IMPLEMENTATION OF T+1 SETTLEMENT IN INDIAN CAPITAL MARKET

*Dr. S. G. Vibhuti
**Dr. Shrinivas R. Patil
***Prof. Rahul Kavishwar

Abstract: *Capital markets are in the midst of a global, systemic restructuring. Communication and technology have enabled individual financial markets to link together creating global market. Internationally, retail and institutional investors have been empowered leading to a more dynamic and sensitive market. The use of technology has enabled the investor populace to discount news more quickly and comprehensively. Technology has also enabled the formation of a larger and a fair market place. This platform has been a launching pad for the exponential growth in volumes showing a widespread and diverse interest in the securities market. As the volume of securities trading in the global market place has increased in the recent years, the need for shortening the settlement and clearance cycle as a cost saving and risk management discipline has become critical to the orderly conduct of business. As a result many jurisdictions around the world are adopting shorter settlement cycles. In view of this, the paper focuses on present settlement system and feasibility of T+1 in Indian capital market.*

Key Words: *Capital Market, T+1 settlement, Technology*

Introduction:

Capital market is the backbone of any country's economy. It facilitates conversion of savings to investments. It can be classified as primary and secondary market. The fresh issue of securities takes place in primary market and trading among investors takes place in secondary market. A major challenge for countries like India relates to the need for achieving efficiency in situations where large-scale increases in the quantum and complexity of processing of financial transactions occur. Today's investors have access to the latest information and have a wide array of options to choose from. Each investor would yearn for the best service or faster settlement at the least possible cost. Against this backdrop, efficiency has become critical if the payment system has to generate a high degree of investor confidence. Hence, ensuring safe and expeditious movement of funds at an optimal cost is the key to success of all financial markets reforms particularly settlement system. In order to protect the interest of investors, transactions should be settled in a short period of time. A further improvement in the process can be sought by introduction of T+1 day settlement, which would require quite a bit of change in the current style of workings.

2. Objectives of the study

- To study the clearing and settlement system in Indian Capital Market.
- To Study the working aspect of T + 2 settlement system in Indian Capital Market.
- To Study and analyze pre requisites for T+1 settlements in Indian Capital Market.

3. Methodology of the study

The present study is based on the Primary and Secondary sources of data. The primary data was collected through a structured "questionnaire" prepared and administered to sample investors in the study area. The study has selected a sample size of 100 investors based on the Belgaum & Hubli cities (Karnataka state) only. The data so collected are analyzed and classified for the purpose of identifying the Relevance and Working of T+2 Settlement, and the Pre requisites for T+1 Settlements into the Secondary Market. The study constructs various suitable tables and graphs for the purpose of achieving the objective of the study.

4. Hypothesis:

To achieve the above objectives the study has developed the following Hypothesis.

*Assistant Professor, Govt. First Grade College Shiggaon, Karnataka
**Associate Professor, KLES's, IMSR, Hubli, Karnataka
***Assistant Professor, KLES's, IMSR, Hubli, Karnataka

H1: More than 50 percentage of the investors are unhappy/ facing difficulties with the present settlement system in the Indian Capital Market.

H2: 50 percentage and more investors prefer the implementation of T+1 settlement system in the Indian Capital Market.

5. Clearing and settlement system in Indian Stock Market

National Securities Depositories Ltd. (NSDL) and Central Depositories Services Ltd. (CDSL) provide electronic transfer of securities and more than 99percentage of turnover is settled in dematerialized form. All actively traded scrips are held, traded and settled in DEMAT form. SEBI had introduced T+5 rolling settlement in equity market from July 2001 and subsequently shortened the settlement cycle to T+3 from April 2002. After having gained experience of T+3 rolling settlement and also taking further steps such as introduction of STP, it is now felt appropriate to further reduce the settlement cycle to T+2 thereby reducing the risk in the market and to protect the interest of investors. SEBI had held several rounds of consultation with all the market participants and based on the consensus, decided to introduce T+2 rolling settlement in Indian equity market from 1st April 2003. At present T+ 1 settlement system is yet to implement in Indian Capital Market.

Table 1: Schedule of settlement in Indian Capital Market

Sl. No	Day	Time	Description of activity
1	T	--	Trade Day
2	T + 1	By 11.00 am	Confirmation of all trades, including custodial trades
		By 1.30 pm	Processing and downloading of obligation files to brokers/ custodians
3	T + 2	By 11.00 am	Pay-in of securities and funds
		By 1.30 pm	Pay-out of securities and funds

Sources: nseindia.com

6. T+2 Settlements in Indian Capital Market:

Settlement is the process by which investors pay for shares they have bought and receive payment for shares they have sold. The T stands for transaction date, which is the day the transaction takes place. The numbers 1, 2 or 3 denote how many days after the transaction date the settlement or the transfer of money and security ownership takes place. T+1 means that if a transaction occurs on a Monday, settlement must occur by Tuesday. Likewise, T+2 means that a transaction occurring on a Monday must be settled by Wednesday, assuming no holidays occur between these days. But if you sell a security with a T+2 settlement date on a Friday, ownership and money transfer does not have to take place until the following Tuesday.

Table 2: Settlement/payment cycle when customer Buys shares

Day	Transaction Day	Party with obligation activity
DAY1	T	Customer buys shares of a particular company.
DAY2	T+1	Customer funds to be paid by customer to the Broking house/ DP for shares purchased.
DAY3	T+2	The broking house /DP transfer funds to stock exchange.
DAY3	T+2	Stock exchange transfers shares to the DP.
DAY 3	T+3	Shares purchased on day 1 are reflected in the customer's demat account and are made available for delivery trade.

Sources: nseindia.com

7. Analysis of study

For the purpose of study, 100 investors are contacted from Belgaum, Hubli and Dharwad as sample area using survey method. Collected data is analyzed with proper weighted method and tested hypotheses as below.

7.1 Portfolio of Shares :

The portfolio of shares is a combination of different shares of different types companies held by the investor. During the survey the study reveals portfolio of shares held by the investor in the sample portfolio of shares held by the investor in the sample area are summarized from the following table 7.1 as follows.

Table 7.1 Portfolio of Shares by the investors

a. 1-3 stocks	b. 4-7 stocks	c. 8-10 stocks	d. More than 10 stocks
20	15	40	25
20percentage	15percentage	40percentage	25percentage

Source: Primary Data

The present study is based on the Belgaum Dharwad & Hubli cities of Karnataka State comprising of investor who invest in the stocks. Table No 7.1 shows the percentage of investor who invested in the stock market. Looking at the above table, 40percentage of the investors they prefer to invest their holdings in 8 to 10 stocks. 25percentage of the investors prefer to invest their holdings in more than 10 stocks.

7.2 Types of stocks normally trade:

In a stock market companies are classified depending upon the market capitalization of shares are classified in to large cap, mid cap or small cap. Market capitalization is a measurement of corporate size equal to the share price times the number of shares outstanding of a public company. As owning stock represents owning the company, including all its equity, capitalization could represent the public opinion of a company's net worth and is a determining factor in stock valuation.

Table 7.2 Stocks normally trade

Large cap stocks	Mid cap stocks	Sector specific stocks	Small cap stocks
35	20	15	30
35percentage	20percentage	15percentage	30percentage

Source: Primary Data

Table No 7.2 shows the type of stocks normally investor invest in the share market. It may be seen from the table that, there were 35percentage of the investor who invest and trade in the large cap and 30percentage of the investor invest and trade in small cap stocks. An overall observation of the type of stock normally trade indicates that, there were more number of trader are involved in speculation rather than investment.

7.3 Reasons for investment in equity market:

The reasons for investment in equity market may be voting rights, holdings by founders/directors/ acquirers which have control element, holdings by persons/ bodies with "Controlling Interest", government holding as promoter/acquirer, holdings through the Foreign Direct Investment (FDI) Route, Strategic stakes by private corporate bodies/ individuals and Equity held by associate/group of companies.

Table 7.3 Table showing Reasons for investment in equity market

Reasons	Reason A	*W	Total	Reason B	W	Total	Reason C	W	Total	Reason D	W	Total	Reason E	W	Total	Reason F	W	Total	Grand Total	percentage of ranks
a. Higher returns	65	40	2600	54	50	2700	52	30	1560	45	60	2700	48	10	480	52	20	1040	11080	18.36
b. Liquidity	70	40	2800	65	50	3250	59	30	1770	48	60	2880	42	10	420	39	20	780	11900	19.72
c. Regular dividends	15	40	600	35	50	1750	36	30	1080	45	60	2700	63	10	630	67	20	1340	8100	13.42
d. Speculations	85	40	3400	82	50	4100	79	30	2370	72	60	4320	70	10	700	69	20	1380	16270	26.96
e. Safety	5	40	200	20	50	1000	16	30	480	50	60	3000	52	10	520	60	20	1200	6400	10.60
F. Transparency	2	40	80	15	50	750	25	30	750	45	60	2700	54	10	540	89	20	1780	6600	10.94
			9680			13550			8010			18300			3290			7520	60350	100.00

Source: Primary Data

* W = weights

Table 7.3, shows that, 26.96 percentage of investor feels that equity market is for speculations purpose. Certain classes of investor's also feel that liquidity is very high 19.72 percentage, which will benefit them as compared to banks and other means. Unlike the other means of investment, equity assures returns that are generally higher return 18.36 per cent of investor feels so. Overall observations of the reasons for sample investor in equity market are speculation and getting higher return and liquidity of funds for a shorter period.

7.4 Reason for the down trend in stock market

The era of international capital mobility, geographical boundaries are no longer a matter of concern for international trade and finance. In view of this the study analyzed the reasons for downtrend in the stock market in the study area. The following table No.7.4 gives preferential weightage of reasons for down trend in the stock market.

Table 7.4 Down trend in stock market

Reasons	Reason A	W*	Total	Reason B	W	Total	Reason C	W	Total	Reason D	W	Total	Reason E	W	Total	Grand Total	percentage of ranks
a. Decreasing FDI inflows.	80	40	3200	74	10	740	69	20	1380	62	50	3100	58	30	1740	10160	20.09
b. Decline in the performance of companies	65	40	2600	62	10	620	70	20	1400	64	50	3200	67	30	2010	9830	19.43
c. SEBI regulations	78	40	3120	72	10	720	70	20	1400	62	50	3100	58	30	1740	10080	19.93
d. Global liquidity crisis	85	40	3400	79	10	790	72	20	1440	65	50	3250	61	30	1830	10710	21.17
e. Fear of recession	79	40	3160	71	10	710	63	20	1260	61	50	3050	54	30	1620	9800	19.38
			15480			3580			6880			15700			8940	50580	100.00

Source: Primary Data

W* = weights

Table No 7.4 shows that, 21.17 percentage of investor feels that down trend in the equity shock market is for Global liquidity crisis. On the other hand the decreasing Foreign Direct Investment in the country is also concern for the decrease trend in the stock market. Certain classes of investor's also feel that Decline in the performance of companies that 19.43percentage and SEBI regulations 19.93 percentage are also concern main reasons for the decline trend. An overall observation of the equity market in the study area is recession. It is concluded that there is the down trend in the study area. In general the entire world market that is the main concern for down trend in the entire equity stock market in the world.

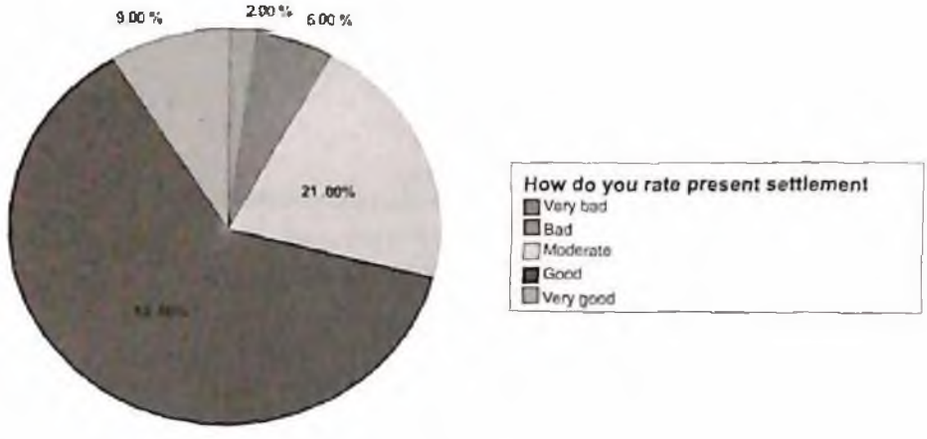
7.5 The present settlement period

The following table 7.5 gives the details of opinion about present settlement period.

Table 7.5 Opinion about Current Settlement period

Opinion	Response	Percentage of Response
Very good	9	9
Good	62	62
Neither Good or Bad	21	21
Bad	6	6
Very Bad	2	2
Total	**100**	**100**

Source: Primary Data



Out of 100 investor's surveyed, it was found that most of them were in favour of the present settlement period. 62 of them believed that the system is good, 21 of them regarded the system to be moderate. An overall observation of the settlement system is that, investors are finding difficulty in settling the transaction in pay in & pay out.

Table 7.6 Difficulties with the T + 2 Settlement

Reasons	Reason A	W	Total	Reason B	W	Total	Reason C	W	Total	Reason D	W	Total	Grand Total	percentage of ranks
a. Shorter settlement cycle.	89	30	2670	78	10	780	69	20	1380	82	40	2480	7310	24.91
b. Settlement failures / chance of auction in the trade.	94	30	2820	83	10	830	78	20	1560	72	40	2880	8090	27.56
c. Difficulty for foreign institutions to confirm and settle trade.	78	30	2340	67	10	670	65	20	1300	62	40	2480	6790	23.13
d. Automation from trade order and execution.	78	30	2340	78	10	780	78	20	1560	62	40	2480	7160	24.40
			10170			3060			5800			10320	29350	100.00

Source: Primary Data

W* = weights

Table No 7.6 shows that, 27.56 percentage of investor feels that there is chance of settlement failures in case of implementation of T + 2 settlements in Indian Capital market, this leads to shorter settlement cycle that is on same day trade and delivery of Delivery Instruction Slips to broker and execution of pay in and payout will happen on the same day. An overall observation of the implementation of T + 1 settlement in Indian Capital market is that India should ready for technological up- gradation in the stock market that leads to improvement in the settlement.

Table 7.8 Settlement cycle and alternatives for T + 1

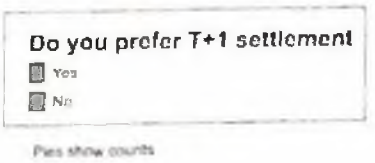
Reasons	Reason A	W	Total	Reason B	W	Total	Reason C	W	Total	Reason D	W	Total	Grand Total	percentage of ranks
a. Usage of Internet banking and Phone Banking instead of Cheque/DD	94	20	1880	82	30	2460	74	40	2960	65	10	650	7950	21.27
b. Usage of SpeedE and Electronic Delivery Instruction Slips.	90	82	7380	85	30	2550	72	40	2880	71	10	710	13520	36.16
c. Opting for E contract notes by the investors.	85	65	5525	74	30	2220	71	40	2840	62	10	620	11205	29.97
d. Confirmation of trade through message by the NSDL/CDS.	78	20	1560	49	30	1470	35	40	1400	28	10	280	4710	12.60
			16345			8700			10080			2260	37385	100.00

Source: Primary Data

W* = weights

Table No 7.8 shows that, 36.16 percentage of investor feels that there should be usage of SpeedE and electronic Delivery Instruction Slips for settlement purpose. The implementation of T + 1 settlements in Indian Capital market, this leads to shorter settlement cycle that results into failure of transaction between the parties and minimization of such failure is usage of electronic delivery instruction slips and confirmation or trade through SMS message from NSDL / CDSL. An overall observation for the implementation of T + 1 settlement cycle in Indian Capital market is usage of banking technology for stock market which leads to less chance of failure in the transactions.





With the success of T+2, SEBI has given a thought towards the further reduction of settlement cycle to T+1 in April 2009. With the advancement in technology, the developments in capital markets, the officials are considering the option of introducing T+0 settlements sooner than later. The survey results showed that the investors are not in favour of T+0 settlement, as 75 of them said Indian exchange still needs to improve on the working efficiencies in order to implement the newer version. However 25 of them think the time has come to implement the shorter settlement cycle. An overall observation of the settlement system is investors are finding difficulty in settling the transaction in pay in & pay out.

8. Hypothesis Testing

Setting up and testing hypotheses is an essential part of statistical inference, in order to formulate such test, usually some theory has been put forward, either because it is believed to the true or because it is to be used as a basis for argument, but has not been proved. In each problem considered, the question of interest is simplified into two competing hypotheses between which we have a choice that is null hypothesis, denoted Ho, against the alternative hypothesis, denoted H1.

To achieve the objectives of the study, the study formulated and tested the following hypotheses with the help of Chi-Squared test. The Chi-Squared Test of association allows the comparison of two attributes in a sample of data to determine if there is any relationship between them. This test is to compare the observed frequencies with the frequencies that would be expected if the null hypothesis is true.

8.1 Null Hypotheses

H0: More than 50percentage of the investors are unhappy (facing difficulties) with the present settlement period.

Sample proportion

$$\frac{\text{No. of respondents in favour}}{\text{Total no. of respondents}} = \frac{16}{100} = 0.16$$

Critical Value

$M + Z\alpha * \sigma p$

$= 0.6 + 1.64 * 0.045$

$= 0.6738$

$$\sigma p = \text{sqrt}\ \frac{P(1-P)}{n-1} =$$

$$= \text{sqrt}\ \frac{0.6(1-0.6)}{100-1}$$

$= 0.045$

Since, the observed value of Sample proportion [0.16] is lesser than the Critical value [0.6738], the Null hypothesis is rejected. It implies that the alternative hypothesis qualify for acceptance. It is concluded that majority of the investor are always happy with the present T+2 settlement system.

8.2 Null Hypotheses

H0: 50percentage and more investors prefer the implementation of T+1 settlement system in the Indian Capital Market.

Sample proportion

No. of respondents in favour
Total no. Of respondents

$= \frac{25}{100}$

$= 0.25$

Critical Value

$M + Z\alpha * \sigma p$

$= 0.6 + 1.64 * 0.045$

$= 0.6738$

$$\sigma p = \text{sqrt}\ \frac{P(1-P)}{n-1}$$

$$= \text{sqrt}\ \frac{0.6(1-0.6)}{100-1}$$

$= 0.045$

Since, the observed value of Sample proportion (0.25) is lesser than the Critical value (0.6738), the Null hypothesis qualify for rejection. It is concluded that majority (69percentage) of the investor prefer T+2 settlement systems rather than the T+1 settlement system.

9. Major findings:

- 40 percentage of the investors prefer to invest their holdings in 8 to 10 stocks. 25percentage of the investors prefer to invest their holdings in more than 10 stocks.
- There are 35percentage of the investors who invest and trade in the large cap and 30percentage of the investor invest and trade in small cap stocks.
- Out of 100 investor's surveyed, it was found that most of them were in favour of the present settlement period. 62 of them believed that the system is good, 21 of them regarded the system to be moderate.
- It is found that, 27.56 percentage of investor feels that there is chance of settlement failures in case of implementation of T + 1 settlements in Indian Capital market, this leads to shorter settlement cycle that is on same day trade and delivery of Delivery Instruction Slips to broker and execution of pay in and payout will happen on the same day.
- It shows that 36.16 percentage of investor feels that there should be usage of SpeedE and electronic Delivery Instruction Slips for settlement purpose. The implementation of T + 1 settlements in Indian Capital market, this leads to shorter settlement cycle that results into failure of transaction between the parties and minimization of such failure is usage of electronic delivery instruction slips and confirmation or trade through SMS message from NSDL/CDSL.
- An overall observation for the implementation of T + 1 settlement cycle in Indian Capital market is usage of banking technology for stock market which leads to less chance of failure in the transactions.

10. Conclusion and policy inferences

The study has conducted to know the feasibility of T+1 and existing condition of T+2 settlement systems in Indian capital market. As cash inflow is increasing year by year because of FII and FDI, pay in and pay out system should be very transparent. When T+1 system in introduced, depositories and depositories participants should accept the system but practically it becomes burden to them since they are facing problem of time deadline as the market starts at 9.00 am. In case T+1 settlement system is implemented, SEBI has to reconsider the timing of pay in, which in turn help the brokers and investors to deliver their securities to respective clients.

11. Bibliography

(A) Books

- Donald F Fisher & Ronald J Jordan – Security Analysis & Portfolio Management (PHI / Pearson Ed. 6th Ed).
- Dr S Guruswamy Financial Markets and Institutions, Thomson learning publication
- Punithvath Pandian – Security Analysis & Portfolio Management (Vikas 2002)
- William F Sharpe, Gordon J Alexander & Jeffrey V Bailey – Investments (PHI 6th Ed)
- ZVI Bodie, Alex Kane & Alan J Marcus – Investments (TMH, 5th Edition 2002)

(B) ARTICLES

- Trading Arrangements - E:\M.Phil\6167-trading-arrangements.htm
- Badla Mechanism - E:\M.Phil\6200-badla-mechanism.htm
- Trends in Turnover on BSE - E:\M.Phil\6202-trends-in-turnover-on-bse.htm
- Some facts about OTCEI - E:\M.Phil\6204-some-facts-about-otcei.htm
- Articles taken from financial periodicals and publications

©REPORTS

- Committee on Financial System, Government of India, 2000.
- Economic Survey - Ministry of Finance, Government of India.
- SEBI Reports.
- RBI Reports.