ISSN: 2249-4804

Business Spectrum

*** Volume – IV No. 2 July –December, 2014 ***

The Bi-annual Journal of

Indian Accounting Association

Midnapore Branch, West Bengal

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Editorial

I am happy to present Vol. – IV, No – 2, June-December, 2014 issue of ***Business Spectrum,*** the on -line journal of IAA Midnapore Branch. This issue contains six articles written by researchers and academicians.

In his article, "Housing Finance in India: Problems and Prospects" Pema Lama discusses the conceptual framework of affordable housing in the Indian scenario. It gives an account of the institutional performance of key housing finance providers. It also analyses the major problems and the future prospects of the housing finance sector in India. The author gives certain recommendations to improve the affordability in housing and housing finance development in India.

Dr. Yogesh Maheswari has reported the results of a study on emotional intelligence in his article, "Impact of Emotional Intelligence on Managers". The study examines the differential impact of emotional intelligence between male managers and female managers. He considers a sample of 58 managers where there are 30 female managers and 28 male managers. He collected data on the basis of a questionnaire using a five-point scale. His finding from the study is that male managers are more emotionally strong as compared to female managers.

Mr. Pawan Prasad in his article entitled, "An Assessment of Implementation of VAT in West Bengal" has given the circumstances in which VAT was introduced in the country in place of sales tax. It enumerates the benefits of VAT. The paper also identifies the problems to be faced by consumers after the introduction of VAT. The results are obtained on the basis of a sample survey where 200 respondents were considered from among wholesalers, retailers, consumers, Chartered Accountants and tax officials--with the help of a schedule using 5-point scale.

The article "Digital Analysis of Financial Data and Detection of Fraud" by Dr. Anupam Parua is concerned with the application of certain principles of Physics and Mathematics to the analysis of financial data. In particular, the author explains the concept of Benford's law and applies it in the context of digital analysis of financial data and detection of fraud.

The article, "Analysis of Cost Effectiveness of Lac Processing in Purulia District" by Dr. Jyoti Prakash Mondal takes up in much detail the technical aspects of lac processing by machine-made and hand-made operations. The author has gone for detailed cost analysis with a view to improving cost effectiveness.

With the growth of e-commerce, e-banking is gaining ground in the Indian banking sector. The article, "E-Banking in India: An Overview" by Mr. Brahma Chaudhuri

explains the concept of e-banking. The author also considers the opportunities and challenges before e-banking in India. The paper considers the basic issues connected with e-banking in India.

In this connection I would like to thank the paper writers and the reviewers of the articles for their cooperation in bringing out this issue. Thanks are also due to the Desk Editor for his sustained effort.

Jaydeb Sarkhel.

ANNOUNCEMENT AGAINST PLAGIARISM

The Board of Editors of Business Spectrum is extremely sorry to announce that the paper titled "Globalisation and Cross-Border Mergers and Acquisitions : Indian Introspection" written by Mr. Anirban Sarkar and published in Volume IV, No. 1, January-June 2014 issue of Business Spectrum has been alleged to be a plagiarized version of a paper entitled "Cross-border Mergers and Acquisitions in India : Extent, Nature and Structure" written by Dr. Beena Saraswathy as working paper No. 34 of Centre for Development Studies, Thiruvanantapuram. The Board received a complaint from Dr. Saraswathy to this effect and on enquiry the allegation was found to be correct. Mr. Anirban Sarkar also admitted that he took certain materials from Dr. Saraswathy's paper. Accordingly the paper of Mr. Anirban Sarkar was retracted from Vol. – IV, No. – 1 of Business Spectrum.

The Board of Editors tenders apology from Dr. Beena Saraswathy for this untoward incident. Though the papers submitted for publication in Business spectrum are sent for blind review to experts it is still not possible to detect plagiarism by the experts concerned. The Board has decided to receive an undertaking from the paper writers to the effect that the articles submitted by them are original articles. The paper writers are legally and morally responsible for the originality of the articles submitted by them and the Board of editors accepts them on good faith. The prospective paper writers are hereby requested to keep this mind.

Housing Finance in India: Problems and Prospects

Pema Lama ♦

Abstract

Housing in India has been one of the important economic activities which serve to fulfill many of the plan objectives, providing shelter to the needy, raising the quality of life, particularly of the poor, creating an environment conductive for better health and sanitation, creating additional employment and achieving urban, rural and inter-personal equity in terms of standard of living. Housing finance is a specialized form of finance in a country is one of the basic indicators of the growth of its economy. The emergence of a formal institutional system for housing finance has been quite late in India with the formation of National Housing Bank (NHB) in 1988, since then housing is being accorded high priority by the Government. Housing Finance Companies (HFCs) play an important role in the Indian housing finance market and have stepped up their lending over the years contributing to the growth of the housing sector. At the same time, housing for all should not remain a distant dream in India and it should be made a reality without any further delay. In the Indian perspective, the demand for housing finance remains and continues to remain insatiable and it requires more need-based schemes and not greed induced programs as happened in subprime lending in the US. This paper attempts to understand the conceptual framework of affordable housing in Indian scenario, key demand driver, issues and future outlook of Indian housing sector. The paper gives emphasis on institutional performances of key housing finance providers, major problems and future prospects of housing finance sector in India and also on some significant recommendations to improve the affordability in housing and housing finance development in India and thereby pave the way for further study in the area..

Key-words: *National Housing Bank (NHB), Housing Finance Companies (HFCs), Performances of key housing finance providers, Subprime lending.*

1. Introduction

House is a centre and domestic device for mankind's moral and substance development ever since the dawn of civilization. Housing shortage is a universal phenomenon and it is more acute in developing countries. Adequate housing is an essential component for human survival with dignity that we human beings need. Without a right to housing, other basic

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human rights will be compromised including the right to family life and privacy, the right to freedom of movement, the right to assembly and association, the right to health and the right to development. Housing in India has been one of the important economic activities which serve to fulfill many of the plan objectives such as providing shelter to the needy, raising the quality of life, particularly of the poor, creating an environment conductive for better health and sanitation, creating additional employment and achieving urban, rural and inter-personal equity in terms of standard of living.

During the recent years, in India housing dimension has been changed due to housing reforms initiatives taken by the Government, as housing is a large investment which requires long term finance in form of reduction in social allocation, cutbacks in public funding and promotion of a real estate culture in close partnership between the state and private actors along with other factors hindering housing development like inflation, interest rate controls, instability of financial markets and the inadequate legal system.

Housing finance is a specialized form of finance and efficiency of housing finance system in a country is one of the basic indicators of the growth of its economy. The emergence of a formal institutional system for housing finance has been quite late in India with the formation of National Housing Bank (NHB) in 1988, since then housing is being accorded high priority by the Government. Housing and Housing finance activities in India has risen to the top of research and policy agenda in recent years as we witnessed a tremendous growth over the years due to some factors like - tax concessions to borrowers, increase in disposable income levels, changing age profile of the borrowers, easy availability of loans, nuclear families and urbanization, etc. Housing Finance Companies (HFCs) play an important role in the Indian housing finance market and have stepped up their lending over the years contributing to the growth of the housing sector.

2. Survey of the Literature

The issue of housing and housing finance has been receiving increased attention over the recent decade and many studies on various observations in this area are on record including few of these namely, **Beyer (1965)** in his analysis titled *'Housing a factual analysis'* states that house is a bulky, durable and permanent product, which has a fixed location being used only in the place where it is built. Once built, it tends to remain in existence for many years long after it has served its usefulness. It becomes almost a part of the land. According to **Krishnamachari (1980)** as stated in the article titled *'Mobilisation of Finance for Rural Housing'*, 'shelter is a basic human need and as an intrinsic part of human settlement, is closely linked with the process of overall socio-economic development. Besides providing shelter, it creates employment, generates voluntary saving and creates a conducive condition needed for achieving crucial goals'. **Naik (1981)** opines in his study titled *'Housing Finance Pamphlet'*, 'housing is an essential element of life for most human beings. The modern concept of housing does not limit the idea of housing merely to the provision of shelter'. As cited by **Paul S (1983)** in his study titled *'A study of the experience of house builders of the middle income group in the urban and rural areas'*, housing constitutes a physical matrix in which human interaction occurs. The house that people live in, touch upon every facet of their lives and the society as a whole'. According to **Satyanarayana (1987)** in his research work titled *'Housing rural poor and their living conditions'*, housing is an element of material culture, is one such devices to overcome threats against physical elements or security to lives and serves as an important purpose by making the provision of shelter. It provides a place for the operation of many human activities. Irrespective of place and time man is using a place of accommodation which is called a house. It helps people to interact within the

family and with the outside world. **Solanki (1989)** highlighted the magnitude of the housing problem in our country as so heavy, that it will require considerable passage of time for the country to offer a sweet home to every family in our nation. As stated by **Sweta Misra (1996)** in her article titled *'Housing - changing perceptions - Rural housing problems and strategies'*, the importance of housing was universally recognized from the dawn of history. With the advancement of knowledge and civilization man became particular about sanitation, environment, privacy and location of the house. He became conscious of better facilities which make his life easy and comfortable.

3. Objective of the Study

The current work revolves around the following major objectives.

i) To analyse the conceptual framework of affordable housing scenario in India.

ii) To assess the key demand driver, issues and future outlook of Indian housing sector.

iii) To evaluate the role and performance of National Housing Bank, institutional performances of key housing finance providers, major problems and future prospects of housing finance sector in India.

iv) Finally, to provide some significant recommendations to improve the affordability in housing and housing finance development in India.

4. Research Methodology

The proposed study, 'Housing Finance in India: Problems and Prospects' is based on secondary data. Secondary data pertaining to population, housing stock, housing shortage, investment on housing were collected from government reports, census of India, articles published in reputed journals, National Housing Bank, Census of India, published annual reports of the Housing Development Finance Corporation Ltd., LIC Housing Finance Ltd., Report on Trend and Progress of Housing in India (2011-13) and Report on state of the housing and housing finance sector (2012-13).

5. Housing Sector in India: Key Issues

5.1. Meaning of Affordability and affordable housing

'Affordability' as a concept is very generic and could have different meanings for different people based on differences in income levels. It refers to any housing that meets some form of affordability criterion. In Indian context, KPMG and the CREDAI have jointly developed definitions of affordable housing for Tier I, II and III cities based on three key parameters - **i)** income level, **ii)** size of dwelling unit and **iii)** affordability. While the first two parameters *(income level and size of dwelling unit)* are independent of each other, the third is a dependent parameter *(affordability)* that can be correlated to income and property prices.

Table I: Definitions of affordable housing in India
(as developed by KPMG and CREDAI)

Income categories	Income Level	Size of Dwelling Unit	Affordability
Economically weaker section (EWS)	<INR 1.5 lakhs p.a.	Upto 300 sq. ft.	EMI to Monthly Income - 30% to 40%
Lower income group (LIG)	INR 1.5 - 3 lakhs p.a.	300 - 600 sq. ft.	EMI to Monthly Income - 30% to 40%
Middle income group (MIG)	INR 3 - 10 lakhs p.a.	600 - 1200 sq. ft.	House price to annual income ratio - < 5:1 *(Task Force headed by Deepak Parekh)*
Source: *KPMG*			

5.2. Population and its growth trends

As per the table II shown below, India after its Independence, rapid growth rate of the population, migration of rural people to urban areas and expansion of industrial and commercial activities of urban area in general and metropolitan centers in particular during 1951- 2011 has grown from 624.44 lakhs to 3771.06 lakhs. The decadal growth of population during last decade was placed at 31.8% in urban areas in 2011 as against 12.2% for the rural areas in 2011. The urban population of India has been growing at a rapid pace. As per the 2011 census, 31.2% of the total population is in the urban areas.

Table II: Growth of Population in India (1951-2011)

Year	Population *(in Lakhs)*					Decennial Growth rate in total population (%)		
	Total	Rural	% Share of Rural Population	Urban	% Share of Urban Population	Total	Rural	Urban
1951	3610.88	2986.44	82.7	624.44	17.3	13.31	8.79	41.43
1961	4392.35	3602.98	82.0	789.37	18.0	21.64	20.64	26.41
1971	5481.60	4390.46	80.1	1091.14	19.9	24.80	21.86	38.23
1981*	6833.29	5238.67	76.7	1594.63	23.3	24.66	19.32	46.14
1991#	8464.21	6286.92	74.3	2176.11	25.7	23.87	20.01	36.46
2001	10287.37	7424.91	72.2	2861.20	27.8	21.54	18.10	31.48
2011	12101.94	8330.88	68.84	3771.06	31.2	17.64	12.20	31.80

* Includes projected population of Assam where 1981 census was not conducted.
\# Includes projected population of Jammu and Kashmir where 1991 census was not conducted.
Source: *Census of India 2001 and Provisional data census 2011*.

Rapid growth rate of the population, migration of rural people to urban areas and expansion of industrial and commercial activities result in huge demand for housing units in the urban areas of the country.

5.3. Housing Scenario

Housing is one of the basic needs of every individual as besides providing shelter and security, it also enables easy access to the credit market by working as collateral comfort and security. During the year 2001-2011, the urban population of India grew at a CAGR of 2.8%, resulting in the increase in level of urbanization from 27.81% to 31.16% and growing concentration of people in urban areas has led to problems of land shortage, housing shortfall and congested transit and has also severely stressed the existing basic amenities such as water, power and open spaces of the towns and cities. Notwithstanding recent improvements, as per 11th Five Year Plan (2007-2012) urban India had an estimated shortfall of 45 million units *(7 million backlog plus 38 million additional units)* which requires an investment of around Rs. 10 trillion between the year 2007 – 2012, i.e. Rs. 2 trillion per year. The shortage of housing units for the urban areas for the year 2012 is estimated at 18.78 million units. Most of the housing shortage is obviously for economically weaker section (56%) and low income group (39%) people. Urbanization has resulted in people increasingly living in slums and squatter settlements and has deteriorated the housing conditions of the economically weaker sections of the society. However, the speedy development in housing and various housing activities have understandably led to the growth of Indian housing finance market.

Table III: Distribution of Households by type of structure in India *(Figures in %)*

Year	Rural Areas			Urban Areas		
	Type of structure			Type of structure		
	*Pucca**	*Semi-Pucca#*	*Katcha^*	*Pucca**	*Semi-Pucca#*	*Katcha^*
1981	22.5	36.9	40.5	60.7	21.8	13.5
1991	30.6	35.6	33.7	72.7	17.7	9.6
2001	38.4	31.4	30.2	75.2	17.4	7.4
2011	43.9	30.5	26.6	73.0	16.7	10.3

Source: *National Building Organisation, Ministry of Urban Affairs and Employment, Govt. of India.*
***** It is one built with permanent materials like oven burnt bricks, concrete, stone blocks, cement, iron or other metal sheets and timber.
# It is built with both katcha and pucca materials.
^ It is built with non-durable materials like unburnt bricks, mud, thatches, leaves and bamboo.

As per table – IV shown below, it can be seen that the proportion of owner occupant households is much higher in rural areas as compared to urban areas. The proportion of owned households is as high as 94.7% in rural areas in 2011 whereas the corresponding figure for urban areas is found to be 69.2%.

Table IV: Tenure status of Household by type of ownership status in India *(in %)*

Year	Ownership Status					
	Owned		Rented		Others	
	Rural	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*
1981	91.2	44.5	3.5	50.8	5.4	4.6
1991	94.6	63.1	2.9	34.1	1.6	2.8
2001	94.1	67.4	3.9	28.5	2.1	4.1
2011	94.7	69.2	3.4	27.5	1.9	3.3

Source: *NSSO, Ministry of Planning*

According to the national report estimated housing shortage for the year – 1991, 2001, 2011. In term of the minimum housing requirement criteria (one house per household), housing shortage is 6.0 million units and this has slowed down to 1.8 million units in the year 2011.

Table V: Housing Stock and Housing Shortage *(in millions)*

Parameters	Year								
	1991			2001			2011		
	Rural	*Urban*	*Total*	*Rural*	*Urban*	*Total*	*Rural*	*Urban*	*Total*
a) Population	628.6	217.6	846.4	742.4	286.1	1028.7	833.0	377.1	1210.1
b) Households	112.5	40.7	153.2	138.2	53.7	191.9	168.0	79.1	247.1
c) Housing Stock	108.5	38.7	147.2	135.1	52.1	187.2	166.9	78.4	245.3
d) Housing Shortage	14.6	8.2	22.8	13.5	8.9	22.4	17.4	9.1	26.5
e) Minimum Need[b-c]	4.0	2.0	6.0	3.1	1.6	4.7	1.1	0.7	1.8

Source: *Estimates from census final household tables, census primary abstract, 2011, GOI (1996)*

Housing shortage has been estimated on the basis of households including homeless households, available housing stock, acceptable housing stock, aspects of congestion and overcrowding.

6. Key drivers

The key factors bolstering growth in demand for affordable housing include -

i) Rapid Urbanization - Urbanization is an index of transformation from traditional rural economies to modern industrial one. India's urban population is increasing at a faster rate than its total population. India's urban population is forecasted to grow to 590 million by 2030 at a compounded annual growth rate (CAGR) of 2.4% between 2010 and 2030. Urbanization has twin impact on housing demand - *Firstly*, it reduces the area per household and *secondly*, there is an increasing need for more nuclear families leading to the formation of more number of households.

ii) A culture of home ownership - The local Indian culture has an inclination for home ownership. Even people in lower income groups are determined to purchase a home rather than rent one.

iii) Increasing population and rising demand for affordable homes - Population growth has a direct bearing on the requirement for housing units on the basis of floor space area. High disposable income, lower interest rates and tax incentives (interest and principal repayments deductible) results a steady movement of households into higher income categories. With home prices far outpacing general inflation and wage growth, premium homes in Tier - I cities have become largely unaffordable increasing the demand for affordable homes.

Table VI: Low-cost housing Vs Affordable housing

Parameters	Low-Cost Housing	Affordable Housing
Amenities	Bare minimum to none	Basic
Target Income Class	EWS & LIG	LIG & MIG
Size of Dwelling Unit	<=300 Sq. Ft.	300 – 1200 Sq. Ft.
Location	Generally within city but can also be located on city peripheries due to high cost of land	Within city
Project Developer	Mostly Government agencies	Private Developers and Government
Mostly available source of finance	Micro finance institutions	Traditional banking system
EMI to Monthly Income	Not exceeding 30% of gross monthly income	Not exceeding 40% of gross monthly income
Source: Credit Suisse, Knight Frank, KPMG Analysis		

Issues for affordable housing - Developing affordable housing in Indian cities faces significant challenges due to a) lack of availability of urban land, b) rising threshold costs of construction, c) lack of access to home finance for low-income groups, d) financial and regulatory constraints etc.

7. Housing Finance Sector in India – An Outlook

Housing Finance defined as the need to reconcile the three partially conflicting objectives of affordability of households, viability of financial institutions and resource mobilization for the expansion of housing sector and of the national economy. It is the single target force that drives the residential real estate in India.

Housing finance is a relatively new concept comparing to other widely available financial services in India as per 2011 ICRA annual report. However, immense demand, speedy development and pecuniary reforms in housing and various housing activities have understandably led to the growth of Indian housing finance market.

Table VII: Historical background of Housing Finance Market in India

Stages	Major Development
Pre- National Housing Bank (NHB) *(Pre- 1970 – 1988)*	➢ Pre- 1970 – Centralized direct credit ➢ 1971 – Establishment of HUDCO – Public sector, wholesale lending ➢ 1977 – Establishment of HDFC as1st private sector retail housing finance institution.1984 – DHFL commences operations. ➢ 1988 – Formation of National Housing Bank as regulatory and supervisory body/refinancing agency
Post National Housing Bank (NHB) *(Early 1990's – till date)*	➢ Early 1990's - Public sector banks or insurance companies promote HFC's. ➢ Late 1990's – Commercial banks get active in direct lending for housing finance. ➢ 2008 – Subprime crises, Indian Mortgage market shows resilience. ➢ 2009-2011 – Microfinance Institutions and foreign banks get active in housing finance market. 54 HFC's active in the market.
Source: *Compiled by the author*.	

Presently, the housing finance industry is gradually expanding by not only providing housing credit service but also provide loans being used for another purpose on the basis of collateral of existing housing. As a result, various agencies like HFCs, PSBs, RRBs and state level apex cooperative housing finance societies have barged into the market in order to attract and retain customer by providing customized home loans with a wide range of choices to eligible individuals. The following table viii shows the institutions providing housing finance in India.

Table VIII: Different Institutions providing Housing Finance in India

Housing Finance Institutions	Regulator	Target Group
Banks including RRBs, State Cooperative Banks and Foreign banks	Reserve Bank of India	**All segments of society in both urban and rural areas** *(Public Sector Banks - SBI, Bank of Baroda, Canara Bank, Dena Bank etc. Private Sector Banks - HDFC Bank, ICICI Bank, Axis Bank etc. Foreign Banks - Standard Chartered, HSBC etc.)*
Housing Finance Companies	National Housing Bank	**Dedicated institutions which lend towards housing** *(DHFL, HDFC, Indiabulls Housing Finance, Reliance Housing Finance, Sundaram BNP Paribas, Religare Housing Development Corporation etc.)*
Insurance Companies	IRDA	**LIC Housing Finance, GIC Housing Finance etc.**
Micro Finance Institutions/NGOs /SHGs	Unregulated *(Act to be introduced for regulating the same)*	**For the poor and lower income segments** *(Micro Housing Finance Corporation, MAS rural housing and mortgage finance etc.)*
Development Financial Institutions,	Reserve Bank of India	**Refinancing Institutions catering to all segments of the society** *(HUDCO, NABARD, SIDBI)*
Co-operative sector Institutions	State Cooperative Acts	**Deep presence across the country, particularly in the rural areas** *(Apex Co-operative Housing Federations, State Co-operative Agriculture and Rural Development Banks etc.)*
Source: *Compiled by the author*		

Direct housing finance refers to the finance provided to individuals or groups of individuals including co-operative societies whereas Indirect housing finance is by way of term loans to housing finance institutions, housing boards, other public housing agencies etc.

8. National Housing Bank (NHB) - Role and Performance

The National Housing Bank (NHB), the apex level financial institution for the housing sector in the country, was established on July 9, 1988 under the National Housing Bank Act, 1987 to operate as a principal agency to promote housing finance institutions and to provide financial and other support to such institutions. It is an apex level institution wholly owned by the Reserve Bank of India. It is a statutory body pursuing its charter and vision to shape and develop the housing finance market in India along sustainable lines and promoting financial and institutional depth in the housing finance sector. The Bank is engaged in a range of activities for low and moderate income housing segments which is crucial to the development of market based solutions. Apart from its various promotional activities, NHB also seeks to undertake measures that promote confidence amongst all stakeholders. Under the provisions of the Act, NHB regulates Housing Finance Companies (HFCs) seeking to do business in the country.

In the backdrop of huge housing shortage among lower income segments, NHB as an apex refinance institution has adopted a multi-pronged approach in tackling this problem. These include institution-building initiatives and measures for creating favorable environment for innovative practices in sync with market oriented approach. The bank also introduced refinance schemes for installation of solar water heaters and special refinance schemes for low income housing and also various initiatives were taken by the bank including NHB-Residex, Credit Risk Guarantee Fund Trust for Low Income Housing (CRGFTLIH) etc.

Besides the lending operations, NHB's dedicated training division conducts regular training programmes in areas relating to housing and housing finance for development of management capabilities of officials working in the sector.

Table IX: Refinance Disbursements and Cumulative Refinance Disbursement of NHB
(Rs. in crores)

Institutions	**Disbursements**		**Cumulative Refinance Disbursement (upto 2012-2013)**	
	2011-12	**2012-13**	**Amount (in crores)**	**% of Total**
Housing Finance Companies	5,302.13	7,693.51	41936.02	40.86
Scheduled Commercial Banks	8,851.42	9,459.33	57025.25	55.57
Regional Rural Banks	143.04	388.80	1142.16	01.11
Cooperative Sector	93.32	0.00	2525.18	02.46
Total	**14,389.91**	**17,541.64**	**102628.61**	**100.00**
Source: *Report on Trends and Progress of Housing in India (2011,2012,2013)*				

Through it refinance schemes, the bank has made cumulative disbursements *(from inception till June 30, 2013)* of Rs. 1,02,628.61/- crore. During the year 2012-2013, refinance disbursements touched the highest ever figure of Rs. 17,541.64/- crore, registering an increase of 22% over the disbursement of Rs. 14,389.91/- crore made in 2011-2012. 71.72% of the Bank's disbursements during 2012-13 were made in respect of individual housing loan upto Rs. 25 lakh. During the year 2012-13, disbursements aggregating Rs. 4027/- crore were made under Rural Housing Fund (RHF) helping construction of more than 3.50 lakh dwelling unit as shown below in Table X.

Table X - Disbursements of NHB in respect of Housing Loans in Rural and Urban Areas *(Rs. in crores)*

Year	Total Disbursement	Rural Areas				Urban Areas	
		GJRHFS*		RHF#			
		Amount	% of Total	Amount	% of Total	Amount	% of Total
2007-08	8586.89	3856.19	44.91	-	-	4730.70	55.09
2008-09	10853.62	718.44	6.62	1761.5	16.23	8373.70	77.15
2009-10	8107.76	1680.00	20.72	2015.80	24.86	4411.94	54.42
2010-11	11722.79	3781.92	32.26	2003.70	17.19	5937.21	50.65
2011-12	14389.91	2604.51	18.10	3003.00	20.87	8782.37	61.03
2012-13	**17541.64**	**3690.18**	**21.03**	**4027.40**	**22.95**	**9824.04**	**56.00**

Source: *Report on Trends and Progress of Housing in India (2013)*
*GJRHFS - Golden Jubilee Rural Housing Finance Scheme
#RHF - Rural Housing Fund

9. Institutional Performance

a) Public Sector Banks - The housing loans outstanding of SCBs stood at Rs. 4,62,200/- crore including priority sector lending as on 31st March, 2013. Housing loans constitute 9.24% of the total advances of scheduled commercial banks in the year 2012-13. Housing loans which forms a part of personal loans increased by 14.59% in the fiscal year 2012-13 compared to 12.9% in the previous year. As evident from the table below at the end of March, 2013, the housing loans as a percentage of total gross bank credit stood at 9.24%.

Table XI: Housing Loans as a percentage of Gross bank Credit for SCB's in the last two years *(Rs. in crores)*

Details	Year		Variations (March, 2012 - March, 2013)
	March, 2012	March, 2013	
Gross Bank Credit	43,79,300	49,98,400	14.1
Housing Loans (Priority and Non- Priority)	4,03,400	4,62,200	14.6
Out of which Housing Loans (Priority)	2,66,500	2,68,100	0.6

Source: *Report on Trends and Progress of Housing in India (2012,2013)*

Table XII: Housing Loans disbursed and Outstanding across various slabs over the last three years and percentage of NPA in respect of various slabs of PSBs *(Rs. in crores)*

Slab-wise Housing Loan	Financial Year								
	2010-11			2011-12			2012-13 (Provisional)		
	Disbursed	O/s#	NPA (%)	Disbursed	O/s	NPA (%)	Disbursed	O/s	NPA (%)
Upto Rs. 2 lakh	5762	9442	6.07	5254	6786	11.54	2957	6165	11.52
Rs. 2-5 lakh	11334	48307	4.90	5571	38491	4.82	4028	36659	4.48
Rs, 5-10 lakh	13510	58771	3.74	11760	64312	3.37	11281	69436	3.01
Rs. 10-25 lakh	20237	68398	2.57	26614	101189	1.67	29912	119362	1.41
Above Rs. 25lakh	24328	54162	1.55	24632	62234	1.09	23678	80359	1.01
Total	**75171**	**239079**	**3.23**	**73831**	**273012**	**2.63**	**71857**	**311982**	**2.35**

Source: *Report on Trends and Progress of Housing in India (2011,2012,2013)*
O/s# - Outstanding

Table XIII: The Credit outstanding by SCBs as on March 31, 2012 towards Urban and Rural Housing areas

Area	Outstanding Rs. in Crores	% to Total
Rural Area	253538.00	6.69
Semi Urban Area	603634.00	15.93
Urban Area	1019677.00	26.92
Metropolitan Area	1910585.00	50.44
Total	**3787434.00**	**100**
Source: *Report on Trends and Progress of Housing in India (2012,2013)*		

b) Housing Finance Companies (HFCs) - Housing is one of the three basic necessities of a man's life and one large indicator of the social happiness of the population in an economy. Access to finance and making housing affordable has been a key agenda across the globe more so for developing nations.

Table XIV: HFCs - Key financial indicators as on March 31, 2013 *(Rs. in crores)*

Particulars	Year		Growth (%)	Year	Growth (%)
	2011	2012		2013	
Paid up capital	5168	5403	4.55	5541	2.55
Free Reserves	29658	34658	16.86	48019	38.55
Net Owned Fund (NOF)	32731	37103	13.36	51027	37.33
Public Deposits	28694	35476	23.64	44179	24.53
Outstanding Housing Loans	186438	222225	19.20	290427	30.69
Outstanding Total Loans	247781	301681	21.75	390217	29.35
GNPA as percentage of Total Loans	1.33	1.23	-	1.11	-
NNPA as percentage of Total Loans	0.53	0.48	-	0.45	-
Source: *Report on Trends and Progress of Housing in India (2012,2013)*					

Housing finance companies (HFCs) along with banks have been catering to the demand for housing finance in India and National Housing Bank has remained the nodal body for HFCs promoting, regulating and facilitating refinancing facilities for HFCs. While housing finance sector in India has grown at a CAGR of 30%, current housing shortage is estimated to be 18.78 million in urban areas and around 43.67 million in the rural areas. This is a clear indicator that there is a huge demand that continues to remain untapped and unaddressed.

Table XV: The Performance review of the HFCs in 2012-13 *(Rs. in crores)*

Parameters	Housing Loans	Other Loans	Total
Loans Sanctioned	40314	17564	57878
Loans Disbursed	32713	12650	45362
Loans Outstanding (As on March 31,2013)	2,85,711	1,01,333	3,87,044
Housings loans as percentage to total loans and advances	**73.81%**		
GNPA percentage as a total of loan outstanding	**1.09%**		
Source: *State of the Housing and Housing Finance Sector, 2012-13.*			

The following table will show the loan disbursements by some of the leading Housing finance Companies in India during the last three financial years:

Table XVI - Volumes of Disbursements of the Top Housing Finance Companies *(Rs. in crores)*

Name of the Housing Finance company	2010-11	2011-12	2012-13
Housing Development Finance Corporation Limited	60,314	71,113	82,452
Housing Urban Development Corporation	995	1,918	1,391
LIC Housing Finance Limited	75,357	92,984	1,16,433
PNB Housing Finance Limited	1,267	1,508	3,682
Dewan Housing Finance Corporation Limited	13,358	9,065	6,506
GIC Housing Finance Limited	969	992	1,354
Can Fin Homes Limited	473	859	1814
GRUH Finance Limited	1,211	1,487	2,174
L&T Housing Finance Limited	-	-	204
Tata capital Housing Finance Limited	662	1653	2,591
Sundaram BNP Paribas Home Finance Limited	1,207	1,948	2,572
Mahindra Rural Housing Finance Ltd	203.63	266.75	432.85
ICICI Home Finance Company Limited *(Figures as reflected in the Balance Sheet of 2012-13)*	**4,562**	**3,786**	**3,569**
Source: *State of the Housing and Housing Finance Sector, 2012-13.*			

10. Policy Environment for Housing and Housing Finance

First National Housing Policy in India was formulated in 1988, followed by a new National Housing Policy in August 1994 which has laid stress on *'Enabling Approach of the State'* where in state government outfits are expected to act as 'facilitator'" rather than 'builder or provider' of housing. Housing has been one of the prime concerns for Indian government through all its Five-Year Plans.

Again in July, 1998 another National Housing & Habitat Policy was announced with some landmark initiatives like involvement of multi-stakeholders, repeal of Urban Land Ceiling Act permitting FDI in housing and real estate sector etc. However, all these policies were generic and applicable to both rural and urban areas. Taking into account emerging challenges of required shelter and growth of slums, the first ever urban areas specific National Urban Housing and Habitat Policy, 2007 was announced in December 2007.

This policy aimed towards a housing revolution by reforms in central and state government's role. The Central Government adopted a comprehensive National Housing Policy as a part of the strategy to overcome the colossal housing shortages such as - a) Development of a viable and accessible institutional system for the provision of housing finance, b) Establishing a system where housing boards and development authorities would concentrate on acquisition and development of land and infrastructure and finally c) Creation of conducive environment in which access to institutional finance is made easier and affordable for individuals for construction or buying of houses or flats. This may include outright purchase of houses or flats constructed by or under the aegis of public agencies.

With the opening up of Indian economy, its liberalization and globalization level is bound to increase due to massive investment coming up in the large urban centres. Since Independence, the Government of India has special priority to housing from the First Five Year Plan to till date and it has been seen that there has been significant institutional development in the areas of housing finance in our country.

Table XVII: Percentage of Investment in Housing to Total Investment during Plan Periods *(Rs. in Crores)*

Plan period	Total Investment in the economy (In Rs.)	Investment in Housing (In Rs.)	% of investment in Housing to total Investment
Ist plan (1951 - 56)	3360	1150	34.2
2nd plan (1956 - 61)	6750	1300	19.2
3rd plan (1961- 66)	10400	1550	14.9
4th plan (1969 - 74)	22635	2800	12.4
5th plan (1974 -79)	47561	4436	9.30
6th plan (1980 - 85)	156000	19491	12.49
7th plan (1985 - 90)	349148	28450	8.15
8th plan (1992 - 97)	767296	97500	12.70
9th plan (1997 - 02)	1212802	151000	12.45
10th plan (2002 - 07)	1525639	726300	47.60
11th plan (2007 - 12)	3644000	1122334	30.79
Source: *1. India's Five year plans, Government of India, New Delhi. 2. Prominent facts on Housing, National Building Organization, 1997 m p.11. 3. Planning Commission of India.*			

11. Housing Schemes by Government of India

For majority of household, housing has been primarily a self help activity. It has made it necessary of the state government to launch housing schemes for weaker sections of the population. In India, the formulation and implementation of the housing programmes is the responsibility of the State Governments. The Central Government however, supplements to the effects of the State Governments. The government of India has launched various programmes, schemes and projects for urban development and improvement of housing. These programmes/schemes also envisages for providing financial assistance for construction of houses. Some of the important programmes are:

a) The Jawaharlal Nehru National Urban Renewal Mission (JnNURM) was launched by Ministry of Urban Development, Government of India at National level in December 2005. The aim is to encourage reforms and fast track planned development of identified Cities. Focus is to be on efficiency in urban infrastructure and service delivery mechanisms, community participation and accountability of housing agencies towards citizens. Basic services for the urban poor (BSUP) and The integrated housing and slum development programme (IHSDP) are the two sub-missions of *Jn*NURM.

b) The Indira Awaas Yojana (IAY) has been focused on the provision of cash subsidy scheme to rural BPL families for construction of dwelling units using their own design and technology. The funding under the Scheme is provided by the Centre and State in the ratio of 75:25 respectively.

c) Rajiv Awaas Yojana (RAY) aims to create a Mortgage Risk Guarantee Fund to enable provision of credit to Economically Weaker Sections (EWS) and LIG households and to encourage the States to adopt policies that will create a slum free India on 'whole City approach'.

d) Valmiki Ambedkar Awaas Yojana (VAMBAY) is a centrally sponsored scheme by Ministry of Urban Development, Govt. of India for the benefit of Slum Dwellers. The objective is to provide shelter or upgrade the existing shelter for people living Below Poverty Line in Urban Slums, with a view to achieve the goal of '*Shelter for All'*.

e) Interest Subsidy Scheme for Housing the Urban Poor (ISHUP) has sought to enhance affordability of the urban poor through the provision of an interest subsidy of 5% p.a. on a loan amount of up to 1 lakh for the economically weaker sections and lower income groups in the urban areas for acquisition/construction of houses.

12. Major Issues concerning the Indian Housing Finance Sector

Housing is the major problem being faced by majority of the urban and rural people in India and still today crores of people in country do not have a shelter. As this sector becomes more and more sophisticated day by day, it often tends to conceal the risks involved at various points between the original lender and the borrower. Therefore the issue of stability of the sector becomes utmost important. Increased involvement and integration of the banking and financial institutions, the capital markets and the real estate sector raise caveats that need continuous monitoring and responsive regulatory changes.

Some of the important issues of concern for the housing finance sector in rural and urban housing in India are - a) Increased household indebtedness, b) Increased sub-prime lending, c) Increased levels of risk, d) Increased dependence on capital markets, e) Onerous archaic laws and regulations, f) Central Government's insufficient allocation of housing funds in its policies to meet people's requirement, g) Absence of Innovative financing mechanism, h) Most of the banks operating in rural or weak areas are concentrating on the priority sector like agriculture, farming other than housing finance, i) Non-traceability of Mortgages, j) Due to higher rates of interest or frequent fluctuations in the rate of interest and Finally, k) Most of the people who desire to construct a house do not meet the stipulated layout rules set up by the village panchayat, municipality and corporation thus making housing finance companies to reject housing finance.

13. Key challenges faced by Indian banks

The achievements of the Indian banks in housing finance segment in recent years are indeed remarkable. The rapid growth in housing finance and competition among the banks has benefited the customers significantly. With growing competition, the banks have come up with innovative products and services offering the customers a wide variety to chose. Housing finance is a long-term commitment, involving many risks for lenders, borrowers and even for the economy in general. The banks as lenders need to manage interest rate risk, liquidity risk and credit risk, while dealing with large number of individual borrowers. They are also not free from any legal risks and also have to face many hurdles in enforcing eviction of defaulters and eventual sale of the house through legal recourse. The analysis of performance of banking system in housing finance both at macro and micro levels revealed during the last decade revealed the following as the key challenges to be faced by the Indian banks in respect of housing finance are:

i) High concentration in metropolitan and urban areas, ii) Housing finance exclusion, iii) Stiff competition and declining spread, iv) Asset-Liability mismatch, v) Regional Imbalance, vi) Increasing frauds, vii) Growing NPA and finally, viii) High Loan -to- value ratio.

14. Recommendations

Following measures are recommended for the holistic development of the housing/housing finance sector:

i) Adopting a policy of moderate home loan interest rates would enable many more households to meet their affordability of housing which would lead to expansion of the housing finance sector.

ii) Interest rate subsidies must be linked to the income class of the borrowers as it can help to build a comprehensive housing finance system that mean lowering the home loan interest rates can be an effective policy tool for meeting housing demand particularly when targeted towards low income households.

iii) To foster the growth of the housing finance market, India needs to focus on strengthening its mortgage market infrastructure, so that there is steady and substantial flow of long term funds towards the sector.

iv) Taking cognizance of discriminatory practices of the lending institutions, policy makers need to take corrective measures that make home loan practices more transparent and that require lenders to be equally responsive in the event of both rising and falling interest rates towards existing and new borrowers. Moreover, cumbersome loan application procedures and lengthy processing could be made simplified and more borrower-friendly.

v) To encourage development of new funding instruments such as covered bonds, securitisation within the framework of RBI guidelines.

vi) To develop innovative products and institutional mechanism.

viii) To reflect the responsibilities of local governments related to housing in their organizational structure.

ix) To organize the sessions or workshops or tailored training activities to provide knowledge and good practices particularly, on existing pilot projects.

15. Conclusion

Housing in India has been one of the important economic activities which serve to fulfill many of the plan objectives, providing shelter to the needy, raising the quality of life, particularly of the poor, creating an environment good for better health and sanitation, creating additional employment and achieving urban, rural and inter-personal equity in terms of standard of living. Housing and Housing finance activities in India has risen to the top of research and policy agendas in recent years witnessed tremendous growth over the years due to some factors like - tax concessions to borrowers, increase in disposable income levels, changing age profile of the borrowers, easy availability of loans, nuclear families and urbanization, etc. In all likelihood, Indian housing finance will undergo a second revolution where specialized lenders will continue to play an important role for a number of years. The housing industry is being viewed as an engine of economic growth with a major role to play in the distributors of economic resources.

At the same time, housing for all should not remain a distant dream in India and it should be made a reality without any further delay. In the Indian perspective, the demand for housing finance remains and continues to remain insatiable and it requires more need-based schemes and not greed induced programs as happened in subprime lending in the US.

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Impact of Emotional Intelligence on Managers

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Abstract
A leader or manager's singular job is to get result. In spite of best efforts effective leadership still elides many organizations. It is well said that in positions of leadership EQ is absolutely crucial. If a manager has emotional skill the most likely chances are that he will get promotion, because IQ can get one the job but it is the EQ that gets one the promotions. The dimensions credibility is a pre-requisite of EQ at work. It has been observed that for effective management an organization has to develop a culture of not just commitment but of trust as well. It will be noteworthy to state that our ancient scared teachings are capable of helping a modern-day-managers to identify, interpret and use emotions in their personal and professional life. The purpose that individual vary in their ability to process information of emotional nature and in their ability to relate emotional processing to a wider cognition. The study examines the relationship between the Male & Female Managers with respect to Emotional Intelligence.
Key-words: *Manager, Emotions, Emotional Intelligence, HR Relationship*

I. Introduction

The emotions which directly affect our day to day life are happiness, fear, anger, affection, shame, disgust, surprise, sadness and love. Therefore before defining "Emotional Intelligence" it would be appropriate to define emotion which is key ingredient here.

Emotions originate from exposure to specific situations.
Emotions are complex state of mind involving bodily changes of widespread character such as breathing, pounding heart, flushed face etc and on the mental side a rate of excitement or perturbation marked by strong feelings. It is important to note that we create our own emotions because our responses are governed by our thoughts. Emotional Intelligence is right mixture of "The Head and the Heart".

The three dimensions of Emotional Intelligence are as follows:-

- **Emotional Competency**- Constitutes the capacity to tactfully respond to emotional stimuli
- **Emotional Maturity**-Constitutes evaluating emotions of one self and others, identifying and expressing feelings, balancing of heart and mind etc

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- **Emotional Sensitivity** -Constitutes understanding threshold of emotional arousal, managing the immediate environment, maintaining rapport etc.

Defining Emotional Intelligence

Emotional intelligence is the ability of an individual to appropriately and successfully respond to a vast variety of Emotional stimuli being elicited from the inner self.

How to be Emotionally Intelligent

Bhagawad Gita- Arjun to Krishna- "Mind is very restless, forceful and strong, O Krishna it is more difficult to control the mind that to control the wind". It is interesting to see that teachings of Gita are directly relevant to today's corporate world. These will have a positive relevance to our managers ability in followings areas:

a) How to succeed
b) How to resolve conflicts
c) Jealousy- its origin and fallout
d) Stand for Dharma
e) Believe in karma- the path of action
f) Tackling emotional upset effectively – The Bhagawad Gitas way

The managers can build them up emotionally, not only forgetting promotions, but also for busting stress, solving problems, taking a mature outlook at a conflict or a power game which requires real intelligent handling both from Head to Heart

2. Review of Previous Studies

In India, the professional approach can be defined as a non-emotional approach which implies hard-core professionalism or a tender approach implying following of Human Relations Approach. It was earlier considered that the Manager who had a high concern for productivity and equally high concern for people was rare. But present day manager is expected to be a successful combination of the two and is expected also to be high both in terms of emotional intelligence.

Sternberg (1985) studied emotional intelligence with respect to three aspects- Analytical, Creative and Practical. ***Schwarz (1988)*** carried out the study and differentiated emotion from mood based on structural differences such as target, belief, states, emotion. ***Thorndike (1913)*** studies the concept of social intelligence and group. ***Salovey and Christoper and Mayer (1993)*** presented a frame work for emotional intelligence. ***Gardner (1993)*** researched on Emotional Intelligence and established there are a Multiple Intelligence. ***Goleman (1995)*** studied emotional intelligence and conclude that the skills that help people harmonize should become increasingly valued as a work place asset in the years to come. Singh (1980) carried out his study on Transactional Analysis and Indian Manager studying intelligence, creativity, leadership, personality and mental health. ***Sharma (1985)*** carried out research on Enhancing Academic Achievement.

3. Methodology

3.1. Statement of the problem

The present study has been proposed to offer an understanding of Emotional Intelligence. A collective study of managers is taken into consideration w.r.t. Emotional Intelligence.

3.2. Rationale of the Problem

The aim of the study is to establish relationship among the managers and its related dimensions- Emotional Intelligence. The area of studies includes Comparing the Emotional Intelligence between male and Female Managers

3.3. Objectives of the Study

The objectives of the study are:

- to find gender difference, if any, with regard to Emotional Intelligence
- to assess the relationship of Emotional Intelligence

3.4. Hypothesis

Male manager do not differ from female managers with regard to emotional intelligence

3.5. Organizations Studied

To accomplish the purpose of the study the data has been collected from a small range of sources due to limitation of time. A total of 65 questionnaires were distributed in the following organizations:

(i) The Telegraph
(ii) Bhavans Publications (Kolkata)
(iii)Acqua Java
(iv)Wipro
(v) Ganesh Enterprise

3.6. Tools Used

Emotional Intelligence Measures

To study EQ level in managers a questionnaire developed by Prof N.K Chandha has used, which has been taken from the book "Emotional Intelligence at Work" by Singh (2001)

The questionnaires ha a set of 15 situations each of which has options out of which the respondent was asked to tick the chosen one. The interpretations of the scores could result in the following categories.

(a) Extremely High EQ
(b) High EQ
(c) Average EQ
(d) Below average EQ
(e) Try some other day category

3.7. Sample

The sample consists of managers at both levels. It was a non-probability incidental sample. A total of 65 questionnaires were distributed in about 5 Organization
Questionnaire returned- 58
Female Managers-30
Male Managers-28

4. Result & Interpretation

A comparison was drawn between Male Managers & Female Managers with respect to Emotional Intelligence.

Comparison between Male and Female Managerial Staff with respect to Emotional Intelligence

	Male Managers		Female Managers		t-Value
	Mean	SD	Mean	SD	
Emotional Intelligence	173.15	57.14	156.43	66.53	1.655

A very important variable namely Emotional Intelligence showed a mean score of 173.15 for male managers as compared to core of 156.43 for Female Managers. The male Managers displayed a higher EQ level as compared to Female Managers in terms of t-value. Although no significance difference has been observed between Male and Female managers.

5. Discussions

Male and Female managers were compared with respect to Emotional Intelligence. The Male Managers were found to be more emotionally strong as compared to female Managers. Thus on being compared, the male managers did not differ significantly on this dimension in comparison to female managers. Although t-value 1.655 and higher mean value in case of male managers suggests that they had slightly higher emotional intelligence as compared to female managers.

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An assessment of implementation of VAT in West Bengal

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Abstract

Tax imposes a personal obligation on the people to pay the tax if they are liable to pay it. The general public should be taxed according to their ability to pay, and the people in the same financial position should be taxed in the same way without any discrimination. When the government operates on a budget surplus or wants to increase its revenue in order to finance its budget deficit. A question that arises is whether value added tax has been a boon or misery for a developing country like India. India has finally agreed to implement value added tax from 1st April, 2005 at a rate of 12.5%. After of its much delayed the tax rate is fixed by meeting of different state level Finance Minister, in New Delhi, designed to make accounting more transparent, to cut short trade barriers and boost tax revenues. The West Bengal government's problem of tackling a cash crunch seems to have partially eased. As per expectations of the state finance minister and architect of the value-added tax (VAT) Asim Dasgupta, the state's revenue collections got a fillip in the post-VAT regime, which came into being in the state since April 1, 2005. Validating Mr Dasgupta's claim that VAT is a superior tax system than sales tax for states' revenue generation, West Bengal has generated 17% more revenue in 2006-07, the second year after VAT's introduction in the state. Introduction of VAT appears to have come as a boon to the state ever since it was introduced here. Despite some teething trouble in bringing all registered dealers and manufacturers under the tax net, the state has realised Rs 3,665.3 crore from VAT in 2005-06, the first year of its implementation. With this, its total collections from VAT, sales tax and central sales tax has increased 7% to Rs 6,119 crore in the year, against Rs 5,721 crore in 2004-05. This paper will focus on the basic problems faced by the business organisations and the consumers after implementing the VAT in West Bengal which otherwise it would be a fantastic aim of generating revenue in the state.

Key-words: *Sales tax, Value Added, Revenue Generation.*

1. Introduction

The system of sales tax suffered from many problems such as cascading effects, tax evasion by concealing sales by traders etc. VAT was the solution to the above problems. It is to be noted that France was the first country to adopt VAT in 1954. Subsequently, about 160

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countries including Pakistan, Bangladesh, Sri Lanka and Nepal have introduced VAT. In 1999, the empowered Committee of State Chief Ministers opened up the subject of VAT. Though VAT was going to be introduced in 2003, certain developments including a careful study of the problem of CST delayed its introduction. Finally, in January 2005 Mr P Chidambaram released a White Paper on VAT, documenting a roadmap to levy uniform state-level tax across majority of the states from April 1st 2005. India has a well-developed tax structure with clearly demarcated authority between Central and State Governments and local bodies. Central Government levies taxes on income (except tax on agricultural income, which the State Governments can levy), customs duties, central excise and service tax. Value Added Tax (VAT), stamp duty, land revenue and tax on professions are levied by the State Governments. Local bodies are empowered to levy tax on properties and for utilities like water supply, drainage etc. In last 10-15 years, Indian taxation system has undergone tremendous reforms. The tax rates have been rationalized and tax laws have been simplified resulting in better compliance, ease of tax payment and better enforcement. The process of rationalization of tax administration is on-going in India.

Value Added Tax (VAT) was introduced in Orissa w.e.f. 1.4.2005 by replacing the erstwhile Sales Tax Act. The VAT scheme immediately expanded the tax base after its inception due to the fact that it eliminates cascading i.e. tax on tax because of set off tax paid on inputs and capital good. Reduction in cost of domestic product because of inbuilt system of input tax credit makes domestic products competitiveness helps growth of industries, increases marketability of products having perspective impact on employment generation. Now, the VAT system has been stabilized further in the sphere of almost all economic activities in the State.

In the existing sales tax structure, there are problems of double taxation of commodities and multiplicity of taxes, resulting in a cascading tax burden. For instance, in the existing structure, before a commodity is produced, inputs are first taxed, and then after the commodity is produced with input tax load, output is taxed again. This causes an unfair double taxation with cascading effects. In the VAT, a set-off is given for input tax as well as tax paid on previous purchases. In the prevailing sales tax structure, there is in several States also a multiplicity of taxes, such as turnover tax, surcharge on sales tax, additional surcharge, etc. With introduction of VAT, these other taxes will be abolished. In addition, Central sales tax is also going to be phased out. As a result, overall tax burden will be rationalized, and prices in general will also fall. Moreover, VAT will replace the existing system of inspection by a system of built-in self-assessment by the dealers and auditing. The tax structure will become simple and more transparent. That will improve tax compliance and also augment revenue growth. Thus, to repeat, with the introduction of VAT, benefits will be as follows:

- A set-off will be given for input tax as well as tax paid on previous purchases;
- Other taxes, such as turnover tax, surcharge, additional surcharge, etc. will be abolished;
- Overall tax burden will be rationalized prices will in general fall
- There will be self-assessment by dealers
- Transparency will increase.
- There will be higher revenue growth

The VAT will therefore help common people, traders, industrialists and also the Government. It is indeed a move towards more efficiency, equal competition and fairness in the taxation system.

The essence of VAT is in providing set-off for the tax paid earlier, and this is given effect through the concept of input tax credit/rebate. This input tax credit in relation to any period means setting off the amount of input tax by a registered dealer against the amount of his output tax. The Value Added Tax (VAT) is based on the value addition to the goods, and the related VAT liability of the dealer is calculated by deducting input tax credit from tax collected on sales during the payment period (say, a month).

If, for example, input worth Rs. 2,00,000/- is purchased and sales are worth Rs. 4,00,000/- in a month, and input tax rate and output tax rate are 4% and 10% respectively, then input tax Credit/set-off and calculation of VAT will be as shown below:
(a) Input purchased within the month: Rs. 2, 00,000/-
(b) Output sold in the month: Rs. 4, 00,000/-
(c) Input tax paid: Rs. 8,000/-
(d) Output tax payable: Rs. 40,000/-
(e) VAT payable during the month: Rs. 32,000/-
After set-off/input tax credit [(d) – (c)]

2. Objectives of the Study

- To determine the impact of VAT on satisfaction over the marketers as well as consumers.
- To identify the problems and prospects consumers point of view in Implementation of VAT

3. Review of Literature

K. Narayana (2005) in his study the state empower committee in India is planning to introduce VAT system at state level from 1st April 2005. As many as 21 states have reiterated their commitment to introduce value added tax (VAT) to replace sales tax from 1st April 2005. The remaining states i.e., U.P., tamilnadu and five other BJP ruled states have expressed their apprehension about the efficacy and revenue loss by introducing VAT. The VAT system of taxation does not encourage vertical integration of firms as it is independent of number of stages in the production and distribution channel. The experiences of many developing countries have shown that if properly designed and implemented the VAT may prove a better resources mobilizer than the present sales tax systems. The apprehensions of the 7 states are illogical and political rather than genuine economic reason.

L. Sathees kumar and Dr. V. Selva raj (2009) in their study introduction of VAT and the relevant legislation has far reaching implications for industry and trade. Adjusting to a VAT regime would require realignment of business strategies, distribution channels and logistic requirements. It is, therefore, important that VAT is implemented with detailed legislation and rules at least four months in advance giving time to trade and industry to adjust.

Kapoor and Dhaliwal (2009) discussed the various procedural reforms under VAT in India with special reference to Punjab Value Added Tax Act 2005. It studied the working of value added tax, incidence of tax, input tax credit mechanism, payment of VAT, filing of returns and refund procedure under VAT. The paper attempted to study and compare the present state value added tax and earlier state sale tax on the basis of incidence of tax and other procedural requirements. Under earlier sales tax structure, before commodity was produced, inputs were first taxed and then taxed again with input tax load after commodity was

produced thus causing an unfair double taxation with cascading effects. On the other hand, under the VAT, set-off is given for input tax as well as tax paid on previous purchases. Further, there was multiplicity of taxes in several states like turnover tax, surcharge on sales tax, additional surcharge etc. But with introduction of VAT, these other taxes have been abolished resulting in overall rationalization of tax burden. Moreover, VAT has replaced the earlier system of inspection by a system of built-in self-assessment by the dealers. The study concluded that the present state value added tax system of taxation is more simple and transparent as compared to the earlier state sale tax system of taxation.

Tripathi et al. (2011) evaluated that Value Added Tax would change the nature of trade in the coming years, but the medium level of trade would face problems. Similarly, small retail dealers would be required to maintain more accounts or pay composition money which cannot be collected from the customers. The present provision of central sales tax and Value Added Tax cannot go together. After the abolition of central sales tax the direct marketing concept may gain ground and the necessity of having warehouse, go downs etc. in all states may decrease or finish.

Value added tax in India has been introduced in modified variants over the past two decades. However, Value Added Tax in its original form is yet to be introduced in India, at Central or State level. After the negative and positive impact on the Indian consumers, Value Added Tax has been identified as the real goal maker by the Indian government in the coming years to foster growth and prosperity in the country. The change in the standard of livings has increased the purchasing power of the high class society but the medium and the poor class society has to work hard in order to achieve their living and meet extravagances.

Deshmukh (2012) analysed the impact of VAT on profitability of manufacturing Industries in Maharashtra. This paper revealed that the share of VAT has increased from 52.2 per cent to 64.8 per cent during 2001-02 to 2009-10 in sales tax revenue gross receipts of the Maharashtra. MST and CST has become the second and third largest contributor after BST/VAT in sales tax revenue gross receipts of Maharashtra. This paper suggested that it would be in the interest of both state governments and tax payers to have uniform laws and procedures for tax administration. In the medium term, a consensus tax administration act will greatly reduce the cost & will lead to increase in the profitability of an organization. The existing VAT system has increased the tax revenue as well as the profitability of the organization. VAT has simplified the paper work, proved to be user friendly, reduced transaction costs and time since e- registration has been made compulsory for every dealer. It is suggested and emphasized that VAT reduces the cascading effect. Therefore, rather than prescribing different rates for different goods, a uniform VAT will improve economic efficiency. It is suggested to prepare the infrastructural setup requisite for adequate automation in tax administration before the GST implementation.

Muthu and Senthil (2013) assessed the attitude of Pharmaceutical Retailers towards VAT in Tiruchendur Taluk of Tuticorin District. The researcher study was about the concept and structure of VAT, identify the practical problems encountered by under VAT and find out what are the beneficial aspects enjoyed by pharmaceutical retailers under VAT. A sample sizes are 55 Pharmaceutical Retailers, using the purposive sampling techniques. The primary data was gathered using interview schedule and analysed by use of percentage method, T – Test, Analysis of Variance (ANOVA) and F – Test were used in the appropriate places. The researcher conclude that Value Added Tax is a new tax format for all pharmaceutical retailers with the introduction of VAT, there are some new formalities and hidden problems for them.

But most of the retailers showed favourable attitude towards VAT implementation. The problems like daily maintenance of opening and closing stock, bill maintenance, self-assessment, computerizing the account should be sympathetically viewed by the Government for considering the development of the pharmaceutical retailers.

4. Research Methodology

4.1. Sampling Plan and Data Collection

The study is based on both primary and secondary data. The primary data is collected from the Tax Officials, Chartered Accountants, Wholesalers, Retailers and Consumers. The questionnaire comprises three broad categories namely business profile, tax implementation stage, tax output stage and its impact over marketers and consumers. The secondary data must be studied in the form of VAT collection for state governments from the date of implementation.

4.2. Sampling Techniques

The Convenient Random Sampling technique is exploited to obtain the responses from the required domains of VAT.

4.3. Sample size

Sample sizes of 200 respondents have been selected for the study amongst Tax Officials, Chartered Accountants, Wholesalers, Retailers and Consumers. All the respondents are from Jalpaiguri, Darjeeling, Medinipur, Cochbihar, Maldah, Howrah, and Kolkata.

4.4. Questionnaire

1) Tax evasion stopped after VAT.
2) VAT implementation has made more transparent the whole system.
3) Vat benefits to the customers.
4) VAT has increased the revenue to the Government.
5) Complications are more than the Sales tax in case of VAT (cost perspective).
6) There is a scope of self assessment.

5. Data Analysis

All the questions have asked on five point scale. For each question for strongly disagree 1, disagree 2, neither Agee or disagree 3, Agree 4 and strongly agree 5 have given.

Out of the 200 respondents only 170 have returned the respondent sheet out of 170, 10 sheets were incomplete so I have excluded those incomplete sheets for analysis purpose. So, ultimately there are total 160 respondents who have returned the sheet with complete response.

For the first question 50 respondent replied with strongly disagree, 20 disagree, 40 neither agree nor disagree, 20 agree and 30 strongly agree.

For the second question 45 respondent replied with strongly disagree, 25 disagree, 35 neither agree nor disagree, 30 agree and 25 strongly agree.

For the third question 55 respondent replied with strongly disagree, 20 disagree, 30 neither agree nor disagree, 25 agree and 30 strongly agree.

For the forth question 10 respondent replied with strongly disagree, 10 disagree, 20 neither agree nor disagree, 30 agree and 90 strongly agree.

For the fifth question 30 respondent replied with strongly disagree, 35 disagree, 10 neither agree nor disagree, 50 agree and 35 strongly agree.

For the sixth question 80 respondent replied with strongly disagree, 50 disagree, 10 neither agree nor disagree, 15 agree and 05 strongly agree.

6. Findings

The major findings of the study are as follows:

a) At the same time, the systems suffer from substantial compliance gaps.
b) The complexities under the State VAT relate primarily to classification of goods to different tax rate schedules. Theoretically, one might expect that the lower tax rates would be applied to basic necessities that are consumed largely by the poor. This is not the case under the State VAT. The lowest rate of 1% applies to precious metals and jewellery, and related products—hardly likely to be ranked highly from the distributional perspective. The middle rate of 4% applies to selected basic necessities and also a range of industrial inputs and IT products. In fact, basic necessities fall into three categories – exempted from tax, taxable at 4%, and taxable at the standard rate of 12.5%. The classification would appear to be arbitrary, with no well accepted theoretical underpinning. Whatever the political merits of this approach, it is not conducive to lower compliance costs.
c) Most retailers find it difficult to determine the tax rate applicable to a given item without referring to the legislative schedules.
d) Many of the administrative processes are still manual, not benefiting from the efficiencies of automation. All this not only increase the costs of compliance, but also undermines revenue collection.
e) Tax cascading remains the most serious flaw of the current system .It increases the cost of production and puts Indian suppliers at a competitive disadvantage in the international markets.
f) There is no refund easily from the department for the advance Tax (if any).
g) There is no similarity between manual system still in some cases and e-system.

7. Suggestions

Since the Consumers and Retailers are Unaware of certain Implementation process of Value added tax. It is suggested the government should come with transparent norms to enlighten the retailers and consumers. The study ascertained maximum benefit to the government through Value Added Tax system. So it is strongly recommended to have innovative slab system suitable for Wholesalers, Retailers and Consumers.

8. Conclusions

Value added tax has a number of advantages, e.g. free movement of goods and services, neutrality of taxation, universal character of application or multi-phase character of the tax. On the other hand, it has also some disadvantages, and administrative cost for taxpayers and for the state is one of them. Owing to the subject of research, we will further pay attention only to the economic effectiveness of paying the tax for businesses, i.e. we will deal with value added tax from the microeconomic point of view.

The tax applicability and e-filing plays a vital role in the VAT system. It gives mutual benefits to the Consumers and Government. Service tax, sales tax and other taxes can be easily vivid due to its Implementation process. But the transparency is required at all the level in order to obtain effective functioning in the VAT system in all the states of India.

The move towards the VAT regime is a welcome step for the Indian Economy, but to get the complete benefits of this VAT, it is necessary that the whole nation should understand the issues and concerns of the trade and the industry at large in evolving a common system of taxation across the country. The states, who have not yet implemented the VAT, have to understand the problems being faced by the trading community at large and should implement the VAT as quickly as possible so as to reduce the concerns of trade. This would pave the way for initiating the steps for the introduction of the GST in a near future.

As already steps have been initiated in integrating the taxation on goods and services at the central level (already inter-sectoral credit has been introduced), it would be necessary to initiate the steps for ensuring a uniform value added tax law across the country which would then pave the wave for implementation of a common GST across the country.

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Digital Analysis of Financial Data and Detection of Fraud

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Abstract

Corporate scams have become common phenomena all around the globe. In most of these scams it is the malfunctioning of accounting and auditing system which is at fault. There is no point in trying to make good for losses after the occurrence of such losses. The system should be there through which any corrupt practice is detected when it is being perpetuated and we should not leave it for the post-control mechanism to detect the fraud and corruption because by that time the real damage is done. In case of financial data the digital analysis of data can hint at the vulnerability of such reported data. Benford's law is a good technique in the field of digital analysis. This paper attempts to discuss the basic conception and acceptability of Benford's law. Simon Newcobm, an astronomer and mathematician, is thought to be pioneer for the development of this rule, although the real credit goes to Frank Benford, an American physicist, who theorized the law. this law is basically an empirical regularity commonly found in sets of data describing naturally-occurring phenomena. The regularity observed is that the frequency of the digits appearing as the first or leading digit in the numbers collected declines as the value of the digits increase. This paper also points out to the applicability issues of the use of this law. Finally the paper attempts to test the authenticity of one published data set. This law is regarded as a part of forensic accounting techniques. Adoption of forensic accounting tools does not guarantee the prevention of frauds in the matter of accounting but, for sure, it will reduce the occurrence of this menace.

Key-words: *Forensic Accounting, Corporate Fraud, Benford's Law, Accounting Practices.*

JEL Classification: *C 16, M 41, Y 10*

1. Introduction

In the recent days' corporate world financial scams have become a very much common phenomena. In world context we can cite a plethora of cases spreading all around the globe. We have the case of 'Parmalat' in 2003. Parmalat was an Italy-based producer of Ultra Hot

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Temperature (UHT) milk and other foods. There the accounting practices adopted by the founder of the company Calisto Tanzi created a hole of about $14 billion in company's accounting records. Then we have a very popular (?) case of 'Enron'. It was the Houston-based energy company that toppled into a spectacular bankruptcy due to a painstakingly-planned accounting fraud made by its accounting firm, Arthur Andersen. Once considered a blue-chip stock, Enron shares dropped from $90 to $0.50, which spelled disaster in the financial world, where thousands of employees and investors saw their savings vanish with the company as it filed for an earnings restatement in October 2001. Again we have the case of 'Tyco International'. That company was a diversified manufacturing conglomerate that deals with electronic components, health care, fire safety, security, and fluid control with headquarters in New Jersey, USA. In 2005, its CEO Dennis Kozlowski and CFO Mark H. Swartz were found guilty of stealing $600 million from the company. In this case there is the excess of executive compensation at shareholder's expense, where Kozlowski will be remembered for the $2 million birthday bash he gave his wife on a Mediterranean Island at the company's expense.

In India also, we have a lot of corporate scams involving accounting malfunctions. One of the most recent and very notable scams is the Satyam scam that jeopardized India's corporate image. That brings issues like business ethics, corporate governance, and accounting and business practices to the limelight in a big way. As rightly pointed out by the FICCI in the aftermath of this scam: "This fraud …… shows a systematic breakdown in audit and board oversight".

The possibility of this type of financial fraud is very much there given the system and practice of accounting and auditing in vogue. There is no point in trying to make good for losses than to prevent the occurrence of such losses. Here lies the importance of checking the authenticity of accounting practices followed in any concern dealing with large amount of money especially for those who are dealing with public money. The system should be there through which any corrupt practice is detected when it is perpetuated and we should not leave it for the post-control mechanism to detect the fraud and corruption because by that time the real damage is done.

In this context digital analysis of reported data has become all the more important. Benford's Law and Benford's Table is a very effective tool in the field of digital analysis of accounting and financial data. The rest of the paper is organized in the following way. Section 2 highlights the concept and basic issues of Benford's law; Section 3 indicates the applicability or otherwise of this law in case of certain types of data sets; Section 4 gives a practical application of this law in a given data set and finally Section 5 offers the conclusions.

2. Benford's Law

2.1. The Background and Basic Overview

Dr. T. P. Hill of Georgia Institute of Technology in United States asked his mathematics students to go home, toss a coin for 200 times, note the results and report it to him. When the students presented the results he easily pointed out which students have really tossed the coin and recorded the results and which students had presented fake results. Dr. Hill then pointed out that '*The truth is most people don't know the real odds of that exercise, so they can't fake data convincingly*".

Probability predictions are often very surprising. Dr. Hill revealed in one issue of 'American Scientists' some surprising probability. It states that the overwhelming odds are that at some

point of time in a series of 200 tosses, there will a run of six or more heads or tails. The fakers don't know that and as such avoid recording long runs of any particular outcome which they mistakenly feel to be improbable.

A strange feature in such probability distribution is that it is scale invariant and also base invariant. The practical application of this in the world of finance is that whether the financial data are recorded in home currency or foreign currency the probability distribution would hold good.

In 1881, Simon Newcomb, an astronomer and mathematician, published an article in American Journal of Mathematics. In the article he noted his observation that library copies of books of logarithms were considerably more soiled in the beginning pages and progressively less worn in the subsequent pages. From that he inferred that more number exists which begin with numeral one than with larger numerals. His inference was not supported by theoretical explanation or empirical testing. As such it was better known as 'Newcomb's Conjecture'. That inference went virtually unnoticed for more than five decades.

Then in 1938, apparently independent from Newcomb's work, Frank Benford, an American physicist, also noticed that first few pages of his logarithm books were more worn out than the last pages. He came to the same conclusion as Newcomb did some 50 years ago; that people more often looked up numbers that began with lower digits than those beginning with higher digits. He also posited that there were more numbers starting with lower digits than the numbers starting with higher digits.

Though the findings of Newcomb and Benford were fundamentally same yet there were huge differences in respect of impact of their work. Newcomb's work went unnoticed as it was not supported by theoretical explanation or empirical testing. But Benford tested his hypothesis by collecting and analyzing data. For this he collected some 20000 observations from diverse fields like length of rivers, atomic weights of elements, population, cost data, X-ray volts, death rates etc.. After analysis he found that numbers consistently fall into a pattern with low digits occurring more frequently in the first position than larger digits. The mathematical tenet of this finding became known as 'Benford's Law'.

Thus, Benford's law, also called the first digit law, refers to an empirical regularity commonly found in sets of data describing naturally-occurring phenomena. The regularity observed is that the frequency of the digits appearing as the first or leading digit in the numbers collected declines as the value of the digits increase. As a result, 1 is the digit more often observed and 9 is the least frequent. That is, not all digits have the same chance of appearing as the first digit in the numbers collected.

This empirical regularity has elicited considerable interest, and even some fascination, for the following reasons. First, Benford's law contradicts what seems to be a natural intuition suggesting that any digit has the same probability of appearing as the first digit in the numbers collected. Common belief suggests that digits have a uniform distribution when appearing as leading digits in numbers. Second, observance of Benford's law has been confirmed in several datasets. Third, the statistical literature has taken a long time to provide solid formal explanations for the often observed presence of Benford's law.

2.2. Understanding the Law

Benford specifically found that the proportion of 'real world' numbers whose leading digit is d=1, 2, 3,……, 9 is approximately given by:

$P(d) = \log_{10}(1+1/d)$

In the similar way distribution of digits in other places can also be found. Thus Benford's table of distribution of probabilities of digits at different places can be had in the following way:

Table 1: Benford's Distribution

Digit	1st Place	2nd Place	3rd Place	4th Place
O	----	11.97%	10.18%	10.018%
1	30.10%	11.39%	10.14%	10.014%
2	17.61%	10.88%	10.09%	10.010%
3	12.49%	10.43%	10.06%	10.006%
4	9.69%	10.03%	10.02%	10.002%
5	7.92%	9.67%	9.98%	9.998%
6	6.69%	9.34%	9.94%	9.994%
7	5.80%	9.04%	9.90%	9.990%
8	5.12%	8.76%	9.86%	9.986%
9	4.58%	8.50%	9.82%	9.982%

Source: Nigrini (1996)

Formula:

Probability for the first digit of the number

$P(D_1=d_1) = \log_{10}[1+(1/d)]$; $d_1=1,2,3,\ldots\ldots,9.$

Probability for the second digit of the number

$P(D_2=d_2) = \log_{10}[1+(1/ d_1d_2)]$; $d_2=1,2,3,\ldots\ldots,9,0.$

For many years the status of Benford's law was little more than a numerical curiosity. Wide discussion and practical use of it started to emerge since 1960s. In 1961 Pinkham developed what was known as scale invariance theorem. He posed the question that if there were indeed some law governing digital distributions then that law should be scale invariant. He went on to prove that Benford's law is scale invariant under multiplication. That means if any set of numbers conformed to Benford's law then the product obtained by multiplying the data set by a constant then the new data set would also follow Benford's law. Hamming (1970) suggested that the rule that almost 1/3rd of the numbers processed began with a 1 could have implications for the design of efficient computers. In economics, Varian (1972) suggested that Benford's law could help detect anomalous information in datasets used for public planning decisions.

Take one example to see why the law is good. Suppose the price of a particular corporate stock is $1 and it grows by 1% per month. So the price will reach $10 after 232 months. However it will take 70 months or 30.2% of total time of 232 months for the price to rise from $1 to $1.99. But it will take only 11 months (4.7% of total time of 232 months) to rise from $9 to $9.99. World data relating to share price and market capitalization are known to fit the Benford's pattern which is not surprising given the above example (Declan Laville, 2005).

Glewwe & Dang (2005) show how having computers available for data input at the district level, so that mistakes can be found more quickly and households re-interviewed sooner, can improve data quality. These computers could easily be programmed to include a Benford's law component to test for the quality of responses to different questions and from different enumerators. Judge & Schechter (2009) have demonstrated how Benford's law can be used to detect data abnormalities arising both from questions that are difficult to answer and from enumerators' errors.

Gonzalez-Garcia & Pastor (2009) found that rejection of Benford's law may be unrelated to quality of statistics, and instead may result from marked structural shifts in the data series. Hence, nonconformity with Benford's law should not be interpreted as a reliable indication of poor quality in macro-economic data.

For the effective application of Benford's law the data set should have a wide range. Otherwise the law would not work. Paldam (2010) checked Maddison's GDP Data as to their conformity with Benford's law and proposed that the deviations from the law were due to range problems. The data covered only three log-decades, the hundreds, the thousands and the ten-thousands, and two of these log-decades were not fully covered.

Benford's law has been used to study different hypotheses about datasets. For example, Nigrini (1996 and 1999) and Nigrini and Mittermaier (1997) used Benford's law to detect fraudulent data in tax payments and accounting. Hales, Sridharan, Radhakrishnan, Chakravorty, and Sinha (2008) studied the reliability of employee-reported operational data by testing the presence of Benford's law in those datasets; and Diekmann (2007) analyzed whether the first digits of regression coefficients published in scientific literature tend to be distributed according to the first digit-law.

3. Applicability of Benford's Law

Benford's law is applicable to a data set which is normally distributed. In the following circumstances Benford's distribution can help rigorously:

- When the numbers to be tested are arising out of combination of numbers from different sources Benford's distribution can be effectively utilised. In other words, combining unrelated numbers gives a distribution of distributions, a law of true randomness that is universal (Hesman, 1999);
- Data sets are expected to follow the Benford's distribution when the elements result from random variables taken from divergent sources that have been multiplied, divided or raised to integer powers (Boyle, 1994);
- Most accounting related data are expected to follow Benford's distribution (Hill, 1995). This is because typical accounts consist of transactions that result from combining numbers;
- If mean of particular set of number is greater than it median and the skewness of the distribution is positive, the data set is likely to follow Benford's distribution. Thus larger the ratio of mean divided by median, the more closely the set will follow the Benford's distribution. This is so because Benford's distribution has predominance of small numbers (Wallace, 2002);
- Data set generated by mathematical operation like repeated multiplication of current numbers by either a constant or a random number would conform to Benford's distribution ((Scott & Fasli, 2002);
- A probability in which the logarithm of the variable is distributed normally is called lognormal distribution. Lognormal distributions are unimodal, positively skewed and

have a range from 0 to ∝ and are defined by two parameter, the median of the distribution and the standard deviation of the logarithm of the variate. Lognormal distributions conform to Benford's distribution independent of scale parameter (median) and dependent on shape parameter (standard deviation) (Scott & Fasli, 2002);

His (Benford's) law is not magic, but sometimes it seems like it (Nigrini, 1998). Sometimes the Benford's predictions fail to detect frauds in data because biasness in data might arise out of some innocent reasons. So in the following cases Benford's law cannot be applied.

- For example, in United States the people who are traveling for business reasons are to submit bills for meals costing $ 25 or more. If the cost of meal is less than $ 25 they are not required to submit bill for that. So in huge number of cases we can find bills for meals costing just below $ 25 say, $ 24.90. That's why we could find so many 24s in the related data set. In this case no real fraud is committed but it is only avoidance of strict rules.
- A data set which contains data arising out of authorized but repetitive transactions would not conform to Benford's distribution. Such non-conformance does not indicate any fraud. Removal of such repetitive entries would make the data set expected to conform to the Benford's distribution (Durtschi, Hillison, Pacini, 2004);
- We can't use Benford's law to improve our chances in lottery. In lottery we are to pulls balls from a jar. The balls are labeled with certain numbers but the numbers are not really acting as numbers. The labels could be changed to use names of animals instead of numbers. The numbers in the balls are uniformly distributed and the chance of getting any number is equal. Thus, in this case Benford's law is not applicable.
- Financial indices like Dow Jones Index data or Sensex data are not expected to conform to Benford's distribution. As the change between two successive closing values will not be independent of preceding changes such data sets lose randomness and as such do not conform to Benford's distribution.
- In order to hold the Benford's pattern true the number must not the invented or assigned. For example, telephone numbers are not going to follow the pattern as these are forced to have a fixed number of digits.
- The sample wherefrom the numbers are to be taken are to be statistically large enough.

4. Benford's Law: One Practical Application on a Given Data Set

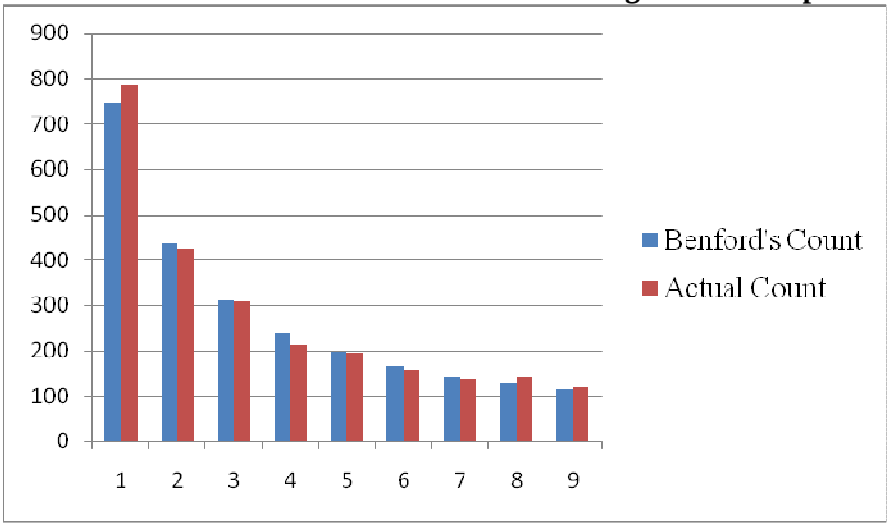
The use of Benford's law can be illustrated by means of an example. For this purpose a sample data comprising of profit after tax (PAT) data of 2478 BSE-listed companies for the accounting year 2012-13 has been taken. The extracted results are as follows:

Table 2: Proportion of Observed Proportion of Leading Digits

First Digit	Actual Count	Observed %	Benford's %	Deviation (%)
1	787	31.8	30.1	5.5
2	425	17.2	17.61	-2.6
3	307	12.4	12.49	-0.8
4	213	8.6	9.69	-11.3
5	195	7.9	7.92	-0.6
6	156	6.3	6.69	-5.9
7	135	5.4	5.8	-6.1

8	140	5.6	5.12	10.3
9	120	4.8	4.58	5.7

Figure 1: Benford's Count and Actual Count for First Digit of the Sample Data Set



From the above table it can be seen that PAT values with leading digit 1 and 8 have a proportion which is obviously higher than that of Benford's distribution. Again for PAT values with first digit of 4 the Benford's count is obviously higher than the actual count. For the first digit of 3 and 5 there is absolutely nothing to choose between. Thus PAT figures with first digit of 1 and 8 special care should be put in so as to detect whereas the reported figures represent true figures.

5. Conclusion

Now we are in all-digit world. Definitely, it gives us certain advantages but it also has brought about the undesirable feature of expediting the manipulation or even the fabrication of digital assets. In the light of recent corporate scams that were possible because of lapses and loopholes in accounting practices the necessity of detecting the perpetuation of such malfunctioning should be detected before these are committed on a larger scale and for a longer period of time. Then only the damage could be prevented or at least could be limited. In this context forensic accounting tools like application of Benflord's law and table have become very important. Adoption of forensic accounting tools does not guarantee the prevention of frauds in the matter of accounting but for sure it will reduce the occurrence of this menace.

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Analysis of Cost Effectiveness of Lac Processing in Purulia District

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Abstract
In this paper various aspects of lac manufacturing is discussed in a length keeping in view to judge its profitability. We have also tried to get a comparative analysis of hand-made manufactures and machine-made manufactures. When seedlac is prepared from sticklac, further processing is carried out which converts it into shellac (machine-made process) or button lac (hand-made process). In the case of handmade shellac, heat process is applied and the solvent process where pure shellac is extracted from seedlac by suitable solvents is applied in the case of machine-made process. These processes require 9 -10 days to manufacture of different types of shellac containing varying percentage of shellac wax. We have prepared cost and profit of producing buttonlac/ machine made shellac from 1kg. of sticklac for the year 2012-13. In the study period price of sticklac is Rs360/kg on Chowri-Parta basis. Seedlac obtained from per kg of sticklac 700-750gm. whereas buttonlac obtained from per kg of sticklac is 650gm to 700gm. Net profit is Rs120-130 from processing of one-kg of sticklac. Ultimate we come to the conclusion that profit earned by buttonlac is greater than machine made shellac in all measures such as absolute profit, profit/capital, and profit/sale.
Key-words: *Lac Manufacturing; Hand-made and Machine-made; Shellac and Buttonlac; Cost and Profit of Manufacturing; Profit/Capital and Profit/Sale*

1. Introduction

Lac industry is the oldest and most visible industrial sector in Purulia district and occupies a place of importance in its economy since time immemorial. Lac industry includes within its fold lac agriculture (producing sticklac), lac processing (manufacturing shellac and seedlac from sticklac) and lac trade (both internal trade and foreign trade). In this paper we are going to analyse various aspects of the second one, i.e. lac processing from different angles. The principal objective of the paper is to judge whether lac processing is a profit earning activity or not. For this purpose we have to know the cost of raw material for lac processing and side-by-side revenue earned in different phases of processing. Ultimately we show that lac

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processing is very much cost effective by including the bye-products in the processing procedures. In the present study we are concerned with the lac industry of Purulia district with special emphasis on Balarampur center.

This paper is divided into following sections. Section 2 gives a brief review of literature. Section 3 examines the processing procedure which is followed by different categories of manufacturer in this district. Section 4 depicts a vivid picture of cost of raw materials and cost of processing of sticklac.

2. Review of Literature

S.C Sengupta (1972) in his article "Twenty Five years of Research in Lac", published in *Indian Farming* Vol. 22 No. 7 summarises the studies on various aspects of lac industry viz. cultivation, processing, production, selling and market operations and utilizations. **K.N. Kabra (1983)** in his book "Dependence and Dominance" focuses attention on historical perspective of lac economy, socio-economic profile of lac growers, lac production, (trends & problems) and lac trade and industry. **Saha S.K. (1976)** in his article "Lac Industry in India" published in *Indian Farming* Vol. 26 No. 6 made an attempt to discuss about shellac industry in different centres, Mirzapur, Jhalda, Balarampur, Tulin, Ranchi, Palamau, Pakur, Madhyapradesh and Umaria.

Report on Problems and Difficulties of Manufactures & Consumers of Lac in India, Published by I.L.R.I (Ranchi), 1985, analyses different aspects related to lac industry. **Agarwal S.C, Jaiswal A.K & Krishna Sharma K (1998)** in their article, "Problems and Prospects of Lac Culture in India" in *Journal of Non Timber Forest Products*. Vol.5 No. (1&2) have made an attempt to highlight the various problems and prospects of lac culture and suggest the ways and means to overcome the problems. The thesis "Economics of Lac Industry in India" by **Ratna Mukherjee (2002)** has attempted a detailed analysis of important economic variables related with lac industry with the help of empirical data. In the course of study and analysis, certain glaring problems are visualised.

This study was actually made in order to get up-to-date cost and revenue figures of producing one kg. of shellac. We then come to conclusion regarding whether lac-manufacturing activity is profit earning or not. We have also tried to get a comparative analysis of hand-made manufactures and machine-made manufactures.

3. Processing of Lac

The lac encrustation which is collected as a result of lac cultivation is known as sticklac. Processing of sticklac means sticklac is converted to commercial grades of seedlac and shellac. The best lac is said to be obtained from twigs of the *kusum* tree. Apart from lac resin, sticklac also contains 6-7% of lac wax, 3-5% of water moisture, colouring matter (lac dye), and impurities like insect debris, wood pieces, sand etc.

i) Sticklac into Seedlac: The process of making seedlac, the semi processed material, from sticklac involves five major unit operations viz. crushing, washing, drying, winnowing and grading. Sticklac is at first crushed and then sieved to remove sand and dust. Crushed lac is then sieved again to clean it of wood particles and dirt. In small factories, sieving is carried out manually but in big or medium sized factories, it is carried out with the help of power operated vibrating screens. After crushing and sieving, the first phase of refining is done by washing with water whereby water soluble colouring matter, vegetable glue and loose foreign

substance as well as most of the dead insects are separated from the resin. Washing can be done manually or mechanically. In manual labouring process, lac is washed in a large vat repeatedly and at the same time rubbing the lac against the rough wall of the vat to break open the insect bodies and dissolving the colouring matter in water. The lac thus cleaned is spread on large, clean, open air floor to dry. After drying; it is winnowed and sieved to get the commercial variety of seedlac.

ii) Manufacture of Hand-Made Shellac*:* When seedlac is prepared from sticklac, it contains 3-7% of foreign matter in the resin. To remove these impurities, further processing is carried out which converts it into shellac or *button lac*. There are two methods for manufacturing of shellac: one is hand-made and the other is machine-made. Hand-made process requires considerable manual skill and long experience.

In hand made process, the furnaces used for the melting operations is called the bhatta (Charcoal oven). General capacity per bhatta per day of 8hrs is 40 kg. The staff pattern is the same at every bhatta viz a *Karigar*, a *Pheriwaya* and a *Bhilwaya*. Refining every ton of sticklac involves on an average 92.1 man-days which indicate the need to modernize/improve the efficiency of processing units. Another variety of handmade shellac is *buttonlac*, which is manufactured by the molten lac on to a piece of galvanized iron sheet to form circular discs or buttons 2-3 inches in diameter and $1/4^{th}$ inches thick.

Seedlac after proper blending is filled into a long narrow cloth bag. One end of the bag is held in front of a wood charcoal fire burning in a *bhatta*, and the other end attached to a windlass, is gradually turned. Seedlac is then melted by the heat of the oven and is forced out through the cloth, pressed by the windlass and at the same time, the impurities are left inside the bag. The molten lac scraped out by one workman. Then he mixes it thoroughly to ensure uniformity, and transfers it to a block of molten lac on the surface of a smooth porcelain cylinder, filled with hot water. Another workman, with the help of a strip of palm leaf spreads the molten mass on the cylinder and pulled off as a sheet of about $1/8^{th}$ inch thickness. The man who spreads the molten lac on the porcelain cylinder, and stretches it into thin sheets is called *Bhilwaya*. Standing in front of the fire, another workman manipulates the sheet as heat is given to the sheet uniformly and then he stretches it with his hand and knees. Finally taking a grip with his hands, legs and mouths he pulls it in all directions to produce very thick sheet of about $5^{/}x4^{/}$ and varying thickness from $1/16^{//}$ at edges to about $1/10^{//}$ in the center. The sheet is removed from the heat, which quickly cools and hardens. The thicker edges are broken off and remelted while the rest is crushed into small pieces and sold in the market as hand-made shellac.

The infusible material left within the cloth bag during shellac manufacture is collected and formed into circular discs of about 2.5 cm thick and 15-20 cm in diameter. This is known as *kiri.* Garnet lac is prepared from this material, which is dark coloured but pure. This kind of lac is used in such lac consuming industries where colour of the resin is immaterial. A part of residue left inside the cloth bag is extracted by boiling with *saji* and made into cakes called *pashewa* which sell at somewhat less than half the rates obtainable for shellac.

Waste water containing fine lac-dusts, after crushed *stick lac* is washed in the factories, flows through artificial reservoir or pool is created by barriers of stone boulders and small earthen barrages to preserve the coloured waste water of lac. Waste coloured water of the reservoir being filtered through fine linen- the filtrate dust of lac is known as *kuni*. Kuni and pashewa are used as raw material mainly in the local manufacturers of lac ornaments, bangles, toys, common sealing wax and also by cabinet makers for covering up cracks in wood.

iii) Manufacture of Machine Made Shellac:
Machine-made shellac is produced in two different ways- one is heat process where the same principle as in the case of handmade shellac is applied and the second is solvent process where pure shellac is extracted from seedlac by suitable solvents.

In the heat process the separation of pure lac is achieved by melting seedlac by stream heat and squeezing the soft molten lac through filter by means of hydraulic process. The molten lac is then stretched by means of rollers into long and continuous sheets which are broken into pieces to form the machine made shellac under heat process. In the solvent process the separation of insoluble impurities is achieved by dissolving the lac in a suitable solvent, usually industrial alcohol. The solution is then filtered through fine cloth and the alcohol is recovered by boiling the solution. The molten shellac is then stretched to the required thickness on a roller followed by stretching machines. The process lends itself to manufacture of different types of shellac containing varying percentage of shellac wax.

[For Process Flow Chart for Seed Lac / Handmade Shellac / Button Lac see Annexure]

4. Cost of raw materials and processing

At the very outset of the discussion on the cost of production it should be pointed out that the accurate cost of production is not very easy to work out. The principal impediment, that deters one, is the fact that majority of the manufacturers do not keep account of cost of production month by month. In this analysis we first find out total cost of production and then subtract value of bye-product, which is obtained at the time of processing. The study covers the year 2012-13.

- ***Cost of Transport:*** The raw material required for the production, sticklac, is available in local *arhat*. The manufacturing unit has to spend some amount for carrying sticklac from *arhat* to his factory, as cost of transport for the raw materials.
- ***Rent for Workshop:*** The manufacturer works generally in his own factory. But, they have some recurring expenses, such as tax imposed by panchayet and cost of annual repair. Here again the manufacturers cannot give actual amount of these recurring expenses.
- ***Wages:*** The manufacturers employ different types of labour on the basis of daily payment. The wages of a group of Bhatta labours (consist of three labour) Rs 500/- and wages of *munish* (male worker) is Rs 160/- and Rs 150/- for female labour or *Kamin*. The wages of other types of labours are fixed at this rate.
- ***Payment for Processing:*** For Bhatta processing charcoal, filter cloth, chemicals are used. Again in press machine operation coal, electricity, fuel, oxalic acid, filter cloth are required.
- ***Interest on Loans*****:** Arhatiyas give loan in terms of sticklac and internal buyer of shellac gives them advance on the basis of forward buying. If the manufacturer fails to obey contract then the advance payment is treated as loan. On the other hand the artisans pay interest to private persons at a rate, varying from 36per cent to 48per cent per annum. The rate of interest raises the cost of production and the price of shellac rises consequently.
- ***Depreciation Charges*****:** It is the general practice to calculate depreciation-charge of a particular unit at a rate varying from 10per cent to 30 per cent per annum.

The price after processing of seedlac is determined by following the rules

Price per kg. of sticklac+ Washing charges . Washing charge is Rs 2.50 per kg. of sticklac

Yield of seedlac

We have prepared cost and profit of producing Buttonlac/ Hand made shellac from 1kg. of sticklac.

Table- 1: Cost and Profit of Producing Buttonlac/ Hand made Shellac from 1kg. of Sticklac.

		Material yield from 1 Kg of Sticklac(Kg.)	Cost per Kg. Of Sticklac Processing (Rs.)	Price of Product /Kg (Rs.)
Sticklac				
Chouri Parta Price = Rs. 360/kg				
Chouri Golden Content = 27.25 Kg.				
Price of per kg Sticklac (= Rs. 27.25/40*360)			**245.25**	
Transport				
Transport Cost is Rs. 8 to 10 per bag of 60 kg. according to the distance.				
Rs. 9 per 60 kg. bag is taken into consideration.				
Transport Cost of per Kg. Stick Lac = Rs. 5/60			**0.15**	
Price of per kg Sticklac after transportation				**245.40**
Sticklac to Seedlac				
Capacity of washer = 8 Maund (320 Kg.)				
Motor of 10 H.P.				
In normal practice, 6 bhora (bag), i.e., 60 X 6 = 360 kg. is fed at a time.				
In a day of 8 hrs. washer can be run twice.				
Cost for washing 360*2 = 720 kg. of sticklac are as follows:				
Sieving, Crushing, Washing				
Labour 4 no. @ Rs. 80 =	320			
Electricity charges =	250			
Caustic Soda 1.5 Kg @ Rs. 42/Kg =	63			
Basket (L.S.)	30			
Drying				
Labour 2 no. @ Rs. 80 =	160			
Sieving, Unwonning				
Labour 12 no. @ Rs. 80 =	960			
Total =	**1783**			
Processing Cost per Kg(Total /720). =			**2.50**	
By-product received from processing of per Kg of Sticklac				
1. Chankpati - 0.0167 kg (**reintroduced in the process**)		**0.0167**		
2. Mollamma Lac - 0.033 Kg. (sold **to market @ Rs. 150/Kg.**)		**0.033**		
Seedlac obtained from per Kg. Sticklac = 27.25/40*1.05+0.0167(Chankpati)= **0.732013 Kg.**		**0.732013**		

Cost per Kg of Seedlac (245.25+.15+2.5)/0.732	= Rs.		**247.9**	**338.66**

Seedlac to Buttonlac		**Material yield from 1 Kg of Sticklac(Kg.)**	**Cost per Kg. Of Sticklac Processing (Rs.)**	**Price of Product /Kg (Rs.)**
Capacity of a Bhatta is 40 kg/day/8hrs.				
Cost of processing 40 Kg. Sticklac are as follows :				
Bhatta Labour @ Rs. 7.75 per Kg. =	310			
Charcoal 28 Kg. @ Rs. 12 per Kg.=	336			
Cloth =	172			
Cloth stitching=	12			
Oxalic acid=	40			
Tin Plate=	40			
Total =	910			
Processing Cost per Kg. =			**22.75**	
By-product received from processing of per Kg of Seedlac				
3. Kirilac - 0.0125 Kg.(**Sold to market @ Rs. 160 per Kg.**)		**0.009**		
Waste processing				
By-product received from further processing cloth bag as per Kg of Seedlac processed				
Cloth bags of 10 bhatta (40 X 10= 400 Kg) processed at a time and the cost of that process are as follows :				
Waste Process 1				
Labour 3 no. @ Rs. 80 =	240			
Caustic Soda 2.5 Kg @ Rs. 30/Kg =	75			
Fuel(L.S.) =	150			
Total =	465			
Processing Cost per Kg. =			**1.16**	
By-product received from per Kg of Seedlac processed:				
4. Dnari Passewa - 0.0125 per kg (**reintroduced in the process**)		**0.009**		
Waste Process 2				
Labour 0.5 no. @ Rs. 80 =	40			
Sulphuric Acid=	15			
Drum (L.S.)=	5			
Total =	60			
Processing Cost per Kg (Rs.60/400). =			**0.15**	
By-product received from per Kg of Seedlac processed:				
Rang Passewa-0.05 per kg. (@ Rs. 70 per kg)			0.04	

	Material yield from 1 Kg of Sticklac(Kg.)	Cost per Kg. Of Sticklac Processing (Rs.)	Price of Product /Kg (Rs.)
Buttonlac obtained from per Kg. sticklac=37/40*0.732013+0.009(Dnari Passewa)=0.686kg			
Cost of Button Lac = Rs. (245.25+.15+2.5+22.75+1.16+0.15)		**271.96**	**396.44**
SELLING PRICE (Price of product/ Material yield from 1 kg of sticklac)		**377.3**	**550.00**
PROFIT:		**105.34**	
Selling Price of by-product 2 = Rs. 150 X 0.033		**4.95**	
Selling Price of by-product 3= Rs. 160 X 0.009		**1.44**	
Selling Price of by-product 5 = Rs. 70 X 0.04		**2.80**	
Total Profit =		**114.53**	
Total Profit / Sales		**30.36%**	
Total Profit / Capital Employed		**42.11%**	

Source: Personal interview from bhatta operating lac manufacturers

Total profit/capital employed can be obtained by dividing total profit by cost of producing buttonlac. Above calculation is based on price level prevailing during 3rd week of October, 2013.

For processing of machine made shellac this calculation is started from 100kg. of sticklac. Total cost of washing is Rs 200. Cost per kg is Rs 2. Seedlac obtained from 100 Kg of sticklac is 75Kg. From processing of shellac from seedlac we obtain 65kg of shellac (conversion rate of seedlac to shellac is about 87%). The yield of shellac from 100kg of sticklac is 55Kg.

The 75kg of seedlac is considered as one charge. Now we calculate the cost of processing of one charge seedlac. As we have stated earlier the necessary machines for processing are Boiler, Press machine (which is operated by electricity), Generator (in case of power failure). Steam coal required in Boiler amounting 100kg, cost is Rs.400. The cost of filter cloth is Rs 50 whereas labour cost is Rs. 150. The press machine is run by electricity. So cost of electricity required in this process is Rs 20. Chemical required for one charge is worth Rs 50. Several types of expenses which are required in the process such as generator at the time of power failure, overhead cost of repairing the machines, workers' bonus etc are worth Rs 60. So total cost of processing of one charge of seedlac into shellac Rs 730 from 100kg. of sticklac. That means per kg. cost of processing shellac is Rs. 7.30. The bye-products obtained in this process are Pasewa (1kg) and Kiri (5 kg). Selling these bye-products total value earned is Rs 175 per charge, which is included in profit.

[For Value Chain Analysis for Processing Shellac from One Kg. of Sticklac see Annexure]

In preparing value chain analysis we follow the same calculation procedure which is adopted in calculating profit earned from making buttonlac. We know raw lac is sold on the basis of chouri parta content which is 68%. So sticklac price will be 68% of chouri-parta price. In this way we get cost of raw materials which is Rs245.25. Transport cost is same for small manufacturers and big manufacturers. Cost of processing seedlac is 247.25 including washing

cost (Rs 2/Kg). Since the yield of seedlac is 0.75kg for per kg. of sticklac, the cost of seedlac per kg. is given in the figure as Rs329.87. Total processing charge of producing shellac from one kg sticklac is Rs(2.00+7.30)= Rs9.30. So cost of producing machine made shellac is (245.25+.15+2.00+7.30) = Rs254.70. The yield of shellac in the machine made process is 0.65 per kg. The cost price of machine made shellac is Rs 391.85. It is sold by Rs 520 per kg. Selling price (Price of product/material yield from 1 kg. of sticklac) is 338. Then total profit is 83.30. By selling by-products Rs 175 was earned which must be entered into the profit. The value of by product obtained from one kg. of sticklac is Rs 1.75. So, total profit is Rs 85.05. Total profit/ capital in this way is 33.39%.

Table-2: Comparison Figure of Producing Buttonlac and Machine Made Shellac(in Rs/Kg)

	Washing charge	Yield of seedlac	Cost of seedlac	Processing charge	Yield of shellac	Cost of shellac	Selling price of	Total profit	Total profit after selling by-products	Profit/ capital	Profit /sale
Buttonlac	*2.50*	*0.73*	*338.6*	*22.75*	*0.69*	*396.44*	*550*	*105.34*	*114.53*	*42.1%*	*30.36%*
M/M Shellac	*2.00*	*0.75*	*329.8*	*7.30*	*0.65*	*391.85*	*520*	*83.30*	*85.05*	*33.4%*	*25.16%*
Difference	*+0.5*	*-0.2*	*+8.8*	*-15.40*	*+0.04*	*+4.59*	*+30*	*+21.96*	*+19.44*	*8.7%*	*+5.20%*

Source- Table-1 & Chart-2

Since selling price of buttonlac is high compared to that of M/M shellac this difference of selling price easily outweighed the difference of processing cost per kg of sticklac. Nevertheless the yield of buttonlac is also higher than that of M/M shellac. Except processing charge the buttonlac enjoyed comparative cost advantage. But machine made shellac manufacturing unit producing shellac in larger scale enjoys processing cost advantage in a big way. They have enough capital to fight against risk and possible losses attached with this industry. The big manufacturers have good network which helps them to take decision regarding whether he sells the finished goods in internal market or foreign market. Small manufacturers are deprived of these facilities.

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Annexure

Chart- 1: Process Flow Chart for Seed Lac / Handmade Shellac / Button Lac

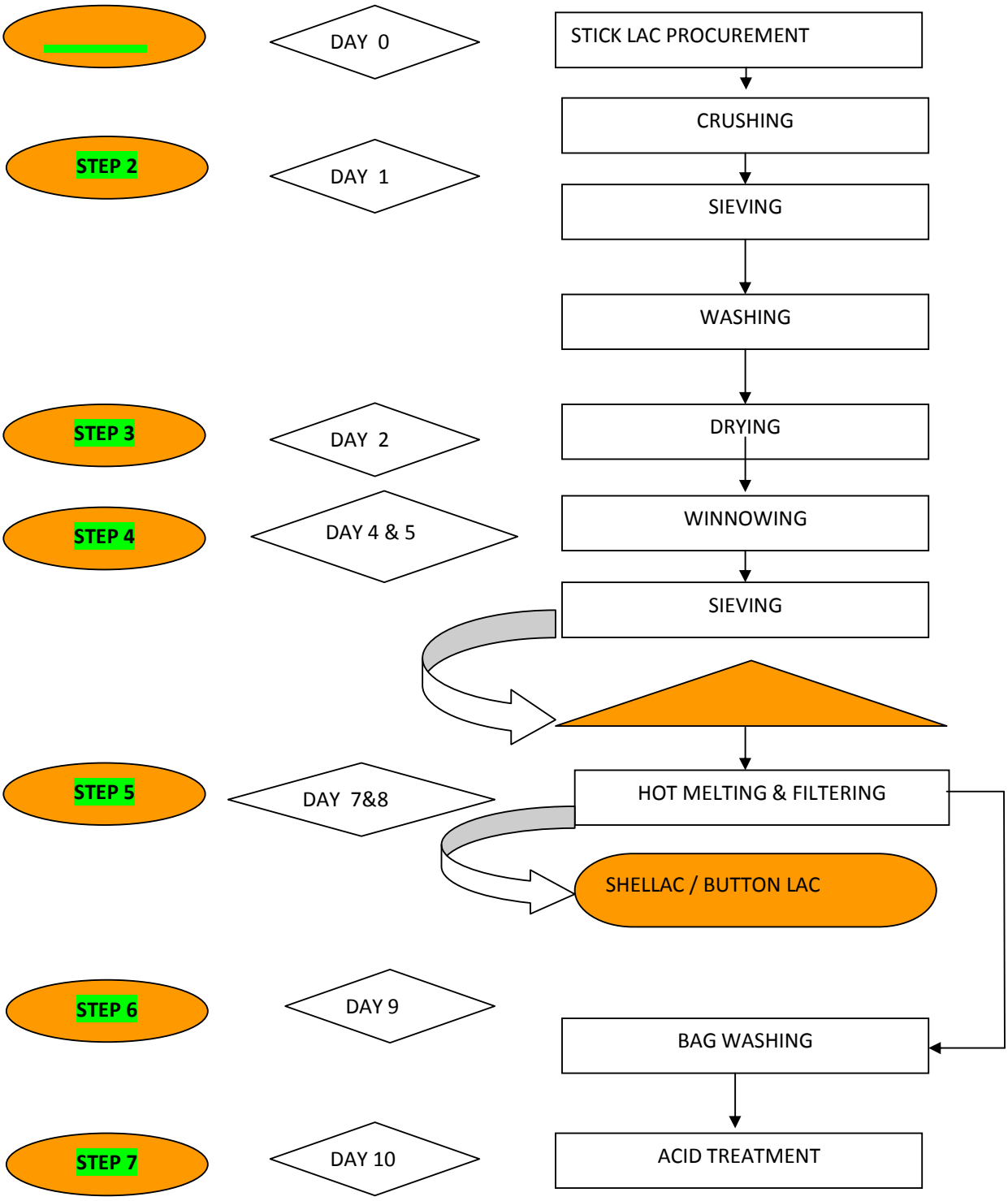
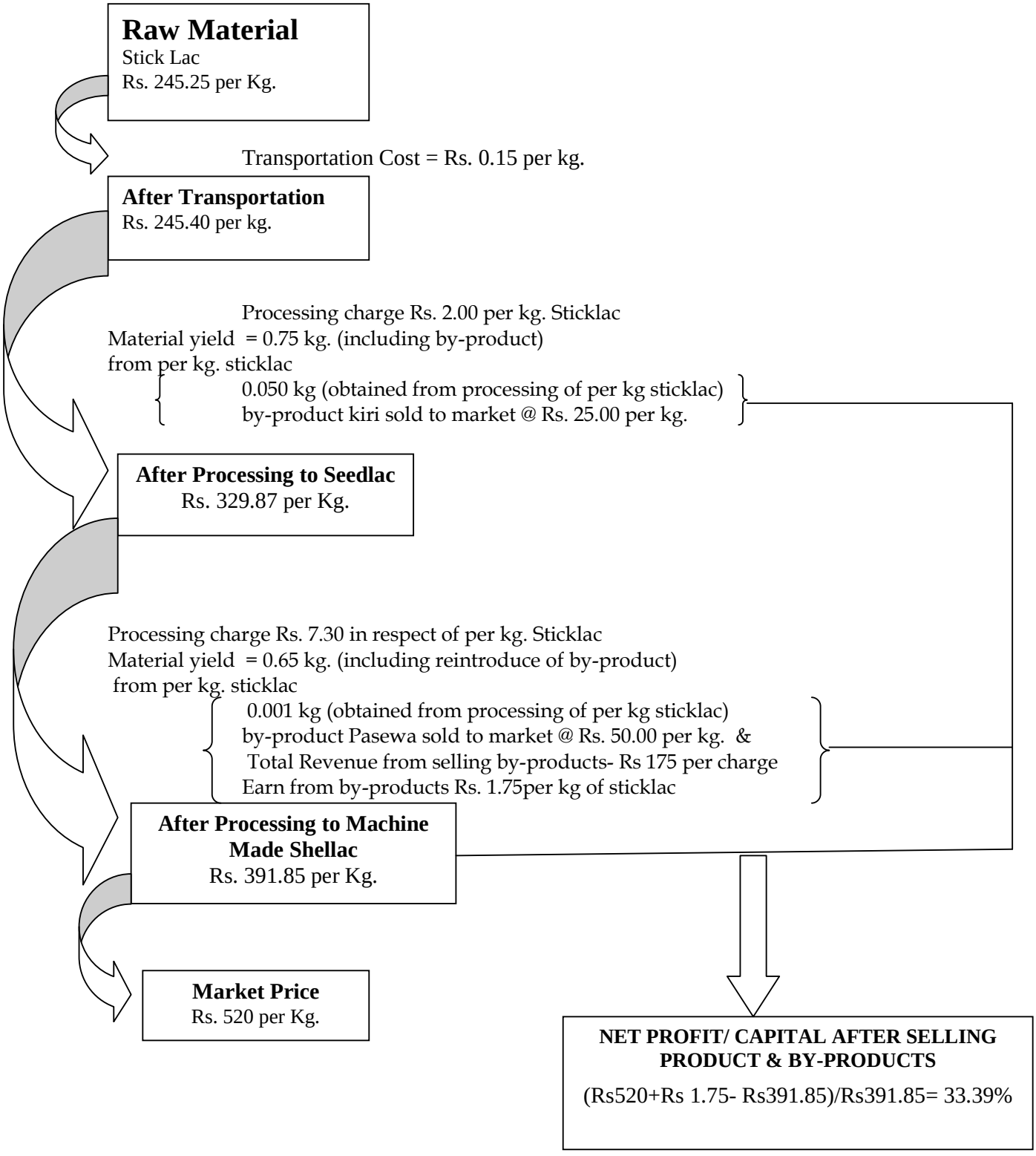


Chart 2: Value Chain Analysis for Processing Shellac from One Kg. of Sticklac



E-Banking in India: An Overview

Brahma Chaudhuri

Abstract
Traditionally, banking activities were confined to acceptance of deposits, granting loans, creation of credit, custodian and agency services. In the present scenario of liberalisation and globalisation, banks offer a wide range of financial services like merchant banking, leasing and term-finance, capital-market related activities and other financial services. Moreover, banks are no longer confined to a particular location or a branch; rather they use a number of platforms to address the needs of its consumers and E-Banking is one such platform for reaching out to consumers. Simply speaking, E-Banking refers to the provision of traditional banking services delivered through an electronic backbone, viz. Internet. In this context, an attempt is made in this paper to give a brief overview of E-Banking in India. The paper is a descriptive analysis of e-banking in India and is based entirely on secondary data. More specifically, the paper seeks to throw light on the concept of e-banking in India and to highlight role of e-banking in Indian economy. The study will also examine the present scenario of E-Banking in India and will identify the opportunities and challenges of e-banking in India.
Key-words: *Banking, E-Banking, electronic, internet, services.*

1. Introduction

Traditionally, banking activities were confined to acceptance of deposits, granting loans, creation of credit, custodian and agency services. In the present scenario of liberalisation and globalisation, banks offer a wide range of financial services like merchant banking, leasing and term-finance, capital-market related activities and other financial services. Moreover, banks are no longer confined to a particular location or a branch; rather they use a number of platforms to address the needs of its consumers and E-Banking is one such platform for reaching out to consumers. Simply speaking, E-Banking refers to the provision of traditional banking services delivered through an electronic backbone, viz. Internet.

Electronic Banking also known as online banking was conceptualised in 1980s. Electronic Banking referred to the use of a terminal, keyboard and TV (or monitor) to access the banking system using a phone line. Online services started in New York, USA in 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufacturers Hanover) offered home banking services using the videotext system. Because of the commercial failure of videotext these banking services never became popular except in

France where the use of videotext was subsidized by the telecom provider and the UK, where the Prestel system was used.

The UK's first electronic banking services was set up by the Nottingham Building Society (NBS) in 1983 .The system used was based on the UK's Prestel system and used a computer, such as the BBC Micro, or keyboard (Tandata Td1400) connected to the telephone system and television set. The system (known as 'Home link') allowed on-line viewing of statements, bank transfers and bill payments. In order to make bank transfers and bill payments, a written instruction giving details of the intended recipient had to be sent to the NBS who set the details up on the Home link system. Typical recipients were gas, electricity and telephone companies and accounts with other banks. Details of payments to be made were input into the NBS system by the account holder via Prestel. A cheque was then sent by NBS to the payee and an advice giving details of the payment was sent to the account holder. BACS was later used to transfer the payment directly. Stanford Federal Credit Union was the first financial institution to offer online internet banking. E-banking in India is a recent phenomenon and it marks a paradigm shift in the traditional way of how banks and financial institutions performed their operations in India.

2. Review of Literature

Daniel (1999) defines electronic banking as the delivery of bank's information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as a personal computer and a mobile phone with browser or desktop software, telephone or digital television. **Raghavan (2006)** opined that at present, over 85% of the finished payment transactions are electronic and traditional way of doing banking at the branch level has relatively little importance to electronic banking users. **Mohan (2006)** remarked that Indian banking is at the threshold of a paradigm shift and a significant development has been achieved by banks in offering a variety of new and innovative e-banking services to customers today, which was not thought of before. However, public sector banks have not been able to harness the benefits of computerization. **Kamakodi et al (2008)** found that a wide gap exists in human service in Indian banking while technology based services are exceeding expectations. **Uppal and Chawla (2009)** found that the customers of public sector, private sector and foreign banks in Ludhiana district of Punjab are interested in e-banking services, but at the same time are facing problems like inadequate knowledge, poor network, lack of infrastructure, unsuitable location, misuse of ATM cards and difficulty to open an account. **Sharma (2009)** opined that the trend towards electronic delivery of banking products and services is occurring partly as a result of consumer demand, and partly because of the increasing competitive environment in the global context. **Kumar and Sinha (2009)** cited various instances of hacking and phishing attacks reported throughout India. **Srinivas (2009)** discussed various e-banking channels and suggested security tips for customers which include changing password frequently, abstaining from revealing PIN either via mails or phone, avoiding cyber cafes for net banking etc. **Mishra (2011)** provided useful tips to ensure safety of IB transactions. IB users are advised not to reply to any mail, phone call or letter, asking for the IB information like login id or password, and not to click on any link provided in any mail, claiming to be the link for the bank's website are the important tips, among others.

3. Objectives of the Study

Against this backdrop, the study revolves around the following objectives:

- To give a brief overview of E-Banking in India.
- To examine the opportunities and challenges of E-Banking in India.

4. Methodology

The study is concerned with conceptual and descriptive analysis of E-Banking in India and is entirely based on secondary data. For the purpose of the study, various articles, journals and books on e-banking have been referred to and the website of Reserve Bank of India and that of other nationalised banks have also been accessed for this purpose.

5. E-Banking: Key Issues

5.1. E-Banking: The Concept

Electronic Banking (E-banking) is a product of e-commerce in the field of banking and financial services. E-banking means any user with a personal computer and a browser can get connected to his bank's website to perform any of the virtual banking functions. In e-banking system the bank has a centralized database that is web-enabled. All the services that the bank has permitted on the internet are displayed in menu. Once the branch offices of bank are interconnected through terrestrial or satellite links, there would be no physical identity for any branch. It would be a borderless entity permitting anytime, anywhere and anyhow banking.

E-banking also known as internet banking offers different online services like:

- Inquiry about information regarding client's account balance and card balance
- Account opening instructions
- Online requests for cheque books
- Card account and balance transfer instructions
- Transaction of foreign exchange
- Recording stop-payment instructions
- Initial Public Offers and investment in mutual funds
- Bill payment, electronic shopping and personal expenses

Mostly, these are traditional services offered through Internet as a new delivery channel. Banks are also offering payment services on behalf of their customers who shop in different e-shops, e-malls etc.

5.2. Types of E-Banking

- Deposits, withdrawals, inter-account transfer and payment of linked accounts at an ATM;
- Buying and paying for goods and services using debit cards or smart cards without having to carry cash or a cheque book;
- Using a telephone to perform direct banking- make a balance enquiry, inter-account transfers and pay linked accounts;
- Using a computer to perform direct banking- make a balance enquiry, inter-account transfers and pay linked.

5.3. Services Offered by Banks

Public sector as well as private sector banks permit customers to interact with them and transact electronically with them. Such services include request for opening of accounts, requisition for cheque books, stop payment of cheques, viewing and printing statements of accounts, movement of funds between accounts within the same bank, querying on status of requests, instructions for opening of Letters of Credit and Bank Guarantees etc. They also offer the facility of receipt, review and payment of bills on-line.

The 'Infinity' service of ICICI Bank Ltd. also allows online real time shopping mall payments to be made by customers. HDFC Bank Ltd. has made e-shopping online and real

time with the launch of its payment gateway. It has tied up with a number of portals to offer business-to-consumer (B2C) ecommerce transactions. The first online real time e-commerce credit card transaction in the country was carried out on the Easy3shoppe.com shopping mall, enabled by HDFC Bank Ltd. on a VISA card.

5.4. Challenges of E-Banking in India

- **Infrastructural Drawback:** For online banking to reach a critical mass, there has to be sufficient number of users and the sufficient infrastructure in place. The communication bandwidth available today in India is not enough to meet the needs of high priority services like e-banking and trading.
- **Security Issues:** There exist a variety of security options for e-banking in India like line encryption, branch connection encryption, firewalls, digital certificates, automatic signoffs, random pop-ups and disaster recovery sites to tackle phishing and cyber crimes. However, this is not enough as there is as yet no Certification Authority in India offering Public Key Infrastructure which is absolutely necessary for e-banking. The customer can only be assured of a secured conduit for its online activities if an authority certifying digital signatures is in place.
- **Privacy issues:** Users of Internet Banking Services are required to fill up the application forms online and send a copy of the same by mail or fax to the bank. A contractual agreement is entered into by the customer with the bank for using the Internet banking services. In this way, personal data in the applications forms is being held by the bank providing the service. The contract details are often one-sided, with the bank having the absolute discretion to amend or supplement any of the terms at any time. For these reasons domestic customers for whom other access points such as ATMs, tele-banking, personal contact, etc. are available, are often hesitant to use the Internet banking services offered by Indian banks.

5.5. Opportunities of E-Banking in India

- The setting up of Credit Information Bureau for collecting and sharing credit information on borrowers of lending institutions online has given a fillip to e-banking.
- Real Time Gross Settlement (RTGS) and National Electronic Funds Transfer (NEFT) helps in transmission, processing and settlements of transactions and instructions in real time and this will be a major factor for the growth of E-Banking in India.
- E-Banking has become a popular channel for retail banking and online securities trading. The bank nowadays provides facilities for online transactions of dematerialised securities and enables fund transfers from broker's account to client's account and vice versa.
- Introduction of Wireless Application Protocol (WAP) telephony and mobile banking also provide a huge opportunity to tap the so far untapped rural population that are out of the traditional banking activities. This will also help in achieving the goal of financial inclusion to a large extent.

6. Concluding Remarks and Recommendations

Electronic banking is widely acknowledged both as a medium of delivery of banking services and as a strategic tool for business development. And as such it has gained wide acceptance internationally and is fast catching up in India with more and more banks entering the e-banking domain.

India is still in the early stages of E-Banking growth and development. Competition and changes in technology and lifestyle in the last 10 years have changed the face of Banking. The changes that have taken place impose on banks tough standards of competition and compliance. In this context, Information technology has played a vital role in the advancement of banking system. The reach of Indian banking to every individual is possible because of the computerization process adopted by banking sector. Information technology has not only simplified the operation but it has also given a great comfort an individual who does not have a good knowledge of IT but need to access banking in an optimum manner.

The declining internet and mobile charges, falling prices of PCs and mobile phones, broadband with access through cable and digital subscriber lines etc. would definitely encourage the boom in E-banking in India. However, it has been hounded by negative issues like identity theft and phishing attacks which are the reason why there are still some customers who are wary of using electronic channels for conducting banking transactions. In this context the following measures have been recommended for effective implementation of E-Banking in India.

Banks should conduct intensive training programmes for the employees so that they get themselves acquainted with the various terms, tools and procedure of e-banking.

- Customer awareness initiatives and programmes should be undertaken by the banks to highlight the importance and necessity of e-banking in modern day world as well as to promote the use of e-banking amongst the mass consumers.
- Banks should identify its core competencies and outsource operations like cyber security department, building IT structure on internet to IT firms in order to ease the burden of its own employees.
- Banks should create and sustain customer, investor and regulator confidence by adopting international standards.
- Regular meetings and discussions should be held between customers and the bank regarding exchange of information on threats and vulnerabilities across the functioning of e-banking.
- Banks should also promote mobile banking as a segment of e-banking.

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