

Impact of Securities Transaction Tax on Select Top 10 Companies Listed in Nifty 50 Index in National Stock Exchange of India

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ABSTRACT

Since, capital gain taxes (CGT) has been reassigned to the stock exchanges, the waive State has been experiencing the erosion of tax base and immoral taxes. Hence, the implementation of Securities Transaction Tax (STT) in the Indian fiscal market in 2004 overlaid CGT. STT is the tax payable by both the buyer and seller at the time of buying and selling of securities. Compared to CGT, STT does not make any dissimilarity amidst short-term capital gains and long-term capital gains realizations. The study is empirical in nature. The paper has used secondary data of select top 10 companies listed in NIFTY 50 Index. Error Correction Model (ECM) model used in the analysis is found to be viable in the long run and the stability test proves that the model is desirable and stable in the long run of the analysis between the variables and STT. Hence, it was concluded that single-handedly STT cannot solve all the tribulations interconnected to the financial markets but can stalwartly make a distinction to those fretful traders about the stability of the financial market in the long-run.

1. Introduction

Securities Transaction Tax (STT) is a tax levied on securities trades only and not on any other commercial trades, like, commodities, currency trades, etc., Equity and Futures and Options (F&O) transactions are applicable to STT, that, vary significantly with different rates. National Stock Exchange (NSE), Bombay Stock Exchange (BSE), and other recognized stock exchanges (SEs) charge STT on the trades made. STT was implemented on October 1, 2004 in the Indian financial markets. On the introduction of STT, it was predicted that there would be a standstill of Indian financial market, which had been proved completely wrong. Instead on the first day of implementation of STT, there was an high increase in SENSEX points, which is even still high after the introduction of STT to till date, also there was an increase in the tax revenue collected. Since, the implementation of STT, the trepidation among the market players, analysts, financial medias, would push away the massive financial transactions from the financial markets. There was a spontaneous and enormous turbulence, against the introduction of STT, that happened to be directed, as it were largely under the pressure of this powerful lobby. Under this tax regime, investors are liable to pay 0.15 per cent STT on any delivery based equity transactions to be shared equally between the buyer and seller, carried out in a recognised SEs, whereas, non-delivery transactions, the STT would be levied at 0.015 per cent, to be payable by the seller. In addition, the implementation of STT has reduced several loopholes in the existing tax regime. For instance, foreign investors who used to take undue advantage of the bilateral direct tax avoidance treaties would now be taxed under the STT regime. This is an issue with serious implications on the Indian financial, tax and regulatory system. Therefore, this paper tries to analyse the impact of select top 10 companies listed in NIFTY 50 Index.

2. Review of Literature

Stiglitz (1989)¹, further argues that the impact of an STT on market liquidity would be insignificant by examining the inventory risk component of the bid-ask spread. He contends that although an STT will lead to thinner markets, the change in spread will be insignificant since the extra time that market-makers hold securities will not yield a significant change in the inventory risk component of the spread.

Westerhoff and Dieci (2006)², found that STT imposition on all transactions to reduce price volatility across markets.

Demary (2010)³, concludes that STTs increase asset mispricing beyond certain thresholds by reducing short-term trading in reaction to fundamental changes.

Matheson (2011)⁴, found that in certain cases, trading becomes unviable because STT does not discriminate between good and bad realizations as opposed to capital gains tax (CGT).

Wang and Yau (2012)⁵, interprets that one reason for this is that transaction costs go up, making it costlier to trade and also another factor that leads to a fall in volume in the taxed region is migration of trade to other untaxed geographies, thus, establishing an inverse relationship between STT and trading volume.

3. Methodology of the Study

The study is empirical in nature. The data is secondary and collected from CMIE Prowess Database. For the purpose of the study, top 10 companies listed in NIFTY 50 Index are selected based on the volume of shares traded actively in NSE during July 2004 to June 2016. Econometric Models such as Augmented Dickey-Fuller (ADF) unit root test, Ordinary Least

Square Regression Analysis and Engle Granger Error Correction Model were utilized in the study.

The data sets of the variables LNIFTY, LBOSCH, LEICHER, LHDFC, LHDFCBNK, LINFY, LINFRATEL, LMARUTI, LTATAM, LTCS and LZEEL were tested for stationarity using Augmented Dickey Fuller tests and the results are presented in table 1.

4. Model Results and Discussion

Table 1- Stationarity tests of variables ADF UNIT ROOT TEST

Variables	Level	P-value	First difference	P-value
LBHARTIAIRTEL	-9.6937	0.8945	-10.7332	0.0000
LBOSCH	-5.3685	0.9773	-10.9145	0.0000
LEICHER	-9.8494	0.3016	-13.9002	0.0000
LHDFCBNK	-1.3916	0.8591	-11.9097	0.0000
LHDFC	-2.8819	0.1718	-14.3216	0.0000
LINFY	-9.6633	0.0773	-15.1161	0.0000
LMARUTI	-7.7811	0.0558	-11.8431	0.0000
LTATAMOTORS	-8.8142	0.7215	-11.3634	0.0000
LTATASTEEL	-2.7307	0.2262	-12.1435	0.0000
LZEEL	-9.9736	0.9707	-11.5667	0.0000

Source: Computed Data

Table 1 exhibits unit root test reveals that LNIFTY, LBOSCH, LEICHER, LHDFC, LHDFCBNK, LINFRATEL, LINFY, LMARUTI, LTATAM, LTCS and LZEEL became

stationary when their first difference with Trend and Intercept was taken.

a) Model Selection

Table 2 - Ordinary Least Square Regression Analysis

Variable	Co-eff	SE	t-Statistic	P- value
C	-8.1673	0.5561	14.6857	0.0000
LBOSCH	5.5E-06	2.3E-06	2.4526	0.0156
LEICHER	0.0177	0.0273	0.6479	0.5183
LHDFC	0.1942	0.0481	4.0364	0.0001
LHDFCBNK	-0.0015	0.0553	-0.0275	0.9781
LINFRATEL	0.0039	0.0300	0.1283	0.8981
LINFY	-0.1672	0.0516	-3.2405	0.0015
LMARUTI	-0.0309	0.0340	-0.9086	0.3654
LTATAM	-0.0396	0.0501	-0.7890	0.4316
LTCS	0.0671	0.0344	1.9499	0.0535
LZEEL	-0.0217	0.0402	-0.5390	0.5909
R-squared	0.4511			
F-stat	10.1069			
P- value	0.0000			
D-W Stat	0.3937			

Source: Computed Data

In table 2, variables like LBOSCH (t-stat - 2.4526, p-value - 0.0156), LHDFC (t-stat - 4.0364, p-value - 0.0001), LINFY (t-stat - -3.2405, p-value- 0.0015) AND C (t-stat - 14.6857, p-value - 0.0000) are significant. R² (0.4511) value is very low than 50%, F-stat is significant (10.1069, p-value - 0.0000), but

the regression equation is found to be spurious or non-sense, with the help of Durbin-Watson Statistics (D-W), indicating that the R² value is greater than D-W Stat (0.3937).

In order to determine whether the model is viable, residual must be stationary. To test that unit root test is applied

b) Viability of the model

Table 3 - Stationarity Test of Residual

	Level	p- value
Augmented Dickey-Fuller test statistic	-11.8057	0.0000
Test critical values:		
1% level	-4.0295	
5% level	-3.4444	
10% level	-3.1470	

*MacKinnon (1996) one-sided p-values.

Source: Computed Data

Table 3 explains that the estimated model is not spurious, the residual (U) is stationary, LBOSCH, LEICHER, LHDFC, LHDFCBNK, LINFRATEL, LINFY, LMARUTI, LTATAM, LTCS,

LZEEL and CONS are co-integrated, meaning there is a long run relationship. The whole model is viable. Therefore, Error Correction Model can be performed.

c) Error Correction Model

Table 4 - Engle Granger Error Correction Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.0116	0.0059	1.9679	0.0214
D(LBOSCH)	0.0015	0.0054	0.2847	0.7763
D(LEICHER)	-0.006	0.0043	-1.4202	0.0181
D(LHDFC)	0.0195	0.0100	1.9481	0.0237
D(LHDFCBNK)	0.0006	0.0104	0.0619	0.0407
D(LINFY)	-0.0004	0.0126	-0.0324	0.0041
D(LINFRATEL)	0.0015	0.0057	0.2659	0.7907
D(LMARUTI)	-0.0054	0.0068	-0.7959	0.0276
D(LTATAM)	-0.0100	0.0115	-0.8664	0.0388
D(LTCS)	-0.0072	0.0090	-0.8013	0.0245
D(LZEEL)	-0.0014	0.0076	-0.1916	0.0483
U(-1)	-0.2474	0.0206	-2.3015	0.0231
R-squared	0.7374			
F-statistic	18.7532			
Prob(F-statistic)	0.0097			
D-W Stat	1.7615			

Source: Computed Data

Table 4, indicates that there is a cause and effect relationship between the variables. The error correction term (U(-1)) actually corrects the disequilibrium. Disequilibrium is corrected at a speed of 24.74 per cent annually and the model is not spurious. U(-1) with a negative sign gives the validity that **D(LEICHER), D(LHDFC), D(LHDFCBNK), D(LINFY), D(LMARUTI), D(LTATAM), D(LTCS), D(LZEEL) and Cons** have a long run disequilibrium/ relationship. The result also

reveals that, R-squared value is 0.73, this indicates that 73 per cent of the variations in the value of D(LNIFTY) are explained by D(LBOSCH), D(LEICHER), D(LHDFC), D(LHDFCBNK), D(LINFY), D(LINFRATEL), D(LMARUTI), D(LTATAM), D(LTCS) and D(LZEEL). The F-statistics is significant at all levels implying that the hypothesized relationship between variables is validated. The value of Durbin-Watson statistic is 1.76 implying that the model is not spurious.

d) Serial Correlation Test

H₀ – There is no serial correlation.

Table 5 - Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.194936	Prob. F(2,119)	0.3063
Obs*R-squared	2.618447	Prob. Chi-Square(2)	0.2700

Table 5 reveals that the probability value of chi- square is more than five percent. Hence the null hypothesis is accepted. Thus, the Breusch-Godfrey Serial Correlation LM Test result

concludes that there is no serial correlation in the model and it is desirable.

e) Stability Test

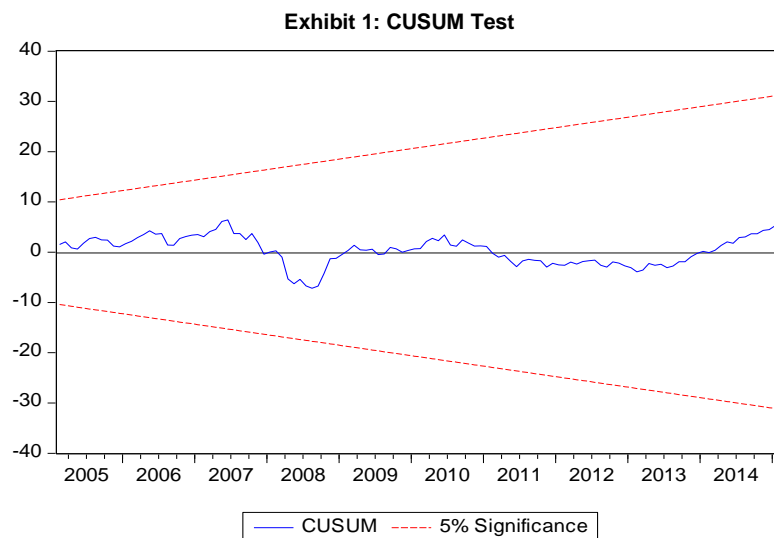


Exhibit 1, shows that the curve is within the dotted lines. Thus, the model is stable. The serial correlation and cusum test confirms that the model can be selected with lag 2 to check the long run association between the variables.

5. Conclusion

While favoring the performance of STT, all problems interrelated to speculation and precariousness in the Indian financial markets would be set on by it. In the present eon, no

single instrument by itself can get to the bottom of all problems afflicting the Indian financial markets. However, if used in juxtaposition with other policy mechanisms (e.g., banning short selling and insider trading), STT does offer a persuasive means to deal with the manifold tribulations. For that reason, any endeavor to weaken the necessities of STT should be stalwartly disparate by all those who are concerned about the stability in the Indian financial markets and also it indicates the long run association between the variables.

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