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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

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DEPOSITORY SYSTEM IN INDIA - A COMPARATIVE STUDY OF NSDL AND CDSL

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ABSTRACT

The present study is an attempt to analyze and compare the performance of NSDL and CDSL for a period of 11 years, i.e. 2000-2010. On the basis of results, it is concluded that an increase in the terms of number of companies available for demat, number of companies signed for demat, number of depository participant, number of locations, value of dematerialized stock is observed during the period under study in both the depositories, i.e. NSDL and CDSL. There is a significant difference in the performance, on an average, of both the depositories on the basis of the selected parameters. There is also a positive correlation in the performance of the depositories on the above parameters, which is also found significant. On the basis of comparative financial analysis, it is concluded that the liquidity position as measured by current ratio is better in case of CDSL as compared to NSDL. The profitability position of NSDL is better than that of CDSL as measured by return on net worth and return on capital employed. However, return on equity and EPS is low in NSDL as compared to CDSL.

KEYWORDS

Depository, Depository participants, Performance, Parameters, Liquidity, Profitability, Financial analysis.

INTRODUCTION

Technology has changed the face of the Indian stock markets in the post-liberalization era. Competition amongst the stock exchanges, increase in the number of players and changes in the trading system led to a tremendous increase in the volume of activity. The traditional settlement and clearing system has been proved inadequate due to operational inefficiencies, delay in transfer, registration, fake certificates and forgery, non availability of depositories, impeding the healthy growth of the capital market. To overcome the problems regarding the stock markets world over, many task forces were set up inducing group of 30 to suggest an alternative for the exiting settlement system, which involved physical movement of scrips. The depository system was initiated by Stock Holding Corporation of India Limited (SHCIL) in July 1992, when it prepared a concept on paper on "National Clearance and Depository System" in collaboration with Price Water House under a programme sponsored by the US Agency for International Development. Thereafter, Government of India promulgated the Depositories Ordinance in September 1995, thus paving the way for setting up of depositories in the country. SEBI notified regulations under the Ordinance in May 1996 in order to provide the regulatory framework for the depositories. Accordingly, the Government of India enacted the Depositories Act 1996 to start depository's services in India. The depository system revolves around the concept of paperless or scripless trading because the shares in a depository are held in the form of electronic accounts, i.e. dematerialized form.

Presently, there are two such depositories in India, viz. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL). NSDL was set up as the first depository company in the country, which is sponsored by the Unit Trust of India, NSE, State Bank of India, HDFC Bank and Citi Bank; and managed by Board of Directors as a public limited company. The Mumbai Stock Exchange (BSE) in association with the Bank of India, Bank of Baroda, State Bank of India and HDFC Bank promoted CDSL as the second depository in India for dealing in the securities in the electronic form, by the name of Central Depository Services (India) Limited (CDSL). The major objective of these depositories is the growth of scripless trading, protection to the individual investor's participation in the depository and to enhance liquidity.

REVIEW OF LITERATURE

This section covers the review of literature of some of the important studies, research papers and articles on the various aspects of depository system. Shah (1996)[1] highlighted that resolution of the single vs. multiple depositories, immobilization vs. dematerialization and role of capital adequacy norms for the custodians which is helpful in quick implementation of depository system in India. Aggarwal and Dixit (1996)[2] expressed their views about the legal framework for depository system in India. They also explained the benefits of the paperless trading, responsibilities of depository or participants and eligibility criteria, etc. Dias et. al (1996)[3] pointed out the problems faced in the area of depository system due to setting up depositories by stock exchanges. Aggarwal (1996)[4] pointed out that the introduction of depository system in India will eliminate many problems like back office functioning, post-trade, post-issue work, settlement and registration work. Sarkar (1996)[5] analyzed the implications of the scripless trading and share transfer based on book entry merely due to the existence of the depository ordinance 1995. George (1996)[6] explained the role of the NSDL in revolutionizing the paperless stock settlement system of the country. He also examined the steps taken by the depository to ensure that the scripless trading system is a success and stressed on the importance of the role of the regulator in making the depository system successful. Gurusamy (1996)[7] explained that the introduction of depository system would help in transfer of securities in the capital market by a mere book entry. He also pointed out the advantages of depository system such as delay in transfer, registration, fake certificates, soaring cost of transactions, more paper work, non availability of depositories in when the transfer of securities take place by physical delivery. Rao and Pramannik (1998)[8] studied the functioning of scripless trading, rights and obligations of depository. They have also shown the relationship between depository and other agencies, relationship between depository and participant, between depository and beneficiary, depository and SEBI and relationship of depository with Companies Act. Hurkat and Ved (1999) [9] discussed the role of depository system in many advanced countries in the stock and capital markets the world over. They also analyzed the services offered by NSDL, dematerialization, re-materialization, trading and fee or charges, comparison of a bank and a depository for the benefits of the depository. Burton (2002)[10] revealed the redesign of the depository structure and procedures and said that this is a viable model system and is being monitored closely and improved on a continuing basis. Mehla and Turan (2002)[11] explored the depository system as a process, which eliminates the paper work and maintains the electronic record of the ownership of securities. Gupta (2002)[12] examined the role of SEBI which enables the investors to choose their depository and the DP to keep their securities in the electronic form and to trade in the demat segment. Ravi Shah (2002)[13] highlighted that NSDL and CDSL have changed the face of the Indian capital market. The move from an account period settlement in 'paper form only' to a T+3 settlement in pure electronic form has been achieved in a record span of few years, whereas it took anywhere between 10-20 years in most of the developed countries. Kanko (2004)[14] discussed about Duopoly Model of security settlement, which shows how pooling payment can help in using liquidity efficiently in relation to CSD (Central Securities Depositories) foreign securities. Schmiedel et. al (2006)[15] analyzed the existence and extent of economies of scale in depository and settlement systems. The study indicated the existence of significant economies of scale but degree of such economies differs by settlement, institution and region. Nishanth and Mitra (2007)[16] highlighted the trends in the growth of dematerialization in the Indian capital market. They analyzed the total turnover and demat segment turnover volume-wise and stated that dematerialization of securities is one of the major step aimed at improving and modernizing the levels of investor's protection measures. Raju and Patil (2007)[17] quantified and analyzed the impact of dematerialization on liquidity in the Indian stock market. Kanan (2008)[18] highlighted that dematerialization has certainly brought about lot of improvement in the investment habits in our country and is bane for the companies and has created havoc in maintaining the members register and in conducting the members meeting.

OBJECTIVES OF THE STUDY

The present study is conducted to achieve the following specific objectives:

1. To evaluate the performance of depositories i.e. NSDL and CDSL on the parameters like number of companies available for demat, number of companies signed for demat, number of clients, number of depository participants, number of locations served value of dematerialized stock, demat custody, etc.
2. To analyze the financial performance of NSDL and CDSL in terms of liquidity, solvency and profitability.

RESEARCH HYPOTHESES

To achieve the objectives of the study, the following hypotheses are formulated and tested:

H01: There is no significant difference between the average number of companies available for demat, signed for demat, depository participants, demat custody, number of clients, number of locations and value of stock of two depositories during the period under study.

H02: There is no correlation between the number of companies available for demat, signed for demat, depository participants, demat custody, number of clients, number of locations and value of stock of two depositories during the period under study.

H03: There is no significant difference in the liquidity, solvency and profitability of two depositories during the period under study.

H04: There is no correlation in the liquidity, solvency and profitability of two depositories during the period under study.

DATA COLLECTION AND ANALYSIS

The present study is of analytical nature, therefore the use is made of secondary data collected from various websites, publications and brochures of depository participants, research papers/articles published in various journals/magazines/newspapers and annual reports of depositories, depositary participants and SEBI for a period of 11 years i.e. from 2000-2010. The data collected have been analyzed with the help of various statistical tools like Coefficient of Correlation (r) and t-test.

RESULTS AND DISCUSSIONS

The conclusions drawn regarding the performance of NSDL and CDSL are presented in the following sections:

ANALYSIS OF BUSINESS PERFORMANCE

In this section, the performance of NSDL and CDSL is analyzed and compared on the parameters like number of companies available for demat, number of companies signed for demat, number of clients, number of depository participants, number of locations served, value of dematerialized stock, demat custody, etc.

COMPANIES AVAILABLE FOR DEMAT

Every company wants to reach its investors through any depository. This is the major aspect for measuring the performance of any depository. More number of companies available for demat shows the exponential growth of the depository. Therefore, every depository tries to add a large number of securities to the list of securities to be settled only in demat form by all categories of investors. Table-1 shows the number of companies available for providing dematerialization facilities to their shareholders. The securities available for dematerialization includes equity shares, debt instruments, government securities, preference shares, certificates of deposit as well as the units of mutual funds and exchange traded funds. As is evident from the Table, the number of companies available for demat observed an exponential growth in both NSDL and CDSL during the period under study. There is no significant difference in the average number of companies available for demat in case of NSDL and CDSL as is evidenced by t-value. Therefore, the null hypothesis can be accepted. But on the other hand, there is a high degree of positive co-relation, which is also found highly significant. Therefore, the null hypothesis cannot be accepted. The main reason behind the growth of number of companies are low transaction charges, centralized database, low cost of set up and branch set up.

NUMBER OF COMPANIES SIGNED FOR DEMAT

This is also another important aspect for measuring the performance of any depository. Generally, this parameter shows the acceptability of the depository by the investors and the reach in the market. Therefore, every depository tries to maintain their relationship with maximum number of investors. Table-2 reveals that the number of companies signed for demat have increased in both NSDL and CDSL. There is no significant difference in the average number of companies signed for demat in case of CDSL and NSDL. Therefore, the null hypothesis can be accepted. However, there is a high degree of positive correlation, which is also found highly significant. Therefore, the null hypothesis cannot be accepted. The reason behind the increase in the number of companies is to bring all the actively traded scrips under the purview of compulsory signed or settlement form.

NUMBER OF DEPOSITORY PARTICIPANTS

A depository participant is an agent of the depository. If an investor wants to avail the services offered by the depository, the investor has to open an account with the depository participant. Depository participant functions as a bridge between the depository and beneficial owner. Number of participants help to increase the business of any depository. Therefore every depository tries to increase the depository services across the country. As depicted in the Table-3, the average number of depository participants has also increased during the period 2000-10 in case of both NSDL and CDSL. A significant difference is found in the average number of depository participants in case of NSDL and CDSL at 1 per cent level of significance. Therefore, the null hypothesis cannot be accepted. On the other hand, there is a high degree of positive correlation, which is also found significant. Therefore, the null hypothesis cannot be accepted.

NUMBER OF LOCATIONS SERVED

Depository offers the unique facility for the depository participants to extend the services directly through their branch network in order to reach investors even in the remote areas. Keeping in view the shortening settlement cycles, SEBI has directed that depository participants to connect electronically all the branches and centre for the benefit of the investors which gives faster settlements. As is evident from Table-4, an increase in number of locations covered is observed during the period 2000-10 in both NSDL and CDSL. There is a significant difference in the average number of companies, which is significant at 1 per cent level. Therefore, the null hypothesis cannot be accepted. On the other hand, there is also high degree of positive correlation, which is also found significant. Therefore, the null hypothesis cannot be accepted.

VALUE OF DEMATERIALIZED STOCK

The value of securities held in the custody of depository witnessed a tremendous growth of any depository. Higher value of demat stock shows the higher growth of the depository. Therefore, every depository wants to increase their value of dematerialization stock with the help of increase in the number of participants and increase the number of accounts of the investors. As is evident from the Table-5, the value of dematerialized stock has increased in both NSDL and CDSL during the period under study. But there is significant difference at 5 per cent level of significance between the average number of companies in case of NSDL and CDSL. Therefore, the null hypothesis cannot be accepted. On the other hand, there is also a high degree of positive correlation, which is also found highly significant. Therefore, the null hypothesis cannot be accepted.

NUMBER OF CLIENTS

This aspect shows the efforts of depository in several areas like up-gradation of the technology, enhancement of operational efficiency through IT, benchmarking of quality process, cost reduction means and aggressive marketing efforts. Income of the depository is dependent on the number of clients. Therefore, every depository tries to increase its number of clients in all the segments of the market. Table-6 shows the number of beneficial owner accounts opened with both the depositories reached a crucial milestone in its life span. The focus is on building up a nation-wide depository participant network, which has paid off as there is appreciable increase in number of beneficial owner accounts. Like other parameters, average number of clients has also increased in both NSDL and CDSL during the period under study. But the difference between the average numbers of clients is found significant at 5 per cent level in case of NSDL and CDSL. Therefore, the null hypothesis cannot be accepted. This is the result of concerted efforts in several areas as up-gradation of technology, enhancement of operational efficiency through IT, benchmarking of quality process, cost reduction means and aggressive marketing efforts. All these states that demat form of holding securities has now acquired wider acceptance of the Indian capital market, as dematerialized stock will be more liquid than physical stock as it could be delivered in any segment of the market. On the other hand, there is also a high degree of positive correlation, which is also found highly significant. Therefore, the null hypothesis cannot be accepted.

DEMAT CUSTODY

This is also one of the important criteria to measure the performance of any depository. A depository can increase their demat custody by increasing its clients and number of securities dematerialized. As is evident from Table-7, the demat custody held in both the depositories witnessed a tremendous growth during the period under study. There is difference between the average demat custody of NSDL and CDSL, which is found significant at 5 per cent level. Therefore, the null hypothesis cannot be accepted. This is mainly due to the higher valuation of shares of companies represented by the new sectors of the economy i.e. information technology, communication and entertainment companies. On the other hand, there is a high degree of positive correlation, which is also found significant. Therefore, the null hypothesis cannot be accepted.

ANALYSIS OF FINANCIAL PERFORMANCE

This section includes the analysis of financial performance of NSDL and CDSL in terms of liquidity, solvency and profitability.

ANALYSIS OF LIQUIDITY

Liquidity refers to the ability of the firm to meet its short-term obligations on due dates and gives a good insight into a firm's ability to remain technically solvent in the event of adversities. The short-term obligations are met by realizing amounts from current, floating or circulating assets. If the current assets can pay off the current liabilities, then liquidity position is assumed to be satisfactory and vice-versa. The current ratio is used to analyze the liquidity position of NSDL and CDSL.

CURRENT RATIO

The current ratio is the ratio of total current assets to total current liabilities and is calculated by dividing current assets by current liabilities. The current assets of a firm represents those assets which can be, in the ordinary course of business, converted into cash within a short period of time, normally not exceeding one year and includes cash and bank balances, interest accrued on investments, sundry debtors, etc. The current liabilities are the liabilities, which are short-term maturing obligations to be met within a year and consist of sundry creditors; income received in advance, deposits from depository participants, etc. As a measure of short-term financial liquidity, it indicates the rupee of current assets available for each rupee of current liability. The higher the current ratio, the larger is the amount of rupees available per rupee of current liability, the more is the firm's ability to meet current obligations. As a convention, the minimum of 2:1 is referred to as a banker's rule of thumb or arbitrary standard of liquidity for a firm. A ratio equal or near to the rule of thumb is considered satisfactory. The idea of having doubled the current assets as compared to the current liabilities is to provide for delays and losses in the realization of current assets. However, the rule of 2:1 should not be blindly followed while making interpretation of the ratio, because firms having less than 2:1 ratio may be having a better liquidity than those firms having more than 2:1 ratio. This is so because the current ratio measures only the quantity of current assets and not quality of current assets. The current ratio of NSDL and CDSL during the period under the study is given in table 8. In case of NSDL, current ratio ranges from 1.76 (2008) to 1.46 (2000), which is lower than the ideal ratio. It indicates that considerable deterioration has occurred in the liquidity position and shortage of working capital. In case of CDSL, the ratio ranges from 1.97 (2008) to 17.30 (2000), which is higher than ideal ratio. A very high ratio may be an indicative of slack management practices. The liquidity position of CDSL, as measured by the current ratio, is better as compared to NSDL. There is a significant difference in the average current ratio of NSDL and CDSL at 5 per cent level of significance. Therefore, the null hypothesis cannot be accepted. On the other hand, there is a low negative correlation and which is also found insignificant. Therefore, the null hypothesis can be accepted.

ANALYSIS OF SOLVENCY

The term 'solvency' refers to the ability of a concern to meet its long-term obligations. The long-term indebtedness of a firm includes debenture holders and financial institutions providing medium and long-term loans. The long-term creditors of a firm are primarily interested in knowing the firm's ability to pay regularly interest on long-term borrowings and repayment of the principal amount at maturity. Accordingly, long-term solvency ratios indicate a firm's ability to meet the fixed interest and repayment schedules associated with its long-term borrowings.

FIXED ASSETS TO PROPRIETORS FUNDS RATIO

This ratio establishes the relationship between fixed assets and proprietors funds. The objective of the ratio is to find out what proportion of owners funds are invested in fixed assets. It can be calculated by dividing the fixed assets by shareholders funds. Fixed Assets are calculated after charging depreciation. Generally, the purchase of fixed assets should be financed by shareholder's equity including reserve and surplus. If the ratio is less than one, it implies that owner's funds are more than total fixed assets and shareholders provide a part of the working capital. When the ratio is more than one, it implies that owner's funds are not sufficient and firm has to depend upon the outsiders to finance the fixed assets. The Fixed Assets to Proprietors Funds Ratio of NSDL and CDSL during the period under the study is given in table 9, which shows that it ranges between 15.9 (2000) and 67.1 (2008) in NSDL, while in case of CDSL, it ranges from 0.19 (2008) to 20.7 (2000). There is a difference in the average fixed assets to proprietor's fund ratio of NSDL and CDSL which is found significant at 1 per cent level of significance. Therefore, the null hypothesis cannot be accepted. There is also a high degree of negative correlation in the ratio of fixed assets to proprietor's funds of CDSL and NSDL and is found significant. Therefore, the null hypothesis cannot be accepted.

CURRENT ASSETS TO PROPRIETORS FUNDS RATIO

This ratio indicates the extent to which proprietor's funds are invested in current assets and is calculated by dividing the total of current assets by the amount of shareholders funds. The ratio of Current Assets to Proprietors Funds of NSDL and CDSL during the period under the study is given in table 10. It ranges from 19.1 (2008) to 25.9 (2000) in case of NSDL. On the other hand, the ratio in case of CDSL ranges from 26.9 (2008) to 43.6 (2000). There is significant difference in the average rate of current assets to proprietor's funds of CDSL and NSDL at 5 per cent level of significance. Therefore, the null hypothesis cannot be accepted. However, there is a low degree of negative correlation between them and is also found insignificant. Therefore, the null hypothesis can be accepted.

ANALYSIS OF PROFITABILITY

Profits are the ultimate test of management efficiency. An organization must be able to earn adequate profits in relation to capital invested. Return on net worth, return on equity, return on capital employed and earnings per share are used to analyze the profitability.

RETURN ON NET WORTH

Net worth is also known as proprietor's net capital employed. The return is calculated with reference to profits belonging to shareholders and, therefore, profits shall be net profits after interest and tax. It is calculated by dividing the profits after interest and taxes divided by shareholders funds. Shareholders' funds include equity share capital and reserve and surplus. This ratio is one of the most important ratios used for measuring the overall efficiency of a firm. This ratio is of great importance to the present and prospective shareholders as well as the management of the company. As this ratio reveals how well the resources of a firm are being used, therefore, higher the ratio, better are the results. The ratio of return on net worth of NSDL and CDSL during the period under the study is given in table 11. It ranges from 0.15 (2000) to 0.45 (2010) in case of NSDL and exhibits a rising trend up to 2000-01 and fluctuating thereafter. On the other hand, it ranges from -0.51 (2001) to 20.58 (2010) in case of CDSL and exhibits a sudden loss in year 2000-01 and rise thereafter. The ratio in case of NSDL is better than that of CDSL because higher the ratio, the better the performance and prospect of the company. There is a significant difference between the average return on net worth of CDSL and NSDL, which is found insignificant. Therefore, the null hypothesis can be accepted. There is a low degree of positive correlation in the ratio of return on net worth of CDSL and NSDL, which is found insignificant. Therefore, the null hypothesis can be accepted.

RETURN ON EQUITY

In real sense, ordinarily shareholders are the real owners of the organization. Preference shareholders have a preference over ordinary shareholders in the payment of dividend as well as repayment of capital. Preference shareholders get a fixed rate of dividend irrespective of the quantum of profits of the company. The rate of dividend varies with the availability of profits in case of ordinary shares only. Thus, ordinary shareholders are more interested in the profitability of a company and the performance of a company should be judged on the basis of return on equity capital of the company. It is calculated by dividing the net profit after interest and taxes by equity capital. The ratio of Return on Equity of NSDL and CDSL during the period under the study is given in table 12, which ranges from 0.18 (2000) to 0.41 (2010) in case of NSDL. This shows the fluctuating trend after the sudden decline in 2001-02. On the other hand, the ratio in case of CDSL ranges from 0.04 (2000) to 0.74 (2008). The profitability position as measured by return on equity is better in case of NSDL as compared to CDSL. There is no significant difference between the average return on equity of NSDL and CDSL. Therefore, the null hypothesis can be accepted. There is a negative correlation in the average return on equity CDSL and NSDL and is also found insignificant. Therefore, the null hypothesis can be accepted.

RETURN ON CAPITAL EMPLOYED

Return on capital employed establishes the relationship between profits and the capital employed. It is primary ratio and is most widely used to measure the overall profitability and efficiency of an organization. It is the ratio of net profits before interest and taxes and capital employed. The term capital employed refers to the long-term funds supplied by the creditors and owners of the firm. The ratio of Return on Capital Employed of NSDL and CDSL during the period under the study is given in table 13. It ranges from 0.68 (2000) to 1.02 (2010) in NSDL and shows the fluctuating trend after a sudden decline in 2001-02. On the other hand, the return on capital employed of CDSL ranges from 0.073 (2000) to 0.42 (2008). The profitability position as measured by return on capital employed is better in case of NSDL as compared to CDSL. There is a significant difference between average return on capital employed of NSDL and CDSL at 1 per cent level of significance. Therefore, the null hypothesis cannot be accepted. However, there is a negative correlation in the average return on capital employed but the same is found insignificant during the period under study. Therefore, the null hypothesis can be accepted.

EARNINGS PER SHARE

EPS measures the profit available to the equity shareholders on a per share basis i.e. the amount that they get on every share held. It is calculated by dividing the profits available to the shareholders by the number of the outstanding shares. The earnings per share of NSDL and CDSL during the period under the study are given in table 14 and ranges from 1.89 (2000) to 9.18 (2010) in NSDL and from 0.42 (2000) to 4.55 (2010) in CDSL. There is a difference in the average EPS of NSDL and CDSL, which is also found significant at 1 per cent level of significance. Therefore, the null hypothesis cannot be accepted. On the other hand, there is a positive high degree of correlation between the EPS of NSDL and CDSL and is also found significant. Therefore, the null hypothesis cannot be accepted.

CONCLUSION

To sum up, there is an increase in the terms of number of companies available for demat, number of companies signed for demat, number of depository participant, number of locations and value of dematerialized stock is observed during the period 2000 to 2010 in both the depositories, i.e. NSDL and CDSL. There is a significant difference in the performance, on an average, of both the depositories on the basis of the selected parameters. There is also a positive correlation in the performance of the depositories in the above parameters, which is also found significant. On the basis of comparative financial analysis, it is concluded that the liquidity position as measured by current ratio is better in case of CDSL as compared to NSDL. The profitability position of NSDL is better than that of CDSL as measured by return on net worth and return on capital employed. However, return on equity and EPS is low in NSDL as compared to CDSL.

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TABLES

TABLE-1: NUMBER OF COMPANIES AVAILABLE FOR DEMAT

Year	NSDL	CDSL
1999-00	821	556
2000-01	2786	2671
2001-02	4172	4284
2002-03	4761	4628
2003-04	5212	4810
2004-05	5536	5033
2005-06	6022	5479
2006-07	6483	5589
2007-08	7354	5943
2008-09	7801	6233
2009-10	8124	7049

T-value = 0.72 (insignificant), Coefficient of Correlation (r) = 0.98 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-2: NUMBER OF COMPANIES SIGNED FOR DEMAT

Year	NSDL	CDSL
1999-00	918	765
2000-01	2821	2723
2001-02	4210	4296
2002-03	4761	4628
2003-04	5212	4810
2004-05	5536	5033
2005-06	6022	5479
2006-07	6483	5589
2007-08	7354	5943
2008-09	7801	6233
2009-10	8124	7049

T-value = 0.72 (insignificant), Coefficient of Correlation (r) = 0.98 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-3: NUMBER OF DEPOSITORY PARTICIPANTS

Year	NSDL	CDSL
1999-00	124	61
2000-01	186	144
2001-02	212	161
2002-03	213	189
2003-04	214	212
2004-05	216	271
2005-06	223	315
2006-07	240	365
2007-08	251	420
2008-09	275	468
2009-10	286	497

T-value = 1.34 (significant at 10% level), Coefficient of Correlation (r) = 0.93 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-4: NUMBER OF LOCATIONS SERVED

Year	NSDL	CDSL
1999-00	1425	15
2000-01	1896	256
2001-02	1648	341
2002-03	1718	414
2003-04	1719	441
2004-05	2819	532
2005-06	3017	586
2006-07	5599	634
2007-08	7204	690
2008-09	8777	468
2009-10	11170	615

T-value = 3.71 (significant at 1 per cent level), Coefficient of Correlation (r) = 0.96 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-5: VALUE OF DEMATERIALIZED STOCK (IN RUPEES)

Year	NSDL	CDSL
1999-00	461385	8188
2000-01	326184	10905
2001-02	442580	24319
2002-03	551304	36164
2003-04	966153	106443
2004-05	1447663	120959
2005-06	2478941	218242
2006-07	3142645	293865
2007-08	4376953	596607
2008-09	3106624	4594480
2009-10	5617842	8389280

T-value = 0.79 (insignificant), Coefficient of Correlation (r) = 0.73 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-6: NUMBER OF CLIENTS

Year	NSDL	CDSL
1999-00	2414000	28545
2000-01	3748000	76003
2001-02	3700000	128252
2002-03	3795604	247369
2003-04	4989734	629159
2004-05	6300723	1005772
2005-06	7560299	1861288
2006-07	7903389	2873508
2007-08	9372335	5480245
2008-09	9685568	6754840
2009-10	10585000	8129577

T-value = 3.15 (significant at 1 per cent level), Coefficient of Correlation (r) = 0.93 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-7: DEMAT CUSTODY (Rs. Crore)

Year	NSDL	CDSL
1999-00	1550	57
2000-01	3271	192
2001-02	5167	4812
2002-03	6876	821
2003-04	8369	1401
2004-05	12866	1908
2005-06	17472	2722
2006-07	20270	3125
2007-08	23690	4982
2008-09	28287	7081
2009-10	35114	7795

T-value = 3.39 (significant at 1 per cent level), Coefficient of Correlation (r) = 0.85 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-8: LIQUIDITY RATIO (in times)

Year	NSDL	CDSL
2000	1.46	17.3
2001	1.04	6.70
2002	1.36	9.39
2003	1.85	8.16
2004	1.64	3.70
2005	1.64	4.31
2006	0.99	7.15
2007	1.61	4.29
2008	1.76	1.97
2009	1.58	1.62
2010	1.67	1.78

T-value = 3.26 (significant at 1 per cent level), Coefficient of Correlation (r) = -0.31 (insignificant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-9: FIXED ASSETS TO PROPRIETOR'S FUND RATIO (Percent)

Year	NSDL	CDSL
2000	15.9	20.7
2001	38.3	20.5
2002	34.8	12.1
2003	28.2	9.3
2004	32.8	8.9
2005	37.9	8.5
2006	51.1	2.0
2007	61.7	2.01
2008	67.1	0.19
2009	69.4	2.74
2010	64.3	3.01

T-value = 6.39 (significant at 1 per cent level), Coefficient of Correlation (r) = -0.81 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-10: RATIO OF CURRENT ASSETS TO PROPRIETOR'S FUND (PERCENT)

Year	NSDL	CDSL
2000	25.9	43.6
2001	25.6	41.4
2002	25.5	52.5
2003	34.9	53.5
2004	28.5	25.3
2005	31.8	35.6
2006	18.4	60.7
2007	27.2	44.6
2008	19.1	26.9
2009	27.8	30.9
2010	28.6	31.6

T-value = 3.66 (significant at 1 per cent level), Coefficient of Correlation (r) = -0.09 (insignificant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-11: RETURN ON NET WORTH (Percent)

Year	NSDL	CDSL
2000	0.15	0.04
2001	0.25	-0.51
2002	0.07	0.02
2003	0.9	0.01
2004	0.2	0.09
2005	0.13	0.08
2006	0.15	0.11
2007	0.32	1.23
2008	0.21	0.21
2009	0.38	0.17
2010	0.45	0.21

T-value = 0.99 (insignificant), Coefficient of Correlation (r) = 0.05 (insignificant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-12: RETURN ON EQUITY (PERCENT)

Year	NSDL	CDSL
2000	0.18	0.04
2001	0.39	-0.52
2002	0.11	0.2
2003	0.16	0.01
2004	0.41	0.97
2005	0.28	0.91
2006	0.37	0.14
2007	0.27	0.22
2008	0.37	0.74
2009	0.25	0.67
2010	0.41	0.73

t-value = 0.58 (insignificant), Coefficient of Correlation (r) = 0.27 (insignificant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE-13: RETURN ON CAPITAL EMPLOYED (percent)

Year	NSDL	CDSL
2000	0.68	0.07
2001	1.01	-0.09
2002	0.25	0.03
2003	0.31	0.3
2004	0.24	0.43
2005	0.41	0.30
2006	0.57	0.29
2007	0.46	0.31
2008	0.5	0.42
2009	0.48	0.37
2010	1.02	0.39

T-value = 2.92 (significant at 1 per cent level), Coefficient of Correlation (r) = -0.30 (insignificant)

Source: Annual Reports of NSDL and CDSL (various issues).

TABLE: 14: EARNING PER SHARE

Year	NSDL	CDSL
2000	1.89	0.42
2001	3.82	0.21
2002	1.15	0.144
2003	1.62	0.098
2004	4.18	0.97
2005	2.89	0.91
2006	3.71	1.45
2007	2.08	0.18
2008	3.29	0.35
2009	3.34	3.26
2010	9.18	4.55

t-value = 2.84 (significant at 1 per cent level), Coefficient of Correlation (r) = 0.81 (significant)

Source: Annual Reports of NSDL and CDSL (various issues).

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