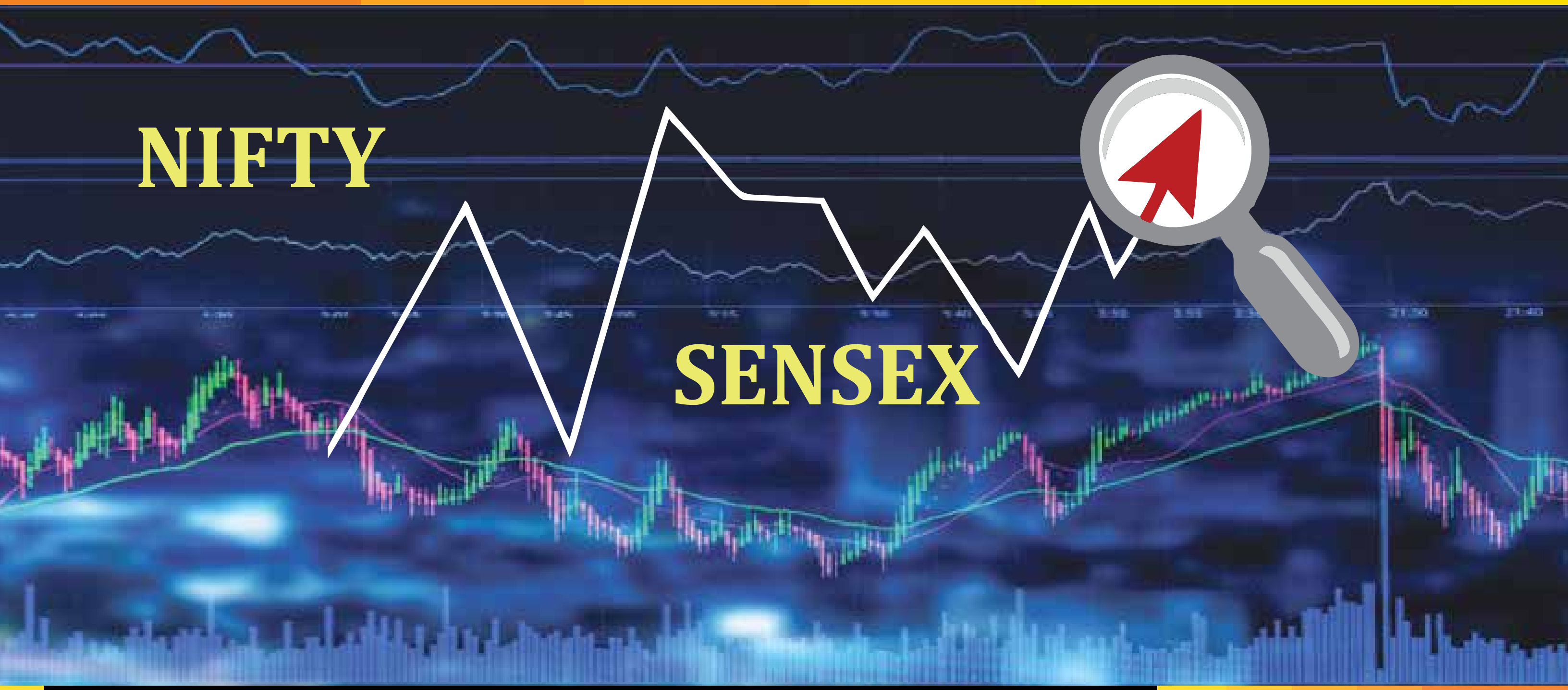
NSDL
Technology, Trust & Reach

The Financial Kaleidoscope

Defining the different shapes of investment

April 2018



From The Editor's Desk

Dear Reader,

With the continuous efforts to increase the financial literacy amongst individuals, 'share market' or 'share bazaar' has become a well-known term amongst all age groups and across sections of society, be it students, working professionals, businessmen or retired individuals. In India, there are thousands of companies listed on the two most popular stock exchanges, namely National Stock Exchange (NSE) and BSE (earlier known as Bombay Stock Exchange). The price of shares and other securities issued by these companies move upwards and downwards thereby creating the opportunity for the investor to either buy or sell the securities. Today, investors have access to information about different securities online which facilitates information backed decision making. Having said that, it is very important for all investors to conduct their own research or homework before buying / selling a stock. For most of us, it is best to take help from a SEBI registered professional or advisor. In capital markets, market indices form an important part as they indicate the overall market performance. Indices make it easy for investors to view the market at a glance and get a feel of mood of the markets. Two of the well-known stock indices in India are the NSE's NIFTY 50 and BSE's SENSEX. They are considered as the benchmark indices in India.

This month's issue of The Financial Kaleidoscope is about Indices, their computations and the important role they play in guiding investors. We trust you find reading it interesting. Your suggestions and comments are always welcome.

Regards,
NSDL

Click & Find: Overview of Index

What is an ‘Index’

Let’s start with the basics. An index is generally a broad based indicator of movement in prices of financial products, commodities, etc. When we say ‘Index’ in stock market, it represents a statistical measure of changes happening in prices of various securities in the market. As the prices of underlying securities is volatile, stock market index keeps on changing rapidly.

Indices are used widely in capital markets. Apart from some general purpose or overall representative indices, there are many specific indices in use all over the world. NIFTY 50 and SENSEX are two most popular indices used in India. Some others for example are – BSE Bankex (sectoral or specific index for banking sector), BSE Small Cap (broad based index for companies which are small on market capitalization parameter), NIFTY Dividend Opportunities 50 Index (a strategy based index) etc.

Types of Indices in a Stock Market

Stock market indices may be categorized according to various parameters, as per the need. Some popular types are mentioned below -

Broad Market Indices

A broad-based index is designed to reflect the movement of the entire market. They serve as a benchmark for measuring the performance of the stocks or portfolios such as mutual fund investments.

However, broad market indices are not total market indices. They leave out many small and micro-cap stocks. Broad market indices only include securities with reasonable size and liquidity. Derivatives based on broad-based indices allow investors to effectively own the same basket of stocks contained in a major index while committing a small amount of money. Example - S&P BSE AllCap index.

Sectoral Indices

Sectoral indices represent indices which are constituted by securities belonging to a specific sector of market, for example, banking, pharma, telecom, financial services etc. These indices enable investors to make more selective choices of companies to track progress in relation to their respective peer group.

For instance – NIFTY Bank Index is an index comprising 12 liquid and large capitalised Indian Banking stocks. It provides investors and market intermediaries with a benchmark that captures the capital market performance of Indian banks.

Thematic Indices

Thematic indices are based on themes like emerging markets, alternative energy, fixed income, education, etc. to help investors match their needs to market trends. Examples - Low Carbon 100 Europe Index of Euronext, S&P BSE India Infrastructure and NSE’s NIFTY Energy Index.

Fixed Income Indices

A Fixed income index measures the performance of the bond market. They are useful tool for investors to measure and compare performance of bond portfolio. Fixed income indices are also used for introduction of Exchange Traded Funds. Examples - NIFTY AAA Ultra Short Duration Bond Index, NIFTY A Long-Term Bond Index, S&P BSE India Sovereign Bond Index.

Blended or Hybrid Indices

As the name suggests, it is an index constituted by two or more indices. The underlying indices may carry same or different weightages in computation of final index. Example - The NIFTY 50 Hybrid Short Duration Debt 25:75 Index. It is blended by two different indices namely NIFTY 50 (25% weightage) and NIFTY Short Duration Debt Index (75% weightage).

Get Started: How is an Index computed?

Basic steps to compute an Index for stock market are given below –

- Prepare list of stocks which would constitute the index
- Ascertain price and / or market capitalization for each chosen stock as on a base date
- Assign a base value or initial value of index as on the base date

- Thereafter, the index can be computed at any pre-defined time interval by giving input of changed prices and / or market capitalization data for each stock

There are two methods which are widely used for calculating indices, described below -

Market-Capitalization Weighted Index

These are the most commonly used indices by the exchanges worldwide. In this method, number (size) and the price of the stock both are taken into consideration to compute the index. Market capitalization for each company is computed by multiplying the number of shares issued by that company with the price of the shares. In this method, index is impacted by movements in price of stock and also by the quantity of the stock.

There are two variations in this method. One considers the total number of shares issued by the company for computation of market capitalization. Other variation which is more logical and hence popular too, considers the number of shares available for trade in the market (free float market capitalization method).

Price Weighted Index

In this method, the value of an index is calculated on the basis of the company's stock price. This method gives weights to each security forming the index according to the price per share prevailing in the market. Hence, stocks with a higher price enjoy more weight and consequently, do have greater influence over the performance of the index.

Let's understand it now by taking an example. Suppose an index is to be computed comprising of two stocks A and B only, using free float market capitalization method. The base date is selected as January 1, 2000 and base or initial value of index set to be 1000.

Name of stock	Total no. of issued shares	No. of shares available for trading to public	Price as on base date January 1, 2000 (In ₹)	Price as on December 31, 2017 (In ₹)
Company A	1000	500	100	125
Company B	2000	1600	200	250
Market capitalization of free float stock	(500*100) + (1600*200) = 3,70,000		(500*125) + (1600*250) = 4,62,500	
Index value as on base date January 1, 2000	1000 (pre decided for given market capitalization of 3,70,000)			
Index value as on December 31, 2017	(4,62,500*1000)/3,70,000 = **1250**			

Over the period, index computation techniques have evolved a lot. There is great amount of research work which goes behind selection of stocks, choice of base year and base value, price intervals to be considered, criteria of inclusion and exclusion of stocks from an index, adjustments to be undertaken on account of corporate events like further issuance of shares by way of bonus or rights issue, sub division of shares etc. which impact the market capitalization of the stock. Most exchanges across the world follow a transparent and well documented policy for computation of their various indices to make them reliable, understandable and acceptable to various user groups.

Benefits of considering Indices to analyse the movement of stock market

An index can be used as a benchmark making it easy for an investor to compare performance of various stocks. SENSEX and NIFTY are often used as benchmarks in India to find out if a stock has outperformed or underperformed the market by comparing the index and the stock price. This also helps investors to identify market trends with ease. Many investors prefer to have a portfolio of securities that closely resembles an index. They simply rely on the index for stock selection (called Passive Investment strategy). As a result, their portfolio returns match those of the index in most cases. For instance, if SENSEX gave 10% returns in one month, then the investor's portfolio which is mirroring the index scrips is likely to give the same percentage of returns.

Indices tell us about the health of the industry in which an investor has invested. If a person following SENSEX sees a drop which continues for some days, he/she might have to analyse his/her portfolio to either buy or sell certain stocks.

Some salient benefits that you can reap by following movements of the stock market indices are mentioned below -

- Stock indices reflect information which is updated on real time basis. Hence, they provide an easy way to track the overall financial health, making it the lead indicator of the overall performance of the economy.
- The historical data of index movements and prices can also provide some guidance to the investors about the market reactions

to certain scenarios in the past. This enables them to balance their portfolios accordingly.

- Indices show trends and changes in investing patterns, providing a yardstick for comparison.

Modern financial applications such as index based funds, index futures, index options play an important role in financial investments and risk management.

Popular Indices of India – SENSEX and NIFTY

Particulars	SENSEX	NIFTY
Full Name	S&P BSE SENSEX	NIFTY 50
Belongs to	BSE Limited	National Stock Exchange of India Limited
Start date	January 1, 1986	April 21, 1996
Base date / period	Base year 1978-79	November 3, 1995
Initial Value	100	1000
No. of underlying companies	30	50
Computation method / basis	Free float market capitalization method	
Highest Value ever (till date)	36,443.98	11,171.55
Closing Value as on April 30, 2018	35,160.36	10,739.35
3 year Index returns as on April 30, 2018	25.40%	25.60%

Some popular Market Indices across the globe

The S&P 500 is one of the world's best known stock markets indices. It includes 70% of the total stocks traded in the United States of America. The Dow Jones Industrial Average (DJIA), another very well-known index, measures 30 stocks traded on the New York Stock Exchange and NASDAQ. These companies include premier corporations such as General Electric Company, Walt Disney, Exxon Mobil Corporation, Microsoft Corporation etc. The NASDAQ Composite index reflects prices of the 4,000 stocks traded on the NASDAQ.

Active and Passive Investment funds

There is a difference between actively managed and passively managed investment funds. Knowing the difference can help you understand which one suits your investment needs better than the other. Mostly, your choice will depend on the amount of risk you are willing to take with your money. When investment funds are actively managed, there is a professional fund manager or a core team which decides where the fund's money should be invested. In contrast, a passively managed fund does not have a management team making investment decisions as they need simply follow a market index, like SENSEX or NIFTY and therefore, charge less fee to investors.

The finance world is divided on its views about the efficacy of each one. Active funds are generally better performers as they can beat the market index in terms of returns in the long run. Passively managed funds, purchase and sell stocks to maintain the relative position in portfolio as per the benchmark index. So, if you have put your money in a fund that follows NIFTY 50, then your performance is going to mimic the performance of NIFTY 50. Common examples of passive funds are Index Funds and ETFs (Exchange Traded Funds).

Index Funds

Because you cannot invest directly in an index, index funds are created to track their performance. Index funds, as the name suggests, invest in an index. An index fund is a type of mutual fund which tracks the components of a stock market index and follows a set of specific rules regardless of the state of the market. These funds purchase all the stocks in the same proportion as in a particular index. They perform in tandem with the index they are tracking, save for a small difference known as tracking error.

Index Funds are easier and beneficial to invest in for a lot of reasons. They have relatively low operating expenses. An index fund might cost you a fraction of the actual expense ratio of most mutual funds. In addition to the lower cost, index funds can be a lower risk investment. They are better choice for people who have a low risk appetite as they provide a broad market exposure. A single index fund can be a potential combination of hundreds of securities which can distribute the risk evenly. They are not traded as frequently as actively managed funds, they provide a low portfolio turnover and hence are more tax efficient.

Your Questions: Our Answers

1. **Why does SENSEX or NIFTY move up or down?**
   Most of us, grapple with this question. Many of us wonder at the speed at which these indices change on screen. The answer lies in the way these indices are computed. As explained above, any stock index reflects the changes happening in the market capitalisation of the underlying securities (which in-turn is mostly a function of price of the security). Generally there are hundreds of trades happening at different prices in the underlying securities every minute during the market hours. Trades happen at different prices because brokers or traders in the market have different perception or viewpoint on same event or piece of market news. If the news is considered as positive, the stock price generally moves up, and vice versa. Therefore, the movement in index depends upon the aggregate or averaged movements in prices of underlying stocks. For example, SENSEX which is constituted by 30 different companies will move up if there is good news about all the 30 companies on the given day and time. If the news is perceived as negative, then the index is expected to go down. Mostly, the news are such that they are positive in case of some companies and negative for rest. There may not be any news in respect of some companies on a given day. So the direction and quantum of movement in index of that day and time, will be the averaged effect of movements in prices of 30 different companies. It should also be remembered that all the stocks do not carry the same amount of impact on the index.
2. **When an index either goes up or down, what does it signify?**
   The movements of an index in either direction and its degree, reflect the changing expectations of the stock market about future dividends of India's corporate sector. When the index goes up, the prospective dividends in the future are expected to be better than the past. In contrast, when prospects of dividends in the future become pessimistic, the index drops.
3. **Why are stock indices important?**
   Indices are great information sources. They give an instant feel on how the market is performing. This information is valuable when an index reflects up to date information and this information, in turn, tells an investor how his/her individual portfolio is performing comparatively.
4. **What are the criteria for selection of securities for Index?**
   The Index Committee specifically constituted by Exchanges for this purpose, meets periodically to review all the indices. Decision on inclusion and exclusion of a particular stock from an Index is taken based upon pre decided set of certain qualitative and quantitative parameters, for example – market capitalization, trading frequency, average daily trades, average daily turnover, listing history and track record. In case of a revision in the Index constituents, the announcement of the incoming and outgoing securities is made in advance of the actual implementation.
5. **What is the calculation frequency for Nifty 50 and Sensex?**
   During market hours, prices of the index constituting Nifty 50 and Sensex stocks are automatically fed to a computer. Index is calculated on a real time basis and disseminated at an interval of 1 second. Index thus computed is continuously updated on all trading workstations connected to the Exchange trading system in real time.
6. **What are Index derivative products?**
   Like for individual stocks, derivative products are available for indices also. So BSE has futures product for popular index SENSEX. It comes in three different maturity periods namely one month, two months and three months. Similarly, NSE currently provides trading in Futures and Options contracts on 9 major indices.

News Articles

SEBI Circular on Investor grievance redress mechanism

SEBI has informed about new measures with respect to its Investor grievance redress mechanism. Effective from August 1, 2018, following procedure shall be followed for filing and redressal of investor grievances using SCORES:

a. Investors who wish to lodge a complaint on SCORES will have to register themselves on **www.scores.gov.in.** Upon successful registration, a unique user ID and a password shall be communicated to the investor through an acknowledgement email / SMS.
b. An investor shall use login credentials for lodging complaint on SCORES.
c. The complaint shall be forwarded to the entity concerned for resolution. The entity is required to redress the grievance within 30 days, failing which the complaint shall be registered in SCORES.

Reference: NSDL Circular No. NSDL/POLICY/2018/0021 dated April 3, 2018, available on **www.nsdl.co.in**

Enhancements in NSDL SMS Alert facility

With effect from April 14, 2018, NSDL has enhanced its SMS Alert facility whereby clients will receive SMS alerts in respect of following events pertaining to instruction submitted for the purpose of acquisition of shares by the company pursuant to Tender-

Offers through stock exchange mechanism:
a) Blocking of shares in the demat account of the client
b) Debit of shares from the demat account of the client
Reference: NSDL Circular No. NSDL/POLICY/2018/0022 dated April 17, 2018, available on **www.nsdl.co.in**

Flashing a link to SCORES on the Participant's website

To address the issues of the Clients/ investors to lodge grievances against a listed company/ intermediary registered with SEBI, w.e.f. July 1, 2018, Participants will provide link to SCORES portal on their website from where the clients view details of their demat account.
Reference:NSDL Circular No. NSDL/POLICY/2018/0024 dated April 23, 2018, available on NSDL website **www.nsdl.co.in**

Online facility for seeding Aadhaar in NSDL Demat Account

NSDL has launched an online facility for demat account holders to update their Aadhaar number in their demat accounts. This facility is available at **https://aadhaar.nsdl.com/AdhaarSeeding/**
Reference: NSDL Circular No. NSDL/POLICY/2018/0015 dated March 14, 2018, available on NSDL website **www.nsdl.co.in**

Activation of New Participant(s)

Following Participant has been admitted as Participant of NSDL and made operational during April 2018 -

Sr. No.	Depository Participant (DP) Name	DP ID	Location
1	Drishti Shares & Investments Private Limited	IN304238	New Delhi

This takes the total number of Participants to 277 and the total number of operational DPM set-ups to 355.

Subscription to SPEED-e

During April 2018, one more Participant has subscribed to the SPEED-e facility namely
- Drishti Shares & Investments Private Limited (DP ID IN304238)

Clients of the above mentioned Participant can now avail the facility of submitting various instructions through SPEED-e facility.
This takes the total number of Participants which have subscribed to SPEED-e to 201.

Training Programmes for Participants

NISM / NSDL-DO training / certification programme for Participants

To facilitate officials of Participants to prepare and appear for NISM-Series VI Depository Operations Certification Examination (DOCE), NSDL conducted four training programmes at Ahmedabad and Mumbai during March and April 2018.

CPE Training Programme for Participants

NSDL, a NISM Accredited Continuing Professional Education (CPE) Provider offers CPE training programmes in different modules like Depository Operations, Mutual Fund, Currency Derivatives, Equity Derivatives, Securities Operations and Risk Management etc. for eligible associated persons. In March and April 2018, NSDL conducted 21 such training programmes at Ahmedabad, Chennai, Hyderabad, Indore, Kolkata, Mumbai and New Delhi.

Training Programme for Issuers and Registrar & Transfer Agents

NSDL conducted two training programmes on NSDL operations for staff of Issuers and Registrar & Transfer Agents at Mumbai & Chennai in March and April 2018.

Investor Education initiatives undertaken by NSDL

In order to reach out to investors that are spread across the country to apprise them about the facilities available in NSDL depository system and educate them about financial markets, NSDL conducts various Programmes with Participants, Housing Societies, Institutions like SEBI, NSE, corporates etc. and also participates in various events. During March & April 2018, NSDL conducted / participated in 59 such programmes / events which were attended by more than 4,400 investors. Details are mentioned below:

Sr. No.	Particulars	
1	**Joint Awareness Programmes with Participants**	**No. of Programmes**
	Sharekhan Limited	10
	Stock Holding Corporation of India Limited	8
	Kotak Securities Limited	4
	ICICI Bank Limited	3
	Acumen Capital Market (India) Limited	2
	ASE Capital Markets Limited	2
	CSE Capital Markets Private Limited	2

	Nirmal Bang Securities Private Limited	2
	Swastika Investmart Limited	2
	Beeline Broking Limited	1
	Jhaveri Securities Limited	1
	KIFS Trade Capital Private Limited	1
	Master Capital Services Limited	1
	SBICAP Securities Limited	1
	SMC Global Securities Limited	1
	Vertex Securities Limited	1
	Total	**42**

2	Joint Awareness Programmes with other Institutions	No. of Programmes
	Securities and Exchange Board of India	8
	Other Institution	3
	Total	**11**

3	Workshop for Colleges	No. of Programmes
	'Zeal' event organized by Vidyavardhini's College of Engineering and Technology, Mumbai	1
	S. P. N. Doshi Women's College, Mumbai	1
	Total	**2**

4	Training Programmes for Participants	No. of Programmes
	Oriental Bank of Commerce	2
	The Saraswat Co-Operative Bank Limited	1
	Total	**3**

5	Participation at Events	No. of Programmes
	The Economic Times Capital Market Summit 2018	1
	Total	**1**

Blog

What is an Index and Index funds?

By Hansi Mehrotra, CFA
Founder of The Money Hans

Imagine you got back from the vegetable market and got asked how the prices of vegetables were that day? Instead of listing how the price of each vegetable had done that day, you could give a 'feel' by imagining a basket with one of each of the vegetables in it. That basket is called an index. It's a 'proxy' for the whole market. So when someone says the market has gone up or down, they mean the index for that market has gone up or down. It does not mean each item in that market has gone the same way.

There are indexes, or indices (to be grammatically correct), for all sorts of things. For example, there is an index for inflation called the Consumer Price Index, which tracks the price of certain goods and services that an average household would have to spend on.

Similarly, there are indices for stock markets. Indeed, there are indices for various segments and sub-segments for every market in the world. For example, you hear about the 'SENSEX' and 'NIFTY' in the business newspapers and TV channels. The SENSEX (an amalgamation of words 'Sensitive' and 'Index') is an index that India's oldest stock exchange, BSE Limited (formerly Bombay Stock Exchange) publishes daily tracking the 30 selected companies listed on the BSE. Similarly, the NIFTY 50 is an index that the National Stock Exchange on India Limited (NSE) publishes daily tracking the prices of the 50 selected stocks listed on the NSE. These two indices are 'large cap' indices, which means they are bellwethers for the performance of the share price of the largest stocks. There are also indices that track the largest 200 and 500 stocks, representing 'mid cap' and 'broad market' segments.

Since the largest 500 stocks represent about 98% of the market value of all stocks listed on the exchanges, an investor who wishes to get exposure to the Indian economy could do so by simply buying an index fund.

Index funds are mutual funds that aim to provide the same performance as a specified market index. For example, a NIFTY index fund buys as many of the 50 stocks that make up the NSE NIFTY Index as possible, such that the performance of the index fund 'passively tracks' the index.

Index funds are useful for investors who do not wish to risk, getting a lower performance than the broad market. Since the index fund is not trying to outperform the index, its fees and charges are very low compared to active mutual funds.

What are the advantages of using Indices while analyzing securities?

Send your replies providing your name, address and contact no. with the subject 'Knowledge Wins Contest - April 2018' to info@nsdl.co.in

Terms and Conditions

- NSDL shall be solely responsible for the execution and administration of this Contest.
- This Contest is only open to Indian Citizens. (NSDL employees are not allowed to participate in this contest.)
- All personal details submitted must be accurate and complete and are subject to proof upon request by NSDL.
- NSDL reserves the right, at any time, to verify the validity of entries and entrants and to dispqalify any entry not submitted in accordance with these Terms or which tampers with the entry process.
- NSDL reserves the right to discontinue the contest at any given point of time without prior intimation.
- All prize drawings will made on a strictly random basis and the decision made by NSDL will be final

Your suggestions for newsletter are valuable to us.
Send in your suggestions mentioning your name, address and contact number with the subject "Suggestions for the newsletter" to info@nsdl.co.in

NSDL Offices

Head Office

Mumbai 4th Floor, 'A' Wing, Trade World, Kamala Mills Compound, Senapati Bapat Marg, Lower Parel, Mumbai - 400013 Tel.: (022) 24994200 / 40904200

Branch Offices

Ahmedabad Unit No. 407, 4th floor, 3rd Eye One Commercial Complex Co-operative Society Limited, C. G. Road, Near Panchvati Circle, Ahmedabad - 380006 Tel.: (079) 26461376	**Bengaluru** Office No. 106, DBS house 26, Cunningham Road, Bengaluru - 560052 Tel.: (080) 40407106	**Chennai** 6A, 6th Floor, Kences Towers, #1 Ramkrishna Street, North Usman Road, T. Nagar, Chennai - 600017 Tel.: (044) 28143911, 28143917	**Hyderabad** Office No. 123, Hyderabad Regus Mid-Town, 1st Floor, Mid Town Plaza, Road No. 1, Banjara Hills, Hyderabad - 500033 Tel.: (040) 44334178

Kochi Suite No. S – 105, Monlash Business Center, 4th Floor, Crescens Tower, NH 47, Changampuzha Nagar Post, Kochi - 682033 Tel.: (0484) 2933075	**Kolkata** Unit 2E, 2nd Floor, The Millenium, 235/2A, A.J.C. Bose Road, Kolkata - 700020 Tel.: (033) 22814662, 22904246	**New Delhi** Unit No. 601, 603, 604, 6th Floor, Tower-A, Naurang House, Kasturba Gandhi Marg, Connaught Place, New Delhi - 110001 Tel.: (011) 23353814, 23353815

- **For any grievances, you can email us at relations@nsdl.co.in**
- **To know more about NSDL Certification Program, you can email us at trainingdept@nsdl.co.in**
- **For any other information, email us at info@nsdl.co.in**

"Printed & Published by **Mr. Manoj Sathe** (Editor) on behalf of National Securities Depository Limited and Printed at Printography Systems (India) Private Limited, 13/D, Kurla Ind. Estate, Nari Seva Sadan Road, Ghatkopar (West), Mumbai - 400086 and Published from National Securities Depository Limited, 4th Floor, A Wing, Trade World, Kamala Mills Compound, Senapati Bapat Marg, Lower Parel, Mumbai - 400013