

Free-float Sensex is a Better Index

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Free float Sensex is a step in the right direction. Its success and transparent practice is in the hands of company management and regulators.

BSE will be transforming the Sensex into a free-float index from September 1, 2003. Globally, the free-float methodology of index construction is considered to be industry best practice and all major index providers like MSCI, FTSE, S & P and STOXX have adopted the same. Currently in India there are two indices based on the free-float methodology. BSE-TECK index -- the country's first free-float index, was launched in July 2001, and BANKEX, also by BSE, was introduced in June 2003. After gaining experience with these two indices and following a series of discussions during the last couple of years, BSE is shifting the Sensex, its flagship index, regarded widely as the bellwether of India's stock market, into a free-float index. Notably, in order to generate a nationwide debate on the issue of free-float, BSE organized a 'Roundtable on Free-float index' in March 2002 chaired by Mr. Mark Makepeace, president and CEO-FTSE group and the response was overwhelming support from the investing community for shifting the benchmark indices to the free-float methodology.

Free-float: Quest for a Proper Definition

Free-float may be defined as that portion of equity capital of a company that is available for trading in the normal course, the remaining being held by promoters and other interested and special categories of investors. Generally, free-float market capitalisation excludes promoters' holding, government holding, strategic holding and other locked-in shares. The most general category of stock price indices are based on market capitalisation of companies. The full market capitalisation methodology takes into account the total number of shares issued by a company for computing the index. Free-float market capitalisation, on the other hand, includes only the free-float shares that is, shares available in the market for trading. Thus, the market capitalisation of a closely held company would be significantly reduced in a free-float based index.

Free-float: The Rationale

Free-float market capitalisation for indexes is considered to be superior to full market capitalisation because it reflects the trading activity and liquidity in the market better. The transparency of ownership data and democratization of the ownership are key factors in implementing free-float. Cross ownership, which refers to stakes held by the index companies amongst other index companies, is widely prevalent in the emerging markets including India. This can be gauged from the fact that in the Sensex, six companies hold stakes in other index companies. For instance, TISCO holds 9.37 per cent stakes in TELCO and again TELCO holds 4.66 per cent in TISCO. However, for the purpose of calculation of the index, in the existing full market capitalisation methodology, the entire market capitalisation of both the companies is taken into account. In contrast, free-float index construction entails such mutual stakes to be deducted in order to represent the free investability of a stock.

Under the full market capitalisation weighted index, a low free-float lends itself to volatility and manipulation and rise in the price of the illiquid stocks (due to large promoter holding), which can cause the index to move sharply. Low free-float can also give rise to price manipulation where a group of investors or even a single speculator can move the prices leading to small investors end up paying a price, which is highly unsustainable. Therefore, basing only on free-float capitalisation, these indices could remove these anomalies to a large extent and reflect the underlying market movement in a better way.

The shareholding pattern in India is another important factor underlining the need to move to the free-float methodology. The available free-float in most American companies is above 90 per cent whereas in India promoters have more than 50 per cent stakes in majority of the large companies. In specific, promoters have about 40 per cent holding in Sensex companies. The main reason behind the growing popularity of the free-float methodology the world over, however, is that foreign institutional investors (FIIs) generally track benchmark indices in order to get an exposure to a country. And hence, the new index is most relevant for them.

Free-float: Implementation of the Methodology

While the objective in building free-float indexes is clear, it appears that there is wide variation in determining what is free-float and how it gets incorporated into calculation of the indexes. Generally, companies falling in a certain range of free float (FF), called band, are given equal weightage. This is mainly due to two reasons. One, the calculation of exact free-float of each company is somewhat difficult. Second, using exact FF factors may require frequent changes in weights and consequently portfolio managers would unnecessarily be

forced to realign their portfolios. Only when the change has a significant impact on share availability, the weight is altered. FTSE, on which BSE relied significantly for advice and guidance, follows its own weighting pattern. It gives relatively higher weights to larger free-floats. While companies with free-float between 5 per cent to 15 per cent get actual weightage, those having free-float shares in the range of 50 to 75 per cent get a weightage of 75 per cent and those with 75+ per cent FF get a weight of 100 per cent. BSE determines the free-float factor for each company based on the detailed information submitted by the companies through the specially designed Free-Float Format. BSE created nine bands of regular intervals of ten percentage points. Once the free-float factor of a company is determined, it is rounded off to the next higher multiple of 10 and each company is placed into one of the bands. For example, if the free-float factor of a company is 0.56 then it will be rounded off to 0.60. In a way, assuming that free-float shares are determined accurately, weights assigned by BSE appear to represent the reality closely compared to FTSE.

The current format of disclosure of shareholding pattern, as per the SEBI guidelines, does not help adequately in determining the free-float. Companies like ACC, HDFC, ICICI, ITC, L&T and SBI report their non-promoter holding as 100 per cent while it is a common knowledge that large holdings in these companies are held by strategic investors and hence cannot be considered to be free-float in the true sense. For instance, Ambuja Cement Ltd holds 14.43 per cent in ACC, foreign companies hold 32.50 per cent in ITC, Grasim Industries holds 14 per cent in L & T and 59.73 per cent held by RBI in SBI. However, the HDFC and ICICI bank have been given free-float factor as 1 due to the fact that all the shares of the company can be considered as floating stocks. Since the free-float methodology relies heavily on the disclosure of the shareholding pattern in an appropriate manner by the companies, BSE has designed a separate format called the Free-Float Format to be filled and submitted by all index companies on a quarterly basis to the stock exchange.

BSE has calculated the free-float factor for all the Sensex companies and reported in its website (see Table-1). Companies such as ICICI Bank and HDFC which have got a larger free-float factor would enjoy a relatively higher weightage in the new Sensex. On the other hand, the free-float factor and weightage of Reliance Industries Ltd and Hindustan Lever Ltd would decrease. The increase in weightage of ICICI bank and HDFC is mainly due to the fact that most of the shares of the companies can be considered as floating stocks. Due to this fact, these companies are assigned free-float factor as 1, which means the entire market capitalisation of these companies would be considered while calculating the index. Other significant gainers in weightage are ACC, Bajaj Auto, Dr. Reddy's Laboratories, Infosys,

Ranbaxy and Satyam Computer Services. However, in case of BHEL, Castrol India Ltd, and HCL Technologies the free-float factor as calculated by BSE will be 0.4, 0.3 and 0.3 respectively. It means that only 30 or less per cent shares of Castrol India Ltd and HCL Technologies are considered as floating stock for index computation. This is because the shares of HCL Corporation Ltd and HCL Holdings Private Ltd acquiring in HCL Technologies is 55.32 and 21.19 percent respectively. Similarly the holding of Castrol Ltd at 70.92 per cent of Castrol India Ltd brings down the free-float factor to 0.3. The free-float market capitalisation of BSES Ltd comes down due to holdings of Reliance group at 58.24 per cent. Similar is the case for HLL and Nestle India Ltd. SBI's free-float market capitalisation comes down significantly due to RBI's holding at 59.73 per cent.

BSE's decision to move from full market capitalisation to free-float market capitalisation not only changes the weightage of individual companies but also changes the sectoral weights. In the sectoral break up of the Sensex (see Table-2), the weightage of Financial Sector, Information Technology, Healthcare and Metal Products and Mining sectors will increase and that of FMCG, Oil and Gas, Chemical and Petrochemicals and Power sector will come down. The weight assigned to the financial sector increases from 13.31 per cent to 15.31 per cent and that of IT from 10.83 per cent to 12.56 per cent. Similarly, the weightage of healthcare and metal products sectors increases from 10.35 and 4.53 percents to 11.51 and 5.61 percents respectively. While FMCG weightage comes down to 18.70 per cent from 21.63 per cent and that of oil and gas from 4.84 to 3.48 per cent.

Now the question arises as to whether the reported free-float factor are proper. The problem with banding approach is that it may lead to inconsistent weightings within the same band. For example, a company falling in the lower side of a band and one falling in the higher side of the band would be weighted equally though their investability differs greatly. Table-1 shows the difference in free-float factor for each company had the BSE followed exact free-float methodology. It is explicit in case of Bajaj Auto Ltd, BHEL Ltd, Glaxo Ltd, Infosys Ltd, SBI etc., which again brings the question of possible bias in estimating the free-float factor.

Even more importantly, for some of the companies weights calculated from the publicly available shareholding pattern differ from what BSE has assigned. For instance, the shareholding pattern of Cipla Ltd and Nestle India Ltd as reported by BSE for the first quarter of the year 2003-04 gives a different free-float factor even after rounding off to a higher multiple of 10. The calculated free-float factor for Cipla Ltd is 0.60 whereas it is 0.70 at BSE calculation. Same is the case with Nestle India Ltd. In case of Satyam Computer Services

Ltd, while the company shows clearly its promoters holding as 20.41 per cent, BSE assigned free-float factor as 0.90. Similar is the case for Cipla Ltd, where company reports promoters stake as 39.94 per cent, BSE assigns free-float factor as 0.70. Telco's case is also interesting because BSE took Daimler Chrysler AG which has 8 per cent share, as a strategic stakeholder though the company reported it under the non-promoter category. Our studies at ISID clearly indicate the need for improvement in the reporting of shareholding data. Indeed, a large number of companies only report aggregates for the private corporate bodies, Indian public, foreign holdings etc without giving the segregated information of their holdings. SEBI should look into this problem.

Free-float: What to Expect?

The free-float based index aids more the passive investing styles rather than active investing. There are funds known as "index funds" that have a specific goal of tracking the performance of established stock market indexes such as Sensex. That approach is known as "indexing" or "passive investing" since there are no decisions made by the fund manager. Most mutual funds, however, have a manager (or team thereof) with a goal of picking good stocks that can outperform the market indexes. Since they are active in the selection of stocks, this approach is known as "active management". Since actively managed funds simply try to pick good stocks, they won't really care if the index weights are changing – resulting in no real impact. Still it would help mutual fund investors in knowing easily how their fund is performing vis-à-vis the index in a realistic way. Hence, index fund investors will be most affected. Due to sensitivity of price movement of closely-held companies in the full market capitalisation index may lead to higher impact cost for index funds which would come down in a free-float based index. Besides that index funds have to face a negative side effect of trading cost. In order to track the adjustments made by Sensex, index fund managers may have to do a lot of buying and selling to re-adjust the weights of each stock to match the new methodology. A damaging side affect of the process is the increased tax liability due to the long-term capital gains tax in equity investment. This is because the reshuffling might trigger a significant capital gain, especially at this juncture, resulting in a potential large tax liability.

Though BSE officials are of the view that there would not be any change in the Sensex value due to the change in the methodology, there is a concern about the replacement of the constituent companies in the Sensex. Right now that problem is non-existent since BSE is shifting only the Sensex and is not concerned about the free-float market capitalisation of constituents of other indices. There is also the distinct possibility of some companies outside

the Sensex might have higher free-float market capitalisation than the constituents of Sensex. Given the criteria for inclusion in Sensex, those companies may qualify to be in the Sensex. This issue is, however, not addressed so far by BSE.

There is also a concern that due to the change in the methodology, historical data relating to the Sensex movement may become irrelevant. In order to have continuity of data, stock exchanges all over the world have worked out backward calculation taking note of free-float. The question is whether the BSE can replicate the global experience. The backward adjustment for the free-float would be possible if shareholding pattern of companies is available for the past years. Therefore, backward adjustment for the free-floating would be of limited value in India, since a somewhat detailed shareholding data is available only since March 2001.

Free-float methodology largely depends on the disclosure of the correct shareholding pattern. Getting this true free-float information is difficult in India and also another difficulty is subjectivity in calculating the free-float factor. It is up to BSE to scrutinize and classify the information carefully, which would show the right way towards BSE's looking forward to adopt the same methodology to other broad based indices. It needs to be seen to what extent the adjustments to portfolios of index investors triggered by the new methodology will impact the market sentiment in the immediate term. It should also be seen to what extent certain companies attract/lose FII investments due to changes in the weights.

Table - 1									
Company Name	Market Cap	Non-Promoter Holding(%)	Banded Free-float	Exact Free-float	Band Free-float Market Cap	Exact Free-float Market Cap	Simple Weight	Weight in Band Free-float	Weight in Exact Free-float
ACC	2862.37	85.57	0.90	0.86	2576.13	2461.64	0.97	1.38	1.40
BSES	3925.78	41.76	0.50	0.42	1962.89	1648.83	1.34	1.05	0.94
Bajaj Auto	5712.05	70.83	0.80	0.71	4569.64	4055.56	1.94	2.45	2.30
BHEL	6709.3	32.38	0.40	0.32	2683.72	2146.98	2.28	1.44	1.22
Castrol India	2512.77	28.97	0.30	0.29	753.83	728.70	0.85	0.40	0.41
Cipla	4682.54	60.06	0.70	0.60	3277.78	2809.52	1.59	1.76	1.59
Colgate-Palmolive	1902.36	49.00	0.50	0.49	951.18	932.16	0.65	0.51	0.53
Dr. Reddy'S Laboratories	8445.63	73.98	0.80	0.74	6756.50	6249.77	2.87	3.62	3.54
Glaxosmithkline	2710.36	51.17	0.60	0.51	1626.22	1382.28	0.92	0.87	0.78
Grasim Industries	4470.13	79.58	0.80	0.80	3576.10	3576.10	1.52	1.92	2.03
Gujarat Ambuja Cements	3085.07	72.51	0.80	0.72	2468.06	2221.25	1.05	1.32	1.26
H C L Technologies	4412.01	22.96	0.30	0.23	1323.60	1014.76	1.50	0.71	0.58
Hero Honda Motors	5011.33	44.90	0.50	0.45	2505.67	2255.10	1.70	1.34	1.28
Hindalco Industries	6999.74	75.63	0.80	0.76	5599.79	5319.80	2.38	3.00	3.02
HLL	37674.29	48.45	0.50	0.48	18837.15	18083.66	12.82	10.11	10.26
HPCL	11722.08	48.99	0.50	0.49	5861.04	5743.82	3.99	3.14	3.26
HDFC	9945.49	100.00	1.00	1.00	9945.49	9945.49	3.38	5.34	5.64
ICICI Bank	9107.56	100.00	1.00	1.00	9107.56	9107.56	3.10	4.89	5.17
ITC	18619.46	67.50	0.70	0.67	13033.62	12475.04	6.33	6.99	7.08
Infosys Technologies	21499.73	71.58	0.80	0.71	17199.78	15264.81	7.31	9.23	8.66
L & T	6258.14	86.00	0.90	0.86	5632.33	5382.00	2.13	3.02	3.05
MTNL	7010.67	43.75	0.50	0.44	3505.34	3084.69	2.39	1.88	1.75
Nestle India	5391.38	40.24	0.50	0.40	2695.69	2156.55	1.83	1.45	1.22
Ranbaxy Laboratories	14578.2	67.95	0.70	0.68	10204.74	9913.18	4.96	5.47	5.62
Reliance Industries	45912.89	53.32	0.60	0.53	27547.73	24333.83	15.62	14.78	13.80
Satyam Computer	5921.47	79.59	0.90	0.80	5329.32	4737.18	2.01	2.86	2.69
SBI	20074.98	40.73	0.50	0.41	10037.49	8230.74	6.83	5.39	4.67
TELCO	6515.82	67.82	0.60	0.68	3909.49	4430.76	2.22	2.10	2.51
TISCO	6318.82	73.70	0.80	0.74	5055.06	4675.93	2.15	2.71	2.65
Zee Telefilms	3942.47	49.51	0.50	0.49	1971.24	1931.81	1.34	1.06	1.10

Note: Market capitalisation data is 30 days average from 6th June 2003 to 17th July 2003.

Table - 2				
Sectors	Market Cap	Weight	Free-float Market Cap	Free-float weight
IT	31833.20	10.83	23852.71	12.56
FMCG	63587.49	21.63	35517.64	18.70
Finance	39128.03	13.31	29090.54	15.31
Media & Publishing	3942.47	1.34	1971.24	1.04
Chemical and Petrochem	45912.89	15.62	27547.73	14.50
Oil & Gas	14234.85	4.84	6614.87	3.48
Healthcare	30416.73	10.35	21865.24	11.51
Telecom	7010.67	2.39	3505.34	1.85
Transport Equipment	17239.15	5.86	10984.80	5.78
Diversified	10728.27	3.65	9208.43	4.85
Metal & Mining	13318.56	4.53	10654.85	5.61
Housing Related	5947.44	2.02	5044.19	2.66
Power	3925.78	1.34	1962.89	1.03
Capital Goods	6709.30	2.28	2146.98	1.13
Total	293934.89	100.00	189967.44	100.00