Information Content of Legal Insider Trading in India

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ABSTRACT

Capital market forms the building block each and every financial system across the globe. It helps to impact development and investiture by gathering collectively companies and investors, who are going to place their hard earned money in them. On one side, this is well thought out by the general traders in capital market for their investment activities, for domestic as well as for international investors, as an approach for investing excess money in the present economic system, most importantly on the other side, this facilitates the business firms in right utilization of general public money. These investments are vital to encourage growth in the economy and its improvement, which in turn advances the standard of living of its inventors. The unavoidable role that capital market acting in the economy is reflected in the examination made by the then Finance Minister in 1956 in the following words: "At first, this only a structured share market, it has the capacity to supply adequate penetrability and value shares, so essential for the desires of the investor. Secondly, the only capital market which can supply the rational standard of safety device and impartial trade in dealing of securities. Thirdly, from the interaction of demand &supply of stocks, accurately structured stock marketplace assist rationally accurate assessment of the shares in importantt terms. Lastly, from the assessment of the stocks, ssecurities market assist for systematic movement and sharing of surplus money enhances the "aggressive investments."

This paper covers the Information content of legal insider i.e. permitted insiders.

This paper mainly focuses on how insider is going to trade in his own company's shares. Will he trade with information or follow any standard investment strategies while trading.

Key words: Insider, Insider Trading, Information Content

RESEARCH GAP

After going through the above review of literature, it is observed that much research was done on the insider trading practices in foreign countries and very less studies on insiders trading activities in India. The reviewedliterature highlighted on the insider trading practices, impact of insider trading activities on securities prices and impact of insider trading activities on market efficiency. But very less research was done on deciding factors of permitted insider trading and information contents of permitted insider trading, impact of permitted insider trading activities on market performance and role/authority of the SEBI in investor protection in India. Therefore there is an immense need to study the impact of permitted insider trading activities on market performance.

NEED FOR THE STUDY

In present days, the businesses are flourishing in international markets and which give the varying opportunities for growth and advancement in the financial markets i.e. share, bond, derivatives and other markets. Not only that with the rapid increase in financial market trading activities, it gives the chance for evolution in one special form of trading activities which is called asInsider Trading. The miss-utilization of share market by using Insiders trading and it causes a big loss to a company, which in turn causes loss to the investors or highest profits are enjoyed by the insiders but not the general investors. It takes away a chance of getting profits from the investors. The company which facessuch a

situation of Insider dealings, investors starts losing the self confidence in such a company and it avoid parking his surplus in that company and not only that he starts disposing /selling off all the shares of such entities. Not only that is any investor is getting the advantage of previous laws, then it reduces investor's self-confidence in exchange trading dealings itself. Indian Capital Market is struggling very hard to increase the national investment rate.For developing a healthy economy, the decent financial mechanism must be essential in India, for decent financial mechanism, self-confidence of the investors in the market is utmost significant. Therefore, there is aimmense need to protect the investors, to defend the interest and reputation of the company to maintain belief in stock exchange trading deal, for maintaining general investors beliefs in the financial system as a whole. Hence, this study intent to identify the deciding factors and information contents of permitted insiders trading activities, the Impact of insiderstrade deals on market performance and try to suggest the measures to improve the confidence of investors and other market players as a whole.

OBJECTIVES OF THE STUDY

To know the deciding factors and information contents of permitted insider trading.

RESEARCH HYPOTHESES

$H_{01:}$ There are no information benefits possessed by the insiders compared to outsider.

RESEARCH METHODOLOGY

The present study depicts the impact of insider trade dealings on the market performance and Role of SEBI in protection of the investors, for which the research methodology is mentioned below:

The "Four-factor asset pricing model" is used for analysis of information content of legal insider trading in the present study. The equation is presented as follows:

$$(R_{it} - R_{Ft}) = \alpha_i + \beta_1 (R_{Mt} - R_{Ft}) + \beta_{2*}SMB_{mt} + \beta_{3*}HML_{mt} + \beta 4*WML_{mt} + \sum\nolimits_t \qquad (3.5)$$

Where
*"Rit*is the daily return on a stock *i* at time *t*,"
*"RFt*is the daily interest rate of Govt. Dated securities at time *t".*
*"Rmt*is the return of the constructed market index at time *t*."
"SMBmt(Small minus Big) is the return on a portfolio of small shares minus the return on a portfolio of big shares."
"HMLmt(High minus Low) is the return on the portfolio of shares with a high book to market value of equity minus the return on a portfolio of shares with low book to market values."
"WMLmt(Winners minus Losers) is the return on the portfolio of shares with high momentum minus the return on a portfolio of shares with low momentum, is the error term in the regression."

Taking "size, momentum and BV/MV" as basis all the companies listed under "Bombay Stock Exchange" are segregated in to three types. Taking market capitalisation as the basis small minus big is formulated in this type small is based on market capitalisation from 0% to 30%, middle is from 30% to 70% whereas 70% to 100% is categorized as big. The second type is High minus Low which is based on book value to market value ratio. In this category 70% to 100% falls under high, 30% to 70% falls under medium and the lower 0% to 30% falls under low. The third type is "Winner minus Losers" is based on the momentum. In this category

(i) Low momentum - 0% to 30%.
(ii) Medium momentum - 30% to 70%.
(iii) High momentum - 70% to 100%.
From each type namely" SMB, HML, WML" nine portfolios are created with total 27 portfolios. The portfolios created are as under
"Small category portfolios are S/L/LM, S/M/MM, S/H/HM,"
"Medium category portfolios are M/L/LM, M/M/MM, M/H/HM,"
"Big category portfolios are B/L/LM, B/M/MM, B/H/HM."

In similar manner as mentioned above portfolios relate to momentum are also created. The simple average variation among three small and big size portfolios is "SMB". Whereas the variation between three top and bottom BV/MV

portfolios is "HML". The variation between three losing and winning portfolios is "WML". To construct "SMB" simple average has been considered which is calculated by taking the variation among three big and small security portfolios. In the same way to create high minus low type a simple average has been considered which is calculated as variation between three top BV/MV and three bottom BV/MV entities. At the end simple average is considered which is the variation between three losers and three winners entities. The momentum is basis for selecting these companies.

For present study an "event- window" is created for 60 days, 30 day before even and 30 days after event. This window system is based on transaction date; the transaction date itself is an even date. Before and after 30 days of a transaction the abnormal returns are calculated on daily basis. After calculation the before 30 days figures and after 30days figures are compared. To calculate" abnormal returns" the following formula is used "(Actual Returns - Expected Returns)".

As per table-1 a total of nine portfolios are constructed i.e. "small, medium, big, low b/m, medium b/m, high b/m, low momentum, medium momentum and high momentum". in calculating "Cumulative Average Abnormal Return" the average every day abnormal return separately for a period of one month i.e. after event and before event window are used. For complete study period "CAAR" related to insiders and outsiders are calculated and combined for buy transactions and sale transactions individually.Apart from these weighted returns with value as weight and equal weight are calculated individually for all the three types on daily basis for buy and sale transactions. This calculation is made before event window and after event window for a period of 30 days for sale and buy.

Sources of Data:
For analysis, the secondary data is used. The publicly available data collected from the BSE website, CMIE Prowess data base, SEBI annual reports, SEBI guidelines, SEBI handbook on statistics, SEBI Working papers and from various research articles and journals.The data from CMIE pertaining to "market Capitalisation, Book Value per share of BSE listed companies" is extracted to assess the information related to insider trading. The data is related to a financial year of a company. If the concerned data is not available then the particular company is excluded from the study of concern period.

"SEBI (Prohibition of Insider Trading) Regulation-2015" stipulates that the investment transactions of insiders should be disclosed to the exchange, where the concerned company is listed. From 1st April 2016 to 31st March 2021, all registered companies have disclosed the insider trading details to the concerned exchange. The total number of transactions disclosed to exchanges is 125940. Out of the total the transactions carried on via open market come up to 97860. These transactions are considered for the study. The transactions with inaccurate details come up to 17270. These transactions were removed from the data. As per "(Kothari and Warner 1997; Lyon et al. 1999, Brav 2000; Dionysiou 2015)" based on date of the transaction the 60 day event-window is generated. To study the performance per short period of time the data is taken on daily basis.

Population:
Population for the study is "all the insider trading transactions reported to the BSE" under "SEBI (Prohibition of Insider Trading) 2015, regulation 7(2) read with regulation 6(2)", from 2016 to 2021.

Sample selection:
All the insider trading transactions reported to the BSE under "SEBI (Prohibition of Insider Trading) 2015, regulation 7(2) read with regulation 6(2)" are categorized in to 9 category by the SEBI as (i) designated persons, (ii) directors, (iii) director's immediate relatives, (iv) employees, (v) employee immediate relative, (vi) promoters, (vii) promoters and directors, (viii) promoters group and (ix) others. In present study out of 9 categories only 5 categories i.e. (i) designated persons, (ii) directors, (iii) promoters, (iv) promoters and directors and (v) promoters group related transactions are selected on judgemental basis because those category are directly related to the company and there is either possibility of having inside information as compared to other 4 category.

Table-1: List of Population and Sample Selection

Sl. No	Population Category	Sample Category
1	Designated Persons	Designated Persons
2	Directors	Directors
3	Director's Immediate Relatives	Promoters
4	Employees	Promoters And Directors
5	Employee Immediate Relative	Promoters Group

6	Promoters	
7	Promoters And Directors	
8	Promoters Group	
9	Others	

ANALYSIS OF RESULTS

Tables-1reveal the buy and dispose transactions made by insiders among size, BV/MV, and "momentum" type of variable. Most of the transactions of large size entities related to buy and dispose transactions shows resembling characteristics. In the same way medium and small type companies comes next with the feature of resemblance. This pattern is similar to general market pattern. In case of buy transactions as per BV/MV ratio the buys are more under medium BV/MV, low buys in entities with low BV/MV and more purchases with high BV/MV. Whereas the scenario for sale transaction is different from that of buy transactions. The sale transactions are concentrated in companies with low BV/MV and companies with high BV/MV falls next. At the end momentum type reveals different scenario. There is equal distribution among low, medium and high category. In contradiction the dispose activities mainly in high momentum type and the transactions in low and medium type variable are very less. To finalize the buy transactions are more with comparison.

Table 2: Summary of Insiders Trading Activities on the basis of Variable from 2016 to 2021

Variable Category	Variable Sub-Category	Variable wise Buy Activities	Total Buy Activities (A)	Variable wise Sale Activities	Total sale activities (B)	Total (C= A+B)
Size	Small	1589 (1.7%)		430 (0.47%)		
	Medium	14794 (16.2%)	56183 (61.45%)	5025 (5.5%)	35242 (38.55%)	91425 (100%)
	Big	39800 (43.5%)		29787 (32%)		
BV/MV Ratio	Low	15336 (16.8%)		19640 (21%)		
	Medium	33283 (36.4%)	56183 (61.45%)	14202 (16%)	35242 (38.55%)	91425 (100%)
	High	7564 (8.3%)		1400 (1.5%)		
Momentum	Low	18754 (20.5%)		5133 (5.6%)		
	Medium	15920 (17.4%)	56183 (61.45%)	5494 (6%)	35242 (38.55%)	91425 (100%)
	High	21509 (23.5%)		24615 (27%)		

Source: Compiled from BSE Website & CMIE Database

Table -3: Monthly CAAR (%) for Insider and Outsider group

Financial Year	1 Month CAAR for Insiders				1 Month CAAR for Outsider	
	Before-Event		After-Event			
	Buy	Sell	Buy	Sell	Before-Event	After-Event
2017	7.940	2.900	5.540	-3.750	0.330	0.450
2018	-0.400	0.880	0.800	-0.770	-0.220	-0.340
2019	-0.500	-0.940	-0.630	-0.080	0.230	0.230
2020	1.800	1.610	0.970	-0.160	0.400	0.380
2021	1.720	1.400	-3.800	-3.460	-0.260	-0.480
Average	2.120	1.170	0.776	-1.640	0.090	0.020
Total	10.560	5.850	3.880	-8.220	0.050	0.140

Source: Compiled from BSE Website & CMIE Database

Table-2presents results of before and after insider's transactions of buy and sell. For this purpose "Cumulative Average" for a period of one month of" abnormal returns" have been calculated apart from this a comparison had been made of CAAR pertaining to insider and outsider group transactions. The calculated figures of one month CAAR for whole year revealed two significant points. Insiders earn positive returns before even. Buy activities earn more CAAR than sell transactions. Even though there are profits after event they are subsequently less than before even. The return from insider sell shows negative CAAR after the event. The outsider earnings are very negligible during this period irrespective of before and after event.

Table -4: One Month Insider Equal WeightedCAAR (%)

Variables	Sub-Variable	Before-Event		After-Event	
		Buy	Sell	Buy	Sell
Size	Small	3.0000	0.2500	2.0000	-4.3000
	Medium	1.8000	0.4200	1.2000	-0.2000
	Big	1.5000	-0.0300	0.4000	-0.1100
BV/MV	Low	0.7000	0.2300	0.5000	-0.1200
	Medium	3.2000	0.2200	0.2000	-0.0700
	High	2.7000	0.5100	1.0000	-0.1000
Momentum	Low	9.7000	0.3300	1.9000	-0.7000
	Medium	0.8000	0.3800	0.4000	-0.1300
	High	0.5000	-0.0300	0.5000	-0.2300
Mean		2.5400	0.2500	0.9100	-0.6600
Total		22.900	2.2800	8.1000	-5.9600

Source: Compiled from BSE Website & CMIE Database

The variables size, BV/MV ratio and "momentum factors" are basis for framing portfolios pertaining to buy and sell events. This portfolio is useful in finding moment of CAAR due to insider trading. Table-3.7 depicts CAAR based on equal weights for insider transaction after and before event. All nine types show a positive CAAR in insider buy transactions irrespective of before/after event. But there is negligible decline in after event. Where as in case of sell transactions CAAR shows a positive trend in before event and a negative trend in after event window. Among same types of variable the calculated weights of CAAR for before and after event are shown in Table-3.8.

Table -4: One Month Insider Value Weighted CAAR (%)

Variable	Sub- Variable	Before-Event		After-Event	
		Buy	Sell	Buy	Sell
Size	Small	2.800	0.4200	0.9500	-3.8000
	Medium	2.100	0.4500	0.2600	-0.3000
	Big	2.000	-0.200	0.3500	-0.1830
BV/MV	Low	0.7000	0.1800	0.4700	-0.1200
	Medium	3.000	0.0980	0.1000	-0.0190
	High	1.800	0.6000	1.0000	-0.2400
Momentum	Low	7.600	0.5800	1.0000	-0.4800
	Medium	0.1000	0.4000	0.4000	-0.6900
	High	0.3100	-0.4000	0.8000	-0.3360
Mean		2.2600	0.2300	0.5900	-0.6850
Total		20.4100	2.0780	5.3300	-6.1600

Source: Compiled from BSE Website & CMIE Database

Table 5: One Month Outsider Group Equal Weighted CAAR (%)

Variable	Sub-Variable	Before-Event	After-Event
Small - Big	Small	0.0600	0.0200
	Medium	-0.0700	-0.0200
	Big	-0.0600	-0.1400

High - Low	Low	0.0100	-0.1000
	Medium	-0.0200	-0.0200
	High	0.1000	0.0700
Winner - Loser	Low	0.0500	0.1400
	Medium	0.0200	0.5500
	High	-0.0500	-0.4600
Mean		0.0100	0.0100
Total		0.0400	0.0400

Source: Compiled from BSE Website & CMIE Database

The weights based on value reflect the values calculated with equal weights portfolio. Apart from this the present study finds the CAAR based on equal weights for outsiders for same portfolios. Table-3.10 depicts these results. The returns of outsider group are not significant with comparison to the returns of insiders.

Table-6: Significance Tests CAARfor Before-event window

Before-event window	Insiders Buy		Insiders Sell		Outsiders Sample Group	
	CAAR	t-statistic	CAAR	t-statistic	CAAR	t-statistic
-1	0.40%	1.462	0.30%	1.877	0.03%	0.187
-2	0.30%	1.468	0.10%	0.271	0.02%	0.188
-3	0.40%	1.778	-0.20%	-0.562	0.03%	0.056
-4	0.30%	0.848	-0.10%	-0.461	0.03%	0.188
-5	0.30%	1.780	-0.30%	-1.831	0.07%	0.366
-6	0.20%	1.750	-0.80%	-3.102	0.05%	0.289
-7	0.30%	1.468	-0.80%	-2.742	0.03%	0.275
-8	0.30%	0.848	-0.30%	-1.997	0.04%	0.274
-9	0.50%	1.490	-0.50%	-1.394	0.05%	0.275
-10	0.60%	1.952	-0.60%	-1.255	0.07%	0.275
-11	0.60%	1.905	-0.10%	-0.427	0.06%	0.205
-12	0.60%	1.929	-0.20%	-0.602	0.04%	0.202
-13	1.00%	2.808	0.00%	-0.012	0.05%	0.204
-14	1.10%	2.989	-0.10%	-0.151	0.06%	0.274
-15	1.50%	3.988	0.10%	0.145	0.07%	0.313
-16	1.60%	4.214	-0.10%	-0.215	0.09%	0.468
-17	1.60%	4.117	-0.10%	-0.154	0.11%	0.642
-18	1.70%	4.136	0.01%	0.086	0.12%	0.693
-19	1.80%	4.343	0.01%	-0.107	0.11%	0.622
-20	2.00%	4.693	0.20%	0.562	0.09%	0.463
-21	2.10%	4.841	0.70%	1.640	0.08%	0.374
-22	2.20%	4.807	0.90%	2.063	0.08%	0.365
-23	2.40%	5.204	1.10%	2.343	0.08%	0.365
-24	2.60%	5.513	1.10%	2.263	0.10%	0.558
-25	2.60%	5.429	1.20%	2.557	0.11%	0.647
-26	2.70%	5.473	1.20%	2.510	0.10%	0.535
-27	2.70%	5.373	1.20%	2.402	0.12%	0.686
-28	3.00%	5.896	1.40%	2.799	0.14%	0.763
-29	3.30%	6.400	1.80%	3.488	0.15%	0.844

| -30 | 3.70% | 6.958 | 2.10% | 4.032 | 0.15% | 0.854 |

Source: Compiled from BSE Website & CMIE Database

Table -7: Significance Tests CAARfor After-event window

Post-event window	InsidersBuy		Insiders Sell		Outsiders Sample Group	
	CAAR	t-statistic	CAAR	t-statistic	CAAR	t-statistic
1	0.30%	0.850	0.30%	0.625	0.040%	0.215
2	0.60%	1.365	0.30%	0.885	0.030%	0.096
3	1.20%	1.645	0.20%	0.785	0.030%	0.210
4	1.30%	2.212	0.40%	0.698	0.010%	0.085
5	1.30%	2.345	0.30%	0.312	0.050%	0.278
6	1.20%	2.321	0.10%	0.010	0.080%	0.468
7	1.20%	2.342	0.20%	0.004	0.080%	0.454
8	1.30%	2.451	-0.40%	-0.623	0.090%	0.359
9	1.40%	2.123	-0.40%	-0.543	0.090%	0.383
10	1.12%	1.854	-0.40%	-0.512	0.050%	0.281
11	0.80%	1.541	-0.30%	-0.468	0.060%	0.212
12	0.90%	1.231	-0.40%	-0.699	0.070%	0.275
13	0.90%	1.499	-0.60%	-1.222	0.080%	0.464
14	0.70%	1.289	-0.70%	-1.354	0.080%	0.345
15	0.80%	1.451	-1.40%	-1.875	0.060%	0.221
16	0.70%	1.345	-1.60%	-2.125	0.020%	0.319
17	1.20%	1.549	-1.60%	-2.325	0.110%	0.580
18	0.80%	1.445	-1.20%	-2.198	0.080%	0.470
19	1.20%	1.459	-1.50%	-1.970	0.080%	0.290
20	1.30%	1.399	-1.50%	-2.120	0.060%	0.369
21	1.20%	1.565	-1.60%	-2.0910	0.080%	0.273
22	1.10%	1.685	-1.40%	-1.910	0.080%	0.351
23	1.40%	1.875	-1.30%	-2.015	0.070%	0.446
24	1.20%	1.321	-1.40%	-1.752	0.120%	0.642
25	1.40%	1.889	-1.20%	-1.513	0.110%	0.561
26	1.10%	1.884	-1.20%	-1.499	0.130%	0.631
27	1.20%	1.845	-1.60%	-1.899	0.140%	0.711
28	1.50%	1.798	-1.60%	-2.0810	0.140%	0.978
29	1.30%	1.779	-1.60%	-2.002	0.130%	0.779
30	1.20%	1.650	-1.50%	-1.9010	0.120%	0.754

Source: Compiled from BSE Website & CMIE Database

T-statistic is calculated for daily basis CAAR in respect of buy portfolios of insiders, insider dispose portfolios and also outsider group for before and after events to know whether the average abnormal returns as percent of cumulative is significant or not.

Table-7reveals insider transactions and CAAR for various buy and sells transactions. The same table shows CAAR for insider transactions on daily basis for buy and sell in respect of before and after event. The t-statistic shows that the earnings from insider transactions of buy portfolios are positive and statistically significant in respect of before and after window for most of the study period. Even though the same transaction also reveals statistical significance, they are fluctuating in between negative and positive values. The same transactions when compare to buy transactions shows significance in less number of days. Whereas the t-statistic in respect of outsider group does not show any statistically significance in before and after window.

The earning of insiders continues to show positive CAAR in respect of buy portfolio and after event window. The t-statistic calculated in this regard show to be statistically significant. In most of the situations the dispose portfolios show negative CAAR even though they are statistically significant. When compared to the buy the dispose portfolios show statistical significance in lee number of transactions. Either before or after window the outsider group will not show any statistical significance.

CONCLUSION

After giving sufficient efforts in identifying different deciding factors and information contents pertaining to insider transactions, and to identify and estimate future chances of such events in capital markets, the present study used "Logistic regression Models" to interpret the data related to insiders buy and sell transactions from Bombay Stock Exchange. The classification is made of companies of different varieties to know the patterns of insider buy and sell transactions in all such varieties. The results of the study reveal that the parties involved in insider trading preferred large cap companies. Apart from capitalisation the traders have taken into account BV/MV, Momentum in taking investment decisions. Insiders preferred value shares over growth shares.

In this study the data used is related to public domain, which gives alert signals for present and potential investor about permitted insider trading. The results revealed and analysis made in this study can be used for formulation of policies for betterment of investors. SEBI can formulate better regulations and guidelines by taking clue from the study.

In this chapter event study methodology is used to calculate cumulative abnormal returns related to permit insiders buy and sell transactions of listed companies with BSE. The event study method studies price response to investment activities of investors for a period of 60 days related to buy and sell individually. In this study based on the standard investment strategies the insider transactions are classified the in to three category they are like "size, BV/MV and momentum category". Not only that the study compares various portfolios findings with the other market index after removing the impact of insiders. The results confirmed that both the portfolios that is buy and sell are most significant and informative in nature. Whereas the buy portfolios has the highest impact as compared to the sell portfolios. Not only that the insider portfolio has more impact as compared with the outsider group. By this it is concluded that the outsider group will not have any impact on the market performance.

As per the study the information about financial transactions of insiders will be available openly through BSE. The study reveal that the buy transactions of insiders lead to returns which are excess of normal returns. Whereas the sell transactions show different picture that is abnormal returns which are in negative. The study concentrated on emerging markets like India. The previous studies in this field are studied in depth and used as supplement in this study. The study revealed that there exists a difference between developed markets and developing market. Apart from this the study laid emphasis to know the effect of gap between the transaction date and the date on which the same details are revealed to stock market and "SEBI".

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