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## Financial Evaluation of Depositories (NSDL and CDSL) in India

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**Farhana Anjum & Dr Bheemanagouda,**

**Assistant Professor, Department of Commerce, SirM.V.Government Arts and Commerce College,Bhadravati.**

**Associate Professor, Department of P.G Studies and Research in Commerce, Vijayanagara Sri Krishnadevaraya University, Jnana sagara, Bellary**

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### **Abstract**

*In India household savings plays a predominant part of gross National Savings. So, unless the savings of small investors are invested in some profitable equity or Bond directly or through intermediaries we cannot expect to have a well developed Capital Market. At the same time Ensuring efficiency and transparency in the stock market operations can solve many grievances of investors. As a part of reforms in Capital Market and in order to bring efficiency and transparency in the operations of fund transfer in both primary and secondary market an initiative step was taken by SEBI in the form of bringing DEPOSITORY SYSEM IN INDIA. In the depository system, the ownership and transfer of securities takes place through electronic book entries. This system rids all the problems which physical handling of securities possess and minimizes the time taken for transfer of securities .By doing so this system achieves the object*

*of ensuring transparency and efficiency in operations. There are two Depositories operating in our country first one being National Securities Depository Limited established in 1996 and the second one central Depository Securities Limited establish in 1999. The thrust of Depository operations lies in the performance of intermediaries known as Depository Participants. This system notifies the investor as Beneficial Owner, who can opens a Demat account with any of the Depository or can have the same with both. This paper titled "Financial Evaluation of Depositories (NSDL & CDSL) in India" focuses mainly on the performance of both the Depositories. The present study is purely based on the secondary data. The period of study is from 1st April 2004 to 31st March 2014 that is for 10 years. The study finds that depositories have made remarkable achievement by improving*

*their financial Progress during the period under study.*

**Index Terms:** BO, DP, NSDL, CDSL, Demat, Dematerialisation and Depositories

## INTRODUCTION TO DEPOSITORY SYSTEM IN INDIA

Depositories have come into being in India only after the enactment of Depositories Act 1996. This act paved the way for the establishment of NSDL, The first Depository in India. NSE joined hands with leading financial institutions to establish NSDL with the object of enhancing the efficiency in settlement system and also to reduce the menace of fake, forged and stolen securities. The second depository in the country was CDSL promoted by BSE in the year 1999. As of today more than 99% settlement of securities takes place in dematerialization.<sup>1</sup>

In the depository system, securities are held in depository account which is more or less similar to holding funds in bank accounts. Transfer of funds is done through simple account transfer. This method does away with all the risks and hassles normally associated with paperwork. The cost of transaction in depository mode is considerably lower

as compared to transacting in certificate.

The Introduction of Depository system has brought a revolutionary change in the way the market operates. Trading in capital market operations to both institutional and individual investors has become convenient and hassle free.

The Depositories Act, 1996 ushered an era of efficient capital market infrastructure, improved investor Protection reduced risks and increased transparency of transactions in securities market. It also immensely benefited the issuer companies in terms of reduced costs and the efforts expended in managing shareholders populace<sup>2</sup>.

As at the end of 31<sup>st</sup> December 2014 about 1, 36, 33, 9732<sup>3</sup> beneficial holders have opened their account with NSDL and about 93, 97,765<sup>4</sup> with CDSL. The NSDL has about 15,864 and CDSL has about 11,428 locations or service centers all over India. About 13,470 companies and about 15,609 companies have admitted their securities (Equity, Bonds, Debentures and mutual funds commercial paper) with NSDL and CDSL.

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<sup>1</sup>Srivastava Vinay K, "Depositories in Indian Capital Market", *Advances in Management*, Vol 4(%) May (2011), pp 5-6.

<sup>2</sup>Inderbir Kaur(2013), “Investors Preference between Demat & Remat and awareness regarding depository and its various laws”, International Journal of Business and Management Invention, May, Vol 2, Iss 5 pp 45-47.

<sup>3</sup>[www.nsdl.co.in](http://www.nsdl.co.in)<sup>4</sup>[www.cdslindia.com](http://www.cdslindia.com)

## REVIEW OF LITERATURE

This particular section covers the review of literature of some of the important studies, research papers and articles on the various aspects of depository system.

**Aggarwal & dixit (1996)** analyzed their views about the Legal framework of Depository system in India. They explained the objectives of depository’s ordinance, Benefits and responsibilities of Depository Participants and the criteria to become a Depository Participant.

**George (1996)** explained the role of NSDL in bringing revolutions in paperless stock settlement system of the country. The stress is primarily on ensuring that scripless trading system is a success and on the importance on the role of the regulator in making the depository system successful.

**Hurkat and Ved (1999)** discussed the role of depository system in many advanced countries in the stock and capital markets the world over. They analyses the services offered by NSDL,

Dematerialisation ,Rematerialisation and fee charges of both the depositories.

**Sarkar (1996)**analysed the implications of the scripless trading and share transfer based on book entry merely due to the existence of the depository ordinance 1995.

**Shah (1996)** highlighted the resolution of single vs multiple depositories. immobilisation vs dematerialization and role of capital adequacy norms for the custodians which is helpful in quick implementation of Depository system in India.

**Schmiedel et.at (2006)**analyzed the existence and extent of economies of scale in depository settlement system. This system indicates the existence of significant economies of scale but degree of such economies differs by settlement, institution and region.

**Dr Ramesh Omkarareppa olekar (2013)** highlighted the emergence of online trading in India and demat accounts in India. He highlighted the role of central Depository services and benefits of demat and stated that demat shares are 100% safe.

**Inderbir Kaur (2013)** highlighted about investor preference between DEMAT

and REMAT and awareness regarding depository and its various laws.

The previous studies covered the Depository System, Depository Legislation, Paperless Trading, Revolutions brought by NSDL and CDSL in the Depository System, Audit of Depository Participants in India, SEBI Guidelines for regulating Depositories in India. It is also necessary to study the Financial Performance of Depositories. Therefore, the present study is been undertaken.

## RESEARCH METHODOLOGY

### a. Rationale for the study

This research basically highlights the financial performance of both the Depositories. The emphasis is on the comparative study of NSDL and CDSL. The research may help the depositories to increase their financial performance by using such tools which increase the income and brings down the expenses. As the research is comparative analysis of both the depositories by this NSDL and CDSL can have a check on their financial performance and can improve the same in the future.

### b. Statement of the problem

Depository is an organization where the securities are held in electronic form through the medium of Depository participant's .A Depository deals in all forms of securities like Shares, Debentures/Bonds, Mutual funds, Derivatives, Money market Instruments, and Government Securities etc. Both the Depositories have a wide network of Depository participants operating in more than 15000 Locations in India. The investors have a complete freedom in choosing the DP based on their convenience. All the securities mentioned above are available for Dematerialization. After viewing such a growth of Depositories since its evolution it also becomes primary to understand the financial soundness of depositories in India. So, the statement of the problem would be to evaluate the financial performance of Depositories.

### c. Objectives of the study

- To study the growth in Operating Income of Depositories.
- To analyze the pattern of Expenses of the Depositories.
- To understand the Return on Investment of selected depositories.
- To evaluate the financial Stability of both the Depositories.

- To check on the Overall profitability of both the Depositories.

d. Data Collection and Period of the Study

This research is purely on the secondary information collected from the Published annual reports of both NSDL and CDSL. The period of study is 10 years from 1<sup>st</sup> April 2004 to 31<sup>st</sup> march 2014.

e. Hypothesis of the Study

There is no significant difference in the operating Income of selected units.

There is no significant difference in Expenses of selected units

There is no significant difference in Return on Investment of Selected units

There is no significant difference in Financial Stability of selected Depositories

f. Tools of Analysis

i. Accounting Ratios: Various accounting ratios for 10 financial years have been calculated for the purpose of analysis and evaluation.

ii. Statistical tools: Few statistical tools like Mean, Standard Deviation, Co

efficient of Variance and One Way ANOVA have been used

g. Limitations of the Study

- The present study is pursued based on the secondary data.

- Few selected Accounting ratios have been used in the study which is a limitation.

**FINANCIAL ANALYSIS OF DEPOSITORIES**

**1. Operating Income to Total Income Ratio:**

This ratio clearly indicates the operating Income to Total Income Ratio of selected depositories during the period under study. This ratio helps to assess the operational efficiency of the Depositories. The higher the ratio the better will be the profitability and affects positively to the operational efficiency of the organization. The formula to arrive at the ratio is

Operating Income to Total Income Ratio =

Operating Income

\_\_\_\_\_ X 100

Total Income

**Table 1 Showing Operating Income to Total Income Ratio**

(Figures in %)

Year	NSDL	CDSL
2004-2005	89.0020	72.9899
2005-2006	90.8654	80.3237
2006-2007	92.7536	77.9545
2007-2008	91.9079	82.9330
2008-2009	91.5461	77.7079
2009-2010	91.6426	80.1020
2010-2011	93.0262	82.4642
2011-2012	94.0467	76.5423
2012-2013	79.8362	72.1206
2013-2014	82.8742	71.5405
Average	89.7500	77.4672
Standard Deviation	3.16227	3.93512
Co efficient of Variance	3.52334	5.07969

Source : Annual Reports of NSDL and CDSL

The above table shows the Operating Income to the Total Income ratio of NSDL and CDSL during the period under study. This ratio indicates the operational efficiency of the Depositories. It is understood from the table that the ratio of CDSL has been showing a fluctuating trend and the ratio of NSDL showed an increasing trend only till 2011-12 and has gradually decreased. The average ratio of NSDL is 89.75% and that of CDSL is 77.46%. While comparing the CV of the Depositories it is seen that CDSL has shown a high CV when compared to NSDL which reveals that the variations are high in case of CDSL ratio and as the ratio of NSDL is less this indicates the stable profitable position of NSDL.

***Ho: There is no significant difference in the Operating Income to Total Income of NSDL and CDSL.***

**Table 2 showing one way ANOVA of Operating Income to Total Income Ratio**

Source of Variation	SS	DF	MS	F. Calculated. Val	F. Critical Value
Between Depositories	754.347	1	754.347	38.59	7.326
Within Depositories	351.897	18	19.5499		
Total	1106.24	19			



The above table shows One Way analysis of the operating Income to Total Income ratio. The Hypothesis is tested @ 5% significance level. Here, calculated value is higher than the tabulated value. So, the null hypothesis is rejected and alternative hypothesis gets accepted. Thereby it can be concluded that there is a significant difference in operating Income to total income ratio of both the Depositories during the period under study.

## 2. Other Income to Total Income Ratio

This ratio shows the Other Income to total Income Ratio of selected depositories during the period under study. This ratio helps to assess depositories “way of functioning”. Higher the ratio the better will be the profitability. The Other Income here includes Misc Income, Interest or Dividend Income, Profit on sale of assets etc. The formula to calculate the ratio is as under.

$$\text{Other Income to Total Income} = \frac{\text{Other Income}}{\text{Total Income}}$$

X 100

Total Income

**Table 3 Showing Other Income to Total Income Ratio**

(Figures in %)

Year	NSDL	CDSL
2004-2005	10.9979	27.0100
2005-2006	9.1345	19.6762
2006-2007	7.2463	22.0452
2007-2008	8.0920	17.0669
2008-2009	8.4538	22.2986
2009-2010	8.3573	19.8979
2010-2011	6.9737	17.5357
2011-2012	5.9532	23.4576
2012-2013	2.0163	27.8793
2013-2014	17.125	28.4594
Average	8.435	22.5326
SD	3.65520	3.93572
Co efficient of Variance	43.33135	17.46358

Source : Annual Reports of NSDL and CDSL

The above table shows the Other Income to total Income ratio of NSDL and CDSL during the period under study. This ratio indicated the other income

source of the depositories. The other income source includes miscellaneous income, Interest, Dividend, Profit on sales of assets etc. It is revealed from the above table that the ratio of NSDL has been decreasing over the period under study except during the year 2013-2014 and the ratio of CDSL has been

fluctuating during the period under study. The ratio of CDSL was at its highest at 28%. Comparing the CV of NSDL and CDSL, NSDL has registered highest ratio which indicates high fluctuation in the ratio whereas CDSL ratio is low which indicated stability in company's earnings.

***Ho: There is no significant difference in the Other Income to Total Income of NSDL and CDSL.***

**Table 4 showing one way ANOVA of Other Income to Total Income Ratio**

Source of Variation	SS	DF	MS	F. Calculated. Val	F. Critical Value
Between Depositories	993.723	1	993.723	62.01	3.067
Within Depositories	288.458	18	16.0255		
Total	1282.18	19			

The above table reflects One Way analysis of the other Income to Total Income ratio. Here the hypothesis is tested @ 5% significant level. Here the calculated value is higher than the table value thereby the null hypothesis is rejected and alternative hypothesis is accepted. It is concluded that there is a significant difference in the other

Income to Total Income ratio of both the Depositories.

### **3. Total Expenses to Total Income ratio**

This ratio shows the Total Expenses to Total Income Ratio of selected depositories during the period under



study. This ratio indicates the profitable position of the depositories. Higher ratio has a direct impact on the profitable position of the depositories it has an effect on the earning of the concern. Total expenses include administration and other expenses of the organization. The formula to calculate the ratio is as under.

$$\text{Total Expenses to Total Income} = \frac{\text{Total Expenses}}{\text{Total Income}} \times 100$$

**Table 5 Showing Total Expenses to Total Income ratio**

(Figures in %)

Year	NSDL	CDSL
2004-2005	66.8608	52.0654
2005-2006	68.7587	43.3814
2006-2007	73.1791	45.5879
200-2008	60.9791	33.9043
2008-2009	81.2097	38.1675
2009-2010	66.3532	33.5018
2010-2011	71.2521	32.8401
2011-2012	71.8022	32.4602
2012-2013	83.5569	48.5212
2013-2014	84.7395	51.8366
Average	65.74392	41.22664
Standard Deviation	10.34929	7.59444
Co efficient of Variance	15.7416	18.4211

Source : Annual Reports of NSDL and CDSL

The above table shows the Total Expenses to total Income ratio of CDSL and NSDL during the period under study. This ratio shows expenses accrued by depositories during study period. The total expenses include administrative expenses and other expenses. It is revealed from the table that the ratio of NSDL has registered fluctuating trend which indicates that its profit was not

stable. The ratio of CDSL has been showing a decreasing trend except during the years 2012-2013 and 2013-2014 which affects positively to its profitability. While comparing the CV it is seen that the ratio of NSDL is less when compared to CDSL which indicates that CDSL has less stability in terms of Total Expenses to Total Income ratio during the period under study.

***Ho: There is no significant difference in the Total Expenses to Total Income of NSDL and CDSL.***

**Table 6 showing one way ANOVA of Total Expense to Total Income Ratio**

Source of Variation	SS	DF	MS	F. Calculated. Val	F. Critical Value
Between Depositories	5006.24	1	5006.24	78.9	5.354
Within Depositories	1142.13	18	63.4517		
Total	6148.37	19			

The above table reflects One Way analysis of Total Expenses to total income ratio. Here, the hypothesis is tested @ 5% significance level. It is understood from the above table that the calculated value is higher than tabulated value thereby the Null hypothesis is rejected and alternative hypothesis is accepted. It is concluded that there is a significant difference in NSDL's and

CDSL's Total Expenses and Total Income ratio during the period under study.

#### **4. Return on investment Ratio**

This ratio shows the percentage return received by depositories on their total share holders fund during the study

period. This ratio helps to assess depositories Profitability from shareholders' point of view. Higher ratio indicates higher profitable position of the depositories. Total shareholders fund includes share capital and reserves and surplus.

The formula to arrive at the ratio is

$$\text{Return on Investment} = \frac{\text{Profit after Tax}}{\text{Total Share Holder's Fund}} \times 100$$

**Table 7 Showing Return on Investment Ratio**

(Figures in %)

Year	NSDL	CDSL
2004-2005	12.6824	7.5560
2005-2006	14.6811	10.6921
2006-2007	12.8736	12.3325
2007-2008	20.3828	20.7899
2008-2009	9.5729	17.1819
2009-2010	22.0261	20.5810
2010-2011	19.5281	18.1720
2011-2012	20.5175	16.1643
2012-2013	5.4499	13.2477
2013-2014	5.3499	12.6540
Average	14.3064	14.93714
Standard Deviation	5.90129	4.12879
Co efficient of Variance	41.2493	27.6411

The above table shows the return on Investment ratio of both the Depositories during the period under study. This ratio indicates the profitable position of both the depositories' under the period of study. A quick glance of the table

indicates that both the depositories are showing a fluctuating trend. The ratio of NSDL hadreached to its highest during the year 2009-2010 at 22% whereas the ratio of cdsl was at its highest during 2007-2008 at 21%. The ratio of NSDL

was as low as 5% during the years 2012-2013 and 2013-2014 which shows a negative impact on the profitability of NSDL. The average ratio of NSDL is 14.3064 and CDSL is 14.9371. Comparing the CV of

Depositories CDSL has registered a low CV as compared with NSDL which indicates that NSDL has less stability with respect to ROI during the period under study as compared to CDSL.

***Ho: There is no significant difference in the Return on Investment of NSDL and CDSL.***

**Table 8 showing One way ANOVA of Return on Investment Ratio**

Source of Variation	SS	DF	MS	F. Calculated. Val	F. Critical Value
Between Depositories	1.98898	1	1.98898	0.06902	0.7988
Within Depositories	518.723	18	28.818		
Total	520.712	19			

The above table indicates One Way analysis of Return on Investment ratio of NSDL and CDSL. The hypothesis is tested @ 5% significance level. Here, calculated value is lower when compared to the tabulated value thereby the null hypothesis gets accepted and thereby it can be concluded that there is no significant difference in the ROI ratio of Depositories during the period of study.

### **5. Current Assets to Current Liability**

This ratio indicates the current assets to current liabilities ratio of selected Depositories during the period under study. This ratio helps to assess the ability of depositories to meet its short term obligations. Higher the ratio higher would be the capacity of Depositories to meet its short term obligations as and when they become due on the other hand the declining ratio indicated deteriorating financial position of the depositories. The current ratio of 2:1 is desirable and ideal in normal business conditions.

The formula to arrive at the ratio is Current Ratio = 
$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

**Table 5.11 showing Current Assets to Current Liabilities ratio**

Year	NSDL	CDSL
2004-2005	4.2868	4.3963
2005-2006	4.0879	7.1061
2006-2007	1.9262	4.2940
2007-2008	2.3074	1.9721
2008-2009	2.3179	4.5615
2009-2010	2.0315	1.1169
2010-2011	1.9913	3.3481
2011-2012	1.9355	27.3185
2012-2013	2.3876	12.8728
2013-2014	1.4787	8.0065
Average	(2.4751)	(7.4993)
Standard Deviation	(0.8922)	(7.3425)
Co-efficient of variance	(36.0470)	(97.9105)

Source: Annual Reports of NSDL and CDSL - Various Issues

The above table shows the current assets to current liability ratio of NSDL and CDSL during the period under study. It is understood from the table that there is a very high fluctuation in the current ratio of CDSL as compared to NSDL. The current ratio of NSDL was highest during the year 2012 -13 @ 2.21584%. As far as the current ratio of CDSL is concerned it was at its highest during the year 2011-2012 @ 27.31850% because a big amount was

invested in short term investments (Current Investment). Comparing CV of both Depositories it is observed that CDSL has recorded a very high variation in current ratio when compared to NSDL which indicates NSDL has a good stability in its liquid position (i.e. Current assets to current Liability).

Ho1: There is a significant difference in current assets to current liabilities to NSDL and CDSL.

**Table 5. showing One Way ANOVA of Current ratio**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	126.266	1	126.266	4.155	0.05648
Within Depositories	547.013	18	30.389		
Total	673.279	19			

The above table indicates One Way analysis of current assets to current Liabilities ratio of NSDL and CDSL. The Hypothesis is tested @ 5% significance level. Here the calculated value is more than the table values thereby the null hypothesis is rejected and alternative hypothesis is accepted. It is concluded that there is a significant difference in NSDL's and CDSL's current assets to current Liabilities ratio during the period under study.

The formula to arrive at the ratio is as follows

$$\text{Current assets to Shareholders funds} = \frac{\text{Current Assets}}{\text{Shareholders' funds}} \times 100$$

### **6. Solvency Ratios (Current Assets to Shareholders funds)**

This ratio is used to measure the long term financial position of a company. It is used to test the solvency of an organization. This ratio is ascertained by dividing the total current assets to owner's equity. A High ratio indicates a strong financial position and a low ratio indicated weak financial position of the depositories.

**Table 5.12 Showing Solvency ratio**

YEAR	NSDL	CDSL
2004-2005	83.1598	35.3924
2005-2006	75.6119	60.2572
2006-2007	41.4997	37.3411
2007-2008	49.1527	19.0716
2008-2009	50.0681	46.1943
2009-2010	39.0426	10.8863
2010-2011	41.6768	32.3304



2011-2012	41.3476	86.9650
2012-2013	23.5201	95.7126
2013-2014	23.8066	93.9199
Average	(46.88859)	(51.80708)
Standard Deviation	(18.3940)	(29.4012)
Co-efficient of variance	(39.2292)	(56.7513)

Source: Annual Reports of NSDL and CDSL - Various Issues

The above table shows the current asset to shareholders' funds ratio of NSDL and CDSL during the period under study. This ratio indicates the financial position or solvency of the depositories. It is understood from the table that the ratio of both the depositories has been showing a fluctuating trend over the years considered for study. The average ratio of NSDL is 46.88859% whereas that of CDSL is 51.80708. After considering the CV of both

the Depositories it is concluded that CDSL has shown a high CV of 56.7513% when compared to NSDL which stood at 39.2292 reveals that the variations are high in case of CDSL ratio when compared to NSDL which indicated a stable financial position of NSDL when compared to CDSL.

H<sub>0</sub>1: There is no significant difference in current assets to shareholders funds of NSDL and CDSL

**Table 6.6 showing One Way ANOVA of Solvency ratio**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	120.958	1	120.958	0.181	0.6755
Within Depositories	12027.5	18	668.196		
Total	12148,5				

The above table indicates One Way analysis of current assets to shareholder's funds of NSDL and CDSL. The hypothesis is tested at 5% significance level. Here the calculated value is more than the table values thereby the null hypothesis is accepted and alternative hypothesis is rejected. It is thereby concluded that there is no significant difference in NSDL's and

CDSL's current assets to shareholders funds ratio during the period under study.

### **7. Current Liabilities to Shareholders Funds**

This ratio is used to measure the long term financial position of a company. It is used to test the solvency of an organization. This

ratio is ascertained by dividing the total current liabilities by the shareholders funds. The standard ratio is 1/3 or 33%. According to this ratio the current liability should not

exceed 33% of Shareholders' funds. If the actual ratio exceeds standard ratio then it would be difficult for the concern to obtain long term funds.

The formula to arrive at the ratio is as follows

$$\text{Current Liabilities to Shareholders fund} = \frac{\text{Current Liabilities}}{\text{Shareholders' Funds}} \times 100$$

**Table 5.13 Showing Current Liabilities to Shareholders Funds**

YEAR	NSDL	CDSL
2004-2005	19.398	8.050
2005-2006	18.496	8.479
2006-2007	21.544	8.696
2007-2008	21.302	9.670
2008-2009	21.600	10.127
2009-2010	19.217	9.746
2010-2011	20.929	9.627
2011-2012	21.361	3.183
2012-2013	9.954	7.435
2013-2014	16.099	11.730
Average	(18.99)	(8.6743)
Standard Deviation	(3.4428)	(2.1590)
Co-efficient of variance	(18.1295)	(24.8896)

Source: Annual Reports of NSDL and CDSL - Various Issues

The above table shows the current Liabilities to shareholders funds ratio of NSDL and CDSL during the period under study. This ratio indicates the financial soundness of the depositories. The ratio of both the depositories has been showing a fluctuating trend during the period under study. From the above table it is understood

that the composition of current liabilities in relation to shareholders funds is more in case of NSDL when compared to CDSL. It is further understood that CDSL enjoys more creditworthiness and financial strength in the market when compared to NSDL.

Ho1: There is no significant difference in the Current Liabilities to Shareholders funds of NSDL and CDSL

**Table 7.1 showing One Way ANOVA of Current Liabilities to Shareholders funds**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	532.068	1	532.068	57.99	4.908E-07
Within Depositories	165.145	18	9.17471		
Total	697.213	19			

The above table indicated One Way analysis of current assets to shareholders funds of NSDL and CDSL. Here the calculated value is more than the table value. Thereby the null hypothesis is rejected and alternative hypothesis is accepted. It is thereby concluded that there is a significant difference in NSDL's and CDSL's current Liabilities to shareholders funds ratio during the period under study.

### 8. Equity to Fixed assets ratio

Total Fixed Assets to Shareholders Funds

This ratio indicated the financial position of the depositories during the period considered for the study. This ratio is obtained by dividing the Net value of fixed assets by the owner's equity. The following ratio is calculated by using the following formula.

$$\text{Equity to Fixed assets ratio} = \frac{\text{Fixed Assets}}{\text{Shareholders funds}} \times 100$$

The standard ratio is 2/3 or 67% i.e Investment in fixed assets should not exceed 2/3 of owners funds. If the ratio of Depositories exceeds 67% then it is indicated that the entire shareholders' funds are blocked in the fixed assets and the firm should depend on external funds to finance its current assets, which indicates that the depositories are financially weak. On the otherhand if fixed assets investment of depositories is less than 67% then it is inferred that the shareowners have financed both fixed assets and current assets. This indicates depositories are financially strong.

**Table 5.14 Showing Total Fixed assets to Shareholders Funds**

YEAR	NSDL	CDSL
2004-2005	95.788	31.725
2005-2006	103.941	28.723
2006-2007	113.278	20.128
2007-2008	107.792	18.71
2008-2009	111.827	21.974
2009-2010	98.692	20.272
2010-2011	25.336	17.917
2011-2012	29.014	11.906
2012-2013	58.376	10.781
2013-2014	36.490	9.488
Average	(78.0534)	(19.1624)
Standard Deviation	(34.6051)	(6.9089)
Co-efficient of variance	(44.3352)	(36.06)

Source: Annual Reports of NSDL and CDSL - Various Issues

The above table shows the equity to fixed assets ratio of NSDL and CDSL during the period under study. The ratio indicates the financial soundness and stability of depositories. As far as the ratio is concerned both the depositories have showed a fluctuating trend. NSDL recorded a highest ratio during the year 2007 at 113.278% and CDSL at 31.725% during 2005. Considering the standard ratio of 67% NSDL showed an increased ratio during all the years the ratio gradually reduced after 2010 and showed a decreasing trend up to 2014. As the NSDL's ratio was more than the standard ratio during many years considered for the study

this situation indicates that NSDL depended on outside financing to finance its current assets as a major part of shareholders' funds went away in buying fixed assets whereas on the other hand CDSL's ratio is in all the years was very much less than the standard ratio which indicates that the shareholders' funds are sufficient to finance both fixed assets and current assets requirements of NSDL and CDSL. Comparing CV of both the depositories it is understood that NSDL has high variations in the ratio as compared to, CDSL which indicates that CDSL is more financially strong and stable in relation to NSDL.

Ho: There is no significant difference in the fixed assets to share holders' funds of NSDL and CDSL.

**Table 8.1 showing One Way ANOVA of Fixed assets to Shareholders funds**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	17340.7	1	17340.7	25.07	9.154E-05
Within Depositories	12452.7	18	691.817		
Total	29793.4	19			

The above table indicates One Way analysis of fixed assets to shareholder's funds of NSDL and CDSL. Here, the calculated value is more than the table value, thereby the null hypothesis is rejected and alternative hypothesis is accepted. It is thereby concluded that there is a significant difference in NSDL's and CDSL's fixed assets to shareholders' funds ratio during the period under study.

### 9. Proprietary Ratio or Equity Ratio or Total Assets ratio

This ratio establishes relationship between shareholders' funds and total assets of a firm. It relates the shareholders' equity to total assets. If the ratio is high then it indicates weak financial position. Shareholders' funds include Equity share capital, Reserves and Surplus and Total assets include fixed assets and Current Assets.

The following formula is used to obtain proprietary ratio

$$\text{Proprietary Ratio} = \frac{\text{Shareholders funds}}{\text{Total Assets}}$$

**Table 5.15 Showing the Proprietary Ratio**

YEAR	NSDL	CDSL
2004-2005	0.5588	1.4899
2005-2006	0.5569	1.1213
2006-2007	0.6460	1.7400
2007-2008	0.6371	2.6467
2008-2009	0.6177	1.4669
2009-2010	0.7260	3.2093
2010-2011	3.8829	0.0019

2011-2012	3.3980	1.0114
2012-2013	1.2210	0.9390
2013-2014	1.6584	0.9670
Average	(1.39028)	(1.45934)
Standard Deviation	(1.1785)	(0.2739)
Co-efficient of variance	(84.7671)	(18.7693)

Source: Annual Reports of NSDL and CDSL - Various Issues

The above table shows the proprietary ratio of NSDL and CDSL during the period under study. This ratio indicates the financial strength of the depositories. It is understood from the above table that the ratio of NSDL and CDSL is showing a fluctuating trend. The average ratio of NSDL is 1.6584 and that as CDSL is

0.9670. While comparing the CV of both the Depositories it is understood that the CV of NSDL is higher at 84.7671% in relation to CV of CDSL @ 18.7693% which indicates that variations are high in case of NSDL's ratio and there is stability in the financial position of CDSL.

Ho There is no significant difference in the proprietary ratio of NSDL and CDSL.

**Table 9.1 showing One Way ANOVA of Shareholders funds to Total assets**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	0.0761131	1	0.0761131	0.0642	0.8029
Within Depositories	21.3415	18	1.18564		
Total	21.4176	19			

The above table shows One Way analysis of Proprietary ratio that is shareholders' funds to fixed assets of the Depositories. The Hypothesis is tested at 5% significance level. Here, the calculated value is lower when compared to the table value so the

null hypothesis is accepted and alternative hypothesis gets rejected. Thereby it is concluded that there is no significant difference in the proprietary ratio of the depositories during the period under study.

**10. Net Fixed assets to Shareholders funds.**

**Table 5.16 Showing the Net Fixed assets to shareholders' funds Ratio**



YEAR	NSDL	CDSL
2004-2005	0.34192	0.08579
2005-2006	0.37893	0.0632
2006-2007	0.37246	0.03964
2007-2008	0.33637	0.02323
2008-2009	0.30615	0.05543
2009-2010	0.19554	0.05159
2010-2011	0.16883	0.02856
2011-2012	0.18151	0.01776
2012-2013	0.04743	0.01977
2013-2014	0.03571	0.01808
Average	(0.2365)	(0.0403)
Standard Deviation	(0.212507)	(0.0219)
Co-efficient of variance	(51.8)	54.3424

Source: Annual Reports of NSDL and CDSL - Various Issues

From the above table it is very clear that the net assets ratio of both NSDL and CDSL show a decreasing trend. The ratio of NSDL in the beginning of 2004-05 was at 34.192% and the same increased to 37.246 during the year 2006-07 and later showed a decreasing trend and went up to 3.571% during the

year 2013-14. The ratio of CDSL stood at 8.579 during 2004-05 and gradually showed a decreasing trend and decreased to 1.0808% during 2013-14. The average ratio of NSDL was 0.2364 and that of CDSL is 0.4031.

Ho: There is no significant difference in the net fixed assets to share holders' funds of NSDL and CDSL.

**Table 10.1 showing One Way ANOVA of Net fixed assets to shareholders 'funds**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	0.203753	1	0.203753	23.64	0.0001253
Within Depositories	0.155165	18	0.00862029		
Total	0.358919	19			

Profitability Ratios

### 11. Operating Profit margin ratio

This ratio explains about the profitable position of NSDL and CDSL. If the ratio shows an increasing trend then it indicates high profitability and if it is low it indicated low profitable position.

The formula for arriving at the same is 
$$\frac{\text{Profit after tax/Operating profit}}{\text{Total Revenue}} \times 100$$

**Table 5.17 Showing the Profit after tax to Total Revenue Ratio**

YEAR	NSDL	CDSL
2004-2005	21.64	33.20
2005-2006	21.31	39.13
2006-2007	18.56	38.91
2007-2008	26.99	46.85
2008-2009	12.30	45.09
2009-2010	23.14	46.86
2010-2011	18.96	47.05
2011-2012	28.19	46.41
2012-2013	16.97	39.33
2013-2014	30.79	39.26
Average	21.885	42.209
Standard Deviation	5.3171	4.5942
Co-efficient of variance	24.2956	10.8844

Source: Annual Reports of NSDL and CDSL - Various Issues

The overall view of the table indicates that the growth in operating profit margin of CDSL is greater than NSDL. The average ratio of NSDL is 20.987 and that of CDSL is 42.141. The CV of NSDL is highest at 23.4428 as compared to CDSL at 10.756

which indicated that there is highest variance in profit of NSDL when compared to CDSL.

Ho: There is no significant difference in the Profit after tax to Total Revenue ratio of NSDL and CDSL.

**Table 11.1 showing One Way ANOVA of Profit after tax to Total Revenue**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	2237.46	1	2237.46	87.99	2.369-08
Within Depositories	457.727	18	25.4293		
Total	2695.19	19			

The above table shows the One Way analysis of Operating profit margin ratio of the depositories. The Hypothesis is tested at 5% significance level. From the above table it is evident that the calculated value is more than the table value, thereby the null hypothesis is rejected and alternative hypothesis is accepted. It is thereby concluded that there is a significant difference in NSDL's and CDSL's

The formula to arrive at the ratio

operating profit margin during the period under study.

### 12.Pretax profit margin

This ratio is the measure of firms' overall profitability. A high ratio indicates the profitability of the concern being good and low ratio indicates that the profitability is poor.

Profit before tax

-----x100

Total Revenue

**Table 5.18 Showing the Pretax profit margin**

YEAR	NSDL	CDSL
2004-2005	33.1391	47.9345
2005-2006	31.2412	56.6185
2006-2007	26.8208	54.4119
2007-2008	39.0208	66.0956
2008-2009	18.7902	61.7357
2009-2010	33.6467	66.4982
2010-2011	28.7478	67.1398
2011-2012	28.1977	64.9306

2012-2013	28.5521	50.7870
2013-2014	39.8011	48.9709
Average	30.79	58.51
Standard Deviation	5.8179	7.2822
Co-efficient of variance	18.8954	12.4461

Sources Annual Reports of NSDL and CDSL - Various Issues

The above table shows the pretax profit margin ratio of NSDL and CDSL during the period under study. The ratio clearly indicated the profitable position of the Depositories. After a quick glance at the table it is understood that the ratio of overall performance of CDSL in terms of profitability is good as compared to NSDL. The ratio of CDSL is higher as compared to

NSDL. The average ratio of NSDL is 30.79% which is much lower as compared to CDSL's ratio which actually stood at 58.51. The Covariance indicated increase in NSDL ratio which means there is high variation in NSDL profit margin.

Ho: There is no significant difference in the Pretax profit margin ratio of NSDL and CDSL.

**Table 12.1 showing One Way ANOVA of Pretax profit margin**

Sources of Variation	SS	df	MS	F.Cal	F.Crit
Between Depositories	3841.03	1	3841.03	79.58	5.023E-08
Within Depositories	868.785	18	48.2658		
Total	4709.81	19			

The above table shows the One Way analysis of Pretax margin of the depositories. The hypothesis is tested 5% significance level. From the above table it is evident that the calculated value is higher as compared to the table value thereby the null

hypothesis is rejected and alternative hypothesis is accepted. It is thereby concluded that there is a significant difference in the pretax margin of both the depositories.

### 13.Earnings per share

**Table 5.19 Showing the Earnings per share**

YEAR	NSDL	CDSL
2004-2005	2.89	0.92
2005-2006	3.71	1.45
2006-2007	3.55	1.80
2007-2008	6.71	3.52
2008-2009	3.34	3.26
2009-2010	9.18	4.55
2010-2011	9.41	4.60
2011-2012	11.24	4.54
2012-2013	5.13	3.93
2013-2014	9.99	3.96
Average	(6.515)	(3.253)
Standard Deviation	(3.0285)	(1.3033)
Co-efficient of variance	(46.4850)	(40.0645)

Sources Annual Reports of NSDL and CDSL - Various Issues

From the above table it is observed that NSDL showed EPS at Rs 0.92 during 2004-2005 which went up to Rs 4.60 during 2013-2014 and CDSL showed EPS at Rs 2.89 during 2004-2005 and went up to Rs

11.24 during 2011-2012. The average EPS of NSDL is 3.253 and that of CDSL is Rs 6.515. When we make an overall comparison we can see that CDSL has recorded an increasing trend.

Ho: There is no significant difference in the Earnings per share of NSDL and CDSL.

**Table 13.1 showing One Way ANOVA of Earnings Per Share**

Sources of Variation	SS	Df	MS	F.Cal	F.Crit
Between Depositories	53.2032	1	53.2032	8.809	0.008238
Within Depositories	108.709	18	6.03937		
Total	161.912	19			

The above table give the One Way analysis of Earning Per share of the depositories. The hypothesis is tested at 5% significance level. It is evident from the above table that the calculated value is greater as compared

to the table value. As the calculated value is greater than the table value there is a significant difference in the earning per share of both the depositories.

## Findings of the study

1. The average Operating Income to Total Income ratio of NSDL was much higher than CDSL which shows that NSDL's operating income is higher when compared to CDSL.
2. The NSDL's operating Income is 90% which indicates that NSDL's focus is more on operating income rather than other Income.
3. CDSL's other income ratio is @ 23% which indicates that CDSL's focus is more on other income rather than operating income.
4. Total Expense to Total Income ratio of NSDL is higher than CDSL.
5. The study reveals that there is a significant difference in the operating income to total income ratio of the depositories.
6. As far as the return on investment is concerned there is no difference in ROI ratio of both the depositories

## CONCLUSION

Depositories were set up with the objective of providing convenient dependable and secure Depository services at affordable cost to all market participants. Depositories have been instrumental in providing the Indian

Investors diaspora a variety of best in class services for capital market operations. This is been done on the back of its strength in technology, immense trust of investors and wide reach across India. The Depositories client accounts, their asset holdings, use of internet platforms like SPEEDe, IDeAS, e.Voting, TRUST and Web CDAS have showcased growth. Depositories are confident in growing intrinsically in the years to follow, by focusing on adding more business partners, enhancing relationship with its existing business partners, using digital marketing channel for direct engagement with investors and riding on the momentum of overall growth in Indian business scenario. The study reveals that Depositories have been working financially smoothly over a period of last 10 years.

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## REFERENCES

1. [www.nsdl.co.in](http://www.nsdl.co.in)
2. [www.cdslindia.com](http://www.cdslindia.com)
3. Shah, Mahesh (1996), "A Care for Depositories in India", the Management Accountant, April, pp. 259-261.
4. Aggarwal V.K and Dixit S.K (1996), "The Depositories Legislation: A Critical Evaluation", Chartered Secretary, April, pp. 367-376.





5. Sarkar A.K (1996), “Implications of Depositories Ordinance”, the Management Accountant, June – July, pp 473-477.
6. George Philip (1996),”Towards a Paperless Settlement System”, Business World, October, pp 134-135.
7. Hurkat, Manoj and Ved, Umesh (1999), “Depository – An Inevitable Institution”, Chartered Secretary, September, pp 991-993.
8. Schmiedel, Heiko, Malkamaki, Markku and Tarkka juha (2006), “Economies of scale and technological Development Securities Depositories and Settlement System”, Journal of Banking and Finance, Vol 30, Issue 6, pp 1783-1806.
9. Prof Sultan Singh and sakshi Goyal (2011), “Analysis of factor affecting the decision making of the investors in Depository system”, Journal of Banking, Financial Services and Insurance Research, Vol 1, pp 13-38.