Vol. VI No. 1 / April 2011
ISSN: 0973-4503 RNI : UPENG 2006/17831

JOURNAL OF COMMERCE & TRADE

Pp. 92-97

# Analysis of Dematerialisation of Securities

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***Abstract***

*Rapid pace of technical advancement and evolution of e-business has broken out traditional and conventional mindset of the people. Since last decade, tremendous changes have taken place almost in every sector and financial sector being at forefront, has experienced greater amount of variation ranging from way of financing to investing. In this direction, there has been paradigm change in the method of maintaining the securities from physical holding to electronic form of holding popularly known as dematerialisation. The concept of dematerialisation of securities provides immense benefits to the investors and has been in practice in developed nation quite extensively. However in developing nations like India, it has been come to the existence since 1996 with the enactment of depository act. Being a new concept, very limited research work has been done in this direction. The present paper describes the development of the concept of dematerialisation particularly in India and attempts to analyse its future prospects. It attempts to explore opportunities and challenges to dematerialisation and submits certain recommendations to meet the challenges.*

## 1. INTRODUCTION

Since the last decade, the trading volumes of equity and debt market have skyrocketed, while the demand for physical securities certificates fell steadily. Physical holding of securities is not only cumbersome and inefficient but also creates greater degree of risks for its participants. Unwarranted delay in share transfers, possibility of scams, mutilation of share certificates and increased cost reflected into investor grievances. To overcome these problems, the need for paperless holding based on depository system has been recognised. The depository system may work through two models viz. Immobilisation and Dematerialisation. Under immobilization, the physical scrip is kept in the depository vaults, supporting the book entry and records are kept on the computer. At the flip side, in case of dematerialization, neither the individual (who owns the shares) keeps scrip in physical form nor the depository participant. The depository maintains the electronic ledger of the securities under its control. Thus, dematerialization (demat) is a process of replacing the physical holding of financial securities to electronic holding. Under this process, security certificates are shredded and a corresponding credit entry of the number of security is made in the account of investor opened with the depository participant (DP) for a consideration of custody fees. These DPs act as an intermediary between investors and depositories. At the global level, no uniform method of holding the securities has been adopted. Some countries like Taiwan adopt immobilised form of holding securities at TSDC. Some

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countries prefer electronic form of holding the securities e.g.; securities are held in dematerialised form at the CSDCC (China), BI (Indonesia; for current issues), BOJ (Japan), BNM (Malaysia), BTR (Philippines), MAS (Singapore; insignificant portion of physical shares still exists), CBC (Taiwan), TSD and BOT (Thailand) prefer dematerialised form of securities. Further some countries like Australia, Hong Kong etc adopts the hybrid practice of holding the scrip. India has recently shifted to the use of dematerialised mode of holding the securities in a considerable manner.

Now-a-days the adoption of demat service is rapidly increasing. The growing popularity of dematerialisation could be observed by the following table1:

**Table - 1**
**Progress of dematerialisation at NSDL and CDSL**

| Year | NSDL | | | | CDSL | | | |
|---|---|---|---|---|---|---|---|---|
| | DPs: Live | DPs: Locations | Market Capitalisation (Rs. in Crore) | Demat Quantity (million shares) | DPs: Live | DPs: Locations | Market Capitalisation (Rs. in Crore) | Demat Quantity (million shares) |
| 1996-97 | 24 | 24 | 90818 | 2 | - | - | - | - |
| 1997-98 | 49 | 200 | 288347 | 176 | - | - | - | - |
| 1998-99 | 84 | 750 | 396551 | 711 | - | - | - | - |
| 1999-00 | 124 | 1425 | 765875 | 15501 | - | - | - | - |
| 2000-01 | 186 | 1896 | 555376 | 37208 | 137 | 13 | 192726 | 1920 |
| 2001-02 | 212 | 1648 | 615001 | 51673 | 148 | 181 | 344796 | 4820 |
| 2002-03 | 213 | 1718 | 600539 | 68757 | 177 | 212 | 592132 | 8210 |
| 2003-04 | 214 | 1719 | 1107084 | 83694 | 200 | 219 | 1192263 | 14010 |
| 2004-05 | 216 | 2819 | 1638300 | 128663 | 532 | 1530 | 1671226 | 19080 |
| Mar-06 | 223 | 3017 | 3005067 | 174722 | 582 | 2577 | 2952742 | 27220 |
| Mar-07 | 240 | 5599 | 3598800 | 202701 | 627 | 4178 | 3389445 | 31250 |
| Mar-08 | 251 | 7204 | 5219700 | 236897 | 681 | 6372 | 5162637 | 49820 |

Source: NSDL and CDSL.

## 2. DEMATERIALISATION IN INDIA

The adaptability to dematerialisation has been started with the ongoing market reforms of government of India via promulgating the depository ordinance in September 1995. Further in May 1996 securities exchange board of India (SEBI) notified its depositories and participants regulations so as to provide regulatory framework to depositories. At present, there are two depositories in India namely: National Securities Depository Limited (NSDL), Central Depository Securities Ltd (CDSL). CDSL has attained the membership of The Asia Pacific Central Securities Depository Group (an organisation that facilitates exchange of information and promotes mutual assistance among member depositories and clearing organisations in the Asia-Pacific region).

Here market capitalisation of companies represents that have joined NSDL (inclusive of both physical and dematerialised shares) and CDSL.

As shown from the above table, since the last decade the value of dematerialised securities is continuously rising. Just after the initiation, the figures have shown exponential rise. The rapid development in dematerialisation process is primarily due to its enormous benefits provided to the investors at large. One of the prominent reasons for the evolution of dematerialisation is saving in cost of processing the transfer of security which is most desirable factor to heighten the growth of financial sector. Gupta (2002) observed that if investors cannot be assured of efficient, quick and liquid transactions at low cost, the stock market will never grow exponentially. The processing fee in case of dematerialised securities is comparatively lesser to that for securities in physical form. In fact the cost of transferring in India consists of two costs namely: financial cost and non-financial cost. Financial cost includes stamp cost (around 0.5% of the transacted value for physical holdings and nil for demat trading), brokerage cost (varying 0.75% to

1.00% to the transacted value for physical trading and 0.50% to 0.75% in case of demat trading) and postage expenses and other costs for transferring the securities. Non-financial cost includes delay in transfer and registration of security, bad deliveries, longer settlement cycle, lengthy process in case of minor investors etc. Further if the investor has given the indemnity bond to the company for the possible loss of paper certificate, he will bound to be deprived of selling and buying securities at the desirable time, in addition to some financial cost in this respect. However in case of demat holdings, non-financial costs are supposed to be minimized as compared to holding and trading of scrip in paper form. As transacting in demat form is supposed to be a boon for small investors ensuring lesser paperwork, faster trading cycle, no loss of share certificates in transit, no bad deliveries or undelivered dividend and interest. Regulatory authorities of India are initiating significant steps for widened the range of its operation. Some of the recent initiatives in this direction could be summarised as follows:

## 3. OPPORTUNITIES TO DEMATERIALISATION

India is one of the fastest growing areas of the world. Huge foreign interest has been observed in the financial sector for strategic investment particularly after announcement of recent government regulation allowing foreign players to pick up to 26% in stock market infrastructure companies such as domestic depositories. Global market players are already exploring opportunities to invest in depositories. This new trend explores the numerous opportunities for depositories to flourish. Recently Indian depositories NSDL and CDSL have signed separate agreements with Depository Trust & Clearing Corporation (DTCC), the world's largest depository based in New York for information sharing and to exchange clearing and settlement data. The signed deal provides custody and asset servicing for 2.8 million security issues from the United States and 100 other countries and territories valued at $36 trillion. The study shows that such type of deal is the first of this sort by a global depository company in India. In fact, such type of agreements provide framework for global trading environment and ultimately benefiting investors through a safe and reliable global securities infrastructure. Ahmed (2008) observed that in the globally integrated economy, domestic economic variables are also subject to change due to the policies adopted and expected to be adopted by other countries or some global events. In the same way, this global event is expected to bring significant changes in Indian financial market. Further, with the rapid advances in information technology, online fund buying is catching up fast with young internet-savvy investors.

Now-a-days, many mutual fund houses like ICICI Prudential, Reliance Mutual Fund, HDFC Mutual Fund, BNP Paribas, SBI Mutual Fund, among others allow online buying of units. Some prominent fund distributors are also offering customised research, model portfolio and opportunities for online interactions. However, appropriate steps are very much required to ensure the confidentiality of depository and client relations. In some countries there are very serious implications imposed against the defaulters and separate act has been enacted. Aronofsky (1999) pointed out that in 1997 Montana signed into law Senate Bill 83, the Foreign Capital Depository Act (Act) which imposes severe civil and criminal penalties for breaching depository customer confidentiality, subjecting to some conditions.

## 4. CHALLENGES TO DEMATERIALISATION

The close scrutiny of the financial market and dematerialisation services offered by various depository participants exposed the following weaknesses of Indian dematerialisation services:

**Inappropriate fee structure:** In addition of the above, the fee system of depositories is also within questionable territory. Particularly, small investors feel that new flat settlement fee-structure, applicable w.e.f. 01-04-02, hit their interest and provide benefits to the large investors only. Goel, Mehta and Gupta (2007), investigated the dissatisfaction of small investors from the point of view of cost of demat comfort. The adoption of flat fee structure (FFS) has become debatable as it may create a situation, when custody charges are more than the worth of security. A flat settlement fee means the lower the value of your sale transaction, the greater your transaction charge as a percentage of your trade value. While large investors gain in the new arrangement, small investors will be worse off. Gupta, Jain and Choudhury (2004) also explained how demat process is

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uneconomical for small investors. The summary of fee-structure as directed by the largest governing body of demat services i.e. NSDL could be analysed through following table: 2

The problem is that officials in the various branches of DPs are not aware that they have to stop charging the transaction fee for credits. Still now some of branch offices of DPs continue to levy the transaction charge for credit.

**Table - 2**
**Fee-structure under old and new scheme as per the trading volume**

| Sales | Flat Settlement Fee (in Rs) | Flat Settlement Fee (in %) | Old Settlement Fee (in Rs) | Old Settlement Fee (in %) |
|---|---|---|---|---|
| 1000 | 10 | 1.000 | 0.2 | 0.02 |
| 2000 | 10 | 0.500 | 0.4 | 0.02 |
| 5000 | 10 | 0.200 | 1 | 0.02 |
| 10000 | 10 | 0.100 | 2 | 0.02 |
| 25000 | 10 | 0.040 | 5 | 0.02 |
| 50000 | 10 | 0.020 | 10 | 0.02 |
| 75000 | 10 | 0.013 | 15 | 0.02 |
| 200000 | 10 | 0.005 | 40 | 0.02 |
| 500000 | 10 | 0.002 | 100 | 0.02 |
| 1000000 | 10 | 0.001 | 200 | 0.02 |

Source: NSDL

Thus, For instance, if one's DP's transaction charge is 0.02 per cent of trade value, investors pay 20 paisa on a trade value of Rs 1,000. With the flat rate, this will rise to Rs 15, or 1.5 per cent of the trade value–an increase of 75 times. The worst affected will be investors who actively trade in small lots and take delivery for short periods. Further, demat trading of mutual fund units has also some concerns regarding fees to be paid. Such transactions through brokerages involve a cost.

**Non-compliance of directives:** Securities and Exchange Board of India (SEBI), Securities and Exchange Board of India (SEBI) SEBI reported that it usually receives request to cut down the rates of depository participants. In 2004, SEBI issued some directives for the reduction in custody fees, but even that were also being found to be insufficient. Raju (2000) found that the brokerage reduction was though significant for investors having high net worth but for small investors it does not seem to be proportional. The charges levied by various depository participants for demat service have been given in annexure. A study conducted by Varma (2001) concluded that depository transaction charges are critical to those who churn their portfolio rapidly by actually giving or taking delivery in their trades. Further researchers observed that there is non-compliance to directives also. SEBI has directed both NSDL and CDSL to direct all DPs to stop imposing account opening charge and transaction charge on credits in a demat account. Despite this, some DPs continue to charge customers.

**Fraudulent and malpractices:** Today, demat is a very catchy issue and coming initial public offerings (IPOs) moved it for a hot discussion. The shocking details of the fraudulent practices as exposed by SEBI investigation report January 2006, reveals the fictitious share trading account opening to take advantage of IPO. The scam involves illegal cornering of shares by financers and market players. A very significant and regrettable aspect of SEBI report is that most of the sections involved in the regime of demat trading have played an active role in the scam. The advent of demat trading has ironed out a host of glitches that plagued the physical share environment. In the demat mode, you hold your shares in a demat account with a depository participant (DP), with the shares being book entries against your name. However, since a demat account is akin to a bank account, it is exposed to similar types of risks, namely frauds and processing errors.

**Multiple and Benami dematerialised accounts:** SEBI report (2006) noticed a large number of multiple dematerialized accounts with common addresses. It could be traced from the following table: Table 3 about here

Further, another fiery issue which concerns with opening of demat account is "benami demat account." Infect the key operators allowed their demat accounts for temporarily parking the credits received from benami applicants before transferring them to financers.

**Poor marketability of demat services:** In addition of above the marketability of demat services also have not

**Table - 3**
**DPs of banks with 20 or more demat account holders sharing common addresses**

| Bank | No. of accounts |
|---|---|
| Centurion bank | 25,953 |
| HDFC bank | 11,000 |
| ICICI bank | 3,965 |
| Standard chartered bank | 1,990 |
| UTI bank | 1,908 |
| Kotak Mahindra bank* | 1,725 |
| Indusind bank | 1,295 |
| City bank NA | 1,113 |
| ING Vysya bank | 1,075 |
| United commercial bank (public sector bank) | 510 |

Source: compiled from the SEBI order of April 27, 2006
*Note: KMS had 6,456 account holders sharing common addresses

been found suitable and it still lacks desired popularity. Hence there is a dire necessity to initiate required steps to drag the investors into the system.

To meet all these challenges, a deliberate and consolidated approach is sincerely required. Sharma and Vashishtha (2007) found that from a regulatory perspective, the recent developments in the financial sector have led to an appreciation of the limitations of the present segmental approach to financial regulation and favours adopting a consolidated supervisory approach to financial regulation and supervision, irrespective of its structural design. In the light of these challenges, following section attempts to put forward following suggestions.

## 5. RECOMMENDATIONS

DEMAT is a platform where such activities would proliferate manifold. Recent scams encountered in financial security market exposed the seriousness of the issue. If serious initiatives, stringent provisions and a disciplinary mechanism have not been immediately taken, one can imagine what harm a hard core criminal can inflict in collusion with some hackers and plain forgers. Stricter surveillance on all market intermediaries and application of foolproof platform in the IT are desperately needed to avoid possible security scams. Fee structure of depository participant should be made uniform and in consensus to benefits provided by them so that small investor's disenchantment could be properly handled. Further, in developed countries the depositories make continuous efforts to reduce the processing cost like Euro-clear UK & Ireland (the Central Securities Depositories of the UK, Ireland, Jersey, Guernsey and the Isle of Man) has recently launched a funds settlement solution which aims to significantly reduce the cost and risk associated with the processing of funds transactions. The similar efforts are required to be initiated in context to India also. In addition to this, there is a need to fix a ceiling on the number of demat accounts one can have under each pattern with one or more depository participants. Some more provisions should be enacted to ensure the non-opening of more demat account of a single holders and to avoid benami transactions.

In addition, it is important to remain vigilant to other factors that may impact the depository activity, like scalability and remaining excess capacity. This becomes especially important if a depository is considering expanding its responsibilities and activities, either by accepting new instruments, through the consolidation of depository functions within a given market, or if cross-border activity is expected to add substantial volumes to the domestic activity. In addition to this, as depository participants play pivotal role in the mechanism of dematerialisation, it is imperative for each depository to be structurally, financially and operationally sound so as to avoid reputational risks. Further, proper supervision by the public sector, an adequate capital base, stringent risk management tools (audits, insurance, etc) and business recovery plans are also very much required. In reality, dematerialization of security is an essential need for the today's world and it is strongly recommended that the above suggestions should be incorporated to minimize the risk and grievance associated with demat concept.

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