

## **Private Placements: Market or Institution?**

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## **Private Placements: Market or Institution?**

### **Abstract**

Private placements, particularly of debt securities, have increased phenomenally in recent years. What started as a quick and less costly, informal route to raise funds has eclipsed the public issue market. The main advantage for borrowers of private placement vis-a vis institutional lending is the ease of raising funds while its advantage vis-a-vis public issue is in lower floatation cost. However, allocative benefits of private placements would depend on efficiency of this market linked mechanism vis-a- vis that of institutional loans. The private placement mechanism needs to be analysed to find whether its working resembles with markets or institutions. Such an assessment may help policy formulation for regulation / development of financial system. Main objective of this paper is to study a few aspects of efficiency of private placement debt market in India. It seeks to explain cost of and access to private placements. It finds that in the absence of secondary market trading private placement mechanism functions more like institution rather than a market.

## **Private Placements: Market or Institution?**

**F**inancial system can be divided into two components based on the governance criteria; financial markets where market based governance mechanism prevails and financial institutions where alternative governance mechanism is relevant either because markets are not well developed or institutional mechanism is found more suitable. On this criterion, financial systems are classified as market based systems (e.g. UK and USA) or bank / institution based systems (e.g. Japan and Germany). Market based systems are believed to be suitable for deals that can be specified completely at the outset. Market would provide valuation of such deals through out their tenure. Institutions are believed to have special advantages in information gathering and processing. Therefore, institutions could monitor the deals better and, if necessary, change them subsequently. Within market-based systems, there are private markets where access is limited (to more informed and large, generally institutional, investors) and public markets where members of public can invest.<sup>1</sup> Often, cost of issuance, as also regulatory restrictions - particularly the level of disclosures - on operators in these segments, are different. In the USA, market for rule 144 securities where only Qualified Institutional Borrowers are permitted is an example of such private markets. Private markets lie on the dividing line between market and institutions. It has elements of both and there is scope for policy initiatives that could enable private market to combine the best of both the systems. Private markets, or private placements as these are commonly known in India, have an important role in development of capital markets.<sup>2</sup> Private placements enable issuers to raise funds from a small number of institutional investors at short notice and moderate costs. These benefits can be greatly enhanced if such privately placed securities could be made liquid through subsequent listing and trading on stock exchanges. Such trading provides liquidity to investors and the secondary market yield could provide an objective benchmark for pricing of further issues by the same/similar issuer. Devoid of such trading opportunities, private placements would be more like syndicated loans extended by a (relatively) large number of participants without the rigors of due diligence that normally accompanies bank loans (syndicated or otherwise).

Private placements, particularly of debt securities, have increased phenomenally in recent years. What started as a quick and less costly, informal route to raise funds has eclipsed the public issue market. In 1995-96, debt private placements accounted for 39.3% of total funds raised through primary market. In 2000-01, share of private placements increased to 91.3%. As early as 1997 the RBI felt that " healthy development of private placements market calls for regulatory norms and standards especially because its a highly informal market." <sup>3</sup> Some important areas for such norm setting included disclosure requirements in the memorandum of information, protection of investor

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<sup>1</sup> Neave Edwin H (1998) *Financial Systems: Principles and Organisation* Rutledge London

<sup>2</sup> In the wake of ill publicized private placement of equity by Cyber Space Infosys, there is demand for preventing financial institutions from participating in private placements. But if this demand is conceded, it would be a classic case of throwing the baby with bath water.

<sup>3</sup> RBI Annual Report 1996-97 p. (94)

interests and transparency in the event of retailing of privately placed issues. The RBI also felt that as the secondary market for debt securities is illiquid there is scope for policy intervention.

The main advantage of private placement vis-a vis institutional lending for borrowers is perhaps the ease of raising funds while its advantage vis-a-vis public issue is in lower floatation cost. However, allocative benefits of private placements would depend on efficiency of this market linked mechanism vis-a- vis that of institutional loans. The efficiency of market and institutions is likely to be inter-linked as institutions are also major players in all financial markets. In a market-based system, deals are worked out completely at the outset and the trading provides a continuous monitoring mechanism. Financial institutions specialise in information processing and they generally have relationship with clients over a longer period. Institutions would consider complex situations which markets may not be able to handle. It may be maintained that market process, unlike institutional behavior, would be amenable to simple explanation in terms of limited price factors. Explaining behavior of institutions would be a complex and difficult task. The private placement mechanism needs to be analysed to find whether its working resembles with markets or institutions. Such an assessment may help policy formulation for regulation / development of financial system. This paper approaches the issue from financial market end.

Predominance of government in the primary debt market and absence of deep secondary debt market may partly explain very few studies being conducted on working of debt market in the past. However, of late, efficiency of secondary debt market is an issue that has attracting research interest<sup>4</sup>. The paper is focused on primary market wherein fresh securities are issued. Main objective of this paper is to study a few aspects of efficiency of private placement debt market in India. Given the current status of secondary market trading in corporate securities, testing the efficiency of secondary market must wait some more time. This paper is divided in two sections. Section I presents recent trends in private placement debt market. It analyses the character of this market in the light of available information about arrangers, issuers and instruments floated in the market. Section II presents the empirical exercises regarding determinants of the coupon rate on privately placed securities and public response thereto. If private placements have predominant elements of market system, pricing and market access could be explained in terms of a few quantifiable variables. Alternatively, private debt placements could be functioning more like an institution. In the light of these findings a few concluding observations are presented about the features of private debt placements along with policy implications for growth and deepening of financial markets.

## Section I

Though capital market development have , at least initially, been mainly in its equity component, debt market too has shown significant developments in recent years. Of late, the quantum of funds raised through public issues of equity has declined and the share of debt has increased considerably (Table 1). While the compositional shift away from equity may partly be explained in terms of equity fatigue (large quantum of equity

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<sup>4</sup> See for example Bose Coondoo and Bhaumik (1999) *The Indian Bond Market Money and Finance* Jan-March ( pp. 45- 59)

was raised in first half of 1990s), lower retail confidence due to periodic "irregularities" and low & volatile returns in equity markets, the shift towards debt could also be due to several Development Financial Institutions (DFIs) raising funds from public through issuing debt securities that offer attractive returns (vis- a- vis bank deposits). Also some instruments offered by these institutions carry tax benefits (e.g. infrastructure bonds) that make them attractive for retail investors. Share of debt in public issues increased from 0% in 1994-95 to 25% in 1995-96, 60% in 1996-97, 63% in 1997-98 94% in 1998-99, 61% in 1999-00 and 63% in 2000-01. During 1999-00 entire debt component was raised by DFIs. All debt issues in 2000-01 were rated AAA.

**Table 1 : Funds raised through Public Issues**

( Rs. Crore )

	<b>Debt</b>	<b>Equity</b>	<b>Total</b>
1996-97	6977	4671	11648
1997-98	1929	1132	3061
1998-99	7407	504	7911
1999-00	4698	2975	7673
2000-01	4144	2479	6623

Source: Prime Annual Report on Public issues 2000-01

Larger share of debt placements is apparently consistent with pecking order model of capital structure propounded by Myers and Majluf. This hypothesis propagates a financial hierarchy descending from internal funds, to debt to external equity. However, it is doubtful whether Table 1 could be construed as a proof of pecking order theory. This is so because Table 1 is only about public issues of debt and equity and not cover private placements as also institutional debt. Secondly the data covers financial as also non-financial entities. Whether aggregative (but partial) data as in Table 1 above is enough for testing of theories of corporate finance is not very clear.<sup>5</sup>

Interestingly, while funds mobilised through public issues was on the decline, private placement market, particularly in debt securities, has shown consistently large increases (Table 2).<sup>6</sup> Initially private debt placements were limited to tax free bonds raised by select public sector units. But since mid 1990s number of private placements, issuers and quantum of funds raised have risen fast enough to overshadow funds raised through public issues. Increase in private debt placements were supply driven as PSUs and DFIs, cut off as they were, from their traditional sources of funds were in need of alternative mechanism of raising wholesale funds in cost and time effective manner. From the demand side, large institutional investors emerged as new entrants in mutual funds, commercial banking, and of late, insurance sector have increased the demand for debt securities. Commercial banks, which were encouraged by the RBI to invest in securities initially, were soon to discover flexibilities of investment in debt securities as demand for credit was stagnating and market becoming more competitive.

<sup>5</sup> For recent discussion on testing of pecking order hypothesis see Shyam-Sunder , Myers C (1999) Testing static tradeoff against pecking order models of capital structure *Journal of Financial Economics* 51 pp.219-44 and Robert S Chirinko , Anuja R Singha (2000) Testing static tradeoff against pecking order models of capital structure : A critical comment *Journal of Financial Economics* 58 pp.417-425

<sup>6</sup> It may be noted that we are not considering private placements of equity in this paper.

**Table 2: Funds raised through Private Placements of Debt Securities**

( Rs. Crore )

Year	Number of Issues (No. of issuers)	Amount Raised ( Rs. Crore)
1994-95	73(47)	10035.28
1995-96	204(159)	18390.83
1996-97	252(153)	30983.34
1997-98	445(205)	38747.72
1999-00	711(233)	54701.38
2000-01	881(251) {285(37)}	+62461.81 {10028.28}

Source: Prime Annual Report Private Placement Institutional and Corporate Debt issues 2000-01  
 Figures in { } denote information pertaining to issues where tenor or options are for a period of 1 year or less.

While private placements enabled private sector companies to raise debt at lower costs, private placements are indeed dominated by PSUs, banks and other FIs. During 2000-01 41% of funds were raised by All India Financial Institutions and banks . Banks have been raising long-term (maturity period of 5/7 year) funds that qualify as tier II capital. Another 15% was raised by PSUs, while 26% was raised by state level financial institutions and other undertakings . The share of private sector in fund mobilisation was only 17%. Large sized issues were predominant as issues ranging Rs. 100 crore and above accounted for 78% of funds raised during 2000-01. The instruments offered are varied in terms tenor, attached options and structuring of interest payments viz. regular return/cumulative, fixed/floating rate and taxable/ tax-free.

Of the total issues made in 2000-01 400 were rated issues, and 203 issuers proposed listing on the stock exchanges. While the number of issues that obtained credit rating formed 67% of the total issues, amount raised through these accounted for 79.8% of total funds raised. Another noteworthy feature is that all the ratings were above investment grade. However, nearly 20% of all the rating had the tag of structured obligations (so). This shows the importance of credit enhancement mechanism upon which these ratings are contingently dependent.

The comparatively lower number of issues that propose listing is a lacuna as it restricts the trading opportunities in future. A large number of transactions were structured deals that are struck among a small number of lenders often just bilateral. Such deals are closer to institutional, rather than market, arrangements.

Arrangers have a key role in private placements and banks, either directly or their merchant banking out fits, have played an important role. Top 3 arrangers accounted for 34.5% of total funds raised during 2000-01.

No systematic information is available about the investors in privately placed issues. However, as the minimum subscription is typically Rs. 1/5 lakh, investor base comprises institutional investors and high net-worth individuals. Scheduled commercial banks have invested Rs. 11852 crore and Rs. 11582 crore in corporate bonds debentures and preference shares during 2000-01 and 1999-2000 respectively. This accounts for

17.5% and 18.8% of funds raised through private placements.<sup>7</sup> In addition, non-scheduled banks too would have invested in these instruments. Mutual funds, pension and provident funds and insurance companies would be other major institutional investors.

The private placements thus are dominated by institutions : the major operators as arrangers, issuers and investors are institutions. Dealings among these would be disciplined only if the privately placed instruments are subsequently listed and traded. This does not seem to be happening in the light of trends in debt trading on National Stock Exchange (NSE).

### Debt trading on NSE

While significant improvements have occurred in development of secondary debt market, the activity has by and large remained confined to government paper. Other segments viz. PSU bonds, bank bonds and corporate bonds have accounted for a smaller proportion of total turnover. However this relative decline was more a result of larger increase in trading in government securities as trading volumes in non-government paper too has increased considerably in absolute terms but the increase was lower than that in gilt trading.

**Table3: Debt Market Trading**

<b>Securities</b>	1996-97	1997-98	1998-99	1999-00	2000-01
PSU Bonds	1969	2522	1729	1528	3617
FI Bonds	800	1527	3278	3345	4270
Bank Bonds and CDs	503	1185	861	805	2027
Corporate Bonds and CPs	696	2428	4228	4615	4516
Others		16	92	36	56
<i>Total</i>	3968	7678	10188	10329	14486
% share to Grand Total	9.4%	6.9%	9.7%	3.4%	3.4%
G Secs	27352	84720	84574	282880	390952
T Bills	10958	18866	10706	11007	23144
<b>Grand Total</b>	42278	111264	105468	304216	428582

Source: National Stock Exchange Annual Report 2000-01

The trading in non-government paper has however increased at a rate faster than increase in market capitalisation. Trading in relation to market capitalisation has increased from 3.76 % in 1996-97 to 8.54% in 1999-00 but declined to 8.52% in 2000-01. Thus while there is some improvement in the extent of trading in recent years, the frequency of trading is still low to instill a market discipline in the primary market. The fact that nearly 50% of the issues are not even listed indicates that potential for introducing market discipline is limited. It would be interesting to examine whether

<sup>7</sup> RBI Annual Report 2000-01 pp. 56

pricing of securities in and access to primary market can be explained in terms of price related factors.

## Section II

The efficiency of primary market may be gauged in terms of pricing of new issues by issuers and their access to market. The pricing should ideally be related to risk return characteristics of instruments and track record of issuers. Similarly, whether market access is restricted / denied to high risk instruments/ventures could be an important indicator of market discipline. Financial institutions have internal norms regarding exposures to different company, group and industries. Besides there exist internal guidelines relating sectors to which credit could be extended and the terms on which funds could be lent. These norms could change in response to changing business outlook / environment for different industries. It is also possible that re-pricing decision could be made applicable retrospectively even to facilities sanctioned in the past. In financial markets, on the other hand, the market discipline would be reflected largely in pricing of (debt) securities. If the terms on which securities are issued do not meet market expectation the issue(s) may remain under-subscribed. The market could view the risk associated with new instruments of a company in terms of secondary market prices of instruments issued earlier. Yield in the secondary market may become effective floor for coupon on fresh issues. However, in view of the limited liquidity in non-government debt, the mechanism of continuous disciplining through secondary debt trading may not be very effective in India at present. Therefore exercise to study the efficiency of private placements needs to be kept limited at primary / issuance stage and consider factors other than secondary market yields.

### Determinants of Coupon Rate

The coupon rate offered on an instrument would primarily depend on the risk free rate (R) and risk premium (P) over such rate.

$$\text{COUP} = F(R, P) \text{ ----- (i)}$$

where COUP - Coupon rate on the instrument

R - Risk free rate / market rate

P - Risk Premium .

The risk premium would depend on several parameters relating to the instrument offered (e.g. security, tenor, repricing option) as also the issuer (the reputation and financial position of the issuing company). The instrument could be secured or unsecured which has a bearing on risk born by / comfort available to lenders. In case the instrument is rated, the rating assigned to the instrument itself would provide a concise measure of credit quality and the attendant risk faced by investor. In this regard, the ownership of borrowing entity could also be important. At times, government owned company could be perceived as less risky even if the instrument is not (highly) rated. Longer is the tenor of instrument, higher rate would need to be specified in view of generally experienced positively sloping yield curve. Based on the available information about instruments and

issuers in private debt placement market, the following form of the equation is chosen for estimation.

$$\text{COUP} = F ( R, \text{TENOR}, \text{SECD}, \text{RATSR}, \text{OPTION} ) \text{----- ( ii)}$$

where

- R - Risk free / market rate
- TENOR - Maturity period of instrument
- SECD - Sector Dummy ( 1 if private, 0 otherwise )
- RATSR - Rating score if the issue is rated
- OPTION - Period in months after which first call option is available

Equation (ii) was estimated by OLS regressions. The data source is prime annual report on Debt private placements. (see the annexure for details on data sources )

Definitions of different variables used in the empirical exercises are given below.

1. **ARET:** Amount retained through the private placement.
2. **BAND:** Bank Dummy : 1 if issuer is a bank ; 0 otherwise.
3. **COUP:** Coupon rate on debt instruments on annual payment basis. Where interest payment is more frequent, equivalent annualised yield is considered.
4. **CMRB:** Monthly average call money rate
5. **EQRT:** Return in equity market computed on the basis of month end values of NIFTY.
6. **LIST:** Listing. 1 if listing is sought ; 0 otherwise
7. **OPTION:** Period after which first call option is available in the cases of instruments with embedded options.
8. **RATSR:** Rating score the alpha ratings are transformed to numerical scores on 1 - 8 scale 8 denoting maximum i.e. AAA rating. NO distinction is made between ratings with and without structural obligations.
9. **SUBRAT:** Subscription ratio is defined in amount retained as a percentage of issue size (including green shoe option)
10. **SECD:** Sector dummy: 1 if issuer is in private sector; 0 other wise.
11. **TENOR:** Maturity of the instruments measured in months
12. **YTBL:** Yield on Treasury bills

The equations explaining coupon rate are reported in Table 4. The coupon rate is explained in terms of two versions of base rate (i) market rate as reflected in call money rate (CMRB) and (ii) or risk free rate as reflected in yield on treasury bills (YTBL). Sign of the coefficient is positive in both equations and are statistically significant though coefficient of YTBL is higher. This indicates coupon rates are closely aligned with yield on Treasury Bills rather than call rates. Call money rates reflect rates on overnight borrowing among banks and do not seem to reflect rates expected by wider class of investors.

**Table 4 : Dependent Variable : COUP**

Const.	SECD	R CMRB	R YTBL	RATSR	TENOR	OPTION	LIST	R-Bar 2	St. error of Y (%)
10.137 (21.87)	0.2988 (1.85)	0.2039 (4.74)		-09282 (-4.08)	0.0032 (1.06)	0.0075 (2.33)	-0.2459 (-1.68)	0.238	7.61
6.3726 (7.15)	0.2703 (1.75)		0.5860 (6.56)	-0.1021 (- 4.70)	0.0035 (1.19)	0.0067 (2.19)	-0.1559 (- 1.09)	0.307	7.29

Note: Bracketed numbers are " t " ratios

Similarly RATSR has expected negative coefficient and is statistically significant. This means *ceteris paribus* companies with high credit rating would be able to raise funds at lower rates. Instruments with higher maturity period are expected to carry higher coupon rates but co-efficient of TENOR, though positive, is not statistically significant in the estimated equations. Coefficient of OPTION is positive and statistically significant. A call option gives the issuer right to redeem the instrument before the due date. Thus the period after which call option is available becomes effective tenure of the instrument when a call option is embedded. Longer is the period after which call option is available higher is the required coupon rate. It appears that this variable and not TENOR is reflecting the impact of maturity period.

Sector dummy (SECD) (1 if issuer is in private sector, 0 otherwise) is used to see whether the issuers in the public sector had any inherent advantages in pricing. This dummy has a positive sign but the coefficient is not statistically significant. LISTING was another dummy used to test its explanatory power in determination of coupon rate. Prima facie, it is expected that potentially listed issues would be more liquid and hence should get some price advantage for issuers. However, contrary to expectations, whether the issue seeks listing on stock exchange or not does not seem to have any statistically significant impact on coupon rate though it had expected negative sign.

As investors may consider investment in primary debt market as an alternative to investment in primary / secondary equity market, return in equity markets may have a bearing on coupon rate on new debt securities. Hence Variable EQRT (returns from equity market) was tried as an explanatory variable in equation 2. During the period under review, commercial banks have (through private placements) raised 5-7 year bonds carrying relatively high coupon rates to augment their capital funds. With a view to test whether such high tenured bond had any systematic effect on pricing process dummy variable BAND was also tried. However, neither EQRT nor BAND had statistically significant coefficients when included in equation 2 nor did their inclusion led to any improvement in overall explanatory power of it. Hence these variables were not included. Equation with YTBL has higher explanatory power and therefore is the preferred version. However, the unexplained variation is quite large at 70%.

## Market Access

In addition to pricing of instruments, access to market itself is an important and perhaps most effective aspect of market discipline. If the issuer's track record is not good enough or the proposed investment plan is too risky, to raise funds from the market should be difficult. Different proxies for market access were tried. These included Extent of over subscription (SUBRAT) and amount retained (AMRET).

The extent of over subscription i.e. amount retained as proportion of issue amount (including green-shoe option) was considered one indicator of market access. Attempts were made to explain variations in SUBRAT across different issues in terms of SECD, COUP, Return in equity market, Rating etc. However, the estimated equation had very low explanatory power, besides coefficients of independent variables were statistically insignificant. As the market under consider is a wholesale market under/over subscription was somewhat rare. Among the selected 194 issues, 75 were over/under subscribed the balance being just subscribed. It is probable that given the nature of the market, issues unacceptable to investors would not see the light of the day or full subscription is 'managed ' in the event of marginal shortfalls. In order to avoid reporting under-subscription, companies use the green shoe-option route. However, while computing over/under-subscription, green shoe option is added to amount issued. As a result of all these factors the dependent variable did not have enough variability as compared to independent variables.

Alternatively, absolute level of funds retained (AMRET) was considered as a proxy for market access. The estimated equation is not very satisfactory but has one significant coefficient (Table 5). Sector Dummy has a negative and statistically significant coefficient. It shows being a public sector issuer has significant effect on amount retained in other words it is easier for public sector issuers to raise funds vis-a vis private sector issuers. RATSRS had expected positive sign but the coefficient was not statistically insignificant. Similarly coupon rate (COUP) had unexpected negative sign though it was not statistically significant. Listing had expected positive effect on amount raised though it was not statistically significant. It may be mentioned that sector dummy SECD was also significant in equation 2 above explaining coupon rate.

**Table 5: Market Access**

Dep. Variable	Const.	SECD	COUP	RATSRS	LIST	R-Bar 2	St. error of Y (%)
ARET	132.494 (1.32)	-35.80 (-3.98)	-3.66 (-.45)	3.059 (1.17)	35.01 (1.32)	0.09	107.4

Note: Bracketed numbers are " t " ratios

It appears that appropriate definition of market access is problematic. Even if "bad" issues are denied market access, this aspect will not get reflected in the data base covering private placements made. The attempts to explain investors response in terms of limited number of quantifiable factors (coupon rate, return in equity market, rating score) are not very successful. Attempts to explain coupon rates too had moderate success. The

failure could of course be due to improper specification and therefore potential to try alternative specifications does exist. But above results may also indicate the possibility that at its current stage, private debt placement mechanism is functioning more as an institution than a market.

### **Concluding Observations**

Private placements lie on the border between markets and institutions. This paper studies the characteristics of private placements. Market based system are defined in terms of deals that can be specified completely at the outset and market would providing valuation of such deals through out their tenure. Institutions are believed to have special advantages in information gathering, processing and monitoring the deals better and, if necessary, change them subsequently. The finding of the paper indicates that in the presence of weak secondary markets, private placements are still largely an arrangement between institutions: as investors or arrangers. A large part of deals - funds raised are through structured or on tap deals - are essentially bilateral deals. Even in the case of other deals factors such as interest rates, credit rating, security, maturity of the instrument explain the variation in coupon rate moderately. Significance of sector dummy also indicates that non-market factors are important in private placements deals. It would be beneficial if market elements are strengthened.

At present there are no regulatory stipulation for different entities in the debt private placement market from SEBI, the regulator for capital market. The RBI has sought to put some restrictions on banks on their investments in privately placed securities. However, other institutional participants such as mutual funds or insurance companies have no such regulatory stipulations. RBI has recently asked banks to enforce discloser standards made in the information memorandum that generally accompanies private placement offers. But it would be more effective if SEBI evolves a policy that will cover all market participants. Mandatory rating and listing of privately placed issues beyond a cut off size (say Rs. 50 crore) or a maturity period (say 3 years) may be a good starting point to help strengthen the links with the market process.

Absence of liquid secondary markets is the main constrain in introducing market discipline in private placements of debt. While entry of new players (debt oriented MFs, insurance companies) would help transactions in debt securities, norms for valuation of investment portfolios would also influence propensity to trade and to recognise capital gains/losses. A shift to market based valuation would force investors to recognise losses from investment portfolio which can be avoided under valuation based on book value. Moreover, under the later system there are incentives to hold investments till maturity and not to book losses. This tends to tilt the scale against trading of securities. Processes that facilitate trading are visible in the case of government securities and could be replicated in non-government securities as well provided there is supportive changes in the regulatory framework.

## Annexure

### Data Sources / Variables used

- 1. Private Placements:** Prime annual report on Private Placement Institutional and corporate Debt issues 2000-01 is the major source of information. Section I makes use of the summary tables in this report rather heavily. The detailed instrument wise information is used in empirical exercises in section II.
- 2. Other Data :**
  - Prime Annual Report on Public issues 2000-1 (Table 1) .
  - National Stock Exchange (NSE) Annual Report 2000-01 for data on debt trading and market capitalisation
  - RBI Annual Report 2000-01 for data on average call money rate (CMRB).
  - Data on average yield on treasury bills (YTBL) is compiled from information on trading volumes at NSE.
- 3. Regression Data Set:**

The regression results are based on 194 debt issues. In selecting these tax-free bonds, floating bonds, deep discounted / cumulative interest bonds were excluded. In the case of deep discounted bonds implicit yields were not available, in the case of floating rate bonds interest rates were linked to particular anchor while pricing of tax-free bonds would be quite different. Also issues of multiple option bond were excluded as response to these different instruments is not available separately. Private placements in the form of structured deals were also excluded. Of the balance issues 194 issues for which complete data was available were chosen for empirical exercise. These issues accounted for nearly 37 % of the total funds raised in 2000-01.