mclaughlin, Safieddine and Vasudevan (1996 and 1998). Adjusted operating cash flow is regressed on the ratio of free cash flow to book value of assets, pre-offer run-up in operating performance, changes in gross property, plant and equipment scaled by book value of assets, a dummy variable for the ratio of market value to book value of equity, and the natural log of the book value.

$$CAOCF_{t-1,t+n} = a + b_1 RFCBV_{t-1} + b_2 RUNUP_{t-2,t-1} + b_3 CGFABV_{t-1,t+n} + b_4 INFASM_{t-1} + b_5 LNBV_{t-1} \quad \text{.....(1)}$$

Where,

CAOCF is Change in operating cash flow from t-1 to t+n, where n is 1 to 3;

RFCBV is Ratio of free cash flow to book value of assets in t-1;

CGFABV is change from t-1 to year n in gross fixed assets to book value of assets in t-1;

INFASM is dummy variable for information asymmetry; takes the value of 1 when market to book value exceeds industry average; and

LNBV is log of book value in t-1.

Free cash flow is expected to have negative influence on adjusted operating performance as managers may undertake capital investments that yield negative net present value or that may increase the monetary and non-monetary benefits of managers (Jensen, 1986). Use of proceeds of capital issues for the purpose of investment on other hand should lead to higher operating performance when these investments represents positive net present value projects. Information asymmetry is expected to have negative impact on operating performance while size is expected to have positive influence as pre-issue information asymmetry may imply that firms with better prospects may not offer seasoned capital, particularly equity capital.

3.2.3 SEO Decision

To analyze the determinants of SEO decision logit regression has been employed following Mclaughlin, Safieddine and Vasudevan (1996) for a sample consisting of

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Electronic Data Gathering and Access Retrieval System (EDGAR) in the US. Cai and Loughran (1998) employ ownership structure and *Keiretsu* affiliation as proxies for information asymmetry.

SEO firms and size-matched non-issuing firms. Influence of scaled free cash flow in t-1 year, run up in adjusted operating performance of firms from t-2 to t-1 relative to issuing year, scaled tax expenses in t-1, scaled interest payments as proxy for leverage or debt tax shield and natural log of book value and a dummy variable of information asymmetry on the decision to issue equity has been examined.

$$\Pr ob(SEO) = a_0 + b_1 RFCBV_{t-1} + b_2 RUNUP_{t-2,t-1} + b_3 INFASM_{t-1} + b_4 STAX_{t-1} + b_5 SINT_{t-1} + b_6 LNBV_{t-1}$$

……..(2)

Where,

Prob(SEO) is the probability that a sample firms issued seasoned equity;

RFCBV is Ratio of free cash flow to book value of assets in t-1;

RUNUP is change from t-2 to t-1 in adjusted operating performance;

INFASM is dummy variable for information asymmetry; takes the value of 1 when market to book value exceeds industry average;

STAX is scaled tax expenditure in t-1;

SINT is scaled interest expense in t-1; and

LNBV is log of book value in t-1.

Free cash flow is expected to have negative impact on SEO decision, while pre-offer run up in operating performance may have positive influence as firms may want to take advantage of right market conditions for raising capital. Information asymmetry is expected to have negative influence, so is interest expense a proxy for leverage as it can be used as a tax shield. Similarly tax expenditure may have negative impact on the decision to issue seasoned equity as firms may have more incentives to raise capital through debt issue[7].

4. Discussion of Results

In order to compare the performance of issuing firms, we match each firm in our sample by a non-issuer during this period. The non-issuers are chosen following the control portfolio method described in the previous section. Average performance of non-issuing firms appears to be better compared to non-issuing firms as inferred from profit before depreciation, interest and tax (PBDIT). Similarly issuing firms appear to be relatively younger compared to non-issuing firms and are small in size compared

[7] Mackie-Mason (1990) and Jung, Kim and Stulz (1996) find evidence of influence of a firm's tax status on capital issue decision.

to that of later[8]. The difference between issuing and non-issuing firms is statistically significant in terms of size and age. However, PBDIT and market value to book value are not significantly different for issuing and non-issuing firms.

Analysis of determinants of operating performance for seasoned equity issuers shows that free cash flow has positive impact on the change in adjusted operating cash flow following the seasoned issue (Table 6). The degree of influence, as evidenced from the coefficient estimates, is significant. Performance run up from t-2 year to t-1 year prior to seasoned offering has negative impact on the operating performance of equity issuers in the long run. This implies that firms that have shown higher improvements in operating performance prior to the offering have registered considerable declines following the seasoned offering of equity. These findings are consistent with McLaughlin, Safieddine and Vasudevan (1998). The coefficients of change in gross fixed assets to book value of assets, dummy variable for information asymmetry and size variable are not statistically significant.

Analysis of probability that a firm issued seasoned equity shows that pre-issue free cash flow and run up in operating performance appear to have no significant influence on the SEO decision (Table 7). However, information asymmetry appears to have positive influence on the decision to issue equity implying that when information asymmetry is high firms take advantage and issue equity. Similarly size has positive influence on the decision to issue equity and this is particularly so in the case of firms with high degree of information asymmetry. These results are consistent with McLaughlin, Safieddine and Vasudevan (1996). Firms in high tax brackets appear to have less incentive to go for equity issue compared to firms in low tax brackets and this particularly appears to be the case in presence of information asymmetry. Negative coefficient for tax implies that firms in low tax brackets may prefer SEO. Firms with higher leverage as proxied by interest expense appear to take the SEO route only in the presence of information asymmetry compared to the finding of McLaughlin, Safieddine and Vasudevan that leverage as proxied book value of debt has positive impact on the decision to go for SEO irrespective of information asymmetry is high or low.

[8] Age data is available only for a small percentage of all sample companies, resulting in the consideration of other variables for measurement of information asymmetry.

5. Summary and Conclusion

The study analyzes the operating performance of seasoned capital offering firms and analyzes the influence of earnings management on operating performance. Size and performance matched adjusted operating cash flow of seasoned capital offering firms show negative performance in the pre and post-issue periods for equity issuers. Debt issuers compared to equity issuers show an improvements in operating performance over 3 years prior to issue as well as 3 years after the issue.

Analysis of determinants of operating performance for debt and equity seasoned issuers shows that free cash flow has positive impact on the change in adjusted operating cash flow for both debt and equity issuers following the seasoned issue, though only coefficients for equity issuers are statistically significant. Performance run up prior to seasoned offering has negative impact on the operating performance of equity issuers in the long run. These findings are consistent with McLaughlin, Safieddine and Vasudevan (1998).

The study also analyzes the determinants of SEO decision and particularly the issue of whether SEO only represents right timing and not a case of earnings management. Analysis of probability that a firm issued seasoned equity shows that pre-issue free cash flow and run up in operating performance appear to have no significant influence on the SEO decision. However, information asymmetry appears to have positive influence on the decision to issue equity implying that when information asymmetry is high firms take advantage and issue equity. Similarly size has positive influence on the decision to issue equity and this is particularly so in the case of firms with high degree of information asymmetry. Tax expenditure similarly appears to have negative influence on the decision to issue equity.

Existence of earnings management poses a threat on one hand and affords an opportunity on the other hand to corporate firms. In the presence of earnings management practices by other firms, firms who do not manage their earnings may be at a disadvantageas investors have no way to sift good lemons from a basket full of bad lemons[10]. While at the same time corporate firms may have an opportunity to

[9] Perhaps due to small sample size of debt issues, the overall model does not appear to be statistically significant for seasoned debt issuers.

[10] Shivakumar (2000) echoes a similar view.

distinguish themselves from others by providing more timely and frequent information to the markets – using accounting as a strategic tool. The findings also have implications for investors. In the presence of earnings management, they are likely to revalue companies on a more frequent basis causing the stock prices to experience higher degree of fluctuations.

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Table 1: Macro Data on Capital Issues and Type of Issues

	1996		1997		1998		1999		2000		2001	
	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)
1. Equity Shares (a + b)	1612	121,803	805	61,160	89	11,624	33	25,627	69	27,525	129	27,652
Premium Issues	467	49,932	126	14,621	29	6,535	19	13,258	48	21,693	56	12,799
(a) Prospectus	1397	86,943	714	41,727	48	3,829	15	3,405	46	16,574	114	23,559
Premium Issues	305	25,926	72	3,967	4	1,513	7	1,810	32	14,059	50	12,112
(b) Rights	215	34,860	91	19,433	41	7,795	18	22,222	23	10,951	15	4,093
Premium Issues	162	24,006	54	10,654	25	5,022	12	11,448	16	7,634	6	687
		0										
2. Preference Shares (a + b)	9	1,501	5	749	1	43	3	597	-		1	512
(a) Prospectus	5	1,166	2	270	-		-		-		-	
(b) Rights	4	335	3	479	1	43	3	597	-		1	512
		0										
3. Debentures	63	39,701	32	42,332	12	19,716	5	1,907	2	508	1	540
(a) Prospectus	16	16,698	14	35,612	6	10,282	2	613	1	208	-	
(b) Rights	47	23,003	18	6,720	6	9,434	3	1,294	1	300	1	540
of Which		0										
I. Convertible (a + b)	48	34,384	20	5,274	10	14,716	5	1,907	2	508	-	
(a) Prospectus	15	15,698	6	712	4	5,282	2	613	1	208	-	
(b) Rights	33	18,686	14	4,562	6	9,434	3	1,294	1	300	-	
II. Non-convertible	15	5,317	12	37,058	2	5,000	-		-		1	540
(a) Prospectus	1	1,000	8	34,900	2	5,000	-		-		-	
(b) Rights	14	4,317	4	2,158	-		-		-		1	540

Table 1: Macro Data on Capital Issues and Type of Issues

	1996		1997		1998		1999		2000		2001	
	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)
4. Bonds (a + b)							7	22,000	8	23,500	6	16,500
(a) Prospectus							7	22,000	8	23,500	6	16,500
(b) Rights							-		-		-	
5. Total (a + b)	1,684	163,005	842	104,241	102	31,383	48	50,131	79	51,533	137	45,204
(a) Prospectus	1,418	104,807	730	77,609	54	14,111	24	26,018	55	40,282	120	40,059
(b) Rights	266	58,198	112	26,632.00	48	17,272	24	24,113	24	11,251	17	5,145

Source: Reserve Bank of India Bulletin, Various Issues
Note: Premium issues are those equity issues that are offered to investors at a premium over the face value. Rights issues are those issues that are offered only to existing investors. Prospectus Issues are those, which are open to the public and are not necessarily to the existing investors.

Table 2: Macro Data on Capital Issues During 1996-2001

	1997		1998		1999		2000		2001	
	No. of Issues[1]	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)
Banking / FIs	10	57,520	8	22,418	15	47,380	15	40,386	13	31,393
Cement & Construction	50	7,814	5	222	4	1,990.2	3	3,369	2	823
Chemical	39	7,716	7	2,265	2	365	4	1,813	5	315
Electronic / Electric	26	1,306	3	622	4	2,037.7	3	2,127	4	694
Engineering	33	2,968	7	1,079	6	265.4	2	101	2	233
Finance	283	13,939	22	737	8	752.9	3	1,243	13	4,577
Entertainment	0	0	0	0	0	0	2	1,289	10	4,399
Food Processing	66	4,581	4	854	2	211	3	706	0	0
Health Care	41	3,153	6	276	0	0	7	5,754	4	476
Info. Tech	14	783	1	85	5	469.2	36	15,470	89	8,035
Metal	58	9,682	7	8,144	2	35.1	0	0	0	0
Mining	11	752	1	1,075	1	204	0	0	0	0
Misc.	105	11,728	16	2,754	3	270.2	6	2,236	5	762
Packaging	14	697	2	50	0	0	1	1,638	0	0
Paper & Pulp	18	1,012	3	161	0	0	1	141	0	0
Plastic	17	706	1	119	0	0	1	70	1	40
Power	0	0	0	0	1	131	1	150	0	0
Telecommunications	3	379	1	51	0	0	1	750	2	9,222
Textiles	65	7,728	12	4,183	4	1,215.4	4	927	0	0
Tourism	15	989	2	281	0	0	0	0	0	0
Transport	14	9,307	3	324	1	537.5	0	0	0	0
Total	882	1,42,760	111	45,700	58	55,864.6	93	78,168	150	60,970

Table 2: Macro Data on Capital Issues During 1996-2001

	1997		1998		1999		2000		2001	
	No. of Issues [1]	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)	No. of Issues	Amount (Rs. Million)
Public	751	1,15,568	62	28,620	32	50,189.5	42	50,977	37	33,854
Rights	131	27,192	49	17,080	26	5,675.6	51	27,190	114	27,224
Total	882	1,42,760	111	45,700	58	55,865.1	93	78,168	151	61,078
Listed			59	35,224	40	51,822.5	65	62,566	124	53,784
IPOs			52	10,475	18	4,042.1	28	15,602	27	7,294
Total			111	45,700	58	55,864.6	93	78,169	151	61,078

Note: [1] No. of issues and amounts raised Include both initial and seasoned offerings
Source: SEBI Annual Report, Various Issues

Table 3: Seasoned Equity Offering by Year and Industry and Type of Issue

Broad Industry Group	SEO by Year				Type of Issue			Total
	1996	1997	1998	1999	Private Placement	Public Issue	Rights Issue	
Chemicals and Plastics	80	20	17	2	35	58	26	119
Computer Hardware and Software	33	5	2	8	12	34	2	48
Drugs & pharmaceuticals	34	9	4	1	11	20	17	48
Electricity	2		1	1	2	1	1	4
Electronics and Electrical	18	5	5	4	13	12	7	32
Food and Beverages	51	7	8	6	22	35	15	72
Machinery	56	8	17	9	33	28	29	90
Metals and Metal Product	40	8	8	4	22	22	16	60
Mining	5		2		3	3	1	7
Misc. Manufacturing	32	1	3	4	7	24	9	40
Non-Metallic Mineral Pro	22	11	4	4	15	16	10	41
Other Services	81	9	12	6	27	65	16	108
Textiles	72	13	14	5	31	55	18	104
Transport Equipment	6	2	1	1	3	3	4	10
Total	532	98	98	55	236	376	171	783
Average	38	8	7	4	17	27	12	56
Median	34	8	5	4	14	23	13	48
Std Dev	26.90	5.08	5.79	2.59	11.51	20.68	8.90	38.04

Note: The industry classification adopted in the study is consistent with Centre for Monitoring Indian Economy (CMIE) industry classification.

Table 4: Age, PBDIT, MV to BV and Market Capitalization for Seasoned Capital Issuing and Non-Issuing Firms

					Anova Analysis				
Average	Capital	No. of Firms	Mean	Std. Deviation	Groups	Sum of Squares	df	Mean Square	F statistic	p value
Profit Before Depreciation Interest Tax	Non-Issuing	2975	193.54	1648.57	Between	5051560.2	1	5051560.2	2.32	0.128
	Issuing	773	102.80	306.09	Within	8155051460.9	3746	2177002.5		
	Total	3748	174.83	1475.73	Total	8160103021.2	3747			
Age	Non-Issuing	20	33.80	23.16	Between	2343.5	1	2343.5	6.64	0.010
	Issuing	337	22.66	18.51	Within	125369.0	355	353.2		
	Total	357	23.28	18.94	Total	127712.4	356			
Market Value to Book Value	Non-Issuing	2710	1.05	5.95	Between	2.8	1	2.8	0.10	0.755
	Issuing	736	0.98	1.90	Within	98426.5	3444	28.6		
	Total	3446	1.04	5.35	Total	98429.3	3445			
Market Capitalization	Non-Issuing	2862	998.85	7967.66	Between	163898990.3	1	163898990.3	3.23	0.072
	Issuing	783	482.53	2042.13	Within	184887996843.1	3643	50751577.5		
	Total	3645	887.94	7126.19	Total	185051895833.4	3644			

The PBDIT is related to operating performance, other variables such as age and market value to book value proxy information asymmetry. Market capitalization captures size effect. The null hypothesis of no association between issuing and non-issuing firms is analyzed using analysis of variance. Number of firms vary on account of missing variables for some firms.

Table 5: Average Adjusted Operating Cashflow Before and After Issue for Debt and Equity Offerings

	Period	Type of Issue	No. of Firms	Mean	Std. Deviation
Adjusted Operating Cash Flow	t-3	Equity	269	-6.96	67.38
	t-2	Equity	323	-8.15	78.18
	t-1	Equity	518	-6.30	72.78
	t+1	Equity	551	-3.62	79.42
	t+2	Equity	516	-3.91	94.02
	t+3	Equity	462	-3.63	83.11

Adjusted operating cash flow is measured following Barbara and Lyon (1996). Control portfolios are formed with firms that have not issued capital during the study period. Firms belonging to the same industry as that of issuing firm form part of a control portfolio. To account for size related issues, all firms are categorized into size groups and firms who do not fall into the same size group as that of issuer prior to the year of issue are excluded from the analysis. Similarly, to account for performance related issues, all firms whose performance does not fall in the same group as that of the issuer firm's ratio of cash flow to book value of assets in the year prior to the issue are excluded. The performance of the control portfolio is measured as the equal-weighted average of the performance of the remaining firms.

Table 6: Regression Analysis of Determinants of Operating Performance for Debt and Equity Issuers

	Change from Year -1 to Year +1 in Adjusted Operating Cash Flow	Change from Year -1 to Year +2 in Adjusted Operating Cash Flow	Change from Year -1 to Year +3 in Adjusted Operating Cash Flow
	Equity Issues	Equity Issues	Equity Issues
Intercept	-0.028 (-0.80)	-0.017 (-0.47)	0.119* (1.78)
Ratio of Free Cash Flow to Book Value of Assets in t-1	0.26* (3.33)	0.237* (2.85)	0.331* (2.25)
Change from t-2 to t-1 in the Adjusted Operating Cash Flow	0.037 ('0.65)	-0.965* (-16.71)	-0.489* (-4.63)
Change from t-1 to Year j in Gross Fixed Assets to Book Value of Assets in t-1	0.013 (0.56)	0.019 (1.14)	-0.019 (-0.76)
Dummy Variable for Information Asymmetry	0.014 (0.69)	0.015 (0.73)	0.051 (1.42)
Natural log of the Book Value in t-1	-0.002 (-0.31)	-0.005 (-0.60)	-0.036 (-2.44)
No. of Firms	220	204	151
Adjusted R^2	0.049	0.590	0.155
F	3.285*	59.691*	6.548*

* Significant at .05 level

Note: t values are reported in parentheses

Change in adjusted operating cash flow from year t-1 to year t+n where n is 1, 2 and 3 is analyzed with the help of a set of independent variables separately for debt and equity issues. The following equation has been estimated.

$$CAOCF_{t-1,t+n} = a + b_1 RFCBV_{t-1} + b_2 RUNUP_{t-2,t-1} + b_3 CGFABV_{t-1,t+n} + b_4 INFASM_{t-1} + b_5 LNBV_{t-1}$$

Table 7: Logit Regression Analysis of SEO Decision

	Probability that a firm issued seasoned equity		
	Entire Sample	Degree of Information Asymmetry 1 = High	0 = Low
Intercept	-1.863*	-2.088*	-1.507*
	(41.36)	(20.11)	(16.22)
Ratio of Free Cash Flow to Book Value of Assets in t-1	0.212	-0.781	0.691
	(0.19)	(0.86)	(1.22)
Runup in Adjusted Operating Performance from t-2 to t-1	-0.132	-0.312	0.004
	(0.25)	0.38	(0.00)
Dummy Variable for Information Asymmetry t-1	0.301*	-------	-------
	(2.86)		
Scaled Tax Expense in t-1	-0.027*	-0.028*	-0.045
	(3.29)	(2.99)	(0.94)
Scaled Interest Expense in t-1	0.879	3.521*	-0.161
	0.434	(2.69)	(0.01)
Natural log of the Book Value of Assets in t-1	0.308*	0.436*	0.22*
	(22.38)	(17.35)	(6.34)
No. of Firms	616	229	387
Log-Likelihood	788.02	289.35	492.77

* Significant at .10 level

Note: wald statistic is reported in parentheses

The decision to equity has been analyzed with the help of following equation:

$$\Pr ob(SEO) = a_0 + b_1 RFCBV_{t-1} + b_2 RUNUP_{t-2,t-1} + b_3 INFASM_{t-1} + b_4 STAX_{t-1} + b_5 SINT_{t-1} + b_6 LNBV_{t-1}$$