

A COMPARATIVE STUDY ON VOLATILITY OF SELECTED STOCKS IN NSE FUTURES WITH NSE SPOT

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ABSTRACT

Global liberalization and integration of financial markets has created new investment opportunities, which in turn require the development of new instruments that are more efficient to deal with the increased risk perception. Derivative is the financial instrument, value of which is derived from another financial instrument or underlying security or a basket of securities. Derivatives have various products or variants that play a vital role in the market, like - Forwards, Futures, Options and Swaps etc.

Futures are the notional agreement to buy or sale a standard quantity of underlying financial asset on a pre specified date at a price determined in the present. In Indian market context, a wider range of instruments are now available to the investors. The National Stock Exchange of India Limited (NSE) commenced trading in derivatives with the launch of index futures on June 12, 2000. Futures trading in NSE are presently materialized with two underlying financial instruments – (a) Index and (b) Individual Stock. Futures on individual stock or securities were introduced on November 9, 2001.

While India's derivatives markets have grown dramatically since their introduction, they are still in an early development stage. Derivatives trading have been started in Indian stock market with the theme that it would reduce the volatility, which is generally considered as a measurement of risk in the stock market return.

Present empirical study is concerned with the comparative study on volatility of some selected stocks in NSE Futures with NSE Spot market segment. This study also aims at indicating some probable reasons for the volatility in respect of security's return on these selected stocks and finally ends with providing justified recommendations thereon.

KEYWORDS: Derivatives, Forwards, Futures, Options, Swaps, Volatility

INTRODUCTION

The rapidity with which corporate finance, banking and investment finance have changed in recent years, has given birth to a new discipline that has come to be known as Financial Engineering which involves the design, development and the implementation of innovative financial instruments and processes as well as the formulation of creative solutions to problems in finance. The last decade has witnessed the introduction of 'Derivatives' as an innovative financial instrument in the Indian markets. Derivative is the financial instrument, value of which is derived from another financial instrument or underlying security or a basket of securities. Derivatives that provide the choice to trade on the underlying at a fraction of a cost, have various products or variants that play a vital role in the market, like - Forwards, Futures, Options and Swaps etc.

Financial derivatives came into spotlight in the post-1970 period due to growing instability in the financial markets. The Indian capital market has witnessed a major transformation and structural change from the past one decade as a result of ongoing financial sector reforms initiated by the Government of India. Trading in derivatives was started in June 9, 2000 with the launch of futures contracts in BSE Sensex and S&P CNX Nifty index on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) respectively. NSE also commenced its trading on 12 June, 2000 based on S&P Nifty. Options trading commenced in June 2001 in Indian market. Since then the futures and options (F&O) segment has been continuously growing in terms of new products, contracts, trade volume and value.

FUTURES TRADING – ISSUES IN VOLATILITY

Futures are the notional agreement to buy or sale a standard quantity of underlying financial asset on a pre specified date and at a price determined in the present. They are highly standardized exchange traded instrument. All elements of futures contract are standardized excepting futures price, which is determined by demand and supply conditions. Futures trading in NSE are presently formulated with two underlying financial instruments – (a) Index and (b) Individual Stock. Futures on individual stock or securities were introduced on November 9, 2001.

Derivatives trading have been started in Indian stock market with the perception that it would reduce the volatility, which is generally considered as a measurement of risk in the stock market return. Derivative products are used either to hedge some pre-existing risk by taking positions in the derivative markets that offset potential losses in the underlying spot or cash market or for speculative purposes such as taking positions to profit from anticipated price movements.

LITERATURE REVIEW

Thenmozhi (2002) investigated the empirical relationship between the NSE 50 futures and the NSE 50 index to determine if there is any change in the volatility of the underlying index due to the introduction of NSE 50 index futures and whether movements in the futures price provide predictable information regarding subsequent movements in the index. The finding that the volatility of the spot market has decreased with the introduction of futures trading and the explanatory power of index futures on spot market volatility support the introduction of derivatives trading and validates the financial sector reforms in the country. The empirical evidence is however quite mixed. Most studies summarize that the introduction of derivatives does not destabilize the underlying market; either there is no effect or perhaps only a very small decline in volatility (Hodges, 1992; Damodaran & Subrahmanyam, 1992; Sutcliffe, 1997; Mayhew & Mihov, 2000). Koutmos and Pericli (2005) tested the hypothesis that the introduction of index futures has increased positive feedback trading on the spot markets of six industrialized nations.

Sung, Taek and Park (2004) studied the effect of the introduction of index futures trading in the Korean markets on spot price volatility and market efficiency of the underlying KOSPI 200 stocks relative to the carefully matched non-KOSPI 200 stocks; they found evidence that market volatility was not affected by futures trading, while market efficiency was improved.

OBJECTIVES OF THE STUDY

Present Study Revolves Around the Following Objectives of

- Examining the relative volatility of cash or spot market and the derivative market segment of NSE, the Indian largest stock exchange. and
- Providing prudential recommendations to reduce the risk perception, identified through the measure of volatility and thereby improve efficiency, liquidity of this market segment.

METHODOLOGY

In order to put forward the comparative study of volatility of the NSE Individual Stock Futures market segment with that of NSE Spot market segment, a period of twelve months ranging from April 2013 to March 2014 has been considered. The relevant secondary data used for this purpose are extracted from the NSE Bhav Copy report segment for the available last trading day of each month of the chosen study period.

Currently The National Stock Exchange of India Ltd. (NSE) is providing the information of 152 stocks out of the entire permitted 210 stocks (currently in force). On the basis of Outstanding Market Capitalization in the Futures market segment of NSE, securities are duly ranked in a descending order. Market Capitalization is obtained through multiplying the outstanding number(s) of security traded on the sample selection date by the near month close price of that particular security.

Outstanding

Market Capitalization = Outstanding Number(s) of Stock × near Month Close Price of
Of a Particular Stock that Particular Stock

On the basis of outstanding market capitalization sixty securities are taken in total from the four segments - first one is from highly capitalized segment, the next one is from moderate capitalized segment, the third one is from lowly capitalized segment and the last one is extracted from the very low capitalized segment having fifteen securities in each segment to move forward with the study objective.

The analysis and interpretation of data is done both graphically and mathematically. First of all, the Multi-period Historical or Ex-post Returns of the selected securities are measured.

Here,

Historical Stock Return: $R_t = \log_e P_t - \log_e P_{t-1}$

Or, $R_t = \log_e (P_t / P_{t-1})$

Where, P_t = near months close price of the security at the time 't',

P_{t-1} = near months close price of the security at the time 't-1'

\log_e = Natural Logarithmic function

To assess the risk or volatility of the securities return, traditional statistical measure of dispersion – Standard Deviation of Historical Return is applied here. Volatility or deviation associated with the historical return series earned over multiple periods ranging from 1st April,2013 to 31th March,2014, is measured in terms of the extent of deviation or dispersion of individual single period historical return from their arithmetic average return or simply arithmetic mean return of each selected stock is quantified through the following expression,

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (R_i - R)^2}$$

Where,

R_i = ex post return of i^{th} period

$$R = \text{arithmetic average return} = \sum_{i=1}^n \frac{R_i}{n}$$

n = total number of security

ANALYSIS AND FINDINGS

Below the table exhibits volatility of all selected sample stocks, both in their Futures market as well as Spot market segment of NSE.

Table 1: Individual Stock-Wise Volatility in Futures and Spot Market of NSE

Rank	Name of the Stock	Standard Deviation	
		FUTURES MARKET	SPOT MARKET
1	STATE BANK OF INDIA	0.11658905	0.113921674
2	UNITED SPIRITS LIMITED	0.08515797	0.081885491
3	AXIS BANK LIMITED	0.157798608	0.162028849
4	ICICI BANK LTD.	0.123469985	0.127030543
5	TATA STEEL LIMITED	0.155025278	0.155887394
6	RELIANCE COMMUNICATIONS L	0.115765073	0.111502843
7	RELIANCE INDUSTRIES LTD	0.073469197	0.07273806
8	TATA MOTORS LIMITED	0.090523705	0.090401704
9	INFOSYS LIMITED	0.080804167	0.080522892
10	TATA CONSULTANCY SERV LT	0.074140048	0.077711844
11	ASIAN PAINTS LIMITED	0.677014327	0.676426417
12	LARSEN & TOUBRO LTD.	0.198720002	0.195504734
13	YES BANK LIMITED	0.205852292	0.20601673

Table 1: Contd...			
14	HDFC BANK LTD	0.072579556	0.071524079
15	RELIANCE CAPITAL LTD	0.080832135	0.08471466
16	M&M	0.07968802	0.072332335
17	ADANI ENTERPRISES LIMITED	0.200609941	0.201363706
18	WIPRO LTD	0.09672894	0.096341331
19	SESA STERLITE LIMITED	0.055712271	0.046200457
20	LIC HOUSING FINANCE LTD	0.159991121	0.16641001
21	RELIANCE POWER LTD.	0.088124514	0.08814579
22	RANBAXY LABS LTD	0.208590149	0.202887791
23	HERO MOTOCORP LIMITED	0.065265373	0.065402641
24	KOTAK MAHINDRA BANK LTD	0.08555176	0.083215827
25	INDUSIND BANK LIMITED	0.127536113	0.128783678
26	ARVIND LIMITED	0.101164895	0.101417659
27	KARNATAKA BANK LIMITED	0.153433117	0.158056502
28	IDEA CELLULAR LIMITED	0.096012692	0.092135905
29	UNITECH LTD	0.128745815	0.116275736
30	CIPLA LTD	0.051210393	0.04996263
31	HINDUSTAN PETROLEUM CORP	0.131152865	0.130990096
32	POWER GRID CORP. LTD.	0.064872896	0.05584891
33	UCO BANK	0.127844485	0.129231925
34	RURAL ELEC CORP. LTD.	0.140754791	0.135467947
35	JUBILANT FOODWORKS LTD	0.093913488	0.091735749
36	TATA COMMUNICATIONS LTD	0.156253329	0.161450496
37	ORIENTAL BANK OF COMMERCE	0.209870818	0.206002335
38	BATA INDIA LTD	0.100377979	0.097786552
39	STERLITE INDUSTRIES (INDIA) LIMITED	0.043226334	0.043149767
40	IFCI LTD	0.12751156	0.121979294
41	TATA MOTORS DVR 'A' ORD	0.117763054	0.1184761
42	ALLAHABAD BANK	0.156291734	0.165471779
43	MRF LTD	0.087156971	0.088477545
44	TATA POWER CO LTD	0.107897976	0.182637771
45	GMR INFRASTRUCTURE LTD.	0.210124879	0.207279395
46	FEDERAL BANK LTD	0.39300783	0.390449132
47	IDBI BANK LIMITED	0.113377992	0.11689726
48	DIVI'S LABORATORIES LTD	0.077446637	0.075558901
49	JAIN IRRIGATION SYSTEMS	0.129292051	0.129918375
50	THE INDIA CEMENTS LIMITED	0.137816117	0.125767281
51	UPL LIMITED	0.055109913	0.05574891
52	INDRAPRASTHA GAS LTD	0.068351587	0.069672043
53	EXIDE INDUSTRIES LTD	0.091760917	0.093434447
54	HINDUSTAN ZINC LIMITED	0.091270069	0.09159707
55	UNIPHOS	0.064332694	0.062690627
56	RENUKA	0.1299197	0.146617951
57	COLGATE PALMOLIVE LTD.	0.056301963	0.056611961
58	ASHOK LEYLAND LTD	0.202532893	0.211318561
59	INDIAN OVERSEAS BANK	0.105924909	0.108683685
60	JSW ENERGY LIMITED	0.162353079	0.150612561

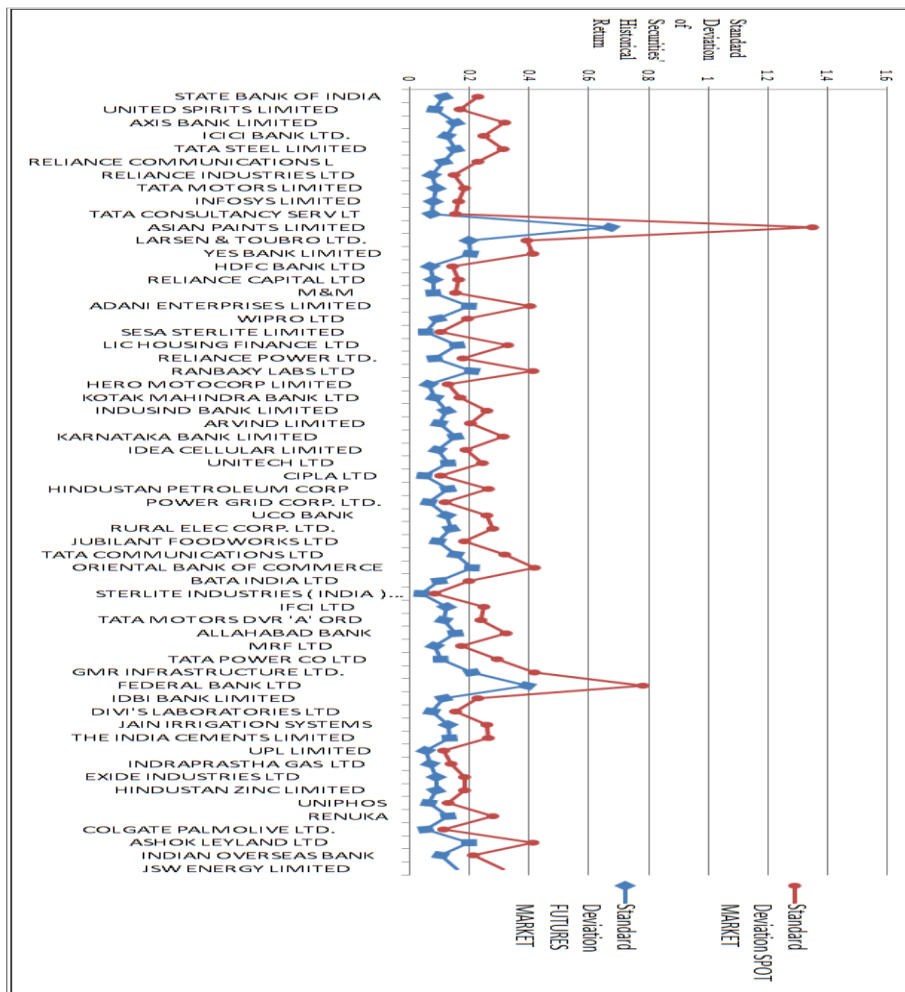


Figure 1: Line Charts Showing Volatility Selected Stocks of NSE Futures Market Segment and the NSE Spot Market Segment

OBSERVATION

Volatility measured through the Standard Deviations of the securities' Historical Return exhibit that the volatility of these selected sample stocks in cash market or spot market is higher than that of the futures market segment over the study period.

The stocks like ASIAN PAINT LTD and FEDERAL BANK LTD displaying extreme volatile condition in their spot market trading activity. Again, the stocks like RELIANCE INDUSTRIES LTD, TATA MOTORS LIMITED, INFOSYS LIMITED, RELIANCE CAPITAL LTD, WIPRO LTD, KOTAK MAHINDRA BANK LTD, BATA INDIA LTD, MRF LTD, IDBI BANK LIMITED, DIVI'S LABORATORIES LTD, INDRAPRASTHA GAS LTD, EXIDE INDUSTRIES LTD, HINDUSTAN ZINC LIMITED and INDIAN OVERSEAS BANK exhibiting medium volatile condition in their spot market trading activity. While, the stocks like TATA CONSULTANCY SERV LT, LARSEN & TOUBRO LTD, M&M, HDFC BANK LTD, SESA STERLITE LIMITED, HERO MOTOCORP LIMITED, CIPLA LTD, POWER GRID CORP. LTD., STERLITE INDUSTRIES (INDIA) LIMITED, UPL LTD, COLGATE PALMOLIVE LTD. etc. are displaying lower level of volatility in cash market. The stock TATA CONSULTANCY SERV LT is situating

on an extreme condition, where at a lower level the Futures Market and the Spot Market volatility coincide with each other, as indicated by the above the line chart (Figure- 1)

CONCLUSIONS AND RECOMMENDATIONS

Volatility of underlying Spot Market is higher than the Futures Market Segment as observed from the empirical analysis. Previous theoretical as well as empirical studies postulated that futures trading are more likely to be conducted by rational investors.

There are two Components to Stock Market Volatility

Volatility Arising Due to Information-Based Changes

Volatility increases due to the rise in the participation of informed investors who rationally process all fundamental related information and use to design their trading strategy upon it. Informed traders dominate futures' trades, resulting into an increase of information-based trading in the futures market. Given the linkage between the spot and futures segments, this enhanced flow of information and its incorporation into prices at the futures' level has a knock-on effect on the spot level, leading to an increase of volatility there.

Volatility Arising Due to Noise Trading or Speculative Trading

Volatility is the result of uninformed investors trading for reasons other than the fundamentals. This type of trading has been dubbed as 'noise trading' (Black, 1986; De Long et al., 1990) and involves any trading strategy based on non-fundamental indicators, for example, technical analysis and investor-sentiment etc. Noise or speculative traders dominate the futures' markets, leading to mispricing at the futures' level, which is then carried forward to the spot level. As this mispricing is associated with a substantial departure from the fundamentals, this leads to a rise in volatility at the futures' level, which is later transmitted to the spot level.

Derivative market given that these investors view derivatives as superior investment instruments. This superiority stems out from their inherent leverage and lower transaction costs. Again, the migration of informed traders would reduce the information asymmetry problem faced by market makers, resulting into an improvement of liquidity in the underlying cash or spot market.

Theoretically, there exists a proportional relationship between the liquidity and the volatility of the market. As the liquidity enhances in the spot market, the volatility also increases here. Again, there exists plausible scenario, the probability of speculative or noise traders taking over the volume of trade of the futures market is relatively low, theoretically which reduces the liquidity perspective here. Thereby, following the proportional relationship between the liquidity and the volatility, the volatility is relatively lower in futures market.

The Following Suggestions May be Implemented to Further Improve Efficiency, Liquidity and Reduce Volatility Here:

- Futures contracts on more number of stocks can be introduced.

- Mini size (smaller value contracts) may be permitted.
- Efforts may be made to look at margin imposition system and reduce margins without Compromising on the integrity of the market.
- The Trading Member shall at all times subscribe to the Code of Conduct as specified by The Securities and Exchange Board of India (Stock Brokers and Sub-Brokers) - Regulations, 1992.
- Right now institutional participation appear to be negligible in the total turnover, therefore, efforts should be made to enhance their role in derivatives participation.
- Excessive volatility is not desirable. The widespread concern of the stock exchange management, management for the derivative instruments, brokers, investors and regulators alike has focused upon the need for measuring and predicting the market volatility. The policy makers and stock exchange regulatory authorities should frame appropriate policy guidelines for the benefit of investors and for smooth working of the market.

Table 2: Showing the Calculation of Outstanding Market Capitalisation

Sl. No.	SYMBOL	NEAR MONTH MARKET CAPITALIZATION												TOTAL	Proportion of Securities Capitalisation to Total Capitalisation	PROPORTION *1000	RANK (DESCENDING ORDER)
		ON APRIL, 30, 2013	ON MAY, 31, 2013	ON JUNE, 28, 2013	ON JULY, 31, 2013	ON AUGUST, 31, 2013	ON SEPTEMBER, 30, 2013	ON OCTOBER, 31, 2013	ON NOVEMBER, 29, 2013	ON DECEMBER, 31, 2013	ON JANUARY, 31, 2014	ON FEBRUARY, 29, 2014	ON MARCH, 31, 2014				
1	ABIRLANUVO	3807.52	1232.79	1490.44	3072.08	3091.38	3885.36	3230.52	2432.72	3570.46	2404.6	1562.39	6502.07	36282.33	0.001787	1.787215	108
2	ACC	5555.86	4639.02	5011.53	8124.26	5699.6	5659.58	10087.35	4336.07	3987.25	4509.14	5907.15	8887.21	72404.02	0.003567	3.566518	76
3	ADANIEMT	4859.47	5496.84	5037.96	4617.9	11507.4	2366.38	15100.75	12373.46	7659.32	24206.12	16497.7	45521.48	155244.8	0.007647	7.647134	40
4	ADANIPTS	752.25	1845.17	1419.33	2742.66	780.81	1008.55	4451.01	4705.43	2943.53	1720.49	4497.19	10020.02	36886.44	0.001817	1.816973	106
5	ADANIPOWER	1886.59	5415.88	3749.38	2854.74	1329.55	855.43	4412.41	4816.44	3094.12	1004.85	1837.19	12798.75	44055.33	0.00217	2.170102	97
6	ALBK	5583.29	3405.2	5931.42	3335.11	2554.7	1407.95	11943.01	3236.17	2982.5	4511.37	2485.85	6248.43	53625	0.002641	2.64149	88
7	AMBUJACEM	4652.19	8209.71	4832.86	9090.02	9168.63	4633.21	12236.74	3881.75	3352.66	3752.89	5159.21	7505.33	76475.2	0.003767	3.767058	71
8	ANDHRABANK	3481.61	2021.75	1693.77	5014.54	1315.63	824.93	4422.26	2330.2	1379.91	2160.17	2493.27	4175.61	31313.65	0.001542	1.542465	112
9	APOLLOHOSP	-	-	-	-	-	-	-	-	898.37	1029.96	682.01	547.52	3157.86	0.000156	0.155552	149
10	APOLLTYRE	5024.54	1563.9	3871.7	3988.78	1316.74	2014.36	5526.51	9032.74	90877.44	16005.6	14744.75	18405.47	172372.5	0.008491	8.490822	34
11	ARVIND	1336.1	2153.52	1950.1	1752.99	2442.93	700.66	5940.49	8667.77	13591.55	33870.49	26967.94	31991.77	131366.3	0.006471	6.470915	49
12	ASHOKLEY	1213.93	634.52	756.7	862.65	486.42	1162.3	1892.53	1370.65	1336.11	1313.1	779.95	5575.51	17384.37	0.000856	0.856329	127
13	ASIANPAINT	2852.41	3230.53	6928.99	6351.74	13603.78	8257.5	23053.96	9710.11	4772.21	4941.96	5895.08	6896.63	96294.9	0.004743	4.743348	59
14	ASIANPAINT	7781.51	9679.8	7197.63	9385.66	11249.7	19412.96	18084.83	22316.5	35334.12	119816.8	146663.3	47512.71	454435.5	0.022385	22.38484	11

Table 3

Sl. No.	SYMBOL	NEAR MONTH MARKET CAPITALIZATION												TOTAL	Proportion of Securities Capitalisation to Total Capitalisation	PROPORTION *1000	RANK (DESCENDING ORDER)
		ON APRIL, 30, 2013	ON MAY, 31, 2013	ON JUNE, 28, 2013	ON JULY, 31, 2013	ON AUGUST, 31, 2013	ON SEPT, 30, 2013	ON OCTOBER, 31, 2013	ON NOVEMBER, 29, 2013	ON DECEMBER, 31, 2013	ON JANUARY, 31, 2014	ON FEBRUARY, 28, 2014	ON MARCH, 31, 2014				
15	AXISBANK	50757.5	42704.01	31877.22	74309.89	177504.9	46648.93	47563.46	44533.23	34787.72	28568.76	39219.01	56218.32	674692.9	0.033234	33.2344	1
16	BAJAJ-AUTO	7489.52	6014.1	8406.15	8644.57	14583.06	7203.55	8237.83	3251.82	4430.73	8143.93	9450.83	6608.87	92464.96	0.004555	4.554691	10
17	BANKBARODA	10291.79	18329.04	7322.65	15923.92	15230.74	8299.54	56218.09	23937.25	17999.82	17615.74	15822.43	40150.4	247141.4	0.012174	12.17383	3
18	BANKINDIA	7203.38	7725.22	5239.96	8447.62	7024.93	3914.99	39735.13	15256.4	17635.06	30462.55	15745.67	39232.97	197623.9	0.009735	9.734667	5
19	BATAINDIA	7572.23	1966.94	4990.82	10269.62	2947.84	6223.67	9363.34	5215.51	1780.16	2357.2	2115.03	2732.57	57534.93	0.002834	2.834088	14
20	BHARATFORG	1148.79	1142.92	923.11	817.59	2141.39	1702.44	5428.79	1564.39	2497.36	3088.75	7325.1	10102.92	37883.55	0.001866	1.866089	15
21	BHARTIARTL	15567.25	13588.9	12416.57	69061.27	15630.34	19264.73	40939.32	18303.12	10118.11	16580.49	16845.15	22450.33	270765.6	0.013338	13.33752	2
22	BHEL	8694.46	8989.52	15349.36	11600.26	13531.85	18950.69	25760.46	37370.23	24375.25	11140.39	15837.41	16338.18	207938.1	0.010243	10.24273	4
23	BIOCON	2823.9	711.75	1299.38	3380.94	5459.48	4070.43	3324.49	3320.54	8011.71	21106.86	23271.8	6941.48	83722.76	0.004124	4.124062	13
23	BPL	8755.87	5760.68	7842.33	13547.84	6798.96	11579.58	8542.38	8929.44	5440.57	8129.96	8801.15	15712.02	109840.8	0.005411	5.410598	9
25	CAIRN	13578.95	6593.64	12252.97	5749.77	8525.12	4017.09	14293.81	7258.08	4550.62	4324.92	2674.04	7772.18	91591.19	0.004512	4.51165	11
26	CANBK	6825.13	6778.77	5387.29	9153.64	6222.19	4866.52	8820.43	7655.15	10192.37	18488.23	7261.37	23042.36	114693.5	0.00565	5.649634	7
27	CENTURYTEX	5867.49	6840.93	5630.84	6091.42	4572.9	3012.81	11977.49	4181.89	32735.78	14030.77	10455.67	7678.13	113076.1	0.00557	5.569967	8
28	CESC	1253.87	1264.76	1300.88	1323.47	459.11	424.26	1885.46	2132.51	4592.11	5669.07	4813.38	3779.22	28898.1	0.001423	1.423479	16
29	CHAMBLFERT	3483.11	1304.97	2006.58	1846.23	542.07	830.68	1356.07	-	-	-	-	-	11369.71	0.00056	0.560056	18
30	CIPLA	5889.6	11603.49	7066.49	8418.91	21599.96	6187.61	15344.77	11608.6	3140.52	5256.27	15152.35	6377.58	117646.2	0.005795	5.79508	6
31	COALINDIA	5880.09	4247.14	13192.6	6910.51	9409.11	6291.63	9575.33	3662.08	5774.84	3926.37	6040.59	11088.88	85999.17	0.004236	4.236195	12
32	COLPAL	5370.12	837.3	849.24	755.51	640.62	1128.14	2489.95	1554.99	3299.41	710.45	258.22	712.85	18606.8	0.000917	0.916544	17

Table 4

Sl. No.	SYMBOL	NEAR MONTH MARKET CAPITALIZATION												TOTAL	Proportion of Securities Capitalisation to Total Capitalisation	PROPORTION *1000	RANK (DESCENDING ORDER)
		ON APRIL, 30, 2013	ON MAY, 31, 2013	ON JUNE, 28, 2013	ON JULY, 31, 2013	ON AUGUST, 31, 2013	ON SEPT, 30, 2013	ON OCTOBER, 31, 2013	ON NOVEMBER, 29, 2013	ON DECEMBER, 31, 2013	ON JANUARY, 31, 2014	ON FEBRUARY, 29, 2014	ON MARCH, 31, 2014				
33	CROMPGREAV	1484.18	2508.71	15791.58	2024.89	1928.6	1537.46	8587.17	8946.83	5770.99	15217.01	12457.82	17967.69	94222.93	0.004641	4.641286	60
34	DABUR	12481.14	2443.23	1384.44	2126.27	2682.23	3222.26	3422.25	2266.88	1049.01	2018.49	1901.19	1380.02	36377.41	0.001792	1.791899	107
35	DENABANK	8201.71	4894.71	5729.87	8418.23	3310.65	1665.89	5641.09	-	-	-	-	-	37862.15	0.001865	1.865035	105
36	DISHTV	1925.62	1414.44	1837.14	4424.38	1363.73	1873.4	9781.08	2938.66	7594.51	1877.2	2614.32	2624.74	40269.22	0.001984	1.983604	102
37	DIVISLAB	2177.81	945.36	1310.32	1560.6	1672.7	724.43	3439.77	1839.65	2468.01	3560.74	2623.34	5065.75	27388.48	0.001349	1.349117	117
38	DLF	27600.24	43215.3	16424.39	27296.43	18101.47	15369.59	24267.7	18568.28	19878.77	16695.94	16677.52	37055.31	281150.9	0.013849	13.84909	23
39	DRREDDY	7362.99	5075.27	8184.61	21187.91	12336.04	8216.87	44469.24	8699.09	3465.62	6241.63	25944.1	13844.92	165028.3	0.008129	8.129056	37
40	EXIDEIND	2188.09	389.65	791.46	753.18	355.48	588.67	2297.14	3765.45	7139.92	1075.56	905.49	2184.52	22434.61	0.001105	1.105097	122
41	FEDERALBNK	3895.41	949.67	532.05	1722.93	1217.17	1607.15	4293.15	2472.93	1476.37	2601.95	2656.36	5329.74	28754.88	0.001416	1.416424	115
42	FINANTECH	4841.66	4053.96	3509.98	5640.01	9646.71	9373.62	2783.25	-	-	-	-	-	39849.19	0.001963	1.962914	103
43	FRL	5344.43	4438.98	4103.51	4208.73	2325.58	1017.68	3165	1073.24	6977.02	-	-	-	32654.17	0.001608	1.608497	110
44	GAIL	3364.94	13814.15	13810.8	5247.36	3939.51	4705.22	6306.57	3925.82	2035.24	4830.23	4508.02	6919.98	73407.84	0.003816	3.615964	75
45	GLENMARK	-	-	-	-	-	-	2412.69	2878.59	1639.27	3280.23	2341.5	1088.34	13640.62	0.000672	0.671917	137
46	GMRINFRA	3202.6	7195.92	1378.43	2720.36	3285.41	3964.48	11731.96	2181.55	5114.35	2399.32	1910.7	3563.64	48648.72	0.002396	2.396366	91
47	GODREJIND	2094.16	1935.53	1015.54	1133.76	502.21	524.65	2523.72	1198.41	1978.19	1984.17	424.93	1212.64	16527.91	0.000814	0.814141	131
48	GRASIM	1579.1	2590.27	2705.88	2656.76	4651.74	2036.85	5868.42	6613.44	1943.65	3188.07	4260.29	6215.27	44309.74	0.002183	2.182634	96
49	GSPL	566.17	1127.8	758.3	160.16	226.78	2215.77	501.62	-	-	-	-	-	5556.6	0.000274	0.27371	147
50	GSKCONS	-	-	-	-	-	-	403.03	446.53	27.87	59.13	59.92	0	996.48	4.91E-05	0.049085	152

Table 5

Sl. No.	SYMBOL	NEAR MONTH MARKET CAPITALIZATION												TOTAL	Proportion of Securities Capitalisation to Total Capitalisation	PROPORTION *1000	RANK (DESCENDING ORDER)
		ON APRIL, 30, 2013	ON MAY, 31, 2013	ON JUNE, 28, 2013	ON JULY, 31, 2013	ON AUGUST, 31, 2013	ON SEPT, 30, 2013	ON OCTOBER, 31, 2013	ON NOVEMBER, 29, 2013	ON DECEMBER, 31, 2013	ON JANUARY, 31, 2014	ON FEBRUARY, 28, 2014	ON MARCH, 31, 2014				
141	UBL	-	-	-	-	-	-	867.44	1248.51	1560.49	1713.75	1515.31	358.37	7263.87	0.000358	0.357808	145
142	UCOBANK	2582.4	5934.1	5196.06	8085.29	4326.53	2732.07	10053.3	8265.54	6139.18	6637.9	4108.56	7478.58	71539.51	0.003524	3.523933	79
143	ULTRACEMCO	1909.59	3554.36	3670.28	2038.47	4152.73	3911.25	7014.79	4492.82	1679.23	2578.77	4878.43	4961.57	44842.29	0.002209	2.208867	95
144	UNIONBANK	8292.91	6083.86	4564.35	7207.88	5666.6	5154.43	15297.37	7999.11	9344.15	15624.98	5300.58	21101.36	111637.6	0.005499	5.499106	56
145	UNIPHOS	4117.17	2652.36	2119.53	5085.79	3868.88	2015.82	-	-	-	-	-	-	19859.55	0.000978	0.978253	124
146	UNITECH	16910.81	14508.88	5794.18	4302.22	5730.2	2760.76	18040.44	14268.44	8139.92	6011.58	4138.55	20485.43	121091.4	0.005965	5.964788	52
147	UPL	-	-	-	-	-	-	7731.62	1504.85	4174.31	4700.56	2739.34	2922.72	23773.4	0.001171	1.171043	120
148	VIJAYABANK	1563.8	909.14	1314.34	1848.68	1010.4	565.75	2399.49	-	-	-	-	-	9611.6	0.000473	0.473454	144
149	VOLTAS	1018.92	1070.35	1786.7	1630.22	972.64	756.4	3238.97	14294.79	5484.53	13197.37	13905.96	17213.82	74570.67	0.003673	3.673244	73
150	WIPRO	5630.93	6863.21	2756.38	15006.53	35548.72	11059.66	21113.53	7319.72	9403.28	9035.57	12241.09	15240.76	151219.4	0.007449	7.448849	41
151	YESBANK	21823.73	18329.32	33754.38	72335.54	40138.09	29127.11	37792.15	25823.64	11585.92	31292.04	19369.56	53477.26	394848.7	0.01945	19.44968	13
152	ZEEL	8568.54	12373.3	2948.25	7311.8	4338.38	3744.04	4568.16	3316.03	2168.65	6557.69	31485.11	5702.99	93082.94	0.004585	4.585131	61
TOTAL=														20094120			

REFERENCES

1. Bhattacharyya, R.K. and Chattopadhyay, P. (1998). "The Indian Financial System". Bhattacharyya Brothers.
2. Kohn, M. (2003). "Financial Institutions and Market". Oxford University Press, New Delhi.
3. Pathak, B.V. (2011). "The Indian Financial System". 3rd edition, Pearson.
4. Abhyankar, A., H. (1995). "Return and volatility dynamics in the FT-SE 100 stock index and stock index futures markets". The Journal of Futures Markets, Vol.15, pp. 457- 88.
5. Alexakis, P. (2007). "On the effect of index future trading on stock market volatility". International research journal of finance & economics, Vol.-11, pp.7-20
6. Bandivadekar, S., Ghosh S. (2003). "Derivatives and Volatility on Indian Stock Markets". Reserve Bank of India Occasional Papers Vol. 24, No. 3