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HISTORY OF STOCK EXCHANGE

When people talk stocks they are usually talking about companies listed on the New York Stock Exchange (NYSE) in world and Bombay stock exchange in case

of India. They are the big daddy and the big leagues. But the First Stock Exchange thrived for decades for a single stock without being actually traded.
Braudal spell about the History of Stock Market that during the 11th century in Cairo, the Jewish and Muslim merchants already had the notion of trade association and had set up all the methods of credit as well as payments. This claim though destroys the call that the History of Stock Market originates with Italy. During the middle of the 13th century the bankers of Venice started trading in government securities. At this very time the government of Venice outlawed airing bruits which were intentionally used to lessen the price of governmental funds. The bankers from Florence, Verona, and Genoa during the 14th century also started trading with government securities. It were the Dutch's in the History of Stock Market who inaugurated the concept of joint stock exchanges which led the people to buy share and become share holders and invest money in various businesses and get their part of profit and loss. In the 1300s Venetians were the leaders in the field and the first to start the Trading from the other Governments.
In other way, the history of stock exchanges can be traced to 12th century France, when the first brokers are believed to have developed, trading in debt and government securities. If we fall back upon the 12th century France it can be seen that the courratiers de change was worried about handling and regulating the debts on the bank's behalf of the agricultural professions. As these men used to deal with debt they can also be called as originators of brokerage business in the History of Stock market.

During the end of 13th century the traders of Bruges commodity accumulated inside the house of a native named Van der Beurse. During the early 14th century they came to be known as the Brugse Beurse. These people institutionalized their gathering, which was known to be an informal meeting until then. This concept did spread at a rapid pace around the European nations and neighboring countries. In the countries like Amsterdam and Ghent its branches known as Beurzen opened. Belgium is the first to boast a stock exchange as far back as 1531, in Antwerp. Brokers and moneylenders would meet there to deal in business, government and even individual debt issues. All these are unofficial share markets existed across Europe through the 1600s, where brokers would meet outside or in coffee houses to make trades.

EAST INDIA COMPANIES- IDEALIST OF SHARES

In the 1600s, the Dutch, British, and French governments all gave charters to companies with East India in their names. On the cusp of imperialism's high point, it seems like everyone had a stake in the profits from the East Indies and Asia except the people living there. Sea voyages that brought back goods from the East were extremely risky - on top of Barbary pirates, there were the more common risks of weather and poor navigation.

When the East India companies formed, they changed the way business was done. These companies had stocks that would pay dividends on all the proceeds from all the voyages the companies undertook, rather than going voyage by voyage. These were the first modern joint stock companies. This allowed the companies to demand more for their shares and build larger fleets. Thus, the term **SHARE** comes into existence.

A LITTLE STOCK WITH YOUR COFFEE?

Since the shares in various East India Companies were issued on paper, investors could sell the papers to other investors. Unfortunately, there was no stock exchange in existence, so the investor would have to track down a broker to carry out a trade. In England, most brokers and investors did their business in the various coffee shops around London. Debt issues and shares for sale were written up and posted on the shops' doors or mailed as a newsletter.

EVOLUTION OF OFFICIAL STOCK EXCHANGE

(A Bond from the Dutch East India Company dating from 7 November 1623, for the amount of 2400 Florins.)

The Amsterdam Stock Exchange, created in 1602, became the first official stock exchange when it began trading shares of the Dutch East India Company. These were the first company shares ever issued. It was subsequently renamed Amsterdam Bourse and was the first to formally begin trading in securities. But this oldest symbol of stock trading merged on 22 September 2000 with the Brussels stock exchange and Paris stock exchange to form Euronext, and is now known as Euronext Amsterdam.

By the early 1700s there were fully operational stock exchanges in France and England, and America followed in the later part of the century. Share exchanges became an important way for companies to raise capital for investment, while also offering investors the opportunity to share in company profits. The early days of the stock exchange experienced many scandals and share crashes, as there was little to no regulation and almost anyone was allowed to participate in the exchange.

Today, stock exchanges operate around the world, and they have become highly regulated institutions. There are now stock markets in virtually every developed and most developing economies, with the world's largest markets being in the United States, United Kingdom, Japan, India, China, Canada, Germany (Frankfurt Stock Exchange), France, South Korea and the Netherlands.

PRESENT TRENDS IN VOLUME OF STOCK EXCHANGES IN THE WORLD

HISTORY OF STOCK EXCHANGE IN INDIA

The origin of the stock market in India goes back to the end of the eighteenth century when long-term negotiable securities were first issued. Later by around 1830′s the main dealing in the shares and stocks (mainly in bank and cotton) was initiated in Bombay. However, the items in which the trading took place increased tremendously by the end of 1839. There after the concept of broker business was started which show momentum in the mid 18th century. This concept has attracted number of people to indulge in the trading of items. By 1860, the number of brokers who are dealing in the trading of items goes up to 60 in number. Further, the number of brokers increased from 60 to 250 in around 1862-1863. However, for all practical purposes, the real beginning occurred in the middle of the nineteenth century after the enactment of the companies Act in 1850, which introduced the features of limited liability and generated investor interest in corporate securities.

An important early event in the development of the stock market in India was the formation of the native share and **stock brokers** 'Association at Bombay in 1875, the precursor of the present day Bombay Stock Exchange. This was followed by the formation of associations/exchanges in Ahmedabad (1894), Calcutta (1908), and Madras (1937). In addition, a large number of ephemeral exchanges emerged mainly in buoyant periods to recede into oblivion during depressing times subsequently.

The Bombay Stock Exchange (BSE) is known as the oldest exchange in Asia. It traces its history to the 1850s, when stockbrokers would gather under banyan trees in front of Mumbai’s Town Hall. The location of these meetings changed many times, as the number of brokers constantly increased. The group eventually moved to Dalal Street in 1874 and in 1875 became an official organization known as ‘The Native Share & Stock Brokers Association’ as already stated. In 1956, the BSE became the first stock exchange to be recognized by the Indian Government under the Securities Contracts Regulation Act.

PRE INDEPENDENCE SCENARIO –

ESTABLISHMENT OF DIFFERENT STOCK EXCHANGES
A TIMELINE

1874	With the rapidly developing share trading business, brokers used to gather at a street (now well known as "*Dalal Street* ") for the purpose of transacting business.
1875	"The Native Share and Stock Brokers' Association" (also known as "The Bombay Stock Exchange") was established in Bombay
1880's	Development of cotton mills industry and set up of many others
1894	Establishment of "The Ahmedabad Share and Stock Brokers' Association"
1880 - 90's	Sharp increase in share prices of jute industries in 1870's was followed by a boom in tea stocks and coal
1908	"The Calcutta Stock Exchange Association" was formed
1920	Madras witnessed boom and business at "The Madras Stock Exchange" was transacted with 100 brokers.
1923	When recession followed, number of brokers came down to 3 and the Exchange was closed down
1934	Establishment of the Lahore Stock Exchange
1936	Merger of the Lahore Stock Exchange with the Punjab Stock Exchange
1937	Re-organization and set up of the Madras Stock Exchange Limited (Pvt.) Limited led by improvement in stock market activities in South India with establishment of new textile mills and plantation companies
1940	Uttar Pradesh Stock Exchange Limited and Nagpur Stock Exchange Limited was established
1944	Establishment of "The Hyderabad Stock Exchange Limited"
1947	"Delhi Stock and Share Brokers' Association Limited" and "The Delhi Stocks and Shares Exchange Limited" were established and later on merged into "The Delhi Stock Exchange Association Limited"

AN ENTITY BEHIND THE DEVELOPMENT OF STOCK EXCHANGES IN INDIA

SIR PHIROZE JEEJEEBHOY.

S

ir Phiroze Jeejeebhoy was the one who dominated the Stock market scene from 1946 to 1980, after the death of Sir Premchand Roychand. His word was law and he had a great deal of influence over both brokers and the government. He was a good regulator and many crises were averted due to his wisdom and practicality. Jeejeebhoy was one of the longest serving employees of the exchange and contributed significantly to the evolution of the BSE. Between 1950 and 1980, the daily turnover on the BSE was in the range of Rs 500-1,500. As against this, the

average daily turnover in the Indian stock market, including derivatives turnover, is over Rs 20,000 crore now. So far BSE had travelled the journey of entity as a Big league in global sector, due to the efforts of Sir Phiroze Jeejeebhoy.
The current headquarters of BSE housed in the 29-storeyed PJ Towers— named after the BSE's legendary chairman Sir Phiroze Jamshedji Jeejeebhoy, who was the head of the exchange from 1966 until his death in 1980—was established in 1982. The BSE building, icon of the Indian capital markets, is called P.J. Tower in his memory.

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STOCK EXCHANGE.

"Experience taught me a few things. One is to listen to your gut, no matter how good something sounds on paper. The second is that you're generally better off sticking with what you know. And the third is that sometimes your best investments are the ones you don't make."

A

Stock exchange is an entity that provides services for stock brokers and traders to trade stocks, bonds, and other Securities. Stock exchanges also provide facilities for issue and redemption of securities and other financial instruments, and capital events including the payment of income and dividends. Securities traded on a stock exchange include shares issued by companies, unit trusts, derivatives, pooled investment products and bonds. To be able to trade a security on a certain stock exchange, it must be listed there. Usually, there is a central location at least for record keeping, but trade is increasingly less linked to such a physical place, as modern markets are electronic networks, which gives those advantages of increased speed and reduced cost of transactions. Trade on an exchange is by members only. The initial offering of stocks and bonds to investors is by definition done in the primary market and subsequent trading is done in the secondary market. A stock exchange is often the most important component of a stock market. Supply and demand in stock markets is driven by various factors that, as in all free markets, affect the price of stocks. There is usually no compulsion to issue stock via the stock exchange itself, nor must stock be subsequently traded on the exchange. Such trading is said to be *off exchange* or over-the-counter. This is the usual way that derivatives and bonds are traded. Increasingly, stock exchanges are part of a global market for securities.

THE ROLE OF STOCK EXCHANGE.

Stock exchanges have multiple roles in the economy. This may include the following

Raising capital for businesses

The Stock Exchange provides companies with the facility to raise capital for expansion through selling shares to the investing public.

Common forms of capital raising.

Besides the borrowing capacity provided to an individual or firm by the banking system, in the form of credit or a loan, there are four common forms of capital raising used by companies and entrepreneurs. All of these available options might be achieved, directly or indirectly, involving a stock exchange.

- **Going public**

Capital intensive companies, particularly high tech companies, always need to raise high volumes of capital in their early stages. By this reason, the public market provided by the stock exchanges, has been one of the most important funding sources for many capital intensive startups. After the 1990s and early-2000s hi-tech listed companies' boom and burst in the world's major stock exchanges, it has been much more demanding for the high-tech entrepreneur to take his/her company public, unless either the company already has products in the market and is generating sales and earnings, or the company has completed advanced promising clinical trials, earned potentially profitable patents or conducted market research which demonstrated very positive outcomes. This is quite different from the situation of the 1990s to early-2000s period, when a number of companies (particularly Internet boom and biotechnology companies) went public in the most prominent stock exchanges around the world, in the total absence of sales, earnings and any well-documented promising outcome. Anyway, every year a number of companies, including unknown highly speculative and financially unpredictable hi-tech startups, are listed for the first time in all the major stock exchanges - there are even specialized entry markets for this kind of companies or stock indexes tracking their performance (examples include the Alternext, CAC Small, SDAX, TecDAX, or most of the third market companies).

- **Limited partnerships**

A number of companies have also raised significant amounts of capital through R&D limited partnerships. Tax law changes that were enacted in 1987 in the United States changed the tax deductibility of investments in R&D limited partnerships. In order for a partnership to be of interest to investors today, the cash-on-cash return must be high enough to entice investors. As a result, R&D limited partnerships are not a viable means of raising money for most companies, especially hi-tech startups.

- **Venture capital**

A third usual source of capital for startup companies has been venture capital. This source remains largely available today, but the maximum statistical amount that the venture company firms in aggregate will invest in any one company is not limitless (it was approximately $15 million in 2001 for a biotechnology company).[5] At those level, venture capital firms typically become tapped-out because the financial risk to any one partnership becomes too great.

- **Corporate partners**

A fourth alternative source of cash for a private company is a corporate partner, usually an established multinational company, which provides capital for the smaller company in return for marketing rights, patent rights, or equity. Corporate partnerships have been used successfully in a large number of cases.

- **Mobilizing savings for investment**

When people draw their savings and invest in shares (through a IPO or the

issuance of new company shares of an already listed company), it usually leads to rational allocation of resources because funds, which could have been consumed, or kept in idle deposits with banks, are mobilized and redirected to help companies' management boards finance their organizations. This may promote business activity with benefits for several economic sectors such as agriculture, commerce and industry, resulting in stronger economic growth and higher productivity levels of firms.
Sometimes it is very difficult for the stock investor to determine whether or not the allocation of those funds is in good faith and will be able to generate long-term company growth, without examination of a company's internal auditing.

- **Facilitating company growth**

Companies view acquisitions as an opportunity to expand product lines, increase distribution channels, hedge against volatility, increase its market share, or acquire other necessary business assets. A takeover bid or a merger agreement through the stock market is one of the simplest and most common ways for a company to grow by acquisition or fusion.

- **Profit sharing**

Both casual and professional stock investors, as large as institutional investors or as small as an ordinary middle class family, through dividends and stock price increases that may result in capital gains, share in the wealth of profitable businesses. Unprofitable and troubled businesses may result in capital losses for shareholders.

- **Corporate governance**

By having a wide and varied scope of owners, companies generally tend to improve management standards and efficiency to satisfy the demands of these shareholders, and the more stringent rules for public corporations imposed by public stock exchanges and the government. Consequently, it is alleged that public companies (companies that are owned by shareholders who are members of the general public and trade shares on public exchanges) tend to have better management records than privately held companies (those companies where shares are not publicly traded, often owned by the company founders and/or their families and heirs, or otherwise by a small group of investors).
Despite this claim, some well-documented cases are known where it is alleged that there has been considerable slippage in corporate governance on the part of some public companies. The dot-com bubble in the late 1990s, and the subprime mortgage crisis in 2007-08, is classical examples of corporate mismanagement. Companies like Pets.com (2000), Enron Corporation (2001), One.Tel (2001), Sunbeam (2001), Webvan (2001), Adelphia (2002), MCI WorldCom (2002), Parmalat (2003), American International Group (2008), Bear Stearns (2008), Lehman Brothers (2008), General Motors (2009) and Satyam Computer Services (2009) were among the most widely scrutinized by the media.
However, when poor financial, ethical or managerial records are known by the stock investors, the stock and the company tend to lose value. In the stock exchanges, shareholders of underperforming firms are often penalized by significant share price decline, and they tend as well to dismiss incompetent management teams.

- **Creating investment opportunities for small investors**

As opposed to other businesses that require huge capital outlay, investing in shares is open to both the large and small stock investors because a person buys the number of shares they can afford. Therefore the Stock Exchange provides the opportunity for small investors to own shares of the same companies as large investors.

- **Government capital-raising for development projects**

Governments at various levels may decide to borrow money to finance infrastructure projects such as sewage and water treatment works or housing estates by selling another category of securities known as bonds. These bonds can be raised through the Stock Exchange whereby members of the public buy them, thus loaning money to the government. The issuance of such bonds can obviate the need, in the short term, to directly tax citizens to finance development—though by securing such bonds with the full faith and credit of the government instead of with collateral, the government must eventually tax citizens or otherwise raise additional funds to make any regular coupon payments and refund the principal when the bonds mature.

NATIONAL STOCK EXCHANGE OF INDIA LIMITED.

NSE

National Stock Exchange of India Limited

The National Stock Exchange of India Limited (NSE) is a Mumbai-based stock exchange. It is the largest stock exchange in India in terms of daily turnover and number of trades, for both equities and derivative trading. Though a number of other exchanges exist, NSE and the Bombay Stock Exchange are the two most significant stock exchanges in India and between them are responsible for the vast majority of share transactions. The NSE's key index is the S&P CNX Nifty, known as the Nifty, an index of fifty major stocks weighted by market capitalization.
NSE is mutually-owned by a set of leading financial institutions, banks, insurance companies and other financial intermediaries in India but its ownership and management operate as separate entities. There are at least 2 foreign investors NYSE Euronext and Goldman Sachs who have taken a stake in the NSE. As of 2006, the NSE VSAT terminals, 2799 in total, cover more than 1500 cities across India. In October 2007, the equity market capitalization of the companies listed on the NSE was US$ 1.46 trillion, making it the second largest stock exchange in South Asia. NSE is the third largest Stock Exchange in the world in terms of the number of trades in equities. It is the second fastest growing stock exchange in the world with a recorded growth of 16.6%.

National Stock Exchange of India Limited (NSE) is a nationwide, electronic exchange offering investors trading facility in a variety of financial instruments which includes equities, debentures, government securities, derivative products such as index futures, index options, stock futures, stock options, interest rate futures etc. NSE operates three market segments, the Capital Market segment (CM), Futures & Options Market segment (F&O) and the Wholesale Debt Market segment (WDM). NSE is the largest stock exchange in India in terms of traded value in equity, debt and derivative products.

Today NSE's share to the total equity market turnover in India averages around 69%, whereas, in the futures and options market this share is around 98%. The Exchange has around 1,075 trading members who are connected to the Exchange through advanced communication technology (VSATs) and leased lines.

It was in year 1992 that the National stock Exchange was for the first time incorporated in India. It was not regarded as a stock exchange at once. Rather, the national Stock exchange was incorporated as a tax paying company and had got the recognition of a stock exchange only in year 1993 the recognition was given under the provisions of the Securities Contracts (Regulation) Act, 1956.
The National Stock exchange is highly active in the field of market capitalization and thus aiming it the ninth largest stock exchange in the said field. Similarly, the trading of the stock exchange in equities and derivatives is so high that it has resulted in high turnovers and thus making it the largest stock exchange in India.
It is the stock exchange wherein there is the facility of electronic exchange offering investors. This facility is available in almost types of equitable transactions such as equities, debentures, etc. it is also the largest stock exchange if calculated in the terms of traded values.
In the end, towards concluding the introduction of the national stock exchange of India LTD, I say The National Stock Exchange (NSE India) is the world's third largest stock exchange in terms of transaction volumes. NSE India is based out of Mumbai. NSE is the largest stock exchange in India in terms of daily turnover and number of trades, for both equities and derivative trading.

National Stock Exchange (NSE India) was incorporated in November 1992 as a tax-paying company unlike other stock exchanges in the India.

NATIONAL STOCK EXCHANGE.

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THE ORGANIZATION

OUR GROUP:-

National Securities Clearing Corporation Limited (NSCCL)

The National Securities Clearing Corporation Ltd. (NSCCL) a wholly owned subsidiary of NSE was incorporated in August 1995. It was the first clearing corporation to introduce settlement guarantee. It commenced clearing operations in April,1,1996.

NSCCL has been assigned the highest corporate rating of 'AAA' for three consecutive years. This is the first Indian Clearing Corporation to get this rating.

National Commodity Clearing Limited (NCCL)

National Commodity Clearing Limited (NCCL) has been incorporated jointly between NSE and NCDEX. Presently, the company provides IT and process support in respect of its clearing and settlement of trades done in derivatives segment. The clearing and settlement covers contracts in 44 products ranging from agricultural commodities to base metals, ferrous metals, energy, polymers and precious metals.

NSE InfoTech Services Limited (NSETECH)

NSE InfoTech Services Limited (NSETECH) is a wholly owned subsidiary incorporated to cater to the needs of NSE and all its group companies exclusively.

India Index Services & Products Ltd. (IISL)

India Index Services and Products Limited (IISL), a joint venture between NSE and CRISIL Ltd., was set up in May 1998 to provide a variety of indices and index related services and products for the Indian capital markets. It has a consulting and licensing agreement with Standard and Poor's (S&P), the world's leading provider of investable equity indices.

DotEx International. Ltd. (DotEx)

The data and info-vending products of NSE are provided through a separate company DotEx International Ltd., a 100% subsidiary of NSE, which is a professional set-up dedicated solely for this purpose. DotEx also offers "NOW" a fully managed, secure and reliable trading gateway, providing immediate, scalable and seamless access through internet to members and internet investors.

NSE.IT Ltd.

NSE.IT is a 100% subsidiary of National Stock Exchange of India Limited (NSE). NSE.IT Limited, a Vertical Specialist Enterprise, offers end-to-end Information Technology (IT) products, solutions and services and has expertise in a wide range of business applications. It specializes in providing complete IT solutions to Stock Exchanges, Clearing Corporations, Brokerage Firms, Insurance Firms and other organizations in the Capital Market, Banking and Insurance industry. NSE.IT has emerged as the preferred technology partner for deploying high end solutions for the financial services sector.

ASSOCIATE / AFFILIATE COMPANIES

National Securities Depository Ltd. (NSDL)

The enactment of Depositories Act in August 1996 paved the way for establishment of NSDL, the first depository in India. NSE joined hands with the Industrial Development Bank of India (IDBI) and the Unit Trust of India (UTI) to promote dematerialization of securities. Together they set up National Securities Depository Limited (NSDL), the first depository in India.

National Commodity & Derivatives Exchange Ltd. (NCDEX)

NCDEX is a public limited company incorporated on April 23, 2003 under the Companies Act, 1956. It obtained its Certificate for Commencement of Business on May 9, 2003. It commenced its operations on December 15, 2003. NCDEX is a nation-level, technology driven de-mutualised on-line commodity exchange with an independent Board of Directors and professional management. It is committed to provide a world-class commodity exchange platform for market participants to trade in a wide spectrum of commodity derivatives driven by best global practices, professionalism and transparency.

Power Exchange India Limited (PXIL)

Power Exchange India Limited (PXIL) is India’s first institutionally promoted Power Exchange that provides innovative and credible solutions to transform the Indian Power Markets.

PXIL’s unique combination of local insights and global perspectives helps its stakeholders to make better informed business and investment decisions, improves the efficiency of the power markets, and helps shape policies and project.

OUR PROMOTERS:-

NSE has been originally promoted by leading financial institutions, banks, insurance companies and other financial intermediaries:

- Industrial Development Bank of India Limited.
- Industrial Finance Corporation of India Limited.
- Life Insurance Corporation of India.
- State Bank of India.
- ICICI Bank Limited.
- IL & FS Trust Company Limited.
- Stock Holding Corporation of India Limited.
- SBI Capital Markets Limited.
- Bank of Baroda.
- Canara Bank.
- General Insurance Corporation of India.
- National Insurance Company Limited.
- The New India Assurance Company Limited.
- The Oriental Insurance Company Limited.
- United India Insurance Company Limited.
- Punjab National Bank.
- Oriental Bank of Commerce.
- Indian Bank.
- Union Bank of India.
- Infrastructure Development Finance Company Ltd.

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MICROSTRUCTURE OF NATIONAL STOCK EXCHANGE

CORPORATE STRUCTURE

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SE is one of the first de-mutualised stock exchanges in the country, where the ownership and management of the Exchange is completely divorced from the right to trade on it. Though the impetus for its establishment came from policy makers in the country, it has been set up as a public limited company, owned by the leading institutional investors in the country.

From day one, NSE has adopted the form of a demutualised exchange - the ownership, management and trading is in the hands of three different sets of people. NSE is owned by a set of leading financial institutions, banks, insurance

companies and other financial intermediaries and is managed by professionals, who do not directly or indirectly trade on the Exchange. This has completely eliminated any conflict of interest and helped NSE in aggressively pursuing policies and practices within a public interest framework.
The NSE model however, does not preclude, but in fact accommodates involvement, support and contribution of trading members in a variety of ways. Its Board comprises of senior executives from promoter institutions, eminent professionals in the fields of law, economics, accountancy, finance, taxation, and etc, public representatives, nominees of SEBI and one full time executive of the Exchange.
While the Board deals with broad policy issues, decisions relating to market operations are delegated by the Board to various committees constituted by it. Such committees include representatives from trading members, professionals, the public and the management.

MEMBERSHIP

1026 trading members on the Capital Market segment, of which around 86% account for corporate, and the remaining individuals and firms.
113 trading members on the Wholesale Debt Market segment, all of which account for corporate. (Out of these 113 trading members, 106 are members of the Capital Market segment also and are included in the 1026 members indicated above).

GEOGRAPHIC DISTRIBUTION

Over 2600 trading terminals
Over 1500 VSAT's across the country with a 24 hour Network monitoring system in over 160 cities as of December 31st, 1997.

NUMBER OF COMPANIES

On the Capital Market segment, 600 securities are listed and 762 securities are permitted to trade as of December 31st, 1997.
On the Wholesale Debt Market segment, 470 securities are listed and 369 securities are permitted to trade as of December 31st, 1997. Of the 470 securities listed, 267 are Government Securities, T-Bills and the balance account for other securities.

TRADING TECHNOLOGY

Across the globe, developments in information, communication and network technologies have created paradigm shifts in the securities market operations. Technology has enabled organizations to build new sources of competitive advantage, bring about innovations in products and services, and to provide for new business opportunities.
Stock exchanges all over the world have realized the potential of IT and have moved over to electronic trading systems, which are cheaper, have wider reach and provide a better mechanism for trade and post trade execution.
NSE believes that technology will continue to provide the necessary impetus for the organization to retain its competitive edge and ensure timeliness and satisfaction in customer service. In recognition of the fact that technology will continue to redefine the shape of the securities industry, NSE stresses on innovation and sustained investment in technology to remain ahead of competition. NSE's IT set-up is the largest by any company in India. It uses satellite communication technology to energize participation from around 200 cities spread all over the country. In the recent past, capacity enhancement measures were taken up in regard to the trading systems so as to effectively meet the requirements of increased users and associated trading loads. With up gradation of trading hardware, NSE today can handle up to 15 million trades per day in Capital Market segment. In order to capitalize on in-house expertise in technology, NSE set up a separate company, NSE InfoTech Services Ltd. which provides a platform for taking up all IT related assignments of NSE.

NEAT is a state-of-the-art client server based application. At the server end, all trading information is stored in an in-memory database to achieve minimum response time and maximum system availability for users. The trading server software runs on OpenVMS based fault tolerant STRATUS main frame computer hosted on the Intel Platform while the client software runs on Microsoft Windows Platform. Between the NEAT client and server there is another layer called the Trading Access Point (TAP)? TAP facilitates IT Infrastructure consolidation and routes the orders and trades between Client and Server in an optimized protocol.
The trading members on the various market segments such as CM, F&O, WDM, Currency Derivatives, SLBM, MF and IPO are linked to the central computer at the NSE through dedicated leased lines and VSAT terminals. The telecommunications network is the backbone of the automated trading system has been upgraded to use the more popular and modern IP Protocol which was using X.25 protocol earlier. The NSE- network is the largest private wide area network in the country and the first extended C- Band VSAT network in the world. Currently more than 10000 users are trading on the real time-online NSE application.
The Exchange uses powerful UNIX servers, procured from HP for the back office processing. The latest software platforms like ORACLE RDBMS, SQL/ORACLE FORMS Front - Ends, etc. have been used for the Exchange applications. The Exchange currently manages its data centre operations, system and database administration, design and development of in-house systems and design and implementation of telecommunication solutions. There are over 500 server class computer systems which include non-stop fault-tolerant Stratus servers and high end UNIX servers, operational less than one roof to support the NSE applications. This coupled with the nationwide VSAT network makes NSE the country's largest Information Technology user.
In an ongoing effort to improve NSE's infrastructure, a corporate network has been implemented, connecting all the offices at Mumbai, Delhi, Calcutta and Chennai. This corporate network enables speedy inter-office communications and data and voice connectivity between offices.

TECHNOLOGY USED BY NATIONAL STOCK EXCHANGE

(Types of Technologies used by the NSE of India to have efficient working in stock market)

INNOVATIONS

NSE pioneering efforts include:

- Being the first national, anonymous, electronic limit order book (LOB) exchange to trade securities in India. Since the success of the NSE, existent market and new market structures have followed the "NSE" model.
- Setting up the first clearing corporation "National Securities Clearing Corporation Ltd." in India. NSCCL was a landmark in providing innovation

on all spot equity market (and later, derivatives market) trades in India.

- Co-promoting and setting up of National Securities Depository Limited, first depository in India
- Setting up of S&P CNX Nifty.
- NSE pioneered commencement of Internet Trading in February 2000, which led to the wide popularization of the NSE in the broker community.
- Being the first exchange that, in 1996, proposed exchange traded derivatives, particularly on an equity index, in India. After four years of policy and regulatory debate and formulation, the NSE was permitted to start trading equity derivatives
- Being the first and the only exchange to trade GOLD ETFs (exchange traded funds) in India.
- NSE has also launched the NSE-CNBC-TV18 media centre in association with CNBC-TV18.
- NSE.IT Limited, setup in 1999, is a 100% subsidiary of the National Stock Exchange of India. A Vertical Specialist Enterprise, NSE.IT offers end-to-end Information Technology (IT) products, solutions and services.
- NSE (National Stock Exchange) was the first exchange in the world to use satellite communication technology for trading, using a client server based system called National Exchange for Automated Trading (NEAT). For all trades entered into NEAT system, there is uniform response time of less than one second.
- NSE today allows members to provide internet trading facility to their clients through the use of NOW (NSE on web), a shared web infrastructure.
- In an ongoing effort to improve NSE's infrastructure, a corporate network has been implemented, connecting all the offices at Mumbai, Delhi, Calcutta and Chennai. This corporate network enables speedy inter-office communications and data and voice connectivity between offices.

HOURS

NSE's normal trading sessions are conducted from 9:15 am India Time to 3:30 pm India Time on all days of the week except Saturdays, Sundays and Official Holidays declared by the Exchange (or by the Government of India) in advance. This timing is not valid for currency segment of National Stock Exchange. The exchange, in association with BSE (Bombay Stock Exchange Ltd.), is thinking of revising its timings from 9.00 am India Time to 5.00 pm India Time.
There were System Testing going on and opinions, suggestions or feedback on the New Proposed Timings are being invited from the brokers across India. And finally on 18 November 2009 regulator decided to drop their ambitious goal of longest Asia Trading Hours due to strong opposition from its members.
On 16 December 2009, NSE announced that it would advance the market opening to 9:00 am from 18 December 2009. So NSE trading hours will be from 9.00 am till 3:30 pm India Time.
However, on 17 December 2009, after strong protests from brokers, the Exchange decided to postpone the change in trading hours till 4 Jan 2010.
NSE new market timing from 4 Jan 2010 is 9:00 am till 3:30 pm India Time.

EVOLUTION OF NATIONAL STOCK

EXCHANGE

ORIGIN.

The National Stock exchange was incorporated for the first time in November, 1992. The national stock exchange was not incorporated as the national stock exchange; rather, it had got the recognition of the recognized stock exchange in April, 1993. The National stock Exchange has increased its trading facilities in June 1994 when the WDM (Wholesale Debt Market Segment) was gone live. It is basically one of the three market segments in which the national stock Exchange works. In the same year, 1994 November, the Capital Market (CM) segment of the stock exchange goes live through VSAT.
The National Stock Exchange has become the first Clearing Corporation in India by the introduction of NSCCL in April 1995. In the same year, 1995 July, it has introduced the Investor protection fund which is a very important function introduced by the national Stock Exchange.
The National stock Exchange had grown with leaps and bounds and had shown tremendous growth mainly in all the fields and thus making it the largest stock exchange of India by October, 1995.
The concept of NSCCL was extended by the introduction of clearing and settlement with the help of NSCCL in year 1996. The National stock Exchange has introduced its Index for the first time in year April 1996. The index was known as the S&P CNX Nifty Index. In year June 1996, it has introduced the Settlement Guarantee Fund. The National Securities Depositor Fund was launched by the National Stock exchange in year 1996, November, and thus making it the first stock exchange who becomes the first depository in India.
Because of the efforts and introduction of new concept in the field of trading, the National stock Exchange has received the BEST IT USAGE award by the computer Society of India in the year November, 1996. It has also received an award for the TOP IT USER in the name of "Dataquest award" in year December, 1996.
The National stock exchange has also introduced another index in year December 1996 in the name of CNX Nifty Junior in year 1996. It had again received an award for the BEST IT USAGE award by the computer Society of India in the year December, 1996. In May, 1998 it had launched its first website. Further in October 1999, it had launched the NSE.IT LTD. Further in year October, 2002, it had launched the Government securities index.
The growth of the National Stock Exchange has been tremendous in every field. It had introduced several programmes and has achieved various achievements and awards while working best in the field in which it is working. The efforts and hard work that is contributed by the National Stock exchange has been tremendous and thus making an important and unique stock exchange in India.

HISTORY.

NSE was incorporated in 1992 and was given recognition as a stock exchange in April 1993. It started operations in June 1994 with the launch of the Wholesale Debt Market Segment. Subsequently, the Capital Market Segment was launched in November 1994 as a trading platform for equities and the Futures and Options Segment in June 2000 for various derivative instruments.

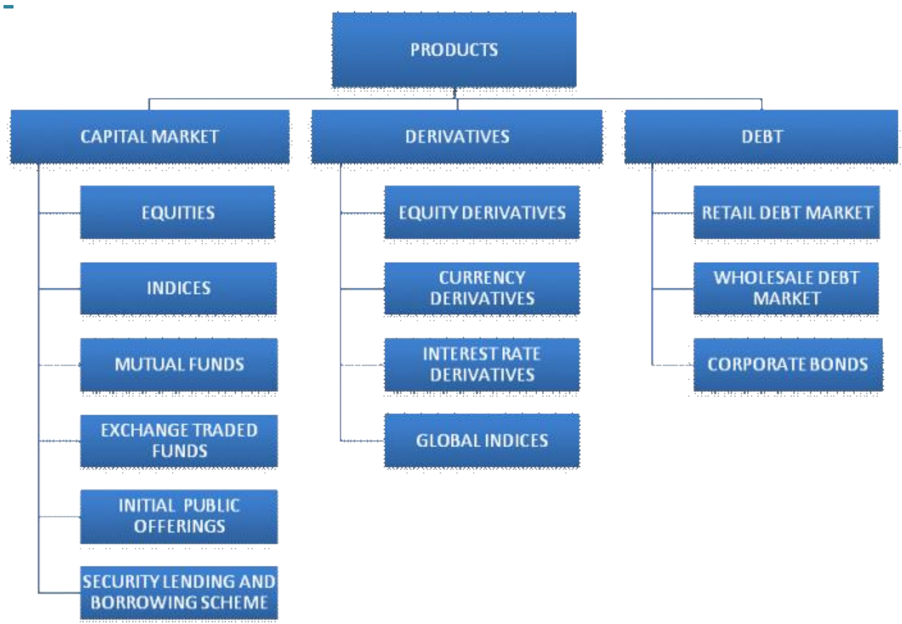
NSE was set up with the objectives of:

(a) Establishing a nationwide trading facility for all types of securities
(b) Ensuring equal access to investors all over the country through an appropriate communication network
(c) Providing for a fair, efficient and transparent securities market using electronic trading system
(d) Enabling shorter settlement cycles
(e) Meeting up with international benchmarks and standards.

NSE has been playing the role of a catalytic agent in reforming the securities markets in India in terms of market microstructure and in evolving the best market practices.

PRODUCTS OF NATIONAL STOCK EXCHANGE

The market operational area of National Stock Exchange represented through presentation



PRODUCTS

I: CAPITAL MARKET

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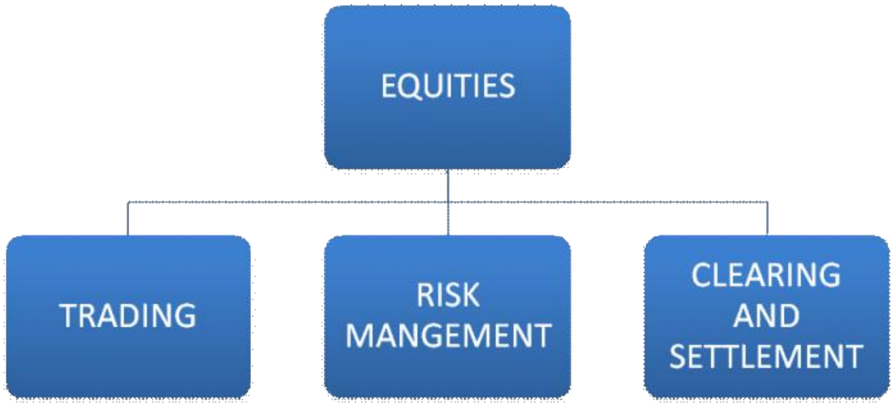
EQUITIES



The securities market has two interdependent and inseparable segments, the new issues (primary) market and the stock (secondary) market. The primary market provides the channel for creation and sale of new securities, while the secondary market deals in securities previously issued. The Stock market or Equities market is where listed securities are traded in the secondary market. Currently more than 1300 securities are available for trading on the Exchange.
The Equity market also known as the stock market is where the listed securities are traded in the secondary market. This is one of the most vital areas of a market economy, as investors have the opportunity to own a slice of ownership in a company with the potential to realize gains based on its future performance.
The price of shares and other assets is an important part of the dynamics of economic activity, and can influence or be an indicator of social mood
NSE started trading in the equities segment (Capital Market segment) on November 3, 1994 and within a short span of 1 year became the largest exchange in India in terms of volumes transacted.
Trading volumes in the equity segment have grown rapidly with average daily turnover increasing from Rs.17 crores during 1994-95 to Rs.15, 687 crores during FY 2009-10. During the year 2009-10, NSE reported a turnover of Rs.3, 812,032 crores in the equities segment.
An equity investment generally refers to the buying and holding of shares of stock on a stock market by individuals and firms in anticipation of income from dividends and capital gains, as the value of the stock rises. Typically equity holders receive voting rights, meaning that they can vote on candidates for the board of directors (shown on a proxy statement received by the investor) as well as certain major transactions, and residual rights, meaning that they share the company's profits, as well as recover some of the company's assets in the event that it folds, although they generally have the lowest priority in recovering their investment. It may also refer to the acquisition of equity (ownership) participation in a private (unlisted) company or a startup company. When the investment is in infant companies, it is referred to as venture capital investing and is generally regarded as a higher risk than investment in listed going-concern situations.
The equities held by private individuals are often held as mutual funds or as other forms of collective investment scheme, many of which have quoted prices that are listed in financial newspapers or magazines; the mutual funds are typically managed by prominent fund management firms, such as Schroder, Fidelity Investments or The Vanguard Group. Such holdings allow individual investors to

obtain the diversification of the fund(s) and to obtain the skill of the professional fund managers in charge of the fund(s). An alternative, which is usually employed by large private investors and pension funds, is to hold shares directly; in the institutional environment many clients who own portfolios have what are called segregated funds, as opposed to or in addition to the pooled mutual fund alternatives.

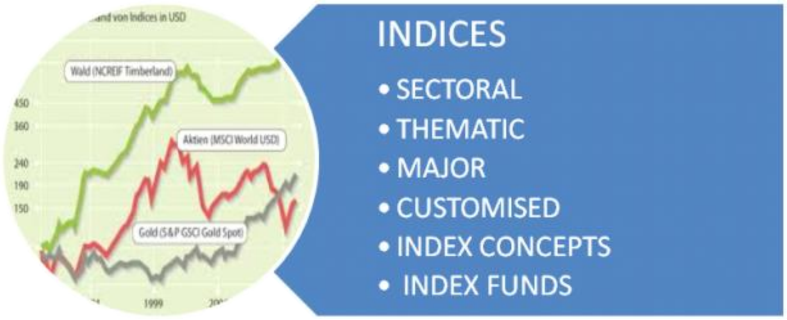
INDICES

A stock market index is created by selecting a group of stocks that are representative of the whole market or a specified sector or segment of the market. An Index is calculated with reference to a base period and a base index value. An Index is used to give information about the price movements of products in the financial, commodities or any other markets. Financial indexes are constructed to measure price movements of stocks, bonds, T-bills and other forms of investments. Stock market indexes are meant to capture the overall behaviour of equity markets. An Index is used to give information about the price movements of products in the financial, commodities or any other markets. Financial indexes are constructed to measure price movements of stocks, bonds, T-bills and other forms of investments. Stock market indexes are meant to capture the overall behaviour of equity markets. A stock market index is created by selecting a group of stocks that are representative of the whole market or a specified sector or segment of the market. An Index is calculated with reference to a base period and a base index value. A calculation can be made to assess whether an equity is over or underpriced, compared with a long-term government bond. This is called the Yield Gap or Yield Ratio. It is the ratio of the dividend yield of equity and that of the long-term bond.

Stock market indexes are useful for a variety of reasons. Some of them are:

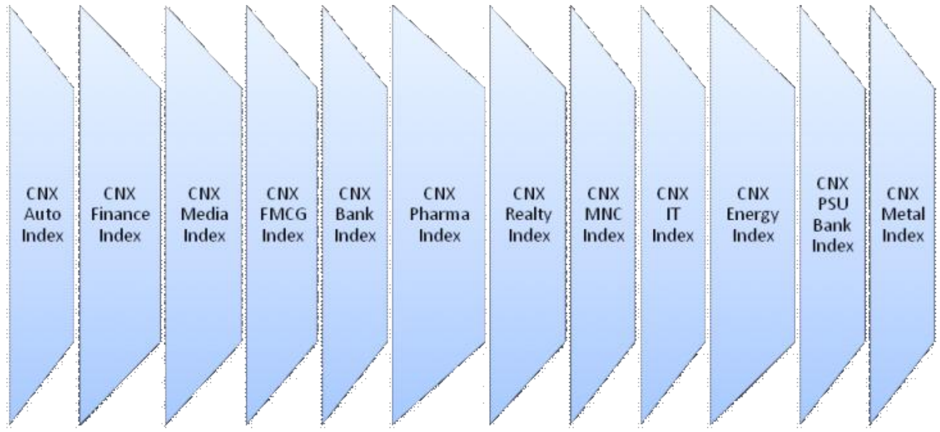
- They provide a historical comparison of returns on money invested in the stock market against other forms of investments such as gold or debt.
- They can be used as a standard against which to compare the performance of an equity fund.
- In It is a lead indicator of the performance of the overall economy or a sector of the economy
- Stock indexes reflect highly up to date information
- Modern financial applications such as Index Funds, Index Futures, Index Options play an important role in financial investments and risk management

TYPES OF INDICES



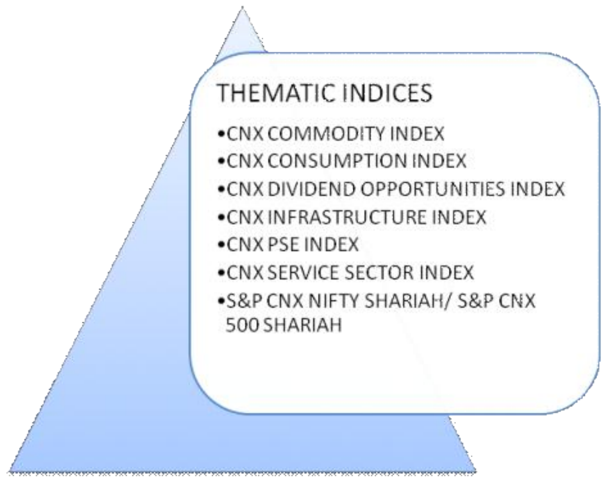
<u>Sectoral Indices</u>

Sector-based index are designed to provide a single value for the aggregate performance of a number of companies representing a group of related industries or within a sector of the economy.



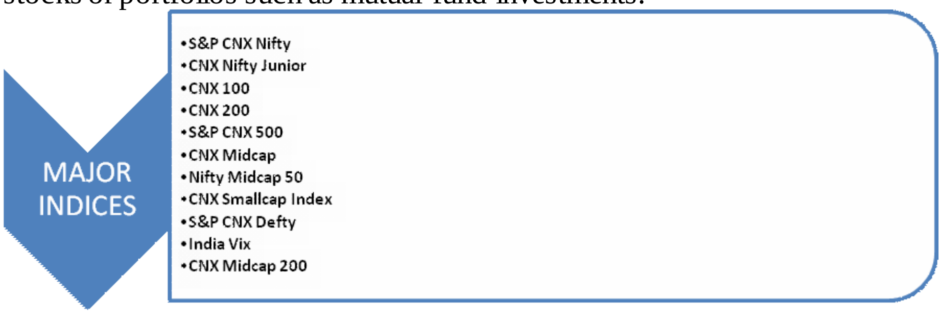
Thematic Indices

Thematic indices are designed to provide a single value for the aggregate performance of a number of companies representing a theme.



Major Indices

These indices are broad-market indices, consisting of the large, liquid stocks listed on the Exchange. They serve as a benchmark for measuring the performance of the stocks or portfolios such as mutual fund investments.



CUSTOMISED INDICES

IISL undertakes development & maintenance of customized indices for clients as well as offers consultancy services for developing indices. Customized indices can be used for tracking the performance of the client's portfolio of stocks vis-à-vis objectively defined benchmarks, or for benchmarking NAV performance to customized indices.

The customized indices can be sub-sets of existing indices or a completely new index. Some of the indices that can be constructed include:

- Sector Indices
- Individual Business Group Indices

- Portfolios
- Industry Indices

Methodology

Customized indices will be computed as per the methodology specified by the client, if it is not a market capitalization weighted index.

Maintenance

IISL will maintain the index for an annual fee. A review will be carried out by IISL in consultation with the client to review the specified criteria, number of constituent companies in the Index, and their performance on the selection criteria periodic intervals.

Services to Clients

Reports and other Information will be provided as per clients' requirements.

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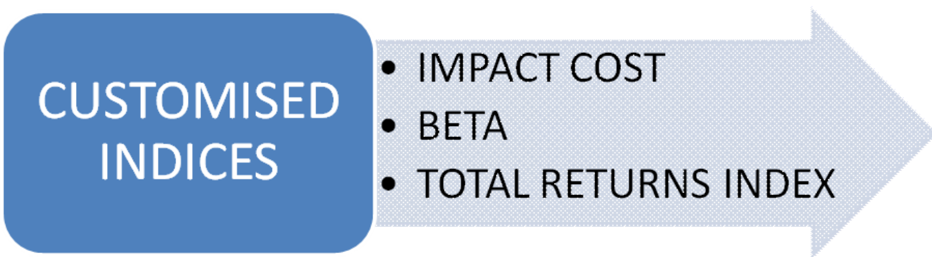
Index Concepts

Indices and index-linked investment products provide considerable benefits. Important concepts and terminologies are associated with Index construction. These concepts are important for investors to learn from the information that indices contain about investment opportunities.



Index Funds

An Index Fund is a type of mutual fund with a portfolio constructed to match the constituents of the market index, such as S&P CNX Nifty. An index fund provides broad market exposure and lower operating expenses for investors. Index Funds today are a source of investment for investors looking at a long term, less risky form of investment. The success of index funds depends on their low volatility and therefore the choice of the index.

IISL's indices are used by a number of well known mutual funds in India for promoting Index Funds. Details of some of these funds are as follows:

Index Funds:

Sr. No.	Index Fund	Index	Launched	Issuer
1	Principal Index Fund	S&P CNX Nifty	Jul 1999	Principal PNB AMC Private Ltd
2	UTI Nifty Index Fund	S&P CNX Nifty	Mar 2000	UTI AMC Private Ltd.
3	Franklin India Index Fund	S&P CNX Nifty	Jun 2000	Franklin Templeton AMC (India) Private Ltd.
4	SBI Magnum Index Fund	S&P CNX Nifty	Dec 2001	SBI Funds Management Ltd.
5	ICICI Prudential Index Fund	S&P CNX Nifty	Feb 2002	ICICI Prudential AMC Ltd.
6	HDFC Index Fund – Nifty Plan	S&P CNX Nifty	Jul 2002	HDFC AMC Ltd.

7	Birla Sun Life Index Fund	S&P CNX Nifty	Sep 2002	Birla Sun Life AMC Ltd.
8	LICMF Index Fund – Nifty Plan	S&P CNX Nifty	Nov 2002	LIC Mutual Fund AMC Ltd
9	Tata Index Fund-Nifty Plan	S&P CNX Nifty	Feb 2003	Tata AMC Private Ltd
10	ING Large Cap Equity Fund	S&P CNX Nifty	Jan 2004	ING Investment Management (I) Ltd.
11	Canara Robeco Nifty Index Fund	S&P CNX Nifty	Sep 2004	Canara Robeco AMC Ltd.
12	JM Nifty Plus Fund	S&P CNX Nifty	Jun 2009	JM Financial AMC Private Ltd.
13	IDFC Nifty Fund	S&P CNX Nifty	May 2010	IDFC AMC Ltd
14	Taurus Nifty Index Fund	S&P CNX Nifty	Jun 2010	Taurus AMC Ltd
15	IDBI Nifty Index Fund	S&P CNX Nifty	Jun 2010	IDBI Asset Management Ltd.
16	Reliance Index Fund- Nifty Plan	S&P CNX Nifty	Sep 2010	Reliance Capital Asset Management Ltd.
17	Benchmark S&P CNX 500 Fund	S&P CNX 500	Nov 2008	Benchmark AMC Private Ltd.
18	ICICI Prudential Nifty Junior Index Fund	CNX Nifty Junior	Jun 2010	ICICI Prudential AMC Ltd.
19	IDBI Nifty Junior Index Fund	CNX Nifty Junior	Sep 2010	IDBI Asset Management Ltd.

QUESTIONAIRE

FREQUENTLY ASKED QUESTIONS ABOUT THE STOCK INDICES

What should a stock market index be?

A stock market index should capture the behaviour of the overall equity market. Movements of the index should represent the returns obtained by "typical" portfolios in the country.

What do the ups and downs of an index mean?

They reflect the changing expectations of the stock market about future dividends of India's corporate sector. When the index goes up, it is because the stock market thinks that the prospective dividends in the future will be better than previously thought. When prospects of dividends in the future become pessimistic, the index drops. The ideal index gives us instant-to-instant readings about how the stock market perceives the future of India's corporate sector.

What is the basic idea in an index?

Every stock price moves for two possible reasons: news about the company (e.g. a product launch, or the closure of a factory, etc.) or news about the country (e.g. nuclear bombs, or a budget announcement, etc.). The job of an index is to purely capture the second part, the movements of the stock market as a whole (i.e. news about the country). This is achieved by averaging. Each stock contains a mixture of these two elements - stock news and index news. When we take an average of returns on many stocks, the individual stock news tends to cancel out. On any one day, there would be good stock-specific news for a few companies and bad stock-specific news for others. In a good index, these will cancel out, and the only thing left will be news that is common to all stocks. The news that is common to all stocks is news about India. That is what the index will capture.

What kind of averaging is done?

For technical reasons, it turns out that the correct method of averaging is to take a weighted average, and give each stock a weight proportional to its market capitalization. Suppose an index contains two stocks A and B. A has a market capitalization of
₹
1000 crore and B has a market capitalization of
₹
3000 crore. Then we attach a weight of 1/4 to movements in A and 3/4 to movements in B.

What is the portfolio interpretation of index movements?

It is easy to create a portfolio, which will reliably get the same returns as the index. I.e. if the index goes up by 4%, this portfolio will also go up by 4%. Suppose an index is made of two stocks, one with a market cap of
₹
1000 crore and another with a market cap of
₹
3000 crore. Then the index portfolio will assign a weight of 25% to the first and 75% weight to the second. If we form a portfolio of the two stocks, with a weight of 25% on the first and 75% on the second, then the portfolio returns will equal the index returns. So if you want to buy
₹
1 lakh of this two-stock index, you would buy
₹
25,000 of the first and
₹
75,000 of the second; this portfolio would exactly mimic the two-stock index. A stock market index is hence just like other price indices in showing what is happening on the overall indices -- the wholesale price index is a comparable example. In addition, the stock market index is attainable as a portfolio.

Why are indices important?

Traditionally, indices have been used as information sources. By looking at an index we know how the market is faring. This information aspect also figures in myriad applications of stock market indices in economic research. This is particularly valuable when an index reflects highly up to date information (a central issue which is discussed in detail ahead) and the portfolio of an investor contains illiquid securities - in this case, the index is a lead indicator of how the overall portfolio will fare.

In recent years, indices have come to the fore owing to direct applications in finance, in the form of index funds and index derivatives. Index funds are funds which passively 'invest in the index'. Index derivatives allow people to cheaply alter their risk exposure to an index (this is called hedging) and to implement forecasts about index movements (this is called speculation). Hedging using index derivatives has become a central part of risk management in the modern economy. These applications are now a multi-trillion dollar industry worldwide, and they are critically linked up to market indices.

Finally, indices serve as a benchmark for measuring the performance of fund managers. An all-equity fund should obtain returns like the overall stock market index. A 50:50 debt: equity fund should obtain returns close to those obtained by an investment of 50% in the index and 50% in fixed income. A well-specified relationship between an investor and a fund manager should explicitly define the benchmark against which the fund manager will be compared, and in what fashion.

What kinds of indices exist?

The most important type of market index is the broad-market index, consisting of the large, liquid stocks of the country. In most countries, a single major index dominates benchmarking, index funds, index derivatives and research applications. In addition, more specialized indices often find interesting applications. In India, we have seen situations where a dedicated industry fund uses an industry index as a benchmark. In India, where clear categories of ownership groups exist, it becomes interesting to examine the performance of classes of companies sorted by ownership group.

Index construction

Isn't averaging like diversification; cancelling out vulnerability to one stock?

Yes, the averaging that takes place in an index is equivalent to diversification. Diversification cancels out individual stock fluctuations. From an investment perspective, diversification reduces risk. From an information perspective, diversification cancels out stock noise; the only thing left after good diversification is the common factor -- news such as nuclear bombs -- which hits all stocks and cannot possibly be removed by diversification.

Then a larger number of stocks in an index will give more diversification -- isn't that a good thing? Why don't we put all the stocks of the country into the index?

It is, indeed, the case that putting more stocks into an index yields more diversification. However, two things go wrong when we do this too much: First, there are diminishing returns to diversification. Going from 10 stocks to 20 stocks gives a sharp reduction in risk. Going from 50 stocks to 100 stocks gives very little reduction in risk. Going beyond 100 stocks gives almost zero reduction in risk. Hence, there is little to gain by diversifying, beyond a point. The more serious problem lies in the stocks that we take into an index when it is broadened. If the stock is illiquid, the observed prices yield contaminated information and actually worsen an index.

Component illiquidity contaminates index

What is wrong with the price information for illiquid stocks?

There are three problems: 'stale prices', 'bid-ask bounce' and vulnerability to manipulation. Through these problems, an index is actually worsened when illiquid stocks are put into it.

A stock may be liquid on one exchange and illiquid on another -- what price do you take when calculating the index?

Illiquid stocks yield bad price data; so the best quality data will come from the most liquid exchange. In India, that is NSE. The S&P CNX Nifty uses price data from NSE for calculations.

What is 'stale prices'?

Suppose we look at the closing price of an index. It is supposed to reflect the state of the stock market at 3:30 PM on NSE. Suppose an illiquid stock is in the index. The last traded price (LTP) of the stock might be an hour, or a day, or a week old! The index is supposed to show how the stock market perceives the future of the corporate sector at 3:30 PM. When an illiquid stock injects these 'stale prices' into the calculation of an index, it makes the index more stale. It reduces the accuracy with which the index reflects information.

What is 'bid-ask bounce'?

Suppose a stock trades at bid 1440 ask 1490. Suppose no news appears for ten minutes. But, over this period, suppose that a buy order first comes in (at
₹
1490) followed by a sell order (at
₹
1440). This sequence of events makes it seem that the stock price has dropped by
₹
50. This is a totally spurious price movement! Even when no news is breaking, when a stock price is not changing, the 'bid-ask bounce' is about prices bouncing up and down between bids and ask. These changes are spurious. This problem is the greatest with illiquid stocks where the bid-ask spread is wide. When an index component shows such price changes it contaminates the index.

What about market manipulation - how would manipulation of an index take place, and how would an index be made less vulnerable to manipulation?

The index is a large entity and is intrinsically harder to manipulate when compared to individual stocks. Obviously, larger indices are harder to manipulate than smaller indices. The weak links in an index are the large, illiquid stocks. These are the Achilles heel where a manipulator obtains maximum impact upon the index at minimum cost. Optimal index manipulation consists of attacking these stocks. This is one more reason why illiquid stocks should be excluded from a market index; indeed this aspect requires that the liquidity of a stock in an index should be proportional to its market capitalization.

So diversification yields diminishing returns, and illiquid stocks are best kept out of an index.... what is the ideal middle road?

S&P CNX Nifty Is the middle road to solve out the diminishing returns in case of diversification and illiquid stocks which are kept out of index.

The S&P CNX Nifty

How does the S&P CNX Nifty work?

S&P CNX Nifty is based upon solid economic research. A trillion calculations were expended to evolve the rules inside the S&P CNX Nifty index. The results of this work are remarkably simple: (a) the correct size to use is 50, (b) stocks considered for the S&P CNX Nifty must be liquid by the 'impact cost' criterion, (c) the largest 50 stocks that meet the criterion go into the index. S&P CNX Nifty is a contrast to the adhoc methods that have gone into index construction in the preceding years, where indices were made out of intuition and lacked a scientific basis. The research that led up to S&P CNX Nifty is well-respected internationally as a pioneering effort in better understanding how to make a stock market index. See "Market microstructure considerations in index construction" by Ajay Shah and Susan Thomas, CBOT Research Symposium Proceedings, summer 1998, page 173-193.

What is 'impact cost'?

Suppose a stock trades at bid 99 and ask 101. We say the "ideal" price is
₹
100. Now, suppose a buy order for 1000 shares goes through at
₹
102. Then we say the market impact cost at 1000 shares is 2%. If a buy order for 2000 shares goes through at
₹
104, we say the market impact cost at 2000 shares is 4%. Market impact cost is the best measure of the liquidity of a stock. It accurately reflects the costs faced when actually trading an index. For a stock to qualify for possible inclusion into the S&P CNX Nifty, it has to reliably have market impact cost of below 0.75 % when doing S&P CNX Nifty trades of half a crore rupees.

What do you mean by 'an S&P CNX Nifty trade'?

Earlier, we said that the index assigns weightages to index components, and the weight of a stock is proportional to its market capitalization. This idea can be applied to buying the S&P CNX Nifty. If you buy all 50 stocks in the S&P CNX Nifty, in correct proportions, that would be called "an index trade".".

What's the impact cost on a trade for
₹
5 million of the full S&P CNX Nifty?

It is safe to think that the impact cost is 0.1% or so. This means that if S&P CNX Nifty is at 1000, a buy order goes through at 1001 and a sell order gets 999. NSE's NEAT software has special facilities to enable buying or selling the entire the S&P CNX Nifty at one shot. The impact cost is not something fixed. It changes, depending upon the liquidity of the market. Indeed, the time-series of the S&P CNX Nifty impact cost is one of the best measures of changes in market liquidity over the years.

Index revision

Why does the index keep changing from time to time?

Think of a liquid stock as a good thermometer, one which gives accurate data about the true price of the stock, because it trades actively with a tight spread. The prices observed for an illiquid stock are like readings from a low quality thermometer, which reports noisy data about the phenomenon of interest (the true price of the security). We try to find the fifty best thermometers in the country and average their values to make the S&P CNX Nifty. As time passes, better thermometers become available (in the form of large, liquid stocks that are not in the S&P CNX Nifty). We would like that S&P CNX Nifty always uses the best thermometers possible. So we remove the weakest thermometer from inside the S&P CNX Nifty and accept the new stock into it. The world changes, so the index should change. Yet, the change should not be sudden - for that would disrupt the character of the index. S&P CNX Nifty uses clear, researched and publicly documented rules for index revision. These rules are applied regularly, to obtain changes to the index set. Index reviews are carried out every six months to ensure that each security in the index fulfills all the laid down criteria. IDBI was once not listed; SBI was once illiquid; Infosys was once an obscure software startup. The world changes, and one by one, these stocks have come into the S&P CNX Nifty. Each change in the S&P CNX Nifty is small, so the continuity of the index is maintained. Yet, at all times, S&P CNX Nifty represents the 50 most important liquid stocks in the country, the best thermometers to build an index out of.

When a stock goes out and a new stock comes in, doesn't that make index levels non-comparable?

No. There are mathematical formulas, which ensure that yesterday's value and todays are comparable, even if a change in composition takes place in-between. Think of an index as a portfolio. The composition of the portfolio changes, but it is still meaningful to keep measuring the overnight returns on the portfolio from day to day. These returns, cumulated up, are the index level.

Index revision sounds dangerous in terms of political pressures. Won't speculators try to push a stock they have purchased into S&P CNX Nifty? Or remove a stock from the index when they are shorting it?

Of course they will. Hence there are no speculators on the internal committee of IISL, which manages the index revisions. Further, there are objective, publicly defined rules which determine when stocks come in and go out of the index. There isn't much room for personal judgment here.

High quality information

How is the S&P CNX Nifty closing price calculated?

The Nifty closing prices are calculated by taking the last half an hour weighted average closing prices of the constituents of the index.

What is special about the NSE closing price?

NSE has the best surveillance procedures in India, so the extent of market manipulation is minimum there. In NSE, the professional staff of the surveillance department has no positions on the market. This elimination of conflicts of interest generates a more honest focus upon eliminating market manipulation. On a day to day basis millions of shares get traded on the NSE generating huge order flows. Due to the liquidity and order flow from numerous market players manipulation of the closing price becomes very hard. NSE is the most liquid exchange in India. Hence, the prices observed there are the most reliable. NSE has the highest trading intensity (reducing stale prices) and their bid-ask spreads are the tightest (reducing bid-ask bounce). This is assisted by the fact that the NSE tick size is
₹
0.05 for all stocks, which encourages tight bid-ask spreads.

What about dividends?

What is commonly reported as S&P CNX Nifty on TV and in the newspapers is actually the S&P CNX Nifty Price Index. It only reflects changes in prices. IISL also calculates something called the S&P CNX Nifty Total Returns (TR) index. This shows the returns on the index portfolio, inclusive of dividends. This is the appropriate benchmark for mutual funds, which do earn dividends. Both S&P CNX Nifty and S&P CNX Nifty TR use a base of 3 November 1995 as 1000. On December 31, 2001, i.e. nearly six years later, S&P CNX Nifty was at 1059.05

while S&P CNX Nifty TR was at 1150.28. The difference in the two levels is the return obtained on reinvestment of dividends through the intervening period.

You say that buying an S&P CNX Nifty portfolio yields the same returns as percentage changes on the S&P CNX Nifty index. But the weights will have to keep on changing from day to day when market caps change?

No. The market-cap weighted index is "self weighting". I.e. when weights change because prices change, yesterday's index portfolio continues to be today's index portfolio. Hence a buy and hold strategy is all that is required to replicate index returns under normal circumstances. Note that someone who buys and holds an S&P CNX Nifty portfolio earns dividends; this should be compared with the S&P CNX Nifty TR index and not plain S&P CNX Nifty.

So when do weights in an index change?

When corporate actions take place, the market capitalization changes and weights have to be adjusted. Rights issues, public issues and mergers all present such problems. Of course, when index set changes take place, the portfolio has to be adjusted and weights get modified. This requires elaborate and consistently-applied policies. These policies have been the subject of great attention and care at IISL and are fully disclosed to the public.

What historical data for S&P CNX Nifty is available?

S&P CNX Nifty and S&P CNX Nifty-TR are available from 3 July 1990 and 6 November 1995 respectively. The historical data is calculated in an intelligent way, i.e. the index set steadily evolves even through the older years. The historical Nifty and Nifty-TR are very useful for researches.

Where do I get data for S&P CNX Nifty?

Data for S&P CNX Nifty and other indices are available on the NSE website under Indices / Statistics

Index funds

What index should be used for index funds?

From a mutual fund investor's point of view, the fund manager should accurately replicate returns on the index. The liquidity filtering in S&P CNX Nifty and numerous operational details about index management, help ensure accurate tracking. When investors see that an index fund is unable to replicate the returns on an index, they would have dark fears and would abandon the product. S&P CNX Nifty is the best index in India in terms of the accuracy of tracking possible.

Index Futures

What about index futures?

NSE commenced trading in Index Futures on June 12, 2000. The Nifty futures contracts are based on the popular market benchmark S&P CNX Nifty Index. S&P CNX Nifty is uniquely equipped as an index for the index futures market owing to (a) low market impact cost and (b) high hedging effectiveness. The good diversification of S&P CNX Nifty will generate low initial margin requirements. Finally, S&P CNX Nifty is calculated using NSE prices, and NSE is the most liquid exchange in India, thus making it easier to do arbitrage for S&P CNX Nifty index futures.

What is hedging effectiveness?

Suppose you have some portfolio, and you use index futures for hedging. A good index is one, which gives high hedging effectiveness, i.e. the index should correlate well with your portfolio -- whatever it may be. A good index would give a very high risk reduction when a portfolio owner short sells the index futures. S&P CNX Nifty correlates better with all kinds of portfolios in India as compared with other indices. This holds for all kinds of portfolios, not just those that contain index stocks.

Why not form a small portfolio of the ten most liquid stocks, and work to ensure that the small portfolio is maximally correlated with the S&P CNX Nifty?

This can, indeed, be done. Is it worth doing? That depends upon the cost and benefit. Calculating the weights, in the ten stocks with the lowest market impact cost, so that the correlation with S&P CNX Nifty is maximized, is not easy to do. (See Risk structure of Indian stocks by Dr. John Blin of Advance Portfolio Technologies APT - http://www.aptltd.com for a calculation of a 10-stock portfolio which is maximally correlated with S&P CNX Nifty. This is found in the book "The future of fund management in India" edited by Dr. Tushar Waghmare, "Invest India" - Tata McGraw Hill Series, 1997 - http://www.iief.com)
The gains from such an activity are not large. S&P CNX Nifty is explicitly designed to make it convenient to trade complete index portfolios. This is in contrast with other markets, where indices have arisen before index futures came about, and ways had to be found to trade them. For example, the S&P 500 index was there before index futures came about. When index futures started trading, arbitrageurs had to find ways to trade the index - trading 500 stocks on the floor-based New York Stock Exchange was highly cumbersome. This led to great creativity in finding 250-stock portfolios which correlate well with the S&P 500. In India, there is no need to undergo these kinds of problems.

Alternatives to the S&P CNX Nifty

How does S&P CNX Nifty compare with other indices?

Every technical reason favors the S&P CNX Nifty.
Diversification. S&P CNX Nifty is a more diversified index, accurately reflecting overall market conditions. The reward-to-risk ratio of S&P CNX Nifty is higher than other leading indices, making it a more attractive portfolio hence offering similar returns, but at lesser risk.
Liquidity. Over one year (October 1998 to October 1999), the trading volume on NSE for Nifty stocks was
₹
3.5 trillion, giving a liquidity ratio of 105%. The 'liquidity ratio' is defined as trading volume over one year divided by market capitalization today.
Hedging effectiveness. The basic risk of Nifty futures will be lower owing to the superior liquidity of Nifty stocks and of NSE. Nifty has higher correlations with typical portfolios in India as compared to any other index. These two factors imply that hedging using Nifty futures will be superior.
Governance. Nifty is managed by a professional team at IISL, a company setup by NSE and CRISIL with technical assistance from Standard & Poor's. There is a three-tier governance structure comprising the board of directors of IISL, the Index Policy Committee, and the Index Maintenance Subcommittee. S&P CNX Nifty has fully articulated and professionally implemented rules governing index revision, corporate actions, etc. These rules are carefully thought out, under Indian conditions, to dovetail with operational problems of index funds and index arbitrageurs. S&P CNX Nifty is relatively free of manipulation, for three reasons: (a) the index levels are calculated from a highly liquid exchange with superior surveillance procedures (b) S&P CNX Nifty has a large market capitalization so the consequence (upon the index) of a given move in an individual stock price is smaller and (c) S&P CNX Nifty calculation intrinsically requires liquidity in proportion to market capitalization, thus avoiding weak links which a manipulator can attack. Users of the S&P CNX Nifty benefit from the research that is possible owing to the long time-series available: both S&P CNX Nifty and S&P CNX Nifty Total Returns Index series are observed from July 1990 onwards. S&P CNX Nifty is backed by solid economic research and three most respected institutions: NSE, CRISIL and S&P.

Parents

How did the S&P CNX Nifty come about?

Equities trading at NSE began in November 1994. By late 1995, NSE became India's largest equity market and was looking for a market index to utilise this unique information source. NSE also wanted to have a vehicle for the futures and options market. NSE approached the economists Dr. Ajay Shah and Dr. Susan Thomas, (then at Centre for Monitoring Indian Economy Pvt. Ltd.- CMIE (www.cmie.com) and now at Indira Gandhi Institute of Development Research (IGIDR - www.igidr.ac.in), to conduct research on methods in index construction. This work was funded by the USAID FIRE project (www.usaid.gov) and led to the S&P CNX Nifty. Some of their research is visible over the Internet at www.igidr.ac.in/~ajayshah

Where does IISL come in?

In 1998, NSE and CRISIL launched a joint venture named IISL to focus on index management. This pools the index development efforts of CRISIL and NSE into a coordinated whole, India's first specialized company focused upon the index as a core product. Today, the S&P CNX Nifty is owned and operated by IISL. It is a global phenomenon where an independent company calculates and maintains the index.

Who is Standard & Poor's, and why does their name appear with the S&P CNX Nifty?

S&P owns the most important index in the world, the S&P 500 index, which is the foundation of the largest index funds and most liquid index futures markets in the world. When S&P came to India to look at market indices, they focused upon the S&P CNX Nifty as opposed to alternative indices. They now stand behind the S&P CNX Nifty, as is evidenced by the name "S&P CNX Nifty" This is a unique occasion; S&P has never endorsed a market index before.

What does 'CNX' in S&P CNX Nifty stand for?

CNX stands for CRISIL NSE Indices. CNX ensures common branding of indices, to reflect the identities of both the promoters, i.e. NSE and CRISIL. Thus, 'C' stands for CRISIL, 'N' stands for NSE and X stands for Exchange or Index.

We sometimes hear the term 'nifty fifty' used in the US to denote a certain set of growth stocks. Is there any connection?

No. It's purely coincidental. It was research that led to the choice of 50 stocks as the optimal size of an index in the Indian equity market. One day, a clever leap was made from NSE-50 to 'S&P CNX Nifty'.

Siblings

What's S&P CNX Defty?

S&P CNX Defty is S&P CNX Nifty, measured in dollars. If the S&P CNX Nifty rises by 2% it means that the Indian stock market rose by 2%, measured in rupees. If the S&P CNX Defty rises by 2%, it means that the Indian stock market rose by 2%, measured in dollars.

What's S&P CNX 500?

The S&P CNX 500 is India’s first broad based benchmark of the Indian capital market. The S&P CNX 500 represents about 86% of total market capitalization and about 78% of the total turnover on the NSE. The S&P CNX 500 companies are disaggregated into 72 industries, each of which has an index – The S&P CNX Industry Index. Industry weightages in the index dynamically reflect the industry weightages in the market. So for e.g. if the banking sector has a 5% weightages among the universe of stocks on the NSE, banking stocks in the index would have an approx. representation of 5% in the index. The S&P CNX 500 is a market capitalization weighted index. The base date for the index is the calendar year 1994 with the base index value being 1000. Companies in the index are selected based on their market capitalization, industry representation, trading interest and financial performance. The index is calculated and disseminated real-time.

What's CNX Nifty Junior?

S&P CNX Nifty is the first rung of the largest, highly liquid stocks in India. CNX Nifty Junior is an index built out of the next 50 large, liquid stocks in India. It is not as liquid as the S&P CNX Nifty, which implies that the information in the S&P CNX Nifty Junior is not as noise-free as that of the S&P CNX Nifty. It may be useful to think of the S&P CNX Nifty and the CNX Nifty Junior as making up the

100 most liquid stocks in India. S&P CNX Nifty is the front line blue-chips, large and highly liquid stocks.

The CNX Nifty Junior is the second rung of growth stocks, which are not as established as those in the S&P CNX Nifty. A stock like Satyam Computers, which recently graduated into the S&P CNX Nifty, was in the CNX Nifty Junior for a long time prior to this. CNX Nifty Junior can be viewed as an incubator where young growth stocks are found. As with the S&P CNX Nifty, stocks in the CNX Nifty Junior are filtered for liquidity, so they are the most liquid of the stocks excluded from the S&P CNX Nifty. Buying and selling the entire CNX Nifty Junior as a portfolio is feasible. The maintenance of the S&P CNX Nifty and the CNX Nifty Junior are synchronized so that the two indices will always be disjoint sets; i.e. a stock will never appear in both indices at the same time. Hence it is always meaningful to pool the S&P CNX Nifty and the CNX Nifty Junior into a composite 100 stock indexes or portfolio.

What is the CNX Midcap?

The medium capitalized segment of the stock market is being increasingly perceived as an attractive investment segment with high growth potential. The primary objective of the CNX Midcap Index is to capture the movement and be a benchmark of the midcap segment of the market. The CNX Midcap Index is a market capitalization weighted index with its base period of the index being the calendar year 2003 and base value as 1000.The distribution of industries in the CNX Midcap Index represents the industry distribution in the Midcap segment of the market. All companies are evaluated for trading interest and financial performance.

What are CNX Segment Indices?

For effectively researching the market, IISL has segregated the market in many ways. One of the ways is based on ownership.

CNX MNC Index. The CNX MNC Index comprises 15 listed companies in which the foreign shareholding is over 50% and / or the management control is vested in the foreign company. The index is a market capitalization weighted index with base period being the month of December, 1994 indexed to a value 1,000. Companies in the index should be MNCs and are selected based on their market capitalization, industry representation, trading value and financial performance.

CNX PSE Index. As part of its agenda to reform the Public Sector Enterprises (PSE), the Government has selectively been divesting its holdings in public sector enterprises since 1991.

With a view to provide regulators, investors and market intermediaries with an appropriate benchmark that captures the performance of this segment of the market, as well as to make available an appropriate basis for pricing forthcoming issues of PSEs. IISL has developed the CNX PSE Index, comprising of 20 PSE stocks. The Index is a market capitalization weighted index with base period being the month of December 1994 and base index value being 1,000. Companies selected in the index have to be PSEs, which should rank high in terms of market capitalization and trading value.

What is CNX IT Sector Index?

With the Information Technology (IT) sector in India growing at a fast rate, there is a need to provide investors, market intermediaries and regulators an appropriate benchmark that captures performance of this sector. Companies in this index should have more than 50% of their turnover from IT related activities like software development, hardware manufacture, vending, support and maintenance. The index is a market capitalization weighted index with its base period being December 1995 with base value 1,000.

MUTUAL FUNDS

An Mutual Fund is an investment vehicle that is made up of a pool of funds collected from many investors for the purpose of investing in securities such as stocks, bonds, money market instruments and similar assets. One of the main advantages of mutual funds is that they give small investors access to professionally managed, diversified portfolios of equities, bonds and other securities, which would be quite difficult (if not impossible) to create with a small amount of capital.

MUTUAL FUND SERVICE SYSTEM

Mutual Fund Service System (MFSS) is an online order collection system provided by NSE to its eligible members for placing subscription or redemption orders on the MFSS based on orders received from the investors. NSE launched India's first Mutual Fund Service System (MFSS) on November 30, **2009** through which an investor can subscribe or redeem units of a mutual fund scheme.

EXCHANGE TRADED FUNDS (ETF's)

In recent times, Exchange-traded funds (ETFs) have gained a wider acceptance as financial instruments whose unique advantages over mutual funds have caught the eye of many an investor. These instruments are beneficial for Investors that find it difficult to master the tricks of the trade of analyzing and picking stocks for their portfolio. Various mutual funds provide ETF products that attempt to replicate the indices on NSE, so as to provide returns that closely correspond to the total returns of the securities represented in the index. ETF's available on NSE are diverse lot. Equity, Debt, Gold and International Indices ETF's are available. Exchange Traded Funds are essentially Index Funds that are listed and traded on exchanges like stocks. An ETF is a basket of stocks that reflects the composition of an Index, like S&P CNX Nifty. The ETFs trading value is based on the net asset value of the underlying stocks that it represents. Unlike regular open-end mutual funds, ETFs can be bought and sold throughout the trading day like any stock.

Most ETFs charge lower annual expenses than index mutual funds. However, as with stocks, one must pay a brokerage to buy and sell ETF units, which can be a significant drawback for those who trade frequently or invest regular sums of money.

They first came into existence in the USA in 1993. It took several years for them to attract public interest. But once they did, the volumes took off with a vengeance. Over the last few years more than $120 billion (as on June 2002) is invested in about 230 ETFs. About 60% of trading volumes on the American Stock Exchange are from ETFs. The most popular ETFs are QQQs (Cubes) based on the NASDAQ-100 Index, SPDRs (Spiders) based on the S&P 500 Index, shares based on MSCI Indices and TRAHK (Tracks) based on the Hang Seng Index. The average daily trading volume in QQQ is around 89 million shares.

Their passive nature is a necessity: the funds rely on an arbitrage mechanism to keep the prices at which they trade roughly in line with the net asset values of their underlying portfolios. For the mechanism to work, potential arbitragers need to have full, timely knowledge of a fund's holdings.

ETFs are not futures

Even though ETFs and Futures allow investors exposure to an index, they are different in many regards. While Futures is a derivative product and trades in the F&O segment of NSE, ETFs are a cash market product and trade in the Capital Market segment of NSE. The maximum tenure available for futures is 3 months while ETFs can be held for as long as the investor wants.

INITIAL PUBLIC OFFERING (IPO)

A primary market is one that issues new securities on an exchange. The primary

markets are where investors can get first crack at a new security issuance. The issuing company offers its equity to investors or groups and receives cash proceeds from the sale, which is then used to fund operations or expand the business. It is the largest source of funds with long or indefinite maturity for the company. A corporate may raise capital in the primary market by way of an initial public offer, rights issue or private placement.
An Initial Public Offer (IPO) is the selling of securities to the public in the primary market. It is the largest source of funds with long or indefinite maturity for the company.

What is Book Building?

SEBI guidelines defines Book Building as "a process undertaken by which a demand for the securities proposed to be issued by a body corporate is elicited and built-up and the price for such securities is assessed for the determination of the quantum of such securities to be issued by means of a notice, circular, advertisement, document or information memoranda or offer document".
Book Building is basically a process used in Initial Public Offer (IPO) for efficient price discovery. It is a mechanism where, during the period for which the IPO is open, bids are collected from investors at various prices, which are above or equal to the floor price. The offer price is determined after the bid closing date.
As per SEBI guidelines, an issuer company can issue securities to the public though prospectus in the following manner:
100% of the net offer to the public through book building process
75% of the net offer to the public through book building process and 25% at the price determined through book building. The Fixed Price portion is conducted like a normal public issue after the Book Built portion, during which the issue price is determined.
The concept of Book Building is relatively new in India. However it is a common practice in most developed countries.

Difference between Book Building Issue and Fixed Price Issue

In Book Building securities are offered at prices above or equal to the floor prices, whereas securities are offered at a fixed price in case of a public issue. In case of Book Building, the demand can be known everyday as the book is built. But in case of the public issue the demand is known at the close of the issue.

SECURITY LENDING AND BORROWING SCHEME

Short Selling means selling of a stock that the seller does not own at the time of trade. Short selling can be done by borrowing the stock through Clearing Corporation/Clearing House of a stock exchange which is registered as Approved Intermediaries (AIs). Short selling can be done by retail as well as institutional investors. The Securities Lending and Borrowing mechanism allows short sellers to borrow securities for making delivery. Securities Lending and Borrowing (SLB) is a scheme that has been launched to enable settlement of securities sold short. SLB enables lending of idle securities by the investors through the clearing corporation/clearing house of stock exchanges to earn a return through the same.
Securities in the F&O segment are eligible for short selling
NSCCL as an Approved Intermediary launched the Securities Lending & Borrowing Scheme on April 21, 2008. Lending & Borrowing is facilitated on an automated screen based platform where the order matching is on price time priority. The participant needs to quote the lending fee per share on the order matching platform.

Features of Securities lending and borrowing scheme

- Automated screen based trading platform with online matching of trades based on price- time priority
- Tenure of lending and borrowing available upto a period of 12 months
- A facility for placing early recall request for the securities lent is provided to the lender

- A facility for the borrower to make an early repayment of securities and further relend them

The transactions are based on fixed monthly tenures with specified reverse leg settlement dates and the tenure ranges from 1 month up to 12 months. The specified reverse leg settlement date is the first Thursday of the corresponding month. Each reverse leg settlement date is assigned a specific series number. Securities traded in F&O segment are eligible for lending & borrowing under the scheme.

Business Growth in CM Segment

Month /Year	No of co's listed*	No. of co's permitted*	No. of co's available for trading *	No. of trading days	No. of securities traded #	No. of trades (lakh)	Traded Quantity (lakh)	Turnover (₹ cr)	Average Daily Turnover (₹ cr)	Average Trade Size	Demat Securities Traded (lakh)	Demat Turnover	Market Capitalisation (₹ cr)*
Current Month													
Dec-2011	1,640	71	1,556	21	1,675	1,076	1,15,115	1,88,886	8,995	17,562	1,15,115	1,88,886	52,32,273
Nov-2011	1,633	66	1,545	20	1,640	1,114	1,23,804	2,06,344	10,317	18,522	1,23,804	2,06,344	55,47,723
Oct-2011	1,631	66	1,543	19	1,614	1,008	1,01,205	1,93,293	10,173	19,185	1,01,205	1,93,293	61,01,891
Sep-2011	1,622	60	1,530	21	1,698	1,226	1,32,298	2,35,270	11,203	19,191	1,32,298	2,35,270	58,20,334
Aug-2011	1,615	60	1,523	21	1,611	1,236	1,33,110	2,35,253	11,203	19,036	1,33,110	2,35,253	59,21,684
Jul-2011	1,606	60	1,514	21	1,600	1,158	1,22,590	2,30,003	10,953	19,862	1,22,590	2,30,003	64,62,238
Jun-2011	1,599	61	1,509	22	1,663	1,159	1,22,299	2,22,457	10,112	19,188	1,22,299	2,22,457	65,74,743
May-2011	1,585	61	1,495	22	1,560	1,151	1,15,857	2,33,876	10,631	21,281	1,15,857	2,33,876	65,69,743
Apr-2011	1,578	61	1,488	18	1,589	1,073	1,29,429	2,28,348	12,686	21,281	1,29,429	2,28,348	67,53,614
2010-2011	1,574	61	1,484	255	1,607	15,507	18,24,515	35,77,412	14,048	23,009	18,24,515	35,77,412	67,02,616
2009-2010	1,470	37	1,359	244	1,968	16,816	2,215,530	4,138,024	16,959	24,608	2,215,530	4,138,024	6,009,173
2008-2009	1,432	-	1,291	243	1,327	13,651	1,426,354	2,752,023	11,325	20,160	1,426,354	2,752,023	2,896,194
2007-2008	1,381	-	1,236	251	1,264	11,727	1,498,469	3,551,038	14148	30,281	1,498,469	3,551,038	4,858,122
2006-2007	1,228	-	1,084	249	1,191	7,846	855,456	1,945,285	7,812	24,793	855,456	1,945,285	3,367,350
2005-2006	1,069	-	929	251	956	6,088	844,486	1,569,556	6,253	25,781	844,486	1,569,556	2,813,201
2004-2005	970	1	839	253	870	4,510	797,684	1,140,071	4,506	25,279	797,684	1,140,071	1,585,585
2003-2004	909	18	787	254	804	3,780	713,301	1,099,535	4,328	29,088	713,301	1,099,535	1,120,976

2002-2003	818	107	788	251	899	2,398	364,065	617,989	2,462	25,771	364,049	617,984	537,133
2001-2002	793	197	890	247	1,019	1,753	278,408	513,167	2,078	29,274	277,717	512,866	636,861
2000-2001	785	320	1,029	251	1,201	1,676	329,536	1,339,510	5,337	79,923	307,222	1,264,337	657,847
1999-2000	720	479	1,152	254	--	984	242,704	839,052	3,303	85,270	153,772	711,706	1,020,426
1998-1999	648	609	1,254	251	--	546	165,327	414,474	1,651	75,911	8,542	23,818	491,175
1997-1998	612	745	1,357	244	--	381	135,685	370,193	1520	97,164	--	--	481,503
1996-1997	550	934	1,484	250	--	264	135,561	294,503	1176	111,895	--	--	419,367
1995-1996	422	847	1,269	246	--	66	39,912	67,287	276	101,950	--	--	401,459
1994-1995	135	543	678	102	--	3	1391	1805	17	60167	--	--	363350

II: DERIVATIVE MARKET

DERIVATIVES

The Derivatives section provides you with an insight into the derivatives segment of NSE with Current Market Reports, Historical Data and Product Information. Real-time quotes and information regarding derivative products, trading systems & processes, clearing and settlement, risk management, statistics etc. are available here. A **derivative** instrument is a contract between two parties that specifies conditions (especially the dates, resulting values of the underlying variables, and notional amounts) under which payments, or payoffs, are to be made between the parties.

Under US law and the laws of most other developed countries, derivatives have special legal exemptions that make them a particularly attractive legal form through which to extend credit. However, the strong creditor protections afforded to derivatives counterparties, in combination with their complexity and lack of transparency, can cause capital markets to underpriced credit risk. This can contribute to credit booms, and increase systemic risks. Indeed, the use of derivatives to mask credit risk from third parties while protecting derivative counterparties contributed to both the financial crisis of 2008 in the United States and the European sovereign debt crises in Greece and Italy.

Financial reforms within the US since the financial crisis have served only to reinforce special protections for derivatives, including greater access to government guarantees, while minimizing disclosure to broader financial markets.

EQUITIES DERIVATIVES

Equity derivative is a class of derivatives whose value is at least partly derived from one or more underlying equity securities. Options and futures are by far the most common equity derivatives.

This section provides you with an insight into the daily activities of the equity derivatives market segment on NSE. 2 major products under Equity derivatives are Futures and Options, which are available on Indices and Stocks.

The National Stock Exchange of India Limited (NSE) commenced trading in derivatives with the launch of index futures on June 12, 2000. The futures contracts are based on the popular benchmark S&P CNX Nifty Index.

The Exchange introduced trading in Index Options (also based on Nifty) on June 4, 2001. NSE also became the first exchange to launch trading in options on individual securities from July 2, 2001. Futures on individual securities were introduced on November 9, 2001. Futures and Options on individual securities are available on 223 securities stipulated by SEBI.

The Exchange has also introduced trading in Futures and Options contracts based on CNX-IT, BANK NIFTY, and NIFTY MIDCAP 50 indices.

Instrument wise Volume and Turnover

As on Jan 07, 2012 12:45:34 IST		
Product	**No. of contracts**	**Traded Value (Rs crores)**
Index Futures	49,528	1,136.16
Stock Futures	53,044	1,160.32
Index Options	2,52,890	6,149.62
Stock Options	19,557	437.31
F&O Total	3,75,019	8,883.41

Options Value calculated as (Premium + Strike price) x Quantity

PRODUCTS

Futures & Options (F&O) segment of NSE provides trading in derivatives instruments like Index Futures, Index Options, Stock Options, and Stock Futures. Since the launch of the Index Derivatives on the popular benchmark S&P CNX Nifty Index in 2000, the National Stock Exchange of India Limited (NSE) today have moved ahead with a varied product offering in equity derivatives. The Exchange currently provides trading in Futures and Options contracts on 9 major indices and 226 securities. The Exchange also introduced trading in Mini Derivatives contracts to provide easier access for small investors to invest in Nifty futures and options.

<u>DERIVATIVES ON THE FOLLOWING PRODUCTS.</u>

CURRENCY DERIVATIVES

A **currency future**, also known as **FX future**, is a futures contract to exchange one currency for another at a specified date in the future at a price (exchange rate) that is fixed on the purchase date. On NSE the price of a future contract is in terms of INR per unit of other currency e.g. US Dollars. Currency future contracts allow investors to hedge against foreign exchange risk. Currency Derivatives are available on four currency pairs viz. US Dollars (USD), Euro (EUR), Great Britain Pound (GBP) and Japanese Yen (JPY). Currency options are currently available on US Dollars.

NSE was the first exchange to have received an in-principle approval from SEBI for setting up currency derivative segment. The exchange launched its currency futures trading platform on 29th August, 2008. Currency futures on USD-INR were introduced for trading and subsequently the Indian rupee was allowed to trade against other currencies such as euro, pound sterling and the Japanese yen. Currency Options was introduced on October 29, 2010.

Products

Currency Derivatives segment of NSE provides trading in derivative instruments like Currency Futures on 4 currency pairs, Currency Options on US Dollars and Interest Rate Futures on 10 Y GS 7 and 91 D T-Bill.

INTEREST RATE FUTURES

An interest rate derivative is a financial derivative where the underlying asset (interest-bearing instrument) is the right to pay or receive a notional amount of money at a given interest rate. Interest rate futures are used to hedge against the risk of interest rate movements (such as volatility movements or simple directional movements) in an adverse direction, causing a cost to the company. Examples include Treasury-bill and Treasury-bond futures.

Interest Rate derivatives (IRD) introduced on NSE from 2009, offers futures contracts on 10 Year Notional Coupon-bearing Government of India (GOI) security (10YGS7) and the recently introduced (2011) 91-day Government of India (GOI) Treasury bill.

NSE launched trading in Interest Rate Futures from 30th August 2009. The underlying instrument is a Notional 10 year 7% coupon bearing Government of India (GOI) security. Interest Rate Futures contract offers market participants a standardized product taking a view of the future directions of the market, hedging and creating income strategies. Electronic trading platform of NSE ensures transparency of prices, volumes and trade data.

Products

Currently Interest Rate Derivatives segment of NSE offers two instruments i.e. Notional 10 year 7% coupon bearing Government of India (GOI) (10YGS7) and 91-day Government of India (GOI) Treasury bill (91DTB). NSE's automated screen based trading, modern, fully computerised trading system designed to offer investors across the length and breadth of the country a safe and easy way to invest. The NSE trading system called 'National Exchange for Automated Trading' (NEAT) is a fully automated screen based trading system, which adopts the principle of an order driven market. NSCCL carrries out the clearing and settlement of the trades executed in the equities and derivatives segments of the NSE. It operates a well-defined settlement cycle and there are no deviations or deferments from this cycle. It aggregates trades over a trading period, nets the positions to determine the liabilities of members and ensures movement of funds and securities to meet respective liabilities.

Business Growth in FO Segment

Year	Index Futures		Stock Futures		Index Options		Stock Options		Total		Average Daily Turnover

	No. of contracts	Turnover (₹ cr.)	No. of contracts	Turnover (₹ cr.)	No. of contracts	Notional Turnover (₹ cr.)	No. of contracts	Notional Turnover (₹ cr.)	No. of contracts	Turnover (₹ cr.)	(₹ cr.)
2011-12	113557046	2763530.39	118483116	2949499.41	671036355	17607727.41	25745384	666411.02	928821901	23987168.08	124933.17
2010-11	165023653	4356754.53	186041459	5495756.70	650638557	18365365.76	32508393	1030344.21	1034212062	29248221.09	115150.48
2009-10	178306889	3934388.67	145591240	5195246.64	341379523	8027964.20	14016270	506065.18	679293922	17663664.57	72392.07
2008-09	210428103	3570111.40	221577980	3479642.12	212088444	3731501.84	13295970	229226.81	657390497	11010482.20	45310.63
2007-08	156598579	3820667.27	203587952	7548563.23	55366038	1362110.88	9460631	359136.55	425013200	13090477.75	52153.30
2006-07	81487424	2539574	104955401	3830967	25157438	791906	5283310	193795	216883573	7356242	29543
2005-06	58537886	1513755	80905493	2791697	12935116	338469	5240776	180253	157619271	4824174	19220
2004-05	21635449	772147	47043066	1484056	3293558	121943	5045112	168836	77017185	2546982	10107
2003-04	17191668	554446	32368842	1305939	1732414	52816	5583071	217207	56886776	2130610	8388
2002-03	2126763	43952	10676843	286533	442241	9246	3523062	100131	16768909	439862	1752
2001-02	1025588	21483	1957856	51515	175900	3765	1037529	25163	4196873	101926	410
2000-01	90580	2365	-	-	-	-	-	-	90580	2365	11

III: DEBT

The Debt section provides you with an insight into the debt segment of NSE with Current Market Reports, Historical Data and Product Information. Large investors and a high average trade value characterize this segment.

Till recently, the market was purely an informal market with most of the trades directly negotiated and struck between various participants. The commencement of this segment by NSE has brought about transparency and efficiency to the debt market.

A **debt** is an obligation owed by one party (the debtor) to a second party, the creditor; usually this refers to assets granted by the creditor to the debtor, but the term can also be used metaphorically to cover moral obligations and other interactions not based on economic value.

A debt is created when a creditor agrees to lend a sum of assets to a debtor. Debt is usually granted with expected repayment; in modern society, in most cases, of the original sum plus interest.

In finance, debt is a means of using anticipated future purchasing power in the present before it has actually been earned. Some companies and corporations use debt as a part of their overall corporate finance strategy.

RETAIL DEBT MARKET

NSE has introduced a trading facility through which retail investors can buy and sell government securities from different locations in the country through registered NSE brokers and their sub brokers in the same manner as they have been buying and selling equities. This market is known as "Retail Debt Market" of NSE. Trading in this retail debt market segment (RDM) on NSE has been introduced w.e.f. January 16, 2003. Trading shall take place in the existing Capital Market segment of the Exchange. With a view to encouraging wider participation of all classes of investors across the country (including retail investors) in government securities, the Government, RBI and SEBI have introduced trading in government securities for retail investors.

Trading in this retail debt market segment (RDM) on NSE has been introduced w.e.f. January 16, 2003. Trading shall take place in the existing Capital Market segment of the Exchange. In the first phase, all outstanding and newly issued central government securities would be traded in the retail segment. This market is known as "Retail Debt Market" of NSE.

In the first phase, all outstanding and newly issued central government securities would be traded in the retail segment. Other securities like state government securities, T-Bills etc. would be added in subsequent phases.

Business Growth in RDM Segment

RDM Business Growth			
Month/Year	**No of trades**	**Traded quantity**	**Traded Value (₹ lakh)**
2011-2012	0	0	0.00
2010-2011	2	20	0.02
2009-2010	5	50	0.06
2008-2009	0	0	0.00
2007-2008	0	0	0.00
2006-2007	4	12,120	13.69
2005-2006	0	0	0.00
2004-2005	31	122,390	149.27
2003-2004	912	372,820	464.41

QUESTIONAIRE

FREQUENTLY ASKED QUESTIONS ABOUT THE RETAIL DEBT MARKET

Government Securities: Government securities are debt instruments issued by Reserve Bank of India on behalf of the Government of India and is known as G-Secs or Gilts. A government security is direct obligation of the Central Government carries its full backing and is also known as Sovereign Debt. The payment of regular interest and the repayment of face value are assured by the Central Government through the Reserve Bank of India. Once issued, these are traded in the secondary market. Most of the trading in the Government Securities takes place on the wholesale basis in the inter-bank market. The major market participants are banks and financial institutions, mutual funds, insurance companies, primary dealers, provident funds, trusts and individuals. Most of these participants actively trade in government securities due to their statutory requirements.

Prior to introduction of NSE's Retail Debt Market in January 2003, government securities were not available for purchase and sale to the retail investors.

Whom should I approach for buying / selling securities in Retail Debt Market?
To buy / sell securities investors need to approach the same NSE broker through whom they have been dealing for equities or derivative products.

Do I need to register as a client again with NSE broker and what are the formalities?
All investors who have already registered with an NSE broker need not go through any registration process. The existing registration with the broker shall stand valid and may be used for executing trades in Retail Debt Market.

How do I give buy / sell instruction to my NSE broker?
All order instructions are to be passed to the broker in the similar manner as in the case of trading in equity shares.

What is the face value of the government security? What is the minimum order size?
All government securities made available for trading in Retail Debt Market will have a face value of Rs. 100/-. An investor is required to place order for a minimum of 10 units.
How is the pricing done in Retail Debt Market?
When investors buy a government security, they receive interest for the full six months on the next interest payment date even if the security is not held for six months. For this reason, on the date of purchase, the buyer has to pay the seller the interest accrued on the security from the date of last interest payment until the date of purchase. This accrued interest is added to the price of the security while entering the quote on the system. Price including the accrued interest is called Dirty Price.
Price of the security without accrued interest is called Clean Price.

Example: 7.46% GOI 2017 is quoted at a clean price of Rs 112.50
Face Value = Rs. 10,000 (100 Units of Rs. 100 each)
Interest Payment Date = 28th August, 2001
Settlement date: 11th January 2002
Accrued interest = (Rate of interest) x No. of days since last Int. payment date/360
In the given case Accrued Interest will be $\frac{7.46 \times 133}{360}$ =2.76 (Per Rs 100 of FV)

Dirty Price = Clean Price + Accrued Interest = 112.50 + 2.76 = 115.26
Consideration Amount = Dirty Price x Face Value/100 = $\frac{115.26 \times 10{,}000}{100}$ = Rs. 11,526

How do I know interest payment dates?

Government securities have interest payment at fixed interval of six months. The interest payment dates are made available on the web-site as also on the trading screen. The Reserve Bank of India announces a shut period three days prior to the interest payment date. NSE shall announce suspension of trading of a security in which the interest payment is due. Similarly, NSE shall announce the re-admission of the security for trading at the end of shut period.

How do I settle my trades? What is the settlement cycle?

Trades in Retail Debt Market are settled in the same manner as in the case of equities on a T+2 (working days) rolling basis. Hence in case of a buy trade, the client is required to make payment to the NSE broker in such a manner that the amount paid is realized well before the pay-in day, and the securities are then credited by the NSE broker to the client's beneficiary account after the pay-out. Similarly, in case of sell trade the client has to give delivery out instructions to the pool account of the NSE broker well before the prescribed settlement day immediately upon getting the contract note for sale, and the NSE broker shall make payment to the client after the pay-out.

What happens if I do not receive/deliver my securities purchased / sold through NSE broker?

In the equities market, the investor is not affected in case the delivering broker fails to meet its obligation, NSCCL provides financial guarantee for the net settlement obligation through the Settlement Guarantee Fund set up for this purpose.
In case of short deliveries, unsettled positions are not auctioned but are directly closed out at Zero Coupon Yield Curve (ZCYC) valuation prices plus a 5% penalty on the value.

The buyer shall be eligible for the higher of the following as compensation:

i) Highest traded price from the trade date to the date of close out OR
ii) Closing price of the security on the close out date plus interest calculated at the rate of overnight FIMMDA-NSE MIBOR for the close out date.

Can I use my existing depository account to trade in G-Secs?

Investors can use the existing beneficiary account with depositories for receiving and delivering government securities.

How will I receive interest in case of holding the securities till the next interest payment date?

All investors holding government securities in the dematerialized form in their beneficiary account with depositories shall receive the interest payment from the respective depository.

In case of dispute between me and the broker of NSE, whom should I approach?

The broker client agreement specifies that any dispute between the broker and client should be lodged immediately with Investor Grievance Cell at Mumbai office or the Regional Offices of NSE based on the dealing office where the deals were executed.
The Exchange also facilitates the process of arbitration between the brokers and their clients. The disputes between clients and brokers are resolved through arbitration in accordance with the Bye-Laws of the Exchange.

What are the returns on a government security?

Government Securities carry a face value, but are traded at a price. When an investor buys securities, he pays its current price which may be higher or lower than the face value. The investor will receive interest at the coupon rate of the security on the face value that the investor holds. Similarly, investor will receive the face value on the maturity date and not the amount invested. The returns on the security are determined by the yield-to-maturity (YTM) of the investment and not by the interest rate. Investors may visit our website www.nseindia.com and use the yield calculator to find the yield to maturity with the information provided in the contract note issued by NSE broker.

Why should I invest in Government Securities?

Presently, retail investors in fixed income securities have following alternatives for investments:

Option	Liquidity	Safety	Return	Tax incidence
Company deposits	Nil	Low to medium	Max. 10% subject for ratings	TDS for income over Rs. 2500/.
Post office/Monthly income scheme/NSC	Low	High	8%p.a.	No TDS (Benefit under section 80L)
PPF	Nil	High	8%p.a.	Tax-free
RBI Relief bonds	Low	High	8%p.a.	Taxable
Tax free bonds	Nil	High	6.5%p.a.	Tax-free
Bank deposits	Medium to high	Medium to High	6%(based on term)	TDS for income over Rs. 5000/-(Benefit under section 80L)
Government securities	High	Highest	6.50%(approx) For 20 years	No TDS (add. Rs.3000 u/s 80L)

An investor may invest in government securities for the following considerations

- Good Avenue for investment
- Highest safety
- Regular stream of income every six months
- Assured yield to maturity if held till redemption
- No tax deduction at source
- Additional income tax benefit of Rs.3000/- under Section 80L of Income Tax Act
- Diversification of risk
- Liquidity through trading

Let us consider an example of 12% GOI 2008. As on June 1, 2002, its purchase price is Rs. 122.52 (prices are quoted per Rs. 100). If an investor holding the above security were to sell it on January 14, 2003, he would have received a sale price of Rs. 130.28, amounting to an annualized return of 18.06%, in addition to the half yearly interest payment @ 12 % on the face value received by the investor.
Now, if the investor had put in the bulk money in other alternative means for investment as indicated above, he would have earned lesser returns of between 7-9%.

Secondly, investment in government securities has the added advantage of easy entry and exit routes resulting in more liquidity to the investor as compared to other fixed income investments which have varying periods of lock-in for the holder and would be more beneficial if held to maturity.

Importance of making government securities available to retail investors

- Cost-effective means of raising long term funds for government
- Provide effective and accessible means for long term investments for retail investors
- Develop a stable debt market for different classes of investors
- Create broad base holding pattern and depth
- Provide efficient price discovery mechanism in primary and secondary market thereby strengthening the existing system
- Diversification of risk
- Low cost of intermediation for investors

Advantages of retailing through NSE

- Wide reach on account of nation-wide spread of NSE trading network, with more than 800 active brokers spread across 380 cities.
- Screen based, anonymous order driven system familiar to retail investors for over 8 years.
- Trade matching based on fair and transparent principles of price-time priority.
- Intra-day netting of buy and sell trades in the same security allowed (settlement of only net outstanding positions).
- Settlement of obligations on rolling basis (T+2 days).
- Settlement of obligations through NSCCL (wholly owned subsidiary of NSE) which offers financial settlement guarantee through a separate guarantee fund.
- Settlement of securities in dematerialized form through depositories only.

Future of retailing

1. Retail debt market will expand manifold as the securities get widely distributed.
2. NSE's anonymous screen based order driven system will bring transparency and liquidity to trading in government securities.
3. Efficient price discovery on account of wide participation.
4. Diversification of risk and income stream for investing public facilitated.

WHOLESALE DEBT MARKET

The Wholesale Debt Market segment deals in fixed income securities and is fast gaining ground in an environment that has largely focused on equities. The segment commenced operations on June 30, 1994. This provided the first formal screen based trading facility for the debt market in the country. The Wholesale Debt Market segment provides the trading platform for trading of a wide range of debt securities. Its product, which is now disseminated jointly with FIMMDA, the FIMMDA NSE MIBID/MIBOR is used as a benchmark rate for majority of deals struck for Interest Rate Swaps, Forwards Rate Agreements, Floating Rate Debentures and Term Deposits in the country.

Its 'Zero Coupon Yield Curve' as well as NSE-VaR for Fixed Income Securities have also become very popular for valuation of sovereign securities across all maturities irrespective of its liquidity and facilitated the pricing of corporate papers and GOI Bond Index.

The Wholesale Debt Market segment deals in fixed income securities and is fast gaining ground in an environment that has largely focused on equities. The Wholesale Debt Market (WDM) segment of the Exchange commenced operations on June 30, 1994. This provided the first formal screen-based trading facility for the debt market in the country.

This segment provides trading facilities for a variety of debt instruments including Government Securities, Treasury Bills and Bonds issued by Public Sector Undertakings/ Corporate/ Banks like Floating Rate Bonds, Zero Coupon Bonds, Commercial Papers, Certificate of Deposits, Corporate Debentures, State Government loans, SLR and Non-SLR Bonds issued by Financial Institutions, Units of Mutual Funds and Securitized debt by banks, financial institutions, corporate bodies, trusts and others.

Large investors and a high average trade value characterize this segment. Till recently, the market was purely an informal market with most of the trades directly negotiated and struck between various participants. The commencement of this segment by NSE has brought about transparency and efficiency to the debt market.

Business Growth in WDM Segment

WDM Business Growth						
Year	**Market Capitalisation (₹ crores)**	**Trading Days**	**Number of Trades**	**Net Traded Value (₹ crores)**	**Average Daily Value (₹ crores)**	**Average Trade Size (₹ crores)**
2011-2012	39,36,784	158	13,876	3,59,167.45	2,273.21	25.88
2010-2011	35,94,877	248	20,383	5,59,446.77	2,255.83	27.45
2009-2010	31,65,929	239	24,069	5,63,815.95	2,359.06	23.42
2008-2009	28,48,315	238	16,129	3,35,951.52	1,411.56	20.83
2007-2008	21,23,346	248	16,179	282,317.02	1,138.38	17.45
2006-2007	17,84,801	244	19,575	2,19,106.47	897.98	11.19
2005-2006	15,67,574	271	61,891	4,75,523.48	1,754.70	7.68
2004-2005	14,61,734	293	1,24,308	8,87,293.66	3,028.31	7.14
2003-2004	12,15,864	294	1,89,518	13,16,096.24	4,476.52	6.94
2002-2003	8,64,481	297	1,67,778	10,68,701.54	3,598.32	6.37
2001-2002	7,56,794	289	1,44,851	9,47,191.22	3,277.48	6.54
2000-2001	5,80,835	289	64,470	4,28,581.51	1,482.98	6.65
1999-2000	4,94,033	294	46,987	3,04,216.24	1,034.75	6.47
1998-1999	4,11,470	289	16,092	1,05,469.13	364.95	6.55
1997-1998	3,43,191	289	16,821	1,11,263.28	384.99	6.61
1996-1997	2,92,772	291	7,804	42,277.59	145.28	5.42
1995-1996	2,07,783	291	2,991	11,867.68	40.78	3.97
1994-1995	1,58,181	223	1,021	6,781.15	30.41	6.64

CORPORATE BONDS

Corporate bonds are debt securities issued by private and public corporations. Companies issue corporate bonds to raise money for a variety of purposes, such as building a new plant, purchasing equipment, or growing the business. Corporate bonds are debt securities issued by private and public corporations. Companies issue corporate bonds to raise money for a variety of purposes, such as building a new plant, purchasing equipment, or growing the business. When one buys a corporate bond, one lends money to the "issuer," the company that issued the bond. In exchange, the company promises to return the money, also known as "principal," on a specified maturity date. Until that date, the company usually pays you a stated rate of interest, generally semiannually. While a corporate bond gives an IOU from the company, it does not have an ownership interest in the issuing company, unlike when one purchases the company's equity stock.

NEED FOR CORPORATE BONDS

One of the announcements in the Budget 2005-06 was to appoint a high level expert committee on corporate bonds and securitization to look into the legal, regulatory, tax and market design issues in the development of corporate bond market. A committee was formed under the Chairmanship of Dr. R.H. Patil to look into the factors inhibiting the development of an active debt market and recommend policy actions necessary to develop an appropriate market infrastructure for the growth of an active corporate bond market. A few of the recommendations for the development of an active secondary market for corporate bonds are:

- Establish a system to capture all information related to trading in corporate bonds as accurately and as close to execution as possible and disseminate it to the market in real time.
- Clearing and settlement of transactions in this market must adhere to the IOSCO standards.
- Based on increase of awareness amongst the participants to introduce online order matching system.

YIELDS

Yield is a critical concept in bond investing, because it is the tool used to measure the return of one bond against another. It enables one to make informed decisions about which bond to buy. In essence, yield is the rate of return on bond investment. However, it is not fixed, like a bond's stated interest rate. It changes to reflect the price movements in a bond caused by fluctuating interest rates. The following example illustrates how yield works.

- You buy a bond, hold it for a year while interest rates are rising and then sell it.
- You receive a lower price for the bond than you paid for it because; no one would otherwise accept your bond's now lower-than-market interest rate.
- Although the buyer will receive the same amount of interest as you did and will also have the same amount of principal returned at maturity, the buyer's yield, or rate of return, will be higher than yours, because the buyer paid less for the bond.
- Yield is commonly measured in two ways, current yield and yield to maturity.

Current yield

- The current yield is the annual return on the amount paid for a bond, regardless of its maturity. If you buy a bond at par, the current yield equals its stated interest rate. Thus, the current yield on a par-value bond paying 6% is

6%.

- However, if the market price of the bond is more or less than par, the current yield will be different. For example, if you buy a Rs. 1,000 bond with a 6% stated interest rate at Rs. 900, your current yield would be 6.67% (Rs. 1,000 x .06/Rs.900).

Yield to maturity

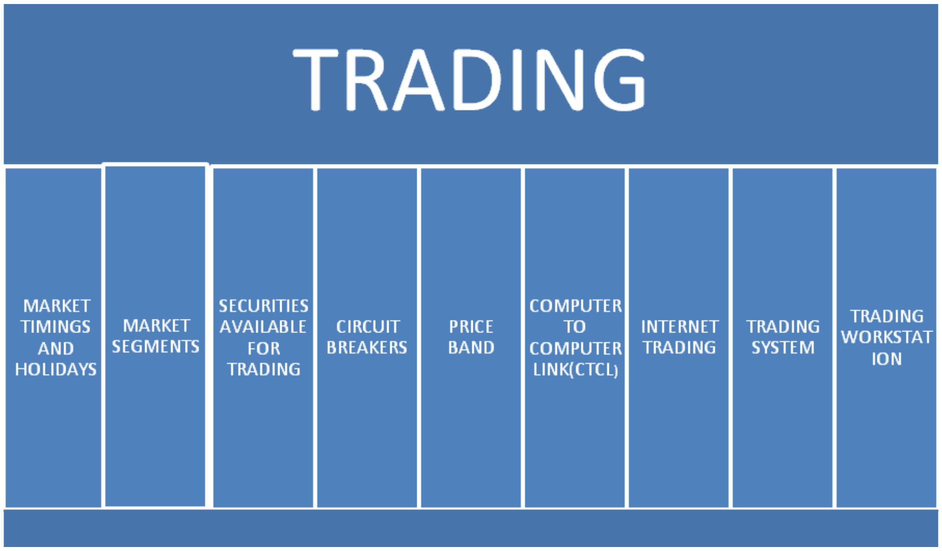
It tells the total return you will receive if you hold a bond until maturity. It also enables you to compare bonds with different maturities and coupons. Yield to maturity includes all your interest plus any capital gain you will realize (if you purchase the bond below par) or minus any capital loss you will suffer (if you purchase the bond above par).

VALUATION OF CORPORATE BONDS

Corporate bonds tend to rise in value when interest rates fall, and they fall in value when interest rates rise. Usually, the longer the maturity, the greater is the degree of price volatility. By holding a bond until maturity, one may be less concerned about these price fluctuations (which are known as interest-rate risk, or market risk), because one will receive the par, or face, value of the bond at maturity. The inverse relationship between bonds and interest rates—that is, the fact that bonds are worth less when interest rates rise and vice versa can be explained as follows:

- When interest rates rise, new issues come to market with higher yields than older securities, making those older ones worth less. Hence, their prices go down.
- When interest rates decline, new bond issues come to market with lower yields than older securities, making those older, higher-yielding ones worth more. Hence, their prices go up.
- As a result, if one sells a bond before maturity, it may be worth more or less than it was paid for.

TRADING



(THE NATIONAL EXCHANGE FOR AUTOMATED TRDING IS THE TRADING TECHNOLOGY USED BY NSE)

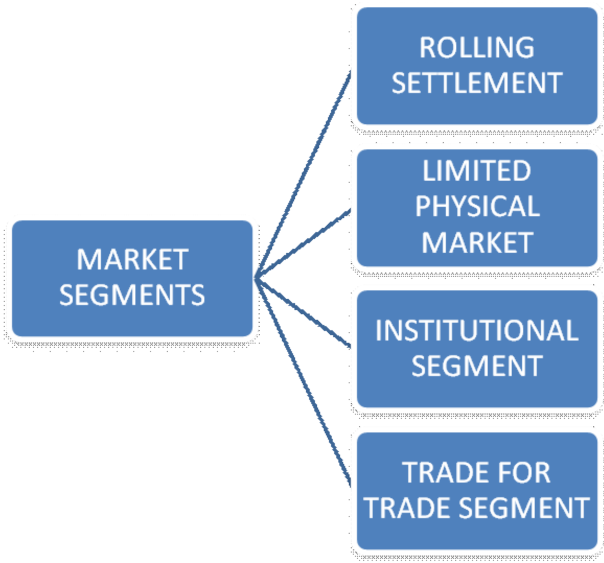
NSE introduced for the first time in India, fully automated screen based trading. It uses a modern, fully computerized trading system designed to offer investors across the length and breadth of the country a safe and easy way to invest. The NSE trading system called 'National Exchange for Automated Trading' (NEAT) is a fully automated screen based trading system, which adopts the principle of an order driven market.

- MARKET TIMINGS AND HOLIDAYS.

Trading on the equities segment takes place on all days of the week (except Saturdays and Sundays and holidays declared by the Exchange in advance).
The market timings of the equities segment are:
A) Pre-open session
Order entry & modification Open: **09:00 hrs**
Order entry & modification Close: **09:08 hrs***
*with random closure in last one minute. Pre-open order matching starts immediately after close pre-open order entry.
B) Regular trading session
Normal / Retail Debt / Limited Physical Market Open: **09:15 hrs.**
Normal / Retail Debt / Limited Physical Market Close: **15:30 hrs.**
Block deal session is held between **09:15 hrs** and **09:50 hrs.**
C) The Closing Session is held between **15.40 hrs.** And **16.00 hrs.**

- <u>MARKET SEGMENTS</u>

  The Exchange operates the following sub-segments in the Equities segment:



- SECURITIES AVAILABLE FOR TRADING:

The Capital Market (Equities) segment of NSE facilitates trading in the following instruments:

- Shares
  1. Equity Shares
  2. Preference Shares
- Debentures
  3. Partly Convertible Debentures
  4. Fully Convertible Debentures
  5. Non Convertible Debentures
  6. Warrants / Coupons / Secured Premium Notes/ other Hybrids
  7. Bonds
- Units of Mutual Funds

- CIRCUIT BREAKERS:

The Exchange has implemented index-based market-wide circuit breakers in compulsory rolling settlement with effect from July 02, 2001. In addition to the circuit breakers, price bands are also applicable on individual securities.

Index-based Market-wide Circuit Breakers

The index-based market-wide circuit breaker system applies at 3 stages of the index movement, either way viz. at 10%, 15% and 20%. These circuit breakers when triggered bring about a coordinated trading halt in all equity and equity derivative markets nationwide. The market-wide circuit breakers are triggered by movement of either the BSE Sensex or the NSE S&P CNX Nifty, whichever is breached earlier.

- In case of a 10% movement of either of these indices, there would be a one-hour market halt if the movement takes place before 1:00 p.m. In case the movement takes place at or after 1:00 p.m. but before 2:30 p.m. there would be trading halt for ½ hour. In case movement takes place at or after 2:30 p.m. there will be no trading halt at the 10% level and market shall continue trading.
- In case of a 15% movement of either index, there shall be a two-hour halt if the movement takes place before 1 p.m. If the 15% trigger is reached on or after 1:00p.m. But before 2:00 p.m., there shall be a one-hour halt. If the 15% trigger is reached on or after 2:00 p.m. the trading shall halt for remainder of the day.
- In case of a 20% movement of the index, trading shall be halted for the

remainder of the day.

These percentages are translated into absolute points of index variations on a quarterly basis. At the end of each quarter, these absolute points of index variations are revised for the applicability for the next quarter. The absolute points are calculated based on closing level of index on the last day of the trading in a quarter and rounded off to the nearest 10 points in case of S&P CNX Nifty.

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- PRICE BANDS:

Daily price bands are applicable on securities as below:

- Daily price bands of 2% (either way)
- Daily price bands of 5% (either way)
- Daily price bands of 10% (either way)
- No price bands are applicable on:
  scrip's on which derivative products are available or scrip included in indices on which derivative products are available (unless otherwise specified)*
- Price bands of 20% (either way) on all remaining scrip (including debentures, preference shares etc).

he price bands for the securities in the Limited Physical Market are the same as those applicable for the securities in the Normal Market.

For Auction market the price bands of 20% are applicable.

* In order to prevent members from entering orders at non-genuine prices in such securities, the Exchange has fixed operating range of 20%.

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- COMPUTER TO COMPUTER LINK(CTCL):

NSE offers a facility to its trading members by which members can use their own trading front-end software in order to trade on the NSE trading system.

This facility called Computer-to-Computer Link (CTCL) facility is available only to trading members of NSE.

About the CTCL facility

Trading Members can use their own software running on any suitable hardware/software platform of their choice. This software would be a replacement of the NEAT front-end software that is currently used by members to trade on the NSE trading system. Members can use software customized to meet their specialized needs like provision of on-line trade analysis, risk management tools, integration of back-office operations etc. The dealers of the member may trade using the software remotely through the member's own private network, subject to approvals from Department of Telecommunication etc. as may be required in this regard.

CTCL software

Members can procure the CTCL software either from software vendors who are empanelled with NSE or they may develop the software through their own in-house development team or may procure the software from other non-empanelled vendors.

The Exchange has issued circular no.NSE/CMO/0235/2005 dated Aug 24, 2005 (Download No.NSE/CMTR/6552) regarding detailing requirement and procedures to be complied with by members desirous of using the CTCL facility.

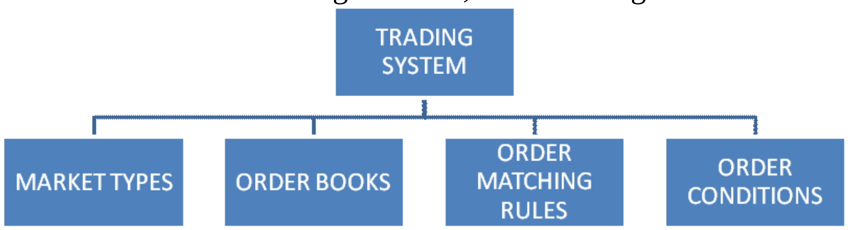
Vendors desirous of being empanelled with the Exchange for providing CTCL solutions to the trading members of the Exchange can refer to circular no.NSE/CMO/0029/2000 dated December 19, 2000 (Download No.NSE/CMT/2174), circular no.NSE/CMO/0039/2001 dated December 14, 2001 (Download No.NSE/CMTR/3054) and circular no.NSE/CMO/10 dated January 28, 2003 (Download No.NSE/CMTR/3896) detailing the requirements and procedures to be complied with by vendors for empanelment.

- <u>INTERNET TRADING:</u>

The Securities & Exchange Board of India (SEBI) approved the report on Internet Trading brought out by the SEBI Committee on Internet Based Trading and Services In January 2000.
Internet trading can take place through order routing systems, which will route client orders to exchange trading systems for execution. Thus a client sitting in any part of the country would be able to trade using the Internet as a medium through brokers' Internet trading systems.
SEBI-registered brokers can introduce Internet based trading after obtaining permission from respective Stock Exchanges. SEBI has stipulated the minimum conditions to be fulfilled by trading members to start Internet based trading and services, vide their circular no.SMDRP/POLICY/CIR-06/2000 dated January 31, 2000.

- <u>TRADING SYSTEM:</u>

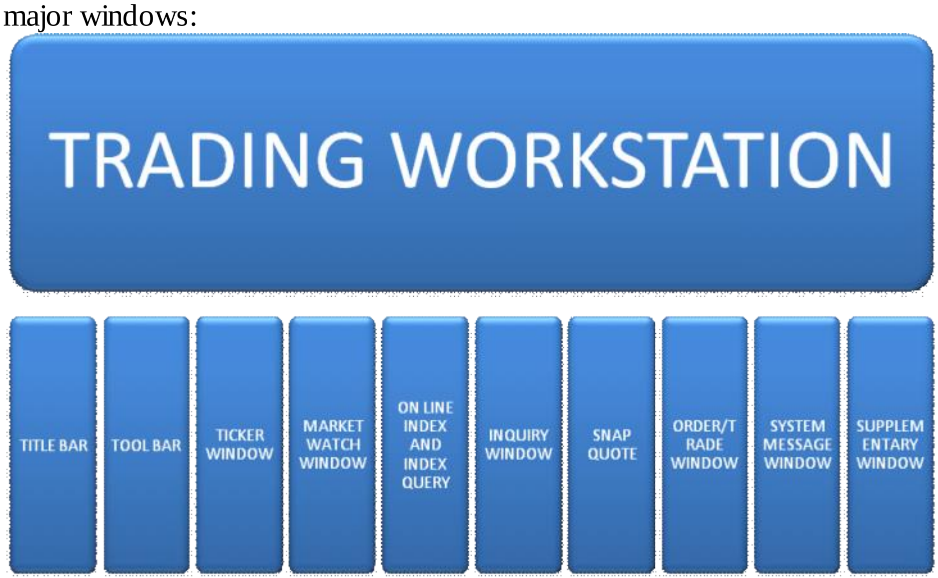
NSE operates on the 'National Exchange for Automated Trading' (NEAT) system, a fully automated screen based trading system, which adopts the principle of an order driven market. NSE consciously opted in favor of an order driven system as opposed to a quote driven system. This has helped reduce jobbing spreads not only on NSE but in other exchanges as well, thus reducing transaction costs.



- <u>TRADING WORKSTATION:</u>

The trader workstation is the terminal from which the member accesses the trading system. Each trader has a unique identification by way of Trading Member ID and User ID through which he is able to log on to the system for trading or inquiry purposes. A member can have several user IDs allotted to him by which he can have more than one employee using the system concurrently.
The Exchange may also allow a Trading Member to set up a network of dealers in different cities all of whom are provided a connection to the NSE central computer. A Trading Member can define a hierarchy of users of the system with the Corporate Manager at the top followed by the Branch Manager and Dealers.

The Trader Workstation screen of the Trading Member is divided into several major windows:



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RISK MANAGEMENT

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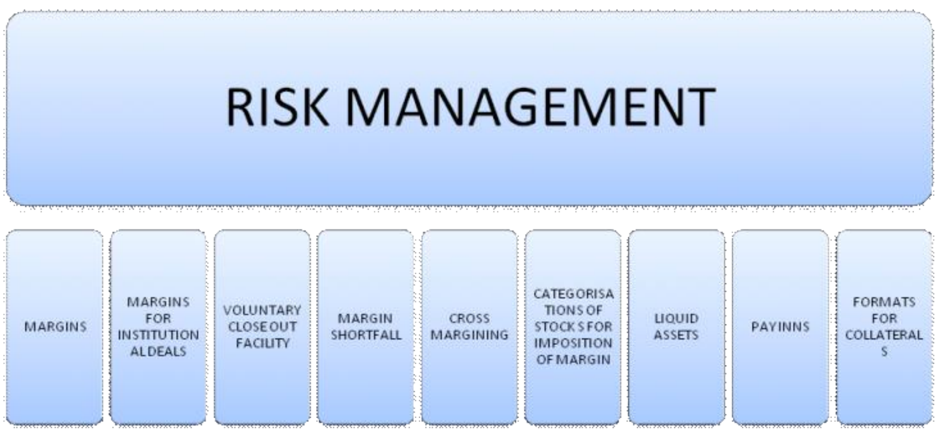
SCCL has put in place a comprehensive risk management system, which is constantly upgraded to pre-empt market failures. The Clearing Corporation ensures that trading member obligations are commensurate with their net worth. n ideal risk management, a prioritization process is followed whereby the risks with the greatest loss (or impact) and the greatest probability of occurring are handled first, and risks with lower probability of occurrence and lower loss are handled in descending order. In practice the process of assessing overall risk can be difficult, and balancing resources used to mitigate between risks with a high probability of occurrence but lower loss versus a risk with high loss but lower probability of occurrence can often be mishandled.

Intangible risk management identifies a new type of a risk that has a 100% probability of occurring but is ignored by the organization due to a lack of identification ability. For example, when deficient knowledge is applied to a situation, a knowledge risk materializes. Relationship risk appears when ineffective collaboration occurs. Process-engagement risk may be an issue when ineffective operational procedures are applied. These risks directly reduce the productivity of knowledge workers, decrease cost effectiveness, profitability, service, quality, reputation, brand value, and earnings quality. Intangible risk management allows risk management to create immediate value from the identification and reduction of risks that reduce productivity.



CLEARING AND SETTLEMENT

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SCCL carries out clearing and settlement functions as per the settlement cycles provided in the settlement schedule.

The clearing function of the clearing corporation is designed to work out a) what members are due to deliver and b) what members are due to receive on the

settlement date. Settlement is a two way process which involves transfer of funds and securities on the settlement date.
NSCCL has also devised mechanism to handle various exceptional situations like security shortages, bad delivery, company objections, auction settlement etc.
Clearing is the process of determination of obligations, after which the obligations are discharged by settlement.
NSCCL has two categories of clearing members: trading clearing members and custodians. Trading members can trade on a proprietary basis or trade for their clients. All proprietary trades become the member's obligation for settlement. Where trading member's trade on behalf of their clients they could trade for normal clients or for clients who would be settling through their custodians. Trades which are for settlement by Custodians are indicated with a Custodian Participant (CP) code and the same is subject to confirmation by the respective Custodian. The custodian is required to confirm settlement of these trades on T + 1 day by the cut-off time 1.00 p.m. Non-confirmation by custodian devolves the trade obligation on the member who had input the trade for the respective client.
A multilateral netting procedure is adopted to determine the net settlement obligations (delivery/receipt positions) of the clearing members. Accordingly, a clearing member would have either pay-in or pay-out obligations for funds and securities separately. In the case of securities in the Trade for Trade – Surveillance segment and auction trades, obligations are determined on a gross basis i.e. every trade results into a deliverable and receivable obligation of funds and securities.
Members pay-in and pay-out obligations for funds and securities are determined by 2.30 p.m. on T + 1 day and are downloaded to them so that they can settle their obligations on the settlement day (T+2).

Auto Delivery Out facility

For pay-in through NSDL / CDSL a facility has been provided to members wherein delivery-out instructions will be generated automatically by the Clearing Corporation based on the net delivery obligations of its Clearing Members. These instructions will be released on the T+1 day to NSDL / CDSL and the securities in the Clearing Members' pool accounts will be marked for pay-in. Clearing members desirous of availing this facility shall send a letter in the format provided in the Annexure.

Cleared and non-cleared deals

NSCCL carries out the clearing and settlement of trades executed on the exchange except Trade for trade - physical segment of capital market. Primary responsibility of settling these deals rests directly with the members and the Exchange only monitors the settlement. The parties are required to report settlement of these deals to the Exchange.

Key Facts & Figures

AT A GLANCE

CAPITAL MARKET (EQUITIES) SEGMENT			
1	Settlement Guarantee Fund	31-MAR-2011	₹ 5,100.35 crores
2	Investor Protection Fund	28-FEB-2011	₹ 311.04 crores
3	Number of securities available for trading	31-JUN-2011	2,993
4	Record number of trades	19-MAY-2009	1,12,60,392
5	Record daily turnover (quantity)	19-MAY-2009	19,225.95 lakh
6	Record daily turnover (value)	19-MAY-2009	₹ 40,151.91 crores
7	Record market capitalisation	05-NOV-2010	₹ 75,60,607 crores
8	Record value of S&P CNX Nifty Index	08-JAN-2008	6,357.10
9	Record value of CNX Nifty Junior Index	04-JAN-2008	13,209.35
CLEARING & SETTLEMENT			
1	Record Pay-in/Pay-out (Rolling Settlement):		
	Funds Pay-in/Pay-out (N2007200)	23-OCT-2007*	₹ 4,567.70 crores
	Securities Pay-in/Pay-out (Value) (N2009088)	21-MAY-2009*	₹ 9,523.33 crores
	Securities Pay-in/Pay-out (Quantity) (N2009088)	21-MAY-2009*	4,385.75 lakh
	*Settlement Date		

DERIVATIVES (F&O) SEGMENT			
1	Settlement Guarantee Fund	31-MAR-2011	₹ 29,759.79 crores
2	Investor Protection Fund	28-FEB-2011	₹ 57.18 crores
3	Record daily turnover (value)	24-FEB-2011	₹ 2,77,277.49 crores
4	Record number of trades	24-FEB-2011	30,29,676
5	Record number of contracts	24-NOV-2011	1,11,36,171
CURRENCY DERIVATIVES SEGMENT			
1	Settlement Guarantee	31-	₹ 853.57 crores

	Fund	MAR-2011	853.57 crores
2	Record daily turnover (value)	20-APR-2010	₹ 21,903.34 crores
3	Record number of trades	11-JAN-2010	78,935
4	Record number of contracts	20-APR-2010	48,84,935
5	Investor Protection Fund	28-FEB-2011	₹ 0.05 crores

WHOLESALE DEBT SEGMENT			
1	Number of securities available for trading	31-MAR-2011	4,479
2	Record daily turnover (value)	25-AUG-2003	₹ 13,911.57 crores

Mission & Vision

Our Mission

NSE's mission is setting the agenda for change in the securities markets in India. The NSE was set-up with the main objectives of:

- establishing a nation-wide trading facility for equities, debt instruments and hybrids,
- ensuring equal access to investors all over the country through an appropriate communication network,
- providing a fair, efficient and transparent securities market to investors using electronic trading systems,
- enabling shorter settlement cycles and book entry settlements systems, and
- Meeting the current international standards of securities markets.

The standards set by NSE in terms of market practices and technologies have become industry benchmarks and are being emulated by other market participants. NSE is more than a mere market facilitator. It's that force which is guiding the industry towards new horizons and greater opportunities.

Our Logo

The logo of the NSE symbolises a single nationwide securities trading facility ensuring equal and fair access to investors, trading members and issuers all over the country. The initials of the Exchange viz., N, S and E have been etched on the logo and are distinctly visible. The logo symbolises use of state of the art information technology and satellite connectivity to bring about the change within the securities industry. The logo symbolises vibrancy and unleashing of creative energy to constantly bring about change through innovation.