

Trading In T+0 Environment In India:Regulatory Changes And Financial Implications

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Abstract

Emerging Markets like India are fast becoming engines for future growth. Trading in equity shares also becomes an integral part for any country in the world and specially a growing economy in India. Trading in equity shares is one aspect of the stock markets for the investors. However, clearing and settlement is a major ecosystem in financial markets. Stock markets across the globe have had a history of long settlement periods. This system across the world has now reduced to T+2. Regulatory authorities in India have reduced this time period to T+1 and even T+0. India is currently trading in this system. This research delves into the T+0 settlement system, its regulations, its advantages and disadvantages. A questionnaire has been prepared and data collected from 224 respondents seeking their opinion about the T+0 system and its effect on liquidity. Statistical tools like Cronbach's Alpha, McDonalds Omega, Shapiro-Wilk Test, Students T-Test, Mann-Whitney U Test and Spearman's rho have been used to prove the hypothesis and ultimately give recommendations on the improvement in the system of T+0. T+0 is a system which is efficient enough but has its own challenges and if overcome well, it will lead to significant benefits in the stock markets.

Keywords: Trading, Equity Markets, T+0, SWIFT, Shorter Settlement Cycle

1. Introduction

Settlement cycles in trading in equity shares are shortening across the globe. Most developed economies are now trading on T+2 settlement system. This means that the share settlement happens and shares are credited to the account of the trader / investor within 2 working days after the actual day of trade. Countries like United States of America and Canada aimed to go for T+1 settlement in May 2024. United States of America already is considered to be the most liquid capital market in the world. They going in for T+1 settlement will mean faster moving of funds and highly liquid assets for the investors. Shares will start reflecting in the equity accounts of the investors on the same day. Such changes will obviously involve huge number of changes in the equity markets and will have huge ramifications across the globe (Papillard, Wootton, Riess, & Sampaio, 2023). There have been several changes in market regulations which have successfully reduced the trading cycle from weeks to days and to T+2. However, the most significant change and perhaps the most challenging is T+0 settlement. Therefore, adoption of T+0 in European markets is difficult (Tomlinson & Rodriguez, 2022).

Amidst all this, India, a country touted to be the leader of Global South, has already moved onto the new system of T+0 from 2024. India had started the settlement system by implementing T+5 rolling system in 1997. It was subsequently reduced to T+3 in 2002 and to T+2 in 2003. Shortening the settlement cycle is believed to have manifold positive outcomes for the investors.

1.1 Potential advantages of Shorter Settlement Period

1.1.1 Reduction of risks

The risks of leaving the trades unsettled for 2 working days significantly reduces since the focus of T+0 rolling settlement is higher and faster efficiency rather than delay in implementation of change in share ownership. Reduction in the time lag ultimately reduces the risk element.

1.1.2 Narrow window time for counterparty insolvency

Bankruptcy of any party to the trade shall not affect the trade settlement or rather drastically reduce the change of having an effect. This reiterates the fact mentioned earlier in 1.1.1 that reduction in the time lag ultimately reduces the risk element.

1.1.3 Boosts liquidity

This T+0 settlement would lead to higher disposable funds in the hands of the investors which would lead to higher trading in the markets. Higher liquidity keeps more funds at the disposal of the investors. Such disposable funds is more often than not reinvested in the markets which leads to higher volume of trading.

1.2 Potential disadvantages of Shorter Settlement Period

1.2.1 Hassles for FPIs

A difference in time zone will lead to much higher complications for Foreign Portfolio Investors with regards to the decision of pre-funding. Many countries which had earlier moved to T+0 or T+1 system have now moved back to T+2 to avoid capital outflow from FPIs as shorter settlement periods are more beneficial for the domestic investors. Time Zone differences and Information Flow Process means FPIs have a big disadvantage because of T+0 system. India being a heavily domestic market, much hassles may not be seen or the effect of FPI outflows may not be that visible.

1.2.2 Higher costs

The cost of running the automated system of quicker settlement is higher than the earlier systems. This is because the technology to run shorter settlement systems need to have stringent mechanisms and faster settlement options. The technology should also ensure that any non-settlement should not destabilise the system. To maintain all this, higher costs would be incurred for T+0 settlement systems.

1.2.3 Possible increase in settlement failures

Reduction in settlement cycles means lesser time to do post-transaction settling which would lead to higher failures in settlement and there may be cash penalty.

1.3 Operational Definition of Settlement Cycle

It refers to the time period between the trade date (buying or selling date) and the date when securities and cash are actually transferred (settled)

2. **Review Of Literature**

Simulations have shown that there can be a reduction of 41% of the market volatility, assuming no changes in the client behaviour if the trading time reduces. (Pozmanter, 2021).

Liquidity and manipulation in the market are important factors that affect the trading volume. Liquidity based price movements can be beneficial for the stock market price and for the investor eventually. (Bhadra & Chopra, January 2023)

Empirical research has identified that there will be substantial increase in volume and scale of trading if T+0 settlement becomes a norm across the globe. Additionally, the costs of trading and settlement involved in securities markets would also reduce. (Milne, 2007)

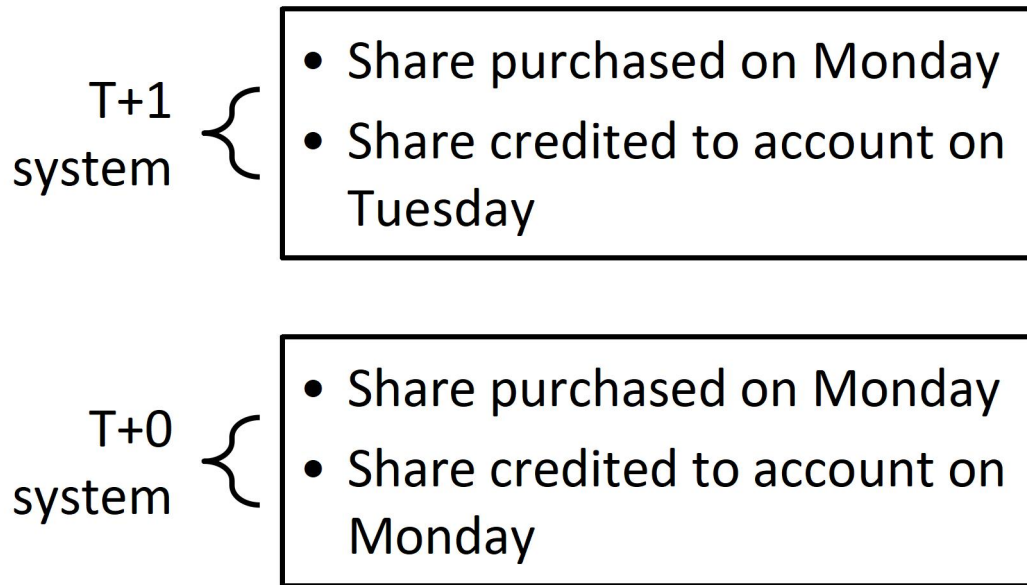
A prerequisite for the development of a feasible stock market is a well-functioning required infrastructure. (Devriese & Mitchell, 2005). Moving to shorter settlement times will require the industry to work together and leveraging the use of Artificial Intelligence (Dagdag, 2023). There is a lot of scope to improve matching and settlement using latest technologies. (Tomlinson & Rodriguez, 2022). Larger settlement houses find it easier for T+0 settlement as they can comply with all the regulatory requirements due to the availability of technology. However, smaller fund houses find it difficult to comply. One of the extra pressures put by T+0 settlement is the ending of use of paper to settle and automate the process. Technology is a key issue for improving the ability to comply with all the norms of accelerated settlement systems. (Gandy, Broby, Wright, Freeman, & Durkin, 30 May 2023). Shorter Settlement Cycles will have an impact on front office, back office, people, technology and fintech (KPMG, 2022). Future-oriented business models shall be developed in order to comply with the pressures of shorter settlement cycles. (Deloitte, 2021)

For shorter settlement cycles to succeed, settlements shall happen in the order of trade that has happened. Alternatively, payments that are costly to delay can be settled first and payments that are monetarily smaller can be settled later with a receipt of delay. Either of the systems can provide better settlement ratio. (Martin & McAndrews, 2010)

Settlement failures can continue to occur even if the settlement period changes. A point to be analysed is whether such failures will affect the future trading done by the market participant or the investor. One suggestion is to restrict the volume of trade which will reduce the failures in reduced settlement cycles. More liquid markets may lead to more significant contagion or effect. This contagion may persist for several days. (Devriese & Mitchell, 2005)

3. Theoretical Framework

T+1 settlement entails that the shares shall be transferred or credited to an investor's account within 1 working day from the date of transaction. For example, if an individual investor purchases shares on Monday, then then shares shall be credited to the investor's account on Tuesday. In the earlier system of T+2, the shares were credited to the account on Wednesday which meant a delay of 1 extra day. This concept has been explained diagrammatically in the below mentioned image:



The same settlement system can be better represented in the following manner:

System	T+0	T+1
T+1 settlement system (earlier system)		
T+0 settlement system (current system)		

It is clearly visible how shortening of the settlement cycle has led to quicker settlements of transactions.

4. Research Methodology

Research Methodology discusses all the tools and techniques used for conducting the research. It lays down the processes to be followed to attain the desired objectives. (Mohajan, 2017)

4.1 Objectives of the Research

1. To assess the current scenario of T+0 settlement system w.r.t. to SDG 17 (Sustainable Development Goal 17)
2. To examine the perception of investors about T+0 settlement system
3. To study the effect of T+0 settlement system on liquidity amongst investors
4. To study the relation of investor experience in trading and T+0 settlement system

4.2 Variables

For the purpose of this research, independent and dependent variables have been identified as under:

1. Independent Variable : Investor Experience
2. Dependent Variable : Trading in T+0 settlement system

4.3 Hypothesis of Research

H₀ There is no significant relationship between investor experience and trading in T+0 settlement system

H₁ There is a significant relationship between investor experience and trading in T+0 settlement system

4.4 Research Design and Research Tools Used

A google questionnaire consisting of 20 likert-scale based questions was administered to the respondents constituting the sample size. More questions consisting of demographic profile was also asked in the questionnaire and their analysis has been mentioned in this research. For the purpose of this research, the below mentioned statistical tools have been used:

To determine internal consistency amongst the questions in the questionnaire	1. Cronbach's Alpha 2. McDonald's Omega (to support the findings of Cronbach's Alpha)	4.5 Sample Size The number of people
To check whether sample comes from a population with a specific distribution	Shapiro-Wilk Test	
To test the hypothesis	1. Independent Samples T-Test and Mann-Whitney U Test 2. Kruskal-Wallis Test (to support the findings of Mann-Whitney U Test)	
To test the level of association	Spearman Rank Correlation Test (Spearman's rho)	

ple belonging to the population is infinite and hence not known. Therefore, the researcher limited the sample size to 224 from across India. All the respondents were investors having varied experience. These respondents were selected on the basis of convenience sampling and snowball sampling. Randomisation was done so as to select random respondents and no special preference was given to any constituent of the population.

4.6 Limitations of the Study

1. Data was collected in a limited time span of November to December 2023. The drawbacks of time constraint on the research cannot be ruled out completely though the researcher has taken ample care in this regard.
2. The data was collected through google questionnaire. Opinions of the investors were sought in online mode. Though the questionnaire was an anonymous one, the respondents may have been hesitant to answer all questions honestly.
3. The number of respondents as per Cochran's Formula for infinite population comes to around 385. The number of respondents finally considered in this research is 224 which is slightly lesser in comparison to the number as derived by Cochran's Formula. However, this

not being a thesis or dissertation. 224 is a reasonable number and cannot be counted as a limitation per se.

4. The researcher is in the learning process of usage of statistical techniques and tools and possibility of errors in computation of various statistics cannot be ruled out inspite of taking due care.

5. Data Analysis And Interpretation

The data received through the respondents can be summarised in the below mentioned manner:

5.1 Demographic Data

Table 1: Gender of Respondents

Gender	Counts	% of Total	Cumulative %
Male	156	69.6 %	69.6 %
Female	68	30.4 %	100.0 %

Source: Data collected through questionnaire and analysed through Jamovi(Version 2.3)

Table 2: Age Group of Respondents

Age Group	Counts	% of Total	Cumulative %
21 – 30 years	186	83.0 %	83.0 %
31 – 40 years	4	1.8 %	84.8 %
41 – 50 years	34	15.2 %	100.0 %

Source: Data collected through questionnaire and analysed through Jamovi(Version 2.3)

Table 3: Years of Experience in Trading

Years of Experience in Trading	Counts	% of Total	Cumulative %
Below 5 years	120	53.6 %	53.6 %
Above 5 years	104	46.4 %	100.0 %

Source: Data collected through questionnaire and analysed through Jamovi(Version 2.3)

5.2 Reliability Analysis

It is imperative that we check whether the questionnaire has components that are reliable enough for applying statistical tools. For this purpose, Cronbach's Alpha and McDonald's Omega is used. While Cronbach's Alpha is more popularly used in data analysis, some researchers often resort to McDonald's Omega to understand the reliability of the scale (Hayes & Coutts, 2020). For further strengthening the research, both analysis have been done and presented in Table 4 below.

Table 4: Scale Reliability Analysis using Cronbach's Alpha and McDonald's Omega

	Cronbach's α	McDonald's ω
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	Cronbach's α	McDonald's ω
Scale	0.954	0.955

Source: Data collected through questionnaire and analysed through Jamovi(Version 2.3)

In case of Cronbach's Alpha, any alpha value above 0.9 is considered to be excellent. Since the value of Alpha in this research is 0.954, we can conclude that the scale used in this research is reliable.

In case of McDonald's Omega, any value above 0.7 is considered to be good. Since the value of Omega in this research is 0.955, we can conclude that the scale used in this research is reliable

5.2 Testing of Normality Distribution

It is imperative to check whether the data that has been received from the respondents is normally distributed or not. For this purpose, Shapiro-Wilk Test was used and findings from the test are depicted below in Table 5.

Table 5: Descriptive Data of Shapiro-Wilk Test

	N	Mean	Median	SD	Variance	Shapiro-Wilk	
						W	p
V1	224	4.50	5.00	1.071	1.148	0.510	< .001
V2	224	4.41	5.00	1.084	1.176	0.579	< .001
V3	224	4.45	5.00	1.036	1.073	0.581	< .001
V4	224	4.27	5.00	1.113	1.239	0.654	< .001
V5	224	3.87	4.00	1.031	1.064	0.827	< .001
V6	224	3.25	3.00	0.787	0.619	0.722	< .001
V7	224	3.34	3.00	1.213	1.472	0.904	< .001
V8	224	3.29	3.00	1.136	1.290	0.903	< .001
V9	224	3.14	3.00	0.969	0.939	0.877	< .001
V10	224	3.04	3.00	0.867	0.752	0.770	< .001
V11	224	3.58	3.00	1.081	1.168	0.817	< .001
V12	224	3.30	3.00	1.244	1.549	0.887	< .001
V13	224	3.86	4.00	1.106	1.223	0.819	< .001
V14	224	3.39	4.00	1.269	1.611	0.880	< .001
V15	224	3.20	3.00	1.375	1.889	0.875	< .001
V16	224	2.81	2.00	1.495	2.234	0.856	< .001
V17	224	2.63	2.00	1.059	1.121	0.868	< .001
V18	224	3.43	3.00	1.184	1.403	0.900	< .001

	N	Mean	Median	SD	Variance	Shapiro-Wilk	
						W	p
V19	224	3.60	4.00	0.979	0.958	0.853	<.001
V20	224	3.79	4.00	1.110	1.231	0.832	<.001

Source: Data collected through questionnaire and analysed through Jamovi(Version 2.3)

It is observed from the above data that p value for all the questions in the questionnaire is below 0.05 which is the significance level for the research. This indicates that the data significantly deviates from a normal distribution i.e data is not normally distributed. If the data is not normally distributed, non-parametric tests shall be used for proving the hypothesis as non-parametric tests do not have any assumption with regards to the distribution of the data.

5.3 Testing of Hypothesis

Non-Parametric Test is used to check the hypothesis of the research. The two non-parametric tests used are Independent Sample T-Test (also known as Students T-Test) and Mann-Whitney U Test and findings from the data are depicted below in Table 6.

Table 6: Independent Samples T-Test and Mann-Whitney U Test

		Statistic	df	p
V1	Student's t	-7.206 ^a	222	<.001
	Mann-Whitney U	3120		<.001
V2	Student's t	-8.765 ^a	222	<.001
	Mann-Whitney U	2288		<.001
V3	Student's t	-8.569 ^a	222	<.001
	Mann-Whitney U	2496		<.001
V4	Student's t	-5.170 ^a	222	<.001
	Mann-Whitney U	4522		<.001
V5	Student's t	-1.625 ^a	222	0.106
	Mann-Whitney U	5932		0.504
V6	Student's t	4.626 ^a	222	<.001
	Mann-Whitney U	3952		<.001
V7	Student's t	4.027 ^a	222	<.001
	Mann-Whitney U	4026		<.001
V8	Student's t	-0.741 ^a	222	0.460
	Mann-Whitney U	6144		0.838
V9	Student's t	2.069 ^a	222	0.040
	Mann-Whitney U	5068		0.011

		Statistic	df	p
V10	Student's t	0.573 ^a	222	0.567
	Mann-Whitney U	5824		0.299
V11	Student's t	-1.196	222	0.233
	Mann-Whitney U	5942		0.503
V12	Student's t	-0.476	222	0.635
	Mann-Whitney U	6134		0.822
V13	Student's t	-1.875 ^a	222	0.062
	Mann-Whitney U	5996		0.596
V14	Student's t	-3.302	222	0.001
	Mann-Whitney U	4596		< .001
V15	Student's t	-1.522	222	0.129
	Mann-Whitney U	5654		0.212
V16	Student's t	1.302 ^a	222	0.194
	Mann-Whitney U	5358		0.062
V17	Student's t	-0.514	222	0.608
	Mann-Whitney U	6080		0.729
V18	Student's t	0.969 ^a	222	0.333
	Mann-Whitney U	5584		0.163
V19	Student's t	3.908 ^a	222	< .001
	Mann-Whitney U	3616		< .001
V20	Student's t	1.531	222	0.127
	Mann-Whitney U	4948		0.005

Note. $H_a \mu_1 \neq \mu_2$

^a Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances

Source: Data collected through questionnaire and analysed through Jamovi(Version 2.3)

The above table indicates that p-value is lesser than 0.05 (supported by Levene's test). In cases where p-value is lesser than 0.05, the Null Hypothesis is rejected. Thus, we can derive that the alternate hypothesis i.e. there is a significant relationship between investor experience and trading in T+0 settlement system is true.

To support the findings, the researcher also performed the Kruskal-Wallis Test which also showed the same result i.e. p-value is lesser than 0.05 and Null Hypothesis is rejected. Findings of Kruskal-Wallis Test are shown below in Table 7.

Table 7: Kruskal-Wallis Test

	χ^2	df	p
V1	69.1610	1	< .001
V2	95.5323	1	< .001
V3	88.4173	1	< .001
V4	15.8862	1	< .001
V5	0.4488	1	0.503
V6	34.0344	1	< .001
V7	22.1797	1	< .001
V8	0.0425	1	0.837
V9	6.5116	1	0.011
V10	1.0793	1	0.299
V11	0.4499	1	0.502
V12	0.0509	1	0.822
V13	0.2825	1	0.595
V14	12.3580	1	< .001
V15	1.5617	1	0.211
V16	3.4970	1	0.061
V17	0.1212	1	0.728
V18	1.9482	1	0.163
V19	33.1117	1	< .001
V20	7.9362	1	0.005

Source: Data collected through questionnaire and analysed through Jamovi(Version 2.3)

5.4 Testing of Correlation and its statistical significance

Since it is proved that there is a relationship between investor experience and trading in T+0 settlement system, it is essential to know the correlation between the two variables. There are 3 methods through which this correlation can be assessed:

1. Pearson's r
2. Spearman's rho
3. Kendall's Tau

However, since the data in this research was non-parametric, Pearson's r cannot be used as the basic assumption of normal distribution of data is violated. The non-parametric equivalent of Pearson's r is Spearman's rho. Based on the data from respondents, Spearman's rho was calculated as -0.07306 using Microsoft Excel (Version 2021). This indicates a negative

association between investor experience in trading and trading in T+0 settlement system. However, merely arriving at a negative correlation is not sufficient for any statistical inference. Whether this correlation is statistically significant or not should also be analysed. In our research, the sample size is 224 and significance level is 0.05. Based on this, we find the critical value as 0.131 (Math Cracker, 2023). The absolute value of Spearman's rho is 0.07306.

$$0.07306 < 0.131$$

Because the absolute value of Spearman's rho that is calculated is not larger than this critical value, we can conclude that the correlation between our variables is not statistically significant. This indicates that the correlation is minimal.

In short, the findings of the research could be summarized as below:

1. The data has high internal consistency and is reliable
2. The data is not normally distributed
3. The alternate hypothesis i.e. there is a significant relationship between investor experience and trading in T+0 settlement system is true
4. The level of association is minimal and does not have a statistical significance.

6. Recommendations And Social Relevance

After conducting this research, it is imperative that recommendations be given so as to implement or dissuade the use of T+0 settlement. We can definitely conclude that T+0 is a good system if implemented thoroughly.

1. Operational Challenges

Changing the opinions of vendors and / or intermediaries is an essential task. Involving a zero-touch settlement is going to be difficult. The strong stickiness to the existing practices shall be overcome by SEBI. SEBI shall conduct large scale workshops for all market intermediaries and investors alike to engage them and implant in them the benefits of shorter settlement periods.

2. Operating Hours

To keep more hours available for settlement, the regulators could reduce the number of daily hours so that an additional 1 hour is available for settlement and challenges associated with it.

3. Reduction in Volume of Trade

In a T+0 settlement, it is imperative that there are no failures to settle the transaction. Only then there shall be investor confidence in the system. To achieve maximum success rate, the regulator can restrict the volume of trade (in number of shares or in Rupee terms) so that the burden on the clearing houses reduces. This will expedite the process of T+0 settlement. It is essential to note that T+0 settlement necessarily should not mean that the settlement should be done on T+0 day but settlement can be done on T+immediate basis too, if possible, and this is anyway going to be implemented in the near future as per estimates and announcements of SEBI.

7. Conclusion

The investor experience has a little effect on the implementation of T+0 system. It is seen that changes in the settlement system have a minimal effect on the investors. It does not matter whether the investor is investing in the stock markets since a long time or a very short time. The Government regulation of implementing T+0 system has had little effects on investors.

India being a majorly domestic market, it doesn't have a severe effect of moving towards T+0 settlement from the earlier T+1 or T+2 settlement. At the time of doing this research, it was

already 12 months since T+0 settlement system was implemented and it is assumed that the system has now overcome all teething troubles and is well established. There has also been minimal drainage of funds outside India post implementation of T+0 system.

Shortening of settlement cycles is not a walk in the park and involves huge levels of adjustments and systematization. The arguments for accelerated systems of settlement are strong. There are voices which indicate that T+0 is a great mechanism and further should be reduced to T+immediate basis, but it will be a daunting task to bring the settlement down to near real time, especially considering the fact that major economies like USA, Japan and UK are still following the T+2 system.

We can conclude that T+0 settlement is a good mechanism for settlement. Ofcourse, it has its own drawbacks but it can be overcome with the use of technology and further reducing it to T+immediate basis which has been spoken about time and again. It will start producing positive returns in the near term.

8. References

1. Bhadra, S., & Chopra, A. (January 2023). Study of Impact of Dematerialization of Shares on the Indian Stock Market. In *Sustainable Finance, Digitalization and the Role of Technology* (pp. 319-335). Delhi. Retrieved November 27, 2023, from https://www.researchgate.net/publication/361995743_Study_of_Impact_of_Dematerialization_of_Shares_on_the_Indian_Stock_Market
2. Dagdag, N. (2023, January 03). *DTCC*. Retrieved December 02, 2023, from [www.dtcc.com: https://www.dtcc.com/dtcc-connection/articles/2023/january/03/understanding-the-drivers-and-impact-of-global-t1-settlement](https://www.dtcc.com/connection/articles/2023/january/03/understanding-the-drivers-and-impact-of-global-t1-settlement)
3. *Deloitte*. (2021, May). Retrieved December 04, 2023, from [www.deloitte.com: https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-accelerating-the-settlement-cycle.pdf](https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-accelerating-the-settlement-cycle.pdf)
4. Deputy General Manager, M. R.-D. (2013, April 18). *Discussion Paper: Risk Management - Safer Markets for Investors*. Retrieved November 27, 2023, from SEBI: https://www.sebi.gov.in/reports/reports/apr-2013/discussion-paper-on-risk-management-safer-markets-for-investors_24640.html
5. Devriese, J., & Mitchell, J. (2005, November 23). Liquidity Risk in Securities Settlement. *Journal of Banking and Finance*, 30(6), 1807-1834. doi:<https://doi.org/10.1016/j.jbankfin.2005.09.008>
6. Dirckx, P. (2019, December 9). *Reducing Settlement Cycles - An Asia Pacific Perspective*. Retrieved November 27, 2023, from Regulation Asia: <https://www.regulationasia.com/reducing-settlement-cycles-an-asia-pacific-perspective/>
7. Gandy, A., Broby, D., Wright, G., Freeman, T., & Durkin, M. (30 May 2023). *Industry Preparedness for Accelerated Settlement*. SWIFT Institute Working Paper. Retrieved December 02, 2023, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4460512
8. Hayes, A. F., & Coutts, J. J. (2020). Use Omega Rather than Cronbach's Alpha for estimating reliability. But... *Communication Methods and Measures*, 1-24. doi:<https://doi.org/10.1080/19312458.2020.1718629>
9. *KPMG*. (2022). Retrieved December 04, 2023, from [www.kpmg.com: https://assets.kpmg.com/content/dam/kpmg/uk/pdf/2022/11/accelerated-trade-settlement.pdf](https://assets.kpmg.com/content/dam/kpmg/uk/pdf/2022/11/accelerated-trade-settlement.pdf)

10. Martin, A., & McAndrews, J. (2010). A Study of Competing Designs for a liquidity-saving mechanism. *Journal of Banking and Finance*, 34(8), 1818-1826. doi:<https://doi.org/10.1016/j.jbankfin.2009.07.023>
11. *Math Cracker*. (2023). Retrieved December 11, 2023, from www.mathcracker.com: <https://mathcracker.com/spearman-critical-correlation-calculator#results>
12. Milne, A. (2007, March 30). The Industrial Organization of post-trade clearing and settlement. *Journal of Banking and Finance*, 31(10), 2945-2961. doi:10.1016/j.jbankfin.2007.03.002
13. Mohajan, H. K. (2017). Aspects of Mathematical Economics, Social Choice and Game Theory. Chittagong, Bangladesh. Retrieved December 12, 2023, from https://www.researchgate.net/publication/321964409_Research_Methodology
14. Papillard, C., Wootton, M., Riess, E., & Sampaio, G. (2023, June 08). *T+1 Settlement: Are you ready?* Retrieved November 27, 2023, from BNP Paribas: <https://securities.cib.bnpparibas/t1-settlement-ready/>
15. Pozmanter, M. (2021, February). *Advancing Together: Leading the Industry to Accelerated Settlement*. Retrieved November 27, 2023, from DTCC: <https://www.dtcc.com/-/media/Files/PDFs/White%20Paper/DTCC-Accelerated-Settle-WP-2021.pdf>
16. Tomlinson, P., & Rodriguez, P. G. (2022, September). T+1 settlement in Europe: Potential Benefits and Challenges. 20. Association for Financial Markets in Europe. Retrieved December 02, 2023, from https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME_Tplus1Settlement_2022_04.pdf

9. APPENDIX (ABBREVIATIONS USED IN JAMOVI SOFTWARE)

V1	I believe that T+1 is a better system than the earlier T+2 system
V2	I know and understand the system of T+1
V3	T+1 settlement system will lead to higher efficiency in financial markets
V4	T+1 settlement system will help me with higher amount of liquid funds for trading
V5	I can forthwith sell the shares that I bought in short run rather than holding for long run
V6	I am trading much more in T+1 settlement than the previous T+2 system
V7	I believe that there is a higher volume of trading due to T+1
V8	T+1 settlement system will not lead to higher settlement failures
V9	I believe that there is a lesser risk in financial markets because of T+1 settlement
V10	I have convinced other investors to trade more in T+1 settlement
V11	Lesser FPI interest due to T+1 settlement means better opportunity for domestic investors
V12	I believe that T+1 settlement is good for investments in the long run
V13	I believe that T+1 settlement is good for investments in the short run
V14	I believe that T+1 settlement is best for investments in blue chip companies
V15	I believe that T+1 settlement is best for investment in penny stocks
V16	I believe that stock market remains bullish for a longer period because of implementation of T+1 settlement
V17	I believe that the volatility in the stock markets has reduced after

	implementation of T+1 settlement
V18	I believe that the technology used for T+1 settlement is excellent
V19	I believe that India can set a great example under T+1 system
V20	I believe that India can be a global pioneer by implementing T+0 system in the near future