

**Stock Holding Corporation of India Limited**

***CONCEPT PAPER***

*on*

***NATIONAL CLEARANCE***

***AND***

***DEPOSITORY SYSTEM***

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**CONCEPT PAPER ON  
NATIONAL CLEARANCE AND DEPOSITORY SYSTEM**

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## I. INTRODUCTION

The purpose of this paper is to present you, a professional in the capital markets industry, with a proposed conceptual framework for the creation of a *National Depository System (NDS)*, a *National Trade Comparison and Reporting System (NTRS)* and a *National Clearing System (NCS)* to improve the operation of the capital markets of India and reduce transaction costs for all. We will refer to these new institutions taken together as the *National Clearance and Depository System (NCDS)*.

This report contains the overall concepts underlying the creation of *NCDS*. It also includes a description of *NDS* which will be the principal system that will lay the foundation for the other systems as explained here. The conceptualisation of these other systems of *NCDS*, such as *NTRS* and *NCS* will be presented in a separate report.

In producing these reports, we have obtained expert assistance from international consultants of *Price Waterhouse* to review our objectives, talk with numerous professionals all over India, analyse issues raised, evaluate alternate solutions and present recommendations to the participants from the industry.

Also, in developing the strategy and recommendations, we have attached special importance to applying lessons learned from experiences of other countries in this area. We propose, for instance, changes that could be brought about in an *evolutionary* manner rather than those that call for *revolutionary* transformations of current practices in the market.

We have already discussed the recommendations proposed in this paper with several industry professionals. Nevertheless, we would like you to know that these are not set in concrete. In fact, our aim is to involve persons such as yourself, in all stages of design and implementation of this undertaking.

*This paper has the objective, therefore, not only of keeping you informed but also inviting your views and comments.*

## **II EXISTING SITUATION IN INDIA**

The early nineties are proving to be a period of unprecedented growth in the capital markets of India. The growth of the "cult of equity" has brought many new investors into the stock markets who have confidence in the economic growth of the country.

While these factors have led to a huge growth in both the primary and secondary equities markets, the ability of the market infrastructure to support these new levels of trading has not grown apace.

The systems being used to perform the registration, clearing and settlement functions have all come under severe strain as trading has reached present levels. The current procedures for handling individual scrips and transfer deeds in marketable lots, has the entire securities market in a *paper-work gridlock* that poses the most serious obstacle to the growth of the markets.

This sudden growth has also served to magnify disproportionately the *systemic risks* that have always plagued the Indian system. Counterparty risk, credit risk, bad deliveries, long delayed deliveries, counterfeit scrips, forged certificates are all at alarmingly high levels. While no market can completely eliminate risk, there is little justification for any market participant to tolerate the kinds of systemic risk prevalent in India today; far less for international investment institutions and fund managers seeking opportunities in developing countries.

To address these problems, the *Ministry of Finance has mandated the creation and implementation of computerised systems to establish a framework for national clearing, settlement and depository services*. This has paved the way for creation of *NCDS*, the elements of which are presented in this report.

### **III LESSONS FROM OTHER COUNTRIES**

Before presenting the elements of *NCDS*, we include here a brief summary of experiences of other countries as well as the essence of lessons learnt from them.

#### **A. WORLDWIDE EXPERIENCE**

The experience worldwide has been that the implementation of national clearing, settlement and depository systems has generally brought significant benefits to all participants in the market place and drastically reduced their transaction costs.

While the underlying concepts have been the same in all countries, the models designed and implemented have been different in each one. Amongst these, there is no single model that can be directly transported to India in its entirety.

#### **B. SUMMARY OF LESSONS**

The following are some lessons to be learnt from case studies around the world and how *NCDS* will apply them:

##### **1. *Understanding the need for communication***

*Communication between the depository and its participants and users has been a critical factor in the success or failure of implementation attempts.*

*NCDS* will set a high priority for the development of good communications throughout all phases of the undertaking. *NCDS* will identify areas where communications are weak, keep the securities industry well informed of all developments, involve representatives in the design and decision making phases, start an education and a public relations program, etc.

##### **2. *Understanding the need for cost effectiveness***

*Simple solutions are more cost effective than complex ones and have had a greater chance of success.*

The following cases illustrate this lesson:

Case 1:

Complex systems that allow simultaneous co-existence of *dematerialisation, immobilisation and physical certificates* are proving very expensive and facing many operational difficulties.

Case 2:

The theoretical benefits that *multiple depositories* may have to offer, such as efficiency driven by market forces, are far outweighed (based on experience of USA) by the complexities and costs of systems and interfaces, proneness for processing and communication errors, and above all the difficulties the users face in coping with duplicated services that are implemented in different ways to perform the same function.

*NCDS* proposes complete dematerialisation (to be achieved gradually over a period) to eliminate the unnecessary complexities and costs associated with vaulting, physical withdrawal of scrips, control of physical scrips, etc.

*NCDS* will include a single depository serving all markets in India. This is in keeping with the practice in all other countries (except USA).

### **3. *Understanding the need and costs of investor protection***

*Investor confidence and trust in the system is imperative to avoid major disasters.*

*NCDS* will design an appropriate risk management framework with provisions for generation of sufficient funds for investor protection with insurance and guarantees.

### **4. *Understanding the need for structured techniques***

*A Methodical plan for strategic design, functional analysis, system development and implementation of systems pays greater dividends than short term expedient solutions.*

NCDS will be seeking the assistance of external consultants and legal advisors to adopt a safe, methodical and structured approach to design, development and implementation of systems.

**5. *Understanding risks of operation***

*It is advantageous to identify sources of risk at the design stage and take appropriate precautions.*

This is especially true in a Depository system where highly sensitive and confidential data will be maintained. Many countries have developed varied solutions to address this requirement.

NCDS will learn from the experiences from other countries and design its own systems incorporating comprehensive confidentiality and integrity standards.

**6. *Understanding the human resource requirements***

*It is a mistake to compromise on the calibre of people on the job.*

NCDS will learn from the experiences of other countries and entrust only the highest quality personnel with relevant experience to manage its operations.

**7. *Understanding what is achievable***

*Attempting to do too much too soon has led to serious problems during implementation.*

The successful countries have been those that have used their clearance, settlement and depository systems to gradually *evolve* the capital markets. Those that have tried to *revolutionise* them overnight are still a long way from implementation with very little benefits to show despite massive capital expenditure.

NCDS will take a conservative approach in both the design and implementation especially considering the risks involved in the system and the high levels of activity expected.

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### C. DESIGN APPROACH

The general strategy for NCDS in the design of systems and formulation of the implementation plan will be:

- ✓ *To establish good communications and relations with all participants, users and other interested parties at all times.*
- ✓ *To keep the design simple.*
- ✓ *To introduce changes gradually.*
- ✓ *To pay attention to project financial plan.*
- ✓ *To plan for minimum impact in the operational role of participants and users (stock exchanges, issuers, registrars, brokers, bankers, investors, etc.) during implementation.*
- ✓ *To stay focussed on the objectives of the organisation, and initially take on only those roles and responsibilities directly related to these objectives.*
- ✓ *To identify the inherent constraints, understand them, devise practical solutions that will yield immediate benefits now while also taking the necessary measures to overcome these constraints in the future.*

Constraints in India could be : Reluctance to change, powerful vested interests thriving on inefficiencies of marketplace, opposition from elements entrenched in parallel informal economies, lack of telecommunications infrastructure, inefficiencies in the banking and financial systems, etc.

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#### **IV. OVERVIEW OF NCDS**

##### **A. SCOPE AND FUNCTIONS OF NCDS**

The *National Clearance and Depository System (NCDS)* will be created to offer three distinct services to the Indian capital markets:

- *National Trade Comparison and Reporting System*
- *National Clearing System*
- *National Depository System*

The basic definition of the functions of these systems follow.

##### **1. National Trade Comparison and Reporting System**

The function of the *National Trade Comparison and Reporting System (NTRS)* is to:

*Firmly establish the terms and conditions of a contract after a trade execution in the securities markets.*

Initially, there is the *trade execution* which is the activity of a securities owner selling securities to a buyer. This is done through brokers who represent the seller and buyer either on the floor of a recognised stock exchange, through Over The Counter Exchange or through non-exchange related negotiation.

After *trade execution*, *NTRS* will ensure that both buyer and seller have the same understanding of the price, quantity, and other terms and conditions of the contract. To do this, *NTRS* will accept un-matched records of trade executions for trade comparison and reporting. In addition, it will be designed to accept matched transactions from exchanges that already have the facilities to provide them.

The principal output of *NTRS* will be a *matched transaction* which will be input the NCS described below.

## 2. *National Clearing System*

The function of the *National Clearing System (NCS)* is to:

*Ensure that clearing can take place nationally on a standard basis to prepare the matched transactions for a depository settlement.*

Essentially, clearing will determine the total amount of (net) cash a broker will need on the next regular settlement date to settle (net of sales) securities he has bought.

As with *NTRS*, the actual service offered by *NCS* and the nature of input obtained will depend upon the clearing function that is performed at each stock exchange.

## 3. *National Depository System*

The primary function of the *National Depository System (NDS)* is to:

*Provide for transfer ownership of securities in exchange for payment by book entry on ledgers of NDS without any physical movement of scrips.*

This report includes a detailed presentation of the conceptualisation of *NDS*.

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**B. OBJECTIVES OF NCDS**

These services offered by NCDS will create an efficient clearing, settlement and depository environment which is strategically superior in Asia, by attaining the following overall objectives:

- ✓ *To liberate the Indian securities markets from the paperwork gridlock in which it finds itself.*
- ✓ *To reduce paper handling costs in capital markets.*
- ✓ *To eliminate the inordinate delays in the process of registration and transfer of securities.*
- ✓ *To implement an achievable clearing, settlement and depository solution that is inexpensive to develop and maintain.*
- ✓ *To substantially reduce the risks associated with current Indian settlement practices and reverse fears concerning the integrity of the Indian capital markets.*
- ✓ *To standardise the Indian settlements practice.*
- ✓ *To create a single national clearance, settlement and depository framework that is accessible to all participants from all over India.*
- ✓ *To implement a solution meeting long term international standards.*
- ✓ *To increase the growth potential of the Indian capital markets.*
- ✓ *To pave the way for growth of other securities related activities in India including custodial services, corporate actions and the pledging of securities through book entries.*

Further to the definition of overall objectives, the purpose of this section is to clarify the scope of NCDS by bringing in perspective the distribution of the functions and responsibilities between the sub-systems of *NCDS* and those of the stock exchanges. This clarification is presented by the following table:

<b>SYSTEM</b>	<b>Functions/responsibilities</b>
<b>EXCHANGE SYSTEMS</b>	<ul style="list-style-type: none"> <li>▶ <i>Order and trade capture</i></li> <li>▶ <i>Trade Execution</i></li> <li>▶ <i>Price dissemination and market news</i></li> <li>▶ <i>Market regulation</i></li> <li>▶ <i>Listing and other services for members</i></li> <li>▶ <i>Trade comparator. (Existing systems)*</i></li> <li>▶ <i>Prepare trade for settlement (Existing systems)*</i></li> </ul>
<b>NATIONAL TRADE COMPARISON AND REPORTING SYSTEM</b>	<ul style="list-style-type: none"> <li>▶ <i>Establish terms and conditions of a trade*</i></li> <li>▶ <i>Rectification of unmatched trades*</i></li> <li>▶ <i>Reporting to participants*</i></li> <li>▶ <i>Regulation and surveillance</i></li> <li>▶ <i>Trade Comparison</i> <ul style="list-style-type: none"> <li>▶ ▶ <i>Inter-exchange</i></li> <li>▶ ▶ <i>Intra-exchange</i></li> <li>▶ ▶ <i>Institutional</i></li> </ul> </li> </ul>
<b>NATIONAL CLEARING SYSTEM</b>	<ul style="list-style-type: none"> <li>▶ <i>Prepare trade for depository settlement</i></li> <li>▶ <i>Receipt of funds transfer instructions</i></li> <li>▶ <i>Regulation and surveillance</i></li> <li>▶ <i>Reporting</i></li> </ul>
<b>NATIONAL DEPOSITORY SYSTEM</b>	<ul style="list-style-type: none"> <li>▶ <i>Maintain record of depositor holdings</i></li> <li>▶ <i>Record Deposits, Free transfers, Book entry settlement against payment</i></li> <li>▶ <i>Record Pledges (hypothecation)</i></li> <li>▶ <i>Record Corporate action (Bonus shares, Rights issues, Dividend, etc.)</i></li> <li>▶ <i>Report to issuers / Registrar/ Participants/ Individual Investors</i></li> </ul>

\* Depending upon facilities available at each exchange

### **C. ORGANISATION AND POLICIES OF NCDS**

This section describes the general concepts of organisation, policies and guidelines that will characterise *NCDS*. These concepts will form the basis for design decisions to be taken in the preparation of detailed functional specifications and plans for the creation and implementation of *NCDS*.

#### **1. Legal Structure**

The *NCDS* should be created by a *clearly defined* legislative charter and made up of two corporations with distinct liabilities and functions. One corporation would perform the functions of national trade comparison reporting and clearing and the other would perform the functions of a *single* national depository.

#### **2. Important Policies and guidelines**

*NCDS* will structure its policies to obtain the following key results which have been identified as being critical to fulfill the overall strategic objectives:

##### **a) Industry-wide Representation**

*NCDS* will arrange for major groups participating in the capital markets (Brokers, Custodians, Registrars, etc.) to have their interests represented through direct participation, *by persons with recognised merit and established reputation*, in the various advisory and executive committees that will be formed to assist in design and implementation of the systems.

##### **b) Regional Neutrality**

*NCDS* will function as a truly national institution. The policies and actions of *NCDS* should not favor regions that currently have the most activity at the cost of regions that are smaller or happen to be more remote from the major trading centers of India.

*NCDS* will make sure that it understands the prevailing regional sentiments and takes adequate steps to consider them in the planning and decision making process. Some of the steps in this direction would be to include regional representation on the governing boards and executive committees, ensure equal accessibility, distribute NCDS facilities geographically, structure fees for price mutualisation (same fee irrespective of location), etc.

**c) Insurance**

To instill confidence in the investor and protect him, *NCDS* must seek means, through sources public and private backed by government guarantee, to insure him against loss stemming from errors committed by any element of the system.

**d) Financial Independence**

The *NCDS* will become a fully self-supporting organisation. This requires that it should charge user fees so as to generate revenue sufficient to meet all operating expenses including depreciation, amortisation of capital investment costs and provide for the anticipated increase in capital spending that will be needed to meet growing demand for services resulting from increased volume and sophistication of the users.

## **V. THE NATIONAL DEPOSITORY SYSTEM (NDS)**

This section presents an overview of the basic concepts of the *National Depository System (NDS)*.

The *NDS* will be implemented before the other systems, *NTRS* and *NCS*, for the following reasons:

- ▶ It will offer the greatest benefit to all the users in the shortest period.
- ▶ During the period of implementation of the *NDS*, trade comparison or clearing operations need not undergo major changes from the way they are being performed now.
- ▶ A fully operational *NDS* is a prerequisite to implementing the changes proposed to improve the *NTRS* and *NCS*.

### **A. OVERVIEW OF NDS**

#### **1. Concept of Operation of NDS**

*The primary objective of the National Depository System (NDS) is to be able to exchange ownership of securities for payment by book entry on electronic ledgers without any physical movement of scrips or transfer deeds.*

This is best illustrated by comparison of the process that takes place now with what would occur under a simple depository environment.

#### *Trade and Settlement*

At present, when a trade is made the seller will deliver the scrip sold to the buyer and receive payment in return. (This transaction will be effected through the brokers who represent the buyer and seller working within the systems established by the stock exchange to carry out the trade, record and compare the trade, settle, etc.).

In the simple depository system, the account of shares for each participant would be maintained as an electronic record within the computer system. Accounts for funds would be maintained similarly. The settlement of the trade would take place by book

entry debits and credits made to these records -- adding to the buyer's account and deducting from the seller's the number of shares traded. The funds would be transferred simultaneously from the buyer to the seller in the same manner -- adding and deducting the value of the transaction from the respective funds accounts.

*Transfer of ownership*

At present, after the trade, the buyer of the scrip is required to have it transferred to his name by the registrar/transfer agent of the issuing company (a process requiring several months)

In the depository system, the process of transfer of ownership would be immediate upon book entry update of the records (with immediate transfer of entitlement to rights and privileges).

The above example is only to illustrate the basic concepts underlying the operation of a depository. The actual implementation of the *NDS*, however, must take into consideration that the individual investors will be using the *Depository Participants* (authorised Brokers, bankers, etc.) to act on their behalf to conduct business with the *NDS*.

**2. Basic Operations to be performed by NDS**

The basic operations to be performed by NDS, using the concepts described above are listed below to present an overview of the system; the details are included in subsequent sections.

<b>OPERATION</b>	<b>DESCRIPTION</b>
<b>NEW ISSUES</b>	<i>Recording Deposit of new issues directly from the issuer to NDS*</i>
<b>DEPOSIT</b>	<i>Recording Deposit of existing issues -- of physical scrip (Free transfer*)</i>
<b>DEPOSITORY SETTLEMENT</b>	<i>Book entry transfer of ownership of security in exchange for payment to settle a trading transaction (Value transfer*)</i>
<b>FREE TRANSFER*</b>	<i>Book entry movement without associated cash movement</i>
<b>CASH ONLY MOVEMENT*</b>	<i>Movement of cash only from one Depository Participant to another</i>
<b>CORPORATE ACTION*</b>	<i>Bonus issues etc. triggered by the issuer that changes the number of shares held in records of the Depository by a Depository Participant or Individual Investor.</i>
<b>PLEDGE/ RELEASE</b>	<i>Pledge/ release of shares which have been hypothecated.</i>
<b>STOCK BORROWING AND LENDING*</b>	<i>Stock borrowing or lending via the Free transfer or money transfer mechanisms*.</i>

\* Defined later in this report

The principles of operation within the NDS environment are best understood by contrasting them with the present mode of operation. This is illustrated in the following table with examples of three basic depository operations (Deposit of new issues, Deposit of existing issues, Settlement of a trade ). Observations are also included to highlight the nature of benefits that can be expected from NDS.

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**1. NEW ISSUE OF DEPOSITORY ELIGIBLE SECURITY**

<b>ACTION</b>	<b>NOW</b>	<b>WITH NDS</b>	<b>OBSERVATIONS</b>
<b>Application For Shares</b>	Send Application form to issuer	▶ Application must include particulars such as Account number and location of account (i.e. <i>Depository Participant</i> ) so that shares can be immediately issued upon allotment.	✓ <i>Investor can opt to have Individual Safekeeping account (ISA) directly with NDS (Trading not permitted with this account).</i>
<b>Allotment</b>	Scripts sent directly to <i>Individual Investor</i> * by issuer. (Printing and despatch could take up to six months)	<p>▶ <i>NDS</i> creates electronic records to credit appropriate account pertaining to the <i>Depository Participant</i> [or Individual Safekeeping Account with <i>NDS</i>]</p> <p>▶ <i>Depository Participant</i> updates his records of accounts for <i>Individual Investors</i> he does sub-accounting for.</p> <p>▶ <i>Individual Investor</i> is notified immediately</p>	<p>✓ <i>No scrips!</i></p> <p>✓ <i>Credits and Debits are electronic ledger transactions.</i></p> <p>✓ <i>Benefits to Investor: Waiting period to receive scrips by mail eliminated; Risks of lost delivery and theft eliminated.</i></p> <p>✓ <i>Benefits to Issuer: Cost savings in processing, printing, mailing.</i></p>
<b>Payment</b>	Directly to issuer	▶ No change	
<b>Reporting</b>		▶ Periodic statements sent to investor confirming holdings by <i>Depository Participant</i> [or by <i>NDS</i> in the case of Individual Safekeeping Account]	✓ <i>Investor spared the cost and anxiety of protection from theft, forgery, misplacement, mutilation, etc.</i>

\* Elaborated in report

2. **REGISTRATION/DEPOSIT OF EXISTING SCRIP OF DEPOSITORY ELIGIBLE SECURITY**

ACTION	NOW	WITH NDS	OBSERVATIONS
<b>Verification of scrip (and Transfer deeds)</b>	Investor turns in Scrip and Transfer deeds to Registrar/ Transfer agent (R/T)	<ul style="list-style-type: none"> <li>▶ Investor turns in scrip and Transfer deeds through <i>Depository Participant</i> (or directly) to Registrar/ Transfer agent (R/T).</li> <li>▶ Verification and authentication of documents.</li> </ul>	✓ <i>Verification and authentication of deposits will be the same procedures in use now by R/T for registration or transfer.</i>
<b>Registration</b>	In owner's name	▶ Registration in nominee name of <i>NDS</i> with name of beneficial owner indicated	✓ <i>This process is required only for initial deposit in NDS. At present it needs to be done at least once a year, when traded.</i>  ✓ <i>Beneficial owner retains rights</i>
<b>Deposit</b>	Documents returned to new owner	<ul style="list-style-type: none"> <li>▶ Notification of deposit to <i>NDS</i> by R/T.</li> <li>▶ <i>NDS</i> credits appropriate account on electronic ledger pertaining to <i>Depository Participant</i> [or Individual's <i>NDS</i> Safe-keeping Account] for number of shares deposited.</li> <li>▶ <i>Depository Participant</i> updates his own records for <i>Individual Investors</i> he does sub-accounting for .</li> </ul>	✓ <i>Only scrips deposited with Depository Participant's sub-account can be traded.</i>  ✓ <i>No withdrawal of scrips will be permitted -- once deposited</i>  ✓ <i>Increase in market liquidity from faster turnaround for registration</i>  ✓ <i>Guaranteed immediate ownership of shares purchased.</i>  ✓ <i>Reduced risk of bad delivery, Forgery, etc.</i>

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3. **TRADE SETTLEMENT OF DEPOSITORY ELIGIBLE SECURITY**

ACTION	NOW	WITH <i>NDS</i>	OBSERVATIONS
<p><b>Securities trade (Buy/Sell)</b></p>	<p>Physical exchange of scrips for payment according to settlement practices followed in each exchange.</p> <p>Transaction carried out through brokers.</p>	<p>► <i>NDS</i> receives settlement instructions that include this particular trade execution which will be carried out between <i>Depository Participants</i> as at present.</p> <p>On settlement day:</p> <p>► <i>NDS</i> Debits and credits appropriate electronic ledger accounts pertaining to the selling <i>Depository Participant</i> and the buying <i>Depository Participant</i>. Simultaneously, <i>NDS</i> also Credits and Debits their respective fund accounts.</p> <p>► The <i>Depository Participants</i> representing buyer and seller, similarly carry out the corresponding accounting entries to debit and credit the sub-accounts that they maintain for their customers on their own systems.</p>	<p>✓ The individual investor holding a Safe-keeping account directly with <i>NDS</i> cannot trade it. To do so he will have to establish a relationship with a <i>Depository Participant</i> and transfer his holdings (Free Transfer) to its sub-account.</p> <p>✓ Seller has same day access to cash</p> <p>✓ Buyer has same day possession of the security</p> <p>✓ Reduced systemic risks (where seller fails to deliver or buyer fails to pay).</p>

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**B. BASIC CONCEPTS OF NDS****1. Products**

The depository will be designed to permit inclusion of multiple products, eventually encompassing all securities traded in the Exchanges such as Equities, Preference shares, Debentures, etc.

The distinction between specified and unspecified shares (Group A or B) is not relevant to the design of *NDS*. Also, the *NDS* will not need to distinguish between marketable lots, odd lots and short lots.

**2. Depository Eligible Securities**

Securities that have been selected by the *NDS* to be eligible for book entry movement within *NDS* are termed '*Depository Eligible*'.

During implementation, individual securities will progressively be made *Depository Eligible* as rapidly as the systems can develop the capacity to handle greater volumes. Eventually all exchange traded securities will be depository eligible.

Once a security is *Depository Eligible*, Stock Exchange transactions in that issue will no longer be settled with delivery of physical scrip.

**3. Participants and Users**

*NDS* will provide depository services to all persons holding *Depository Eligible* securities. These services will be made available through *Depository Participants* described below.

**a) Depository Participants**

The *Depository Participants* also referred to as *Securities Industry Participants*, are members of the *NDS* legally permitted to initiate settlement, transfer of ownership and other related securities transactions with *NDS* on behalf of beneficial owners.

*Depository Participants* will include:

- ▶ Brokers
- ▶ Banks (Custodians, Merchant Banks, etc.)
- ▶ Insurance Companies (LIC, etc.)
- ▶ Mutual Funds (UTI, SBI, etc.)

Other *Depository Participants* who can communicate with *NDS*, access the information pertaining to them and perform their designated functions with *NDS* include:

- ▶ Stock Exchange Clearing cells (Bombay, Calcutta, ..., Cochin, etc.)
- ▶ The Reserve Bank of India
- ▶ Government Financial Institutions (ICICI, IDBI, IFCI, etc.)
- ▶ Institutional Managers
- ▶ Fund Managers
- ▶ Registrars / Transfer Agents
- ▶ Issuing houses

In order to qualify as a *Depository Participant*, the securities and financial institutions will have to satisfy stringent criteria regarding their capital adequacy. They will also have to adhere to strict rules and regulations pertaining to various aspects of the securities business.

#### b) INDIVIDUAL INVESTORS

The term *Individual Investor* refers to any of the following:

- ▶ Investing individual
- ▶ Guardians of minors
- ▶ Joint holders
- ▶ Legal representatives or Trusts
- ▶ Corporate bodies
- ▶ Other qualifying groups of persons (HUF, etc.)

An *Individual Investor* may establish an Individual safekeeping Account in the *NDS* but may not directly conduct business through this account. His instructions to trade or transfer his holdings must be carried out through an authorised *Depository Participant* with whom he has established a formal business relationship by transferring his holdings to the sub-account in his name, within that institution.

*Individual Investors* will be required to furnish specified documentary evidence of identity before they can be accommodated in the system. It will be the Depository Participant's responsibility to 'know' his customer in order to assure that only valid instructions are issued with respect to that customer's account.

#### **4. Account Structure**

The account structure of *NDS* will provide for both *Depository Participants* as well as *Individual Investors* to be included in the system in the manner described below.

##### **a) Accounts for Depository Participants**

*NDS* will provide *Depository Participants* with accounts to record the holdings of securities and a separate account (or accounts) for holding balances of funds movements.

The *Depository Participant* can use the securities account held for it by *NDS* to represent its aggregate holdings of securities with *NDS*, including those in its own name not beneficially owned by its clients.

The functional design of the system will specify the details of options available to a *Depository Participant* to structure its accounts to suit his business needs.

##### **b) Sub-accounts for Individual Investors**

*Individual Investors* will have their holdings of securities recorded in sub-accounts that will be linked to a *Depository Participant*. As already explained, an *Individual investor* can operate only through a *Depository Participant*.

The *Depository Participant* will normally have automated facilities to maintain the records of securities holdings for each of its clients in these sub-accounts. Here, the sub-accounts for its clients should be well segregated from the accounts of its own holdings of securities. (The administration of these sub-accounts by the *Depository Participant* will be controlled by accounting regulations specified for this purpose and requirements to send periodic statements to the beneficial holders indicating their holdings in each security.)

**c) *Individual Safekeeping Accounts***

In addition to the above, *NDS* will provide a special service to *Individual Investors* who wish to maintain an *Individual Safekeeping Account* with *NDS*. This is to provide for those who choose not to be associated with any *Depository Participant*, for the moment. As explained earlier, this account is merely for safekeeping purposes as only sub-accounts linked with *Depository Participants* can be traded.

**d) *Characteristics of Account Structure***

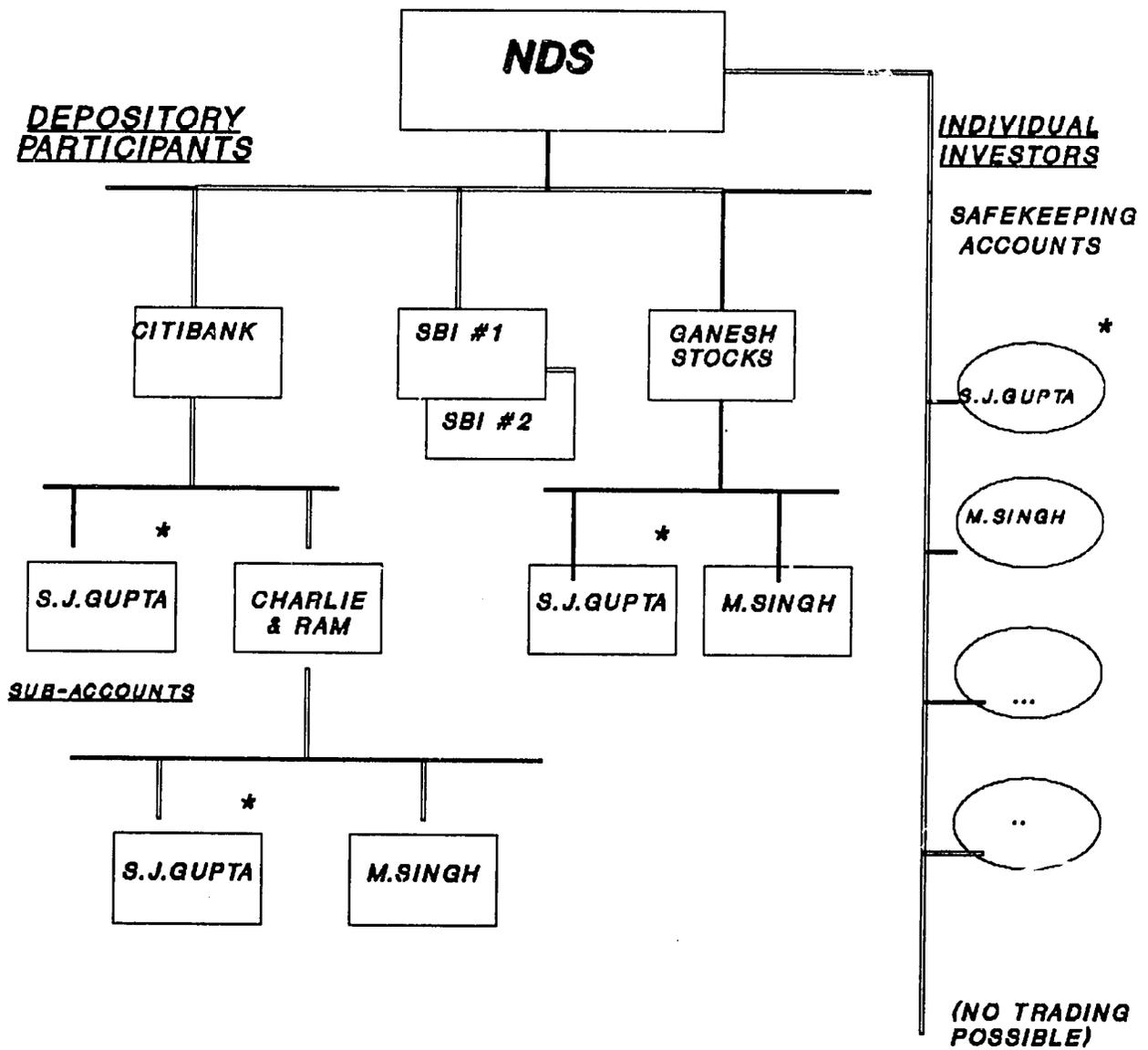
The structure of the accounts proposed will have the following characteristics:

- ▶ The confidentiality of the *Depository Participants* and *Individual Investors* will be respected.
- ▶ The *Individual Investor* can have sub-accounts with any number of *Depository Participants* without limitations.

**e) *Illustration***

The structure of accounts within *NDS* is illustrated by the diagram on the following page. Here, *Individual Safekeeping Accounts* in the name of the *Individual Investors* are on the right hand vertical line. *Depository Participants* tied directly to the *NDS* are authorised to conduct business with the *NDS*. Sub-accounts can be maintained by clients of the *Depository Participant*; and may even be maintained, eventually, by the clients of the *Depository Participants* who are themselves in the securities business and are authorised by *NDS* to do so.

# NATIONAL DEPOSITORY SYSTEM PARTICIPANTS AND INDIVIDUAL INVESTORS



\* *These accounts not linked*

**C. TECHNICAL OBJECTIVES OF NDS**

Technical objectives for *NDS* are those specific objectives critical for achieving the overall strategic objectives of *NCDS*.

For example, dematerialisation and facility to transfer ownership by book entry are keys to accomplishing the overall objectives such as liberation from the paperwork gridlock, reduction of paper handling costs, elimination of transfer delays, reduction of systemic risks, etc.

The following is a description of the principal objectives and the recommended approach for achieving them.

**1. Dematerialisation**

Dematerialisation is defined here as follows:

Dematerialisation is the process of transforming physical scrips that are now being used in the settlement for trade execution into computerised ledger accounts maintained by *NDS* (which alone is authorised to transfer ownership by book entry movements).

As used here, dematerialisation also describes the state of new issues that were never issued in the material form and that of a balance ledger (a document used by *NDS* to represent the total holdings of a scrip deposited with it), which for purposes of trade execution is not 'material'.

The process recommended for dematerialisation of new issues will differ from that for existing ones. Following is the recommended approach:

**a) Dematerialisation of new issues**

New issues that are *Depository Eligible* will be issued "Scrip-less". That is, no physical scrips will be printed or issued.

A gist of this process:

- ▶ The *Individual Investor* will establish an account with *NDS* or a sub-account with one of its authorised *Depository Participants* and include this information in his application for allotment.
- ▶ *NDS* will create electronic records to credit the appropriate account pertaining to the *Depository Participant* Account (or the *Individual Safekeeping Account with NDS*)
- ▶ The *Depository Participant* will update his records for individual investors he does sub-accounting for.
- ▶ The *Individual Investor* will be notified immediately.

**b) Dematerialisation of existing issues**

Existing issues that are deemed *Depository Eligible* will first require to be deposited (and dematerialised) before they can be traded.

A gist of this process:

- ▶ Physical Scrip will be deposited with Registrar/Transfer Agent, who will carry out the process of verification of the physical scrips and transfer deeds using the same procedures employed currently.
- ▶ The Registrar/Transfer Agent will register the equivalent number of shares indicating the beneficial owner (in the nominee name of *NDS*) and then instruct *NDS* to credit the appropriate account.
- ▶ *NDS* will credit the electronic ledger account pertaining to a *Depository Participant* for the security (or the *Individual Safekeeping Account with NDS*).
- ▶ The *Depository Participant* will update his records for the *Individual Investor* he maintains sub-accounts for
- ▶ The *Individual Investor* will be sent a confirmation of deposit.

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c) *Withdrawal of Scrip*

*NDS* will *not* permit physical withdrawal of scrips deposited with it.

2. **BOOK ENTRY TRANSFER**

The elementary technical objective of NDS is to be able to execute book entry transfer of ownership of securities, in exchange for payment, on its electronic records to effect a depository settlement.

This requires the *NDS* to be able to do two basic operations on its electronic records: the transfer of ownership of securities and the simultaneous transfer of money in exchange.

Each type of depository settlement may entail different combinations of transfers of ownership and money as explained below:

- ▶ Ownership of security is transferred but no money, pertaining to records held by *NDS*, is involved (a *Free Transfer*)

Examples: Individual Investor changes custodian banks for his portfolio; or moves securities from his *Individual Safekeeping Account* to the sub-account of his *Depository Participant* at the time of sale.

- ▶ Ownership of security is transferred also involving transfer of money (*Value Transfer*).

Example: *Individual Investor* buys/sells security.

- ▶ Money is transferred but no security is involved (*Cash only Transfer* -- opposite of *Free Transfer*).

Examples: *Individual Investor* repays loans;  
*NDS* charges usage fees to *Depository Participant*.

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Implementation of this objective, which actually is the fundamental process of Depository settlement, is as follows:

▶ *Transfer of ownership*

Transfer of ownership of securities is effected by the conceptually simple process of debiting the seller's depository account and crediting that of the buyer for the number of shares the settlement is for.

▶ *Transfer of money*

The transfer of money execution of depository settlement is carried out in a similar manner by debiting and crediting the respective funds accounts held by the buyer and seller.

However, *NDS* will ensure that there are guarantees that payment can take place the same day that ownership transfer occurs, by implementing computerised verification of buyer's cash and collateral (Proposition of automatic debit of the buyer's account will be reevaluated after the necessary improvements in the banking environment).

Further details about this transfer are dealt with in the discussion of the 'Delivery versus Payment' objective that follows.

### 3. ***DELIVERY VERSUS PAYMENT (DVP)***

The objective of *Delivery Versus Payment (DVP)* is to implement same day settlement of securities for money to reduce the systemic risk in a depository. *NDS* must ensure that:

- ▶ All payments are made to or received from the depository (or its agent bank) in good funds no later than the same day that book entry ownership transfer takes place.
- ▶ A single money movement transaction (to or from the depository) on a 'Net due to' or 'Due from' basis.

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- ▶ Once the funds movements are made, they are final. A collateral requirement will be enforced with each book entry settlement to ensure this.

Implementation of this objective is tied with the development of the banking environment and the policies of the Reserve Bank of India.

#### **4. *SCRIP HYPOTHECATION***

The objective of *NDS* is to provide both operational and transactional facilities to permit hypothecation.

Hypothecation, in this report signifies the pledging, by book entry by *NDS*, of collateral by a borrower to a lender.

This hypothecation may be either a *Free Transfer* or a *Value Transfer* depending on whether the lender uses the depository money movement system to lend the money.

It is a basic principle of hypothecation that the rights of the lender to seize the collateral in case of repayment default must be identical for hypothecated scrip as if he had physical possession of the collateral.

The implementation of this will require the following:

- ▶ Legal, regulatory, and contractual framework to permit hypothecation.
- ▶ Provision for both operational and transactional facilities to permit hypothecation in *NDS* systems; to effect these book entry transactions on the books of the *NDS* without any physical securities being created or involved.

#### **5. *BENEFICIAL OWNER RECORD-KEEPING***

The objective of *NDS* will be to facilitate the identification of beneficial owners of each issue to the companies and their registrars to enable them to distribute dividend, interest payments and other mailings directly to their beneficial owners.

The implementation of this objective will require the registrars to obtain information from the

*NDS* on the Individual Safekeeping Accounts and the *Depository Participants* regarding the sub-accounts maintained by them. The list of beneficial owners excluded by the above, i.e. the ones with scrips still in their hands, would always be available from the registrar's own books.

To facilitate this process of roll-up of the beneficial owner data, *NDS* will administer the specification of data formats and modes for interchange of data, the operational requirements, etc.

#### **6. ACCOUNT RECONCILIATION WITH REGISTRARS**

*NDS* will establish close communications with the registrars to carry out reconciliations between the records maintained by the registrars and those of *NDS* (in addition to facilitating the beneficial owner record keeping described above).

*NDS* will specify the requirements for interfaces needed for accomplishing this objective.

#### **7. PROCESSING ALL TYPES OF SECURITIES**

The objective of *NDS* is to eventually make all listed securities in India *Depository Eligible*.

Introduction of this process of change will be carried out gradually and cautiously.

#### **8. LINKS TO INTERNATIONAL DEPOSITORIES**

Links to other depository systems around the world will be provided after maturity of the domestic operations.

#### **9. CODING SCHEMES**

The objective of *NDS* is to ensure that there are systems to establish procedures for coding the *Securities Identification Numbers*, *Depository Participants*, etc.

In order for *NCDIS* to work efficiently, a given security will have the same identification on all stock exchanges and in the depository. This identification scheme will be compatible with the International Securities Identification Number (*ISIN*) as specified by the International Organisation for Standardisation (*IOS*).

For messages involving securities and associated cash movements, internationally accepted structure will be adopted in India. Also, for securities industry messages the governing *ISO* standard will be used.

*Depository Participants* will be uniquely identified irrespective of which exchange they hold their cards with. This will permit *NDS* to exercise greater control in integration of the stock exchanges. It will also permit *NDS* to consolidate depository inventory positions at the request of the *Depository Participants*.

In order to assure consistency, there will be a single controller for the issuance and maintenance of all these coding standards.

## 10. CONFIDENTIALITY AND INTEGRITY

It is of vital importance that *NDS* assure a high degree of confidentiality to its users. The following objectives will be implemented:

- ▶ To provide information only on a strict need-to-know basis.
- ▶ To enforce secrecy and disclosure agreements of the proposed *NDS* rules to be signed.
- ▶ To permit the *Depository Participant* with access only to its own accounts.
- ▶ To provide a system that is capable of recovering all data stored irrespective of any failures that could occur.
- ▶ To provide comprehensive audit facilities to detect system misuse.
- ▶ To authenticate all communications into or out of the system.

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**D. SUPPORTING ENVIRONMENT FOR NDS**

The *NCDS* areas outlined above require certain changes and improvements in other supporting systems that make up the framework of the capital markets and financial environment that *NCDS* is to operate in. Following are some of the more important areas where such changes are needed:

**1. Legal framework**

The ability of the *NDS* to function according to the concepts described here requires certain principal commercial law changes.

Following are the major issues relating to these changes:

- ▶ Settlement by Book Entry
  - ▶▶ Transfer of ownership by book entry must be legally recognised.
  - ▶▶ The present system allows transfer of rights only by physical scrip and transfer deed.
  - ▶▶ Fungibility of securities (explained below) recorded in the electronic ledgers of *NDS* must be recognised.
- ▶ Vesting of beneficial owner rights
  - ▶▶ Legal changes are needed to permit the vesting of rights to the beneficial owner as shown in the records of the depository.
- ▶ Pledges and release of pledges
  - ▶▶ Book entry system requires change in law so that banks are not required to hold physical scrips as collateral, but may accept hypothecation by the *NDS*.

- ▶ Fungibility
  - ▶▶ Present Indian law requires a specific physical scrip, with distinctive number for each share, to be transferred.
  - ▶▶ Fungibility permits book entry transfer without attribution to specific scrips or distinctive numbers.

Other special concerns about Indian law have to do with the following:

- ▶ Company's rights to refuse transfer of ownership will prevent *NDS* from making valid book entry transfers; thus imposing serious impediments on the secondary markets. Alternate solutions have been proposed to provide equivalent protection to companies without holding up operations of the *NDS* and the securities market.
- ▶ Stamp tax on transfer deeds does not cover book entry transfers. Appropriate substitutes have to be designed.

## 2. *Regulatory Environment*

The need to establish trust of the Indian investor in *NCDS* is of prime importance. For reasons elaborated earlier, the level of confidence in the securities markets and its participants is at its lowest ebb.

The means of achieving this trust would be through a powerful regulatory system that will perform the following:

- ▶ Enforce measures to support systems designed to reduce systemic risks.
- ▶ Use Internal Controls and audits as a key tool and establish systems and procedures to monitor the regulatory process
- ▶ Plan for establishment of a strong body to provide oversight and ensure that the self-regulatory function of *NDS* is carried out.

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3. *Banking Environment*

The operation of *NDS* requires mechanisms to permit transfer of funds from the buyer of securities to the seller on the same day that the ownership of security is being transferred by book entry in the records of *NDS*. (The participation of *NCDS* in the Reserve Bank of India's funds transfer operations in major Indian cities is one alternative that is being investigated).

## VI. CONCLUSION

The systems represented by the conceptual design outlined here will result in benefits to the nation, the investing public, the intermediaries and the issuers of securities. The following is a brief description of the benefits that can be expected.

### Benefits to India :

- ✓ *Growing and more liquid capital markets to provide financing and development stemming from more efficient post-trade systems with reduced transaction costs.*
- ✓ *Increase in competitiveness in the international market place and attracting investors and fund managers by complying with stipulated international standards calling for an efficient and risk-free trading environment.*
- ✓ *Improved prospect for privatisation of public sector units by creating a conducive environment.*
- ✓ *Restoration of faith in the capital markets and the participants with systems to minimise settlement risks and fraud.*
- ✓ *Considerable reduction in the delay in registration which can currently impact trading.*

### Benefits to the investing public:

- ✓ *Reduction of risks associated with loss, mutilation, theft and forgery of physical scrip.*
- ✓ *Elimination of financial loss owing to loss of physical scrip.*
- ✓ *Greater liquidity from speedier settlements and reduction in delays in registration.*
- ✓ *Greater opportunities for investment offered by new instruments and services that can be provided only when NCDS is implemented.*

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- ✓ *Faster receipt of benefits and rights resulting from corporate actions.*
  - ✓ *Improved protection of shareholder's rights resulting from more timely communications from the issuer.*
  - ✓ *Reduced transaction costs through greater efficiency.*

**Benefits to Issuers:**

- ✓ Up-to-date knowledge of shareholder's names and addresses.
- ✓ Savings in costs of new issues from reduction in printing and distribution costs.
- ✓ Increased efficiency of registrar and transfer agent functions.
- ✓ Better facilities for communication with shareholders, conveying benefits of corporate actions and information notices.
- ✓ Improved ability to attract international investors without having to incur the expenditure of issuance in overseas markets.

**Benefits to Securities Industry Intermediaries:**

- ✓ Less risky settlement with implementation of collateral based Payment systems.
- ✓ Greater profits from increased trading volume made possible by *NCDS* systems with reduced operational cost per transaction and reduced risk.
- ✓ Improved cash flow from not having funds tied up for long periods.
- ✓ Elimination of forgery and counterfeit with attendant reduction in settlement risk from bad deliveries.

- ✓ Opportunity for development of retail brokerage business.
- ✓ Opportunity for development of more sophisticated custodial services which can be offered to the smaller investor.
- ✓ Standardised communications between *NCDS*, registrars, and other intermediaries.
- ✓ Ability to arrange pledges without movement of physical scrip and further increase overall level of trading activity, liquidity and profits.

This report represents the first document in a series of communications aimed at increasing the awareness and understanding of the projects we are undertaking.

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