Annual Research Journal of
Symbiosis Centre for Management Studies, Pune

Emerging Trends in the Global Financial Landscape-Approaches, Challenges and Opportunities

From the Editors Desk

It gives me great joy to present the Third Volume of our Annual Research Journal of SCMS, Pune (AJSP). The Journal provides a compilation of well researched and refereed articles in several functional areas of Management, Entrepreneurship and Economics.

Post the global financial crises, the financial landscape has witnessed significant changes; with policy makers and regulators having embarked on an inclusive reform agenda. There is an increased recognition that the high level of inter-connectedness of economies not only leaves the domestic economy uninsulated from the events elsewhere in the world but also of the need for a collaborative and supportive approach between economies. Several crucial aspects including prudential norms, recording and reporting financial information, supervision and control, financial inclusion and enhanced Corporate Governance have been the underlying themes of these reforms.

Against this backdrop, the current issue of the Journal – "Emerging Trends in the Global Financial Landscape-Approaches, Challenges and Opportunities" brings together articles capturing the emerging trends in the global financial landscape through selected works of researchers in the field. The Journal comprises articles that are well articulated and substantive.

We extend our gratitude to all our authors, editors and reviewers who have provided unstinting support at all stages and contributed to the preparation and enrichment of the articles in the Journal. Suggestions that would improve the quality of our Journal are welcome and highly solicited.

Dr Bhama Venkatramani
Director SCMS, Pune
Dean Faculty of Management (SIU)

Message from the Chancellor

The Symbiosis International University always practices and preaches the concept, 'World is One Family' – 'Vasudhaiva Kutumbakam'.

It always promotes friendship, co-operation and understanding between foreign and Indian students. Symbiosis today is the premiere educational institute of Pune and a brand equity in providing quality management education.

The different institutes that come under the umbrella of Symbiosis International University are the agents of change which contributes to the symbiotic growth of the University.

I would like to congratulate the entire team of SCMS on the launch of their second Journal – "*Annual Research Journal of SCMS–Pune*" and for having their second international conference. Research gives birth to new knowledge and answers a lot of existing questions. These kind of conferences are a plethora of knowledge and contribute to the prevalent research culture in the university.

This initiative taken by SCMS Pune will take them forward by leaps and bounds on the path of recognition and reputation. I wish them good luck and success in all their endeavors.

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Prof. Dr S.B. Mujumdar
Founder & President, Symbiosis,
Chancellor, Symbiosis International University

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Profile of the Vice-Chancellor

Dr. Rajani Gupte, the Vice Chancellor of Symbiosis International University [SIU], Pune, completed her doctorate in Economics from the Gokhale Institute of Economics and Politics, Pune. She has more than 30 years of experience in teaching and research at prestigious institutes including Loyala College, Madras and her alma mater the Gokhale Institute. After six years of corporate work experience as a Finance Director, she joined Symbiosis. She was a founding member of Symbiosis Institute of Foreign Trade in 1992 (now Symbiosis Institute of International Business, SIIB) and was Director of SIIB from 2004–12. She was instrumental in establishing SIIB as one of the leading B-Schools in India, and in starting innovative niche MBA programs in Agribusiness as well as Energy and Environment. Under her leadership, SIIB built several active international collaborations for student and faculty exchange and created a successful credit exchange program with a German University.

Dr. Gupte also served as Dean – Faculty of Management, Dean – Academics and later Pro-Vice Chancellor at Symbiosis International University.

A visiting faculty at the Oakland University, School of Business Administration, Michigan, USA, she has also addressed business leaders at Bremen University for Applied Sciences, Germany. Appointed on the WTO Cell set up by the Department of Horticulture, Government of Maharashtra, she was also a member of the International Trade Panel, CII, Western Region. She was the member of the Advisory Board, Chemtech World Expo from 2009 to 2011. She has been a UGC nominee on various committees.

Her research interests relate to World Trade Organisation, International Business and Trade Policy and Non-Tariff barriers. She has participated in several seminars organised by the CII, FIEO, Indo American Chamber of Commerce, Maratha Chamber of Commerce, and other Industry Associations.

Dr Rajani Gupte
Vice-Chancellor
Symbiosis International University

Profile of Principal Director

Dr. Vidya Yeravdekar is the Principal Director, Symbiosis. She is an eminent educationist, internationally renowned for her leadership i n educational policy, governance, and research. Her academic and professional repertoire is as varied as it is distinguished. The pages that list her achievements run long, but suffice it to share glimpses: She completed her specialization in medicine at the B.J. Medical College in Pune,a degree in Law and also has a doctoral degree in the field of internationalization of higher education in India. A member of the Central Advisory Board of Education and former member of the University Grants Commission, she has resolutely advocated for driving higher education forward as a top agenda item. Of special interest to her is the subject of international education. As well as being on the board of several regulatory bodies, such as the Indian Council of Cultural Relations, she has served on a number of high level working groups to set India on the global higher education map. She is also the Executive Director, Symbiosis Centre for International Education. A keen research interest in higher education has taken her on a course of academic and journalistic eminence. Her expert opinion and advice is frequently sought in print and other media.

Dr Vidya Yeravdekar
Principal Director,
Symbiosis

Contents

Financial Literacy Index for College Students

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ABSTRACT

One of the causes of Financial Crisis is identified as lack of Financial Literacy. India is a developing country and we are entering into second phase of Financial Sector Reforms. Integration of our economy with world economy will increase further and so the risk of world crisis impacting Indian economy.

In India there is large unorganized sector and the Government is withdrawing from pension schemes even in organized sector. In absence of any social security scheme, our economy may be in, for a major instability after demographic dividend starts waning after 20/25 years. Thus improvement of financial literacy in the country is imperative for financial wellbeing of individuals as well as for the economy.

The significance of financial literacy as a transformation agent on the financial inclusion agenda of the nation is undisputed in academic as well as practitioner's circle. This paper takes a literature review of definitional and measurement aspects of financial literacy. It makes an attempt to identify the various aspects involved in defining and

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measuring Financial Literacy in Indian context. It also takes a review of Financial Literacy measures being taken in the country.

We propose to arrive at an index of Financial Literacy for college going students. It may be pointer to modification of educational inputs for improvement in Financial Literacy amongst the students.

Introduction

Adequate level of financial literacy is required for financial wellbeing of the individual and that of the family. It impacts short term requirement like day to day money management as well as long term requirement like buying home, children education, and secure retirement. Ineffective money management can also result in behavior that makes consumers more vulnerable to a financial crisis (Braunstein and Welch, 2002).

Insurance and pension plans are important for ensuring security in retired life. This requires knowledge about the markets, financial products and also proper attitude as well as behavioral skills. These activities need budgeting, planning and involve savings and investments.

Indian economy is entering into second phase of financial sector reforms. Consequently it will be integrated with world economy at a greater pace and will face increasing risk of adverse impact of world economic crisis. In this situation, the ability of individuals to make informed financial decisions will be of crucial importance. As Klapper et al. (2012) suggested that improved financial literacy will lead to a more prudent borrower behavior that could reduce financial fragility. Well-informed consumers may also exercise innovation-enhancing demand on the financial sector and play an important role in monitoring the market. This will also help improve transparency and honesty in financial institutions.

In India, we have a large population working in informal sector. Lack of Financial literacy is identified as one of the major causes of financial exclusion by the researchers. Thus it can be inferred that financial literacy will facilitate the process of financial inclusion and bring them into formal sector. Cole et al. (2013) argue that "*drawing the individuals and firms*

working in the informal sectors into the formal financial sector would be one of the fastest ways to foster financial development in emerging markets."

Efforts to improve financial literacy is also an important pathway to increase saving rates and lending to the poorest and most vulnerable consumers, such as those working in informal sectors (Klapper et al., 2012). Therefore developing financial literacy in India is of paramount importance.

In India social security system is very poor and the government is withdrawing from pension schemes in organized sector. Insurance sector in India has not covered significant portion of the population. Diverse sections of the society need different kind of treatments when it comes to financial literacy. In India, there is huge diversity in terms of economic as well as social status of the individuals and community. Each of this section of society would require a different measure of financial literacy. India is having the largest young population in the world. But, education system of the country has been questioned by many researchers. We suspect that in line with general literacy, financial literacy also would be in bad shape. In order to assess the efficacy of developmental efforts, constructing a proper measure of financial literacy is necessary. Keeping this in view, we propose to construct a measure of financial literacy for college students.

Next Section takes review of literature on financial literacy and its measurement. It discusses various measures taken by different stakeholders to promote financial literacy in India. In third section, methodology for developing financial literacy index is discussed and this is followed by discussions in last section.

Literature Review

Definitions of Financial Literacy

In literature the term Financial Literacy is interchangeably used with financial capability and economic literacy (Lusardi, and Mitchell, 2014). Some researchers consider it as a necessary skill which is regarded as ability to get and use financial information, which can be measured through understanding of financial concepts and through financial performance (Mason and Wilson, 2000). According to Murray (2010), it is a set of capabilities such as general literacy, problem solving ability, numerical

ability applied to personal finance. Financial Literacy is relative in the sense that it is specific to socioeconomic conditions of the people and is linked to their specific problems such as exclusion.

Atkinson and Messy (2011), define Financial literacy as *"a combination of awareness, knowledge, skills, attitude and behaviors necessary to make sound financial decisions and ultimately achieve individual financial wellbeing"* However, levels of Financial Literacy can be considered as basic and beyond. Once a person attains basic level, he requires ability, skills, and attitude along with access to financial services for making sound decisions.

Financial literacy involves ability for judgment and discretion (Piprek et al., 2004). Basic financial literacy includes understanding of terms like savings, credit, insurance and budgeting. Financial Literacy means acquiring knowledge, skills, values and habits for successfully managing finances of individuals and family which includes managing earning, spending, saving, borrowing and investing. In essence financial literacy helps people in framing proper responses to situations involving risk and opportunities. It enables people to take informed decisions resulting into financial wellbeing.

National Council on Economic Education (NCEE, 2005) mentions Financial Literacy as "familiarity with basic economic principles, knowledge about the U.S. economy, and understanding of some key economic terms."

OECD (2005) defines Financial Literacy "as *a combination of financial awareness, knowledge, skills, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being." People achieve financial literacy through a process of financial education.* The organization defines Financial education as *"the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being"*.

Lusardi and Tufano (2009) mentions debt literacy with reference to financial illiteracy meaning lack of knowledge in respect of risk mitigation,

about financial instruments such as shares and bonds and inability for numerical calculations.

The President's Advisory Council on Financial Literacy (PACFL, 2008) defined it, as "*the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being*". This definition appears to be inadequate as literature reveals the following as its essential features of financial literacy.

1. Knowledge, 2. Skills for application of that knowledge, 3. Perceived knowledge, 4. Financial behavior, and 5. Financial experiences.

Moreover financial behavior is influenced, not only by knowledge and skills but also by financial experiences and perceived knowledge. Financial experiences in turn impact knowledge, skills and perceived knowledge.

Draft of National Strategy on Financial Education (2012), by Indian Government mentions that "*The main components of financial education are understanding the key financial products one may need throughout one's life; understanding basic financial concepts; developing skills and confidence to be aware of financial risks and opportunities and to benefit from them; making sound financial choices about saving, spending, insurance, investing; and managing debt throughout one's life.*"

Importance of Financial Literacy

Poor people in the society are more vulnerable to health risk and risk of loss of livelihood. Financial literacy helps the poor in avoiding such eventualities and to avoid financial exploitation. In this sense it an important capability for the poor to prevent them from getting into the trap of poverty. "*Financial literacy and financial inclusion are integral to each other and are important because they are integral to attacking poverty. They are two elements of an integral strategy; while financial inclusion provides access, financial literacy provides awareness*" D. Subbarao (2013).

It improves ability of the people in, availing financial services, planning their own finances and optimal utilization of resources which in turn promotes economic development. (Patel, 2005). It is a lifelong process, related to the knowledge and to life situations (Engelbrecht, 2008). Its main characteristic is that basics of it can be improved through teaching

(Cohen et al., 2004). Financial literacy increases confidence and self-control of the people, which in turn facilitates their participation in the formal economic system. It will finally lead to empowerment and well-being.

Lusardi (2004) concludes that financial education programmes for older people have positive impact on their wealth after retirement. The study which is based on data analysis of older households shows that many families which are on the verge of retirement, possess very less or no assets. The study further concluded that retirement seminars can increase level of their savings and assets; especially in respect of those, who are less educated and whose savings are on lower side.

Researchers have concluded that financial literacy is necessary for wellbeing of individuals and for development of economy. However, Willis (2008) has taken contrary view arguing that, there is no a consensus, on the definition of financial literacy as well as on the method of its measurement. Therefore outcome of the studies cannot be taken as a benchmark. Moreover financial literacy programme are entailed with the costs. On the other hand, effectiveness of these programmes is not supported by empirical evidence. The cost benefit analysis of these studies and programmes is required to be done. The cost of running these programs outweighs benefits, because given the complex nature of financial industry; consumers require multidisciplinary knowledge to make them capable enough to take the decision. Financial education will increase the knowledge of consumers, which is may be actual or perceived. Actual knowledge promotes such desirable behavior as explained above. However, perceived financial knowledge is an illusion of being aware and would also promote the same desirable behavior that may result in bad decisions and irreversible financial mistakes.

Contrary view apart, there is a lack of consensus amongst the researchers, as to what constitutes financial literacy. So also relationships between financial education, financial literacy and financial behavior are not fully known. In ultimate analysis, the financial behavior is important. It is an outcome of additional factors such as attitudes and experiences which are personal in nature. In addition to the complexity of financial behavior, the knowledge gaps exist, about the mutual relationship between these factors.

The lack of appropriate data is a major hindrance in understanding the process leading to financial behavior.

Measures Being Taken in India

India has large proportion of financially excluded population. There is also financially included population participating in financial as well in consumer markets. Therefore different approaches are needed depending on the sector of population. The programmes for excluded section are basic and aim at avoidance of exploitation and over indebtedness and eradication of money lending practices in the country.

The areas identified for included sector are; banking, securities market, insurance and retirement planning. In addition to basic knowledge, features of market products are also the learning objectives.

The project "Financial literacy" is undertaken by Reserve Bank of India (R.B.I.) for school and university students, women and senior citizens, in addition to financially excluded section of society. Banks in India have started Financial Literacy Centers (FLCs) throughout the country. In addition to banks, Self Help Groups, Micro Finance Institutions are also involved in promotion of financial literacy through their learning material and websites.

The Insurance Regulatory and Development Authority (IRDA) has launched awareness programme for policy holders giving information about rights and duties of policy holders; and has put in place grievance redressal mechanism. It also organizes seminars for benefit of policy holders.

The Securities Exchange Board of India (SEBI) has been offering certification courses on various market related subjects. It organizes workshops throughout the country on various topics such as, investment, financial planning, risk management and retirement planning. The Pension Fund Regulatory and Development Authority (PFRDA) have opened FAQ section on its website. It has also appointed aggregators for creating awareness in public about pension schemes.

Table 1: Initiatives by Different Stakeholders

Organizations	Initiatives
Reserve Bank of India	• National strategy for financial education • Materials for financial literacy • Directing banks for various initiatives related with financial literacy
Banks	• BC/BF Model • Credit counseling centers
NGOs/MFIs	• SEWA has developed manual for financial literacy, FINO
Educational institutes	• Inclusion of material related with financial literacy in syllabus
Insurance Regulatory Authority of India	• Awareness programmes and Simple messages about the rights and duties of policyholders on television and radio • Annual seminar on policy holder protection and welfare • 'Policyholder Handbooks' as well as a comic book series on insurance • Integrated Grievance Management System (IGMS)
Securities and Exchange Board of India	• Nationwide campaign • Empanelment and training of Resource Persons throughout India • Workshops to these target segments • Investor education programs • Seminars through various stakeholders • Dedicated website for investor education • Study materials
The Pension Fund Regulatory and Development Authority (PFRDA)	• Developed FAQ on pension related topics on its web • Appointment of intermediaries called Aggregators for pension awareness mostly in vernacular languages

Source: Adapted from Singh and Venkataramani, 2014.

Financial education strategy in India, envisages ways of creating awareness and educating consumers about access to financial services, the various types of products and their features, expanding skills to translate knowledge into responsible financial behavior and teaching consumers about their rights and obligations. It aims at enabling informed decision making and

for undertaking retirement planning. The ultimate objective is; active, informed and responsible participation by the people in financial markets.

Measurement of Financial Literacy

Financial literacy is related socio economic environment of the people and culture and general level of literacy. It is also related to their personal finances.

As per Lusardi and Mitchell (2011) financial literacy levels of adults around the world have been measured based on three basic concepts, i.e. understanding and calculation of interest rates, understanding of inflation, and risk diversification knowledge. They have designed a standard set of questions around these ideas and implemented them in numerous surveys in the United States and abroad. The questions have been designed on the basis of four criteria namely simplicity, relevance, brevity and capacity to differentiate, meaning and the rationale behind them is given in Table 2.

Table 2: Details of Criteria Used by Lusardi and Mitchell (2011)

Criteria	*Meaning/Rationale*
Simplicity	The questions should measure knowledge of the building blocks fundamental to decision making in an inter temporal setting.
Relevance	The questions should relate to concepts pertinent to peoples' day-to-day financial decisions over the life cycle; moreover, they must capture general, rather than context-specific, ideas.
Brevity	The number of questions must be kept short to secure widespread adoption.
Capacity to differentiate	The questions should differentiate financial knowledge to permit comparisons across people.

In order to facilitate the sharing of experiences and competence, OECD has set up International Framework for Financial Education. It has developed a method of survey through INFE for measurement of financial literacy amongst adults across the world. The questionnaire contained 19 questions covering knowledge, attitude and behavior. Out of these; substantial number constituted questions on financial knowledge. These related simple or compound interest rates, risk of investment and diversification, inflation .The questions on simple type of financial products were also included. In order to even out the level of difficulty

of questions, hard questions were given multiple choices for answers whereas simple questions were kept open ended. The option of "do not know" was also given.

Heenkkenda (2014) has used: (1) Saving Behavior, (2) Investment and payment mechanisms, (3) Awareness on financial products, (4) Risk Management & pension funds, and (5) Money Management Financial planning Knowledge in measuring financial literacy in Sri Lanka. It revealed that financial literacy is very much diverse across type of settlements. There is diversity across domain knowledge. Scores were high on financial knowledge but scores on risk management were low. It was found that financial literacy was higher amongst male as compared to female. Better the income or literacy levels; higher were the scores. Amongst different age groups scores were higher in age group of 25-34 years. Married people showed higher scores, so also the urban sectors. High level of financial literacy was found amongst families which had only one source of income. The persons having no dependents also scored high. The score were low amongst female, lower income groups and older people.

Behrman et al. (2012), have studied financial literacy amongst Chilean population. In this study, they have added questions regarding Chilean retirement system in addition to the set of questions used by Lusardi and Mitchell (2011), which were used in several international surveys. It was found that the respondents had little knowledge about basic concepts or retirement system. However, the study revealed that financial literacy increases the possibility of contribution to pension savings.

Attempts have been made in the U.S. to measure financial literacy and to understand the cause and effect relationship between financial literacy, education and behavior; amongst college students, adults and older people. It was found that various sections of US population lack different financial skills. Lusardi and Mitchell (2011) observed that financial illiteracy is widespread even in the developed economies and is not related to stage of economic development. They identified facilitators of financial literacy like (1) good at mathematics, (2) experiences, (3) age, (4) gender, (5) occupation, (6) education, (7) ethnicity, and (8) urbanization. Apart from this, different patterns were observed on the basis of self-assessment of financial literacy. Older people rate themselves higher and self-assessment of younger population is near to the actual. So also,

Americans rate themselves higher whereas Japanese tend to rate themselves low.

However there are many discrepancies in the financial literacy measured by these methods. The report of the Financial Literacy and Education Commission (2006) mentions that, "*a systematic method of evaluation of financial literacy programs does not exist.*" Huston (2010) also has identified three major difficulties in developing a standard measure.

1. Lack of common construct.

2. Lack of comprehensive set of questions covering all components of Financial literacy.

3. Lack of guidance for interpretation of the measure.

Methodology

It is revealed through literature that many researchers have concentrated only on knowledge component of financial literacy. However, it is financial behavior which ultimately matters and knowledge as well as attitude influence behavior. This study takes into consideration three aspects of Financial literacy namely, knowledge, attitude and behavior. We have included questions representing all three aspects.

Volpe et al. (2002) have classified the questions as easy, medium and difficult to measure the financial literacy. However different weightages were not given to these questions depending on level of difficulty, meaning there by that level of questions have no bearing on level of financial literacy; which appears to be incorrect. We have adapted their questionnaire and contextualized it to Indian situation.

In order to even out the level of difficulty of questions; Atkinson and Messy (2011) had given hard questions multiple choices for answers whereas simple questions were kept open ended and the option of "do not know" was also given. However these measures do not properly address the issue of "unequal level difficulty" of questions.

In order to resolve this issue, it is necessary to give different weightages to questions depending on the level of difficulty. Respondent correctly answering difficult questions has a better knowledge than the one answering equal number of easy questions and thus should be rated higher.

If different weightages are not given, difficult questions will get equal value as easier ones and justifying the same would be difficult. Categorization of respondents on this basis will thus be incorrect.

We have included questions on knowledge, behavior and attitude and have given different weightage to the knowledge related questions based on their level of difficulty. There are 30 questions (Annexure) on knowledge aspect, and we have given 1, 1.5 and 2 marks to easy, medium and difficult questions respectively.

Table 3: Classification of Knowledge Related Questions as Per Level of Difficulty

Level	Easy	Medium	Difficult
Question Number	6,7,14,15,16,19,22,23, 24,26,30,32,33,34,35	8,10,11,12, 18,21, 25,28,37,40	9,13,17,20,27,29, 31,36,38,39
Total Number of Questions	15	10	10
Wight Assigned	1	1.5	2
Marks	15	15	20

Similarly, there are 5 questions each on attitude and behavior and each question carries maximum 5 marks.

Table 4: Category (area) Wise Marks to Questions

Area (Question number)	Marks
Knowledge (6-35)	50
Attitude (36-40)	25
Behavior (41-45)	25

As the questionnaire is designed for students, the knowledge component is given more weightage as compared to attitude and behavior. Majority of students in India are dependent of their parents for financial support and their financial attitude and behavior are in early stage of life cycle.

The questionnaire emphasizes on four areas namely General personal finance knowledge, Savings and Borrowings, Insurance and Investment. The questions are related to Indian situation and pertain to banking,

securities market, insurance and retirement planning. These are the areas, envisaged under national strategy on financial education.

Conclusion

The level of financial literacy worldwide is observed to be low. Considering the education system in India, we suspect that financial literacy here must be at low level. Moreover, we have a large unbanked population; financial literacy will help in bringing them in formal financial fold. It will favorably affect not only economic aspects of individuals but also social aspects. There are many malpractices and frauds taking place in financial sector. Financial literacy will help the people by preventing them in getting in to those traps. It will act as preventive as well as curative measure for the consumers.

This highlights the need for basic level financial education in the school curriculum and also suitable inputs at college level depending upon their level of financial literacy. The inputs should address attitude and behavioral aspects in addition to knowledge.

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Annexure-1: Questionnaire

Survey of Personal Financial Literacy

I. About Yourself

1. Name:…………………………..

2. What is your age?
    A. 18-23
    B. 24-29
    C. 30-35
    D. 36-40
    E. Above 40.

3. What is your sex? A. Male, B. Female, C. Do not want to disclose.

4. What is your educational qualification:
    A. Secondary (10th Standard)
    B. Under-Graduate
    C. Graduate
    D. Post-Graduate
    E. Ph.D.

5. Which best describes your or your family's personal income last year?
    A. Below 2.5 Lakh
    B. 2.5 to 5 Lakh
    C. 5 to 7.5 Lakh
    D. 7.5 to 10 Lakh
    E. Above 10 Lakh.

II. General Personal Finance Knowledge

Note: Level of difficulty for questions: (E: Easy, M: Medium, D: Difficult)
(Answer **Bold** marked are right answers)

6. Personal finance literacy can help you (E)
    A. Avoid being victimized by financial scams.
    B. Buy the right kind of insurance to protect you from catastrophic risk.

    C. Learn the right approach to invest for your future needs.
    D. Lead a financially secure life through forming healthy spending habits.
    E. Do all of the above.

7. Personal financial planning involves (E)
    A. Establishing an adequate financial record keeping.
    B. Minimizing expenses.
    C. Preparing plans for future financial needs and goals.
    D. Both A and C.
    E. All of these.

8. The most liquid asset is (M)
    A. Money in a fixed deposit account.
    B. Money in a saving account.
    C. A car.
    D. A computer.
    E. A house.

9. Your net worth isthe difference between your (D)
    A. Expenditures and income.
    B. Liabilities and assets.
    C. Cash inflow and outflow.
    D. Bank borrowings and savings.
    E. None of the above.

10. You are not overspending if (M)
    A. You issue cheques for more than what you have in your account.
    B. Your monthly wages are Rs. 3,000 and you are spending Rs. 3,500.
    C. You frequently receive calls from debtors.
    D. Your monthly debt payment is 30% of your take-home pay.
    E. None of these.

11.is not a cost of taking an apartment on lease (M)
    A. Security deposit.
    B. Monthly rental payment.
    C. Expenses incurred for non-compliance of lease terms.
    D. Medical expenses of your friend who fell and broke his arm in the apartment.

E. Security deposit retained by the landlord for damages to property beyond normal wear and tear.

12. If you signed a twelve month lease for Rs. 3,000/month but never occupied the apartment. Notice of one month is given as per the contract. You legally owe the landlord: (M)
    A. Your security deposit.
    B. Your first month's rent of Rs. 3,000.
    C. Your twelve month's rent of Rs. 36,000.
    D. Nothing.
    E. Whatever the landlord requires.

13. Bank account reconciliation involves (D)
    A. Balancing bank statement with your checkbook records to determine if there are errors.
    B. Reconciling current bank statement with the previous month's statement to determine if there are errors.
    C. Subtracting outstanding checks to your checkbook balance to determine if your checks have been properly processed.
    D. Adding outstanding checks to your checkbook balance to improve your credit standing.
    E. None of the above.

III. Savings and Borrowing

14. Suppose you had Rs. 100 in a savings account and the interest rate was 4% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? (E)
    A. More than Rs. 104
    B. Exactly Rs. 104
    C. Less than Rs. 104
    D. Do not know
    E. Refuse to answer.

15. Imagine that the interest rate on your savings account was 4% per year and inflation was 6% per year. After 1 year, how much would you be able to buy with the money in this account? (E)
    A. More than today
    B. Exactly the same

    C. Less than today

    D. Do not know

    E. Refuse to answer.

16. You have just graduated from college and found a job earning Rs. 4,00,000 per year. You will pay Rs. 6,000 per month for five years for education loans. What should you do to improve your financialhealth? (E)

    A. Cut expenses and use your savings to pay down debt.

    B. Keep the same spending pattern as in the past.

    C. Apply for a consumer loan for a new car.

    D. Use your credit card to pay for a vacation in the Switzerland.

    E. None of the above.

17. Your savings accounts in a Public Sector bank are insured by (D)

    A. Deposit Insurance Corporation to the maximum amount of Rs. 1,00,000 per depositor.

    B. LIC to the maximum amount of Rs. 100,000.

    C. GIC to the maximum amount of Rs. 50,000 per account.

    D. IRDA to the maximum amount of Rs. 100,000.

    E. None of these.

18. If you invest Rs. 1,000 today at 8% for a year, your balance in a year will be (M)

    A. Higher if the interest is compounded daily rather than monthly.

    B. Higher if the interest is compounded quarterly rather than weekly.

    C. Higher if the interest is compounded yearly rather than quarterly.

    D. Rs. 1,040 no matter how the interest is computed.

    E. Rs. 1,000 no matter how the interest is computed.

19. Which of the following investments require that you keep your money invested for a specified period or face an early withdrawal penalty? (E)

    A. Fixed deposit.

    B. Savings Accounts.

    C. National Saving Certificates.

    D. Current Accounts.

    E. None of these.

20. Which of the following statements is TRUE about the floating rate on housing loan? (D)

    A. It is the actual rate of interest paid over the life of the loan.
    B. It is fixed for a year.
    C. It is a good measure of comparing loan costs.
    D. It takes into account all charges on loan account,
    E. None of the above.

21. You can receive your credit report from (M)
    A. CIBIL
    B. A commercial bank
    C. Post Office
    D. University
    E. Retail Store.

22. Which is FALSE concerning credit cards? (E)
    A. You can use your credit card to receive a cash advance.
    B. If your credit limit is Rs. 10,000, and you utilize a credit Rs. 4,000, then interest would be charged on Rs. 10,000.
    C. The rate of interest on your credit card is normally higher than you can earn on a deposit.
    D. A credit card company will not charge you interest if you pay off the entire balance by the due date.
    E. You cannot spend more than your line of credit.

23. An overdraft (E)
    A. Occurs when you write a Rs. 1,000 cheque when you have Rs. 500 in your account.
    B. Is a stop-payment order written by the payee.
    C. Will result in fines.
    D. All of the above.
    E. Both A and C.

24. You will improve your creditworthiness by (E)
    A. Visiting your local commercial bank.
    B. Showing no record of defaults.
    C. Paying cash for all goods and services.
    D. Borrowing large amounts of money from your friends.
    E. Donating money to charity.

25. If you co-sign a loan for a friend, then (M)
    A. You become responsible for the loan payments if your friend defaults.

B. It means that your friend cannot receive the loan by himself.
C. You are entitled to receive part of the loan.
D. Both A and B.
E. Both A and C.

IV. *Insurance*

26. The main reason to purchase insurance is to (E)
    A. Protect you from a loss recently incurred.
    B. Provide you with excellent investment returns.
    C. Protect you from sustaining a future loss.
    D. Decrease the chances of accidents.
    E. Improve your standard of living by filing fraudulent claims.

27. Auto insurance companies determine your premium based on (D)
    A. Age of insured.
    B. Record of accidents.
    C. Type and age of vehicle.
    D. Completion of a driver education course.
    E. All of the above.

28. The main reason to purchase medical insurance is to (M)
    A. After buying medical insurance, you are normally covered for pre-existing conditions.
    B. You have a better chance to choose doctors.
    C. Compensate for the future medical expenses.
    D. A policy purchased by the individual is cheaper than one purchased through a group.
    E. None of the above.

29. ……….would not ordinarily be covered under a homeowners policy. (D)
    A. War
    B. Earthquake
    C. Flood
    D. Your being sued by someone for slander
    E. All of the above.

30. You have a better chance of resolving a complaint against an insurance company by bringing the issue to a government agency at the (E)

A. Court.
B. Grievance Redressal Officers, GRO, of all insurance companies.
C. Grievance Redressal Cell of the Consumer Affairs Department of IRDA.
D. All of the above.
E. None of the above.

31. Term Insurance Means (D)
   A. It is the policy wherein the insured gets death benefit if any contingency happens within the policy term.
   B. The insured is, however, not entitled to receive any survival benefit if he outlives the policy term.
   C. These plans are relatively cheaper than endowment policies, money back policies and ULIPs.
   D. All of the above.
   E. None of the above.

32. Microinsurance is meant for (E)
   A. Poor People
   B. Rural Area
   C. Urban Area
   D. Involves Small amount
   E. Both A and D.

33. Agriculture related Insurances are(E)
   A. Crop Insurance
   B. Livestock Insurance
   C. Both A and B
   D. None of the above.

V. Investments

34. Please tell me whether this statement is true or false. "*Buying a single company's stock usually provides a safer return than a stock mutual fund.*" *(E)*
   A. True
   B. False
   C. Do not know
   D. Refuse to answer

35. Assume you're in your early twenties and you would like to build up for a secure retirement in next 30 years. Which of the following approaches should not be in your plan? (E)
    A. Start to build up your savings account at a commercial bank.
    B. Save money in fixed deposit accounts.
    C. Put monthly savings in a diversified growth mutual fund.
    D. Invest in Pension Schemes.
    E. None of the above.

36. If interest rates rise, the price of a Government bond will (D)
    A. Increase.
    B. Decrease.
    C. Remain the same.
    D. Be impossible to predict.

37. A high-risk and high-return investment strategy would be most suitable for (M)
    A. An elderly retired couple living on a fixed income.
    B. A middle-aged couple needing funds for their children's education in two years.
    C. A young married couple without children.
    D. All of the above because they all need high return.
    E. None of the above because they are equally risk averse.

38. Which of the following is FALSE? (D)
    A. As shareholders of a mutual fund, you have a right to tell fund managers what securities to buy.
    B. A mutual fund is a diversified collection of securities used as an investment vehicle.
    C. A mutual fund is an investment corporation that raises funds from investors and purchases securities.
    D. Your ownership in a mutual fund is proportional to the number of shares you own in the fund.
    E. None of the above.

39. Which of the following is false about 'Systematic Investment Plan'? (D)
    A. It works on the principle of regular investments.

B. It is an investment strategy wherein an investor needs to invest the same amount of money in a particular mutual fund at every stipulated time period.

C. It enables an investor to buy more units when the price falls and fewer units when the price rises.

D. It is riskier than one time investment in equity market.

E. None of the above.

40. If other factors remain the same, U.S. dollar value of a Indian fund will be (M)

A. Higher if the dollar's value rises against that of the Indian Rupee.

B. Lower if the dollar's value rises against that of the Indian Rupee.

C. Unchanged if the Indian Rupee's value rises against that of dollar.

D. Lower if the Indian Rupee's value rises against that of dollar.

E. Impossible to determine if exchange rate changes between Rupee and dollar.

VI. Personal Finance Opinions and Decisions

41. Do you maintain financial records?

A. Maintain very detailed records. (5)

B. Maintain minimal records. (2.5)

C. Maintain no records. (0)

42. What do you do with your pocket money?

A. Spend it fully (0)

B. Save a portion of it in the bank (5)

C. Save it in home (2.5)

43. How often you ask for extra money from your parents

A. Once in a month (2.5)

B. 2-3 times in a month (0)

C. Never (5)

44. How often do you borrow?

A. Never (5)

B. Once in a month (2.5)

C. 2-3 times in a month (0)

45. Do you intimate your parents about the expenditures at college in advance?
    A. Yes (5)
    B. No (0)
    C. Sometimes (2.5)

Using the scale given below please rank the importance of items numbered for questions 36 to 40.

A	B	C	D	E
Very Important (5)	Somewhat Important (4)	Not Sure (3)	Somewhat Unimportant (2)	Very Unimportant (1)

46. Maintaining adequate financial records. (E)

47. Spending less than your income. (E)

48. Maintaining adequate insurance coverage. (D)

49. Planning and implementing a regular investment program. (M)

50. Planning for retirement. (M)

Analysis of Financial Performance of Banks in India

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ABSTRACT

Business cycles are not new to the Indian economy. In last ten years India witnessed two major phases of business cycle. High growth tide lifted all boats and high revenue high profits were taken for granted. The last four years have been the phase of recession. Banking industry which was growing at a high growth of +30% now is struggling to achieve 19% growth. This paper is an attempt to analyze performance of five major public, private and foreign sector banks with principle component analysis on the financial parameters. The weights are assigned on the basis of importance of the parameters on financials.

Keyword: Banks, Financial Ratios, High Growth Years, Recession

Introduction

Indian economy has been going through recession for last couple of years. The growth momentum achieved during 2004-08 has been lost. Indian economy is struggling to maintain the GDP growth of 5%. In this scenario, banking sector has been facing reduced demand for credit. The high inflation years of 2010-2012 compelled RBI to keep policy rates at

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higher levels. The high growth years saw goldilocks period where inflation was low and growth rate was high. The scenario changed in 2009 when GDP growth rate dipped. The expansionary fiscal policy was used by the government to boost the growth rate. If anything it increased inflation in the economy. Fiscal prudence was needed and with the fear of credit agencies reducing India's ranking to junk status, government reduced it expenditure. This resulted in further reduction in growth.

Banking sector has been suffering since the current crisis stated from collapse of major banks and financial institutions in the western economies. The lack of trust in banking sector is death bell. Couple of new private sector banks suffered more due to this lack of trust of people. This paper is an attempt to find out how banks have performed on financial parameters during last 5 years compared to high growth years. Financial performance of banks is compared in two time periods: (1) High growth years of 2004-08, (2) Low growth years of 2009-2013.

Review of Literature

Many studies have undertaken by researchers on the performance of Indian commercial banking. The studies have focused on ratio analysis, CAMEL rankings, liquidity, and profitability and so on. There have been studies which prove that there has been significant difference in performance of public and private sector banks (Tatuskar, Svetlana, 2010, Makkar, Anita; Singh, Shveta, Sharma, Vijay Kumar; Kumar, Anuj 2013). The other studies have shown that non-performing assets have been rising in recent years (Bansal Disha 2010, Mishra, Akshay Kumar 2013). The banking services in retail segment have also improved over the last couple of years (Haque, Imamul 2011). The analysis of banks has not been done on the basis of economic cycles. The impact of recession on Indian banks has been analyzed in current paper. The principle component analysis is applied on financial parameters of banks. The resultant 11 parameters are compared between two periods of time.

Hypothesis

Ho: There has been no difference in performance of Indian banks in two time periods (2002-08) and (2009-13).

H1: There has been a difference in performance of Indian banks in two time periods (2002-08) and (2009-13).

Methodology - Data Analysis

The current study has 15 banks which are chosen from all reporting banks to RBI. The banks are selected on the basis of two parameters.

1. Types of banks (Public, Private and Foreign Banks)
2. First 5 banks from each category on the basis of total funds

The banks considered for the study are SBI, PNB, BOB, BOI, Canara bank from Public sector banks. ICICI, HDFC, AXIS, DCB and IndusInd Bank from private sector banks. CITI, SCB, HSBC, DBS and Deutsche bank from foreign sector banks.

The data is collected from each years' RBI publications.

The summary of Principle Component Analysis is given in Table 1.

The 55 financial parameters are compared and 11 major components are studied for the analysis. The parameters are Deposits, Advances, Profit, Interest Income, Other Income, total funds, Gross NPAs, Net NPAs, Net Worth, and Total assets.

The data is collected for the said 11 parameters from 2003 to 2013. The data is divided in period 1 as 2003-2008 and period 2 as 2009-2013.

The summary of mean values of all parameters is given in the Tables 2, 3 and 4.

Results and Findings

Standard two sample T test

The parameters mentioned for principle component are divided in two time periods

(A) The high growth years of 2003 to 2008

(B) The recessionary phase from 2009 to 2013.

The mean values are compared on standard two sample T test with 95 % confidence interval with the null hypothesis of there has been no significant difference between two time periods.

Table 1: Financial Parameters Compared for Principle Component Analysis

		FA1	Method	Principal	Rotation	Varimax	No. of Factors	15.000	SS
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Deposits	D	0.972							0.123
Advances	A	0.980							0.110
Profit	P	0.950							
Interest Income	II	0.990							
Other Income	OI	0.948							
Cash-deposit ratio	CDR		0.175		0.469		-0.102	-0.119	
Credit-deposit ratio	CRDR	0.124	0.183			-0.154			
Investment-deposit ratio	IDR	-0.208		-0.173			-0.204		-0.857
(Credit + Investment)-deposit ratio	CIDR		0.144	-0.131			-0.125		-0.567
Ratio of deposits to total liabilities	DTL	0.140	-0.205	0.274	-0.250		0.183		0.474
Ratio of term deposits to total deposits	TDPD	-0.203			-0.178	-0.198		0.214	
Ratio of priority sector advances to total advances	PATA		-0.139			0.466	0.197	-0.140	
Ratio of term loan to total advances	TLTA	0.101	-0.171	0.169		-0.589	0.273	-0.131	0.126
Ratio of secured advances to total advances	SATA	0.142	-0.189	0.308	-0.545	-0.231		0.168	
Ratio of investments in non-approved securities to total investments	NASTI					-0.175		-0.127	-0.521
Ratio of interest income to total assets	IITA			0.924			0.144		0.127
Ratio of net interest margin to total assets	NIMTA		0.470		0.535	0.133	0.389		

		FA1	Method	Principal	Rotation	Varimax	No. of Factors	15.000	SS
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Ratio of non-interest income to total assets	NIITA	-0.208	0.268		0.634	-0.129	-0.661		
Ratio of intemediation cost to total assets	ICTA	-0.229			0.927				
Ratio of wage bills to intemediation cost	WBIC	0.316			-0.272	0.806		0.114	0.169
Ratio of wage bills to total expense	WBTE		0.110	-0.299	0.389	0.795	0.159		
Ratio of wage bills to total income	WBIT		-0.140	-0.194	0.283	0.852	0.233		0.119
Ratio of burden to total assets	BTA		-0.370	0.127		0.221	0.873		
Ratio of burden to interest income	BII		-0.326			0.160	0.888		
Ratio of operating profits to total assets	OPTA	-0.126	0.687		0.436		-0.311		
Return on assets	ROA		0.861		0.219	-0.102		-0.154	
Return on equity	ROE		0.879	0.133	-0.133			-0.119	
Cost of deposits	COD	0.176	-0.226	0.716	-0.405	-0.164			
Cost of borrowings	COB	-0.119		0.109		0.121			
Cost of funds	COF		-0.234	0.800	-0.295		-0.152		
Return on advances	RA		0.150	0.803	0.278	-0.172			
Return on investments	RI	-0.120	0.274	0.248	-0.113			0.173	
Return on advances adjusted to cost of funds	RACF	-0.113	0.325	0.258	0.505	-0.182	0.173		
Return on investments adjusted to cost of funds	RICF	-0.161	0.425	-0.378	0.121		0.132	0.115	

		FA1	Method	Principal	Rotation	Varimax	No. of Factors	15.000	SS
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Business per employee (in Rs.lakh)	BE		0.170	-0.159		-0.134		-0.150	-0.168
Profit per employee (in Rs.lakh)	PE	-0.140	0.493	-0.140	0.171		-0.202		-0.314
Capital adequacy ratio	CAR			-0.138	-0.146			-0.143	
Capital adequacy ratio - Tier I	TI			-0.136				-0.118	
Ratio of net NPA to net advances	NPANA		-0.100				-0.340	0.455	
GNPA to Advances ratio	GNPATOAD		-0.383	0.111		0.139		0.620	
NET NPAs to Advances ratio	NPATOAD		-0.180	0.118				0.943	
Net Interest to Total Assets	NIITOTA			0.854			0.107	0.285	0.166
Net Profit Margin	NPM		0.917	-0.149				-0.203	-0.114
Return on Net Worth	RONW		0.874	0.110	-0.151			-0.124	
Profit to Total Funds ratio	PTOTF		0.876		0.251		-0.132	-0.109	
Profit to Total Assets	PTOTA		0.925		0.185		-0.156	-0.134	
Advances to Total Assets ratio	ATOTA	0.353		0.259	-0.213		0.247		0.620
NET NPAs to Total Assets	NPATTA		-0.177	0.120	-0.128			0.935	0.153
CASA percentage	CASA	0.159	0.248	-0.161	0.778	0.103			
Total funds	T. Fund	0.984							
Total income	T.Income	0.991							
Gross NPAs	GNPA	0.934						0.140	
Net NPAs	NNPA	0.927						0.182	
Net Worth	NW	0.944							
Total assets	T. Assets	0.990							

Source: Calculated by researcher.

Table 2: The Mean Values of Principle Component Analysis Factors Public Sector Banks

Bank	SBI	SBI	PNB	PNB	BOB	BOB	BOI	BOI	Canara	
Period	1	2	1	2	1	2	1	2	1	2
Deposit	389126	945301	115483	308627	98558	319570	96371	283681	111415	279577
Advance	254387	768866	73098	237181	60763	232505	67934	212539	72417	198697
Profit	4460	10472	1397	4212	950	3802	1005	2532	1298	3054
Interest Income	36368	88470	9851	29177	7800	23708	7720	23272	9267	24747
Other Income	7054	14773	1510	3740	1451	3085	1575	3079	1679	2811
Total Funds	416457	1059797	118604	335048	100727	337859	102069	307959	112261	292690
Total Income	43422	103244	11362	32918	9251	26793	9341	26351	10744	27559
GNPA	11973	30262	3873	6508	2988	3968	2866	5588	2111	3627
NNPA	5759	14108	630	2994	932	1515	1394	2930	1110	2863
Net Worth	28247	74343	8222	22874	7114	21694	5580	17978	7249	18896
Total Assets	504282	1228672	136917	371788	115387	371715	114867	337755	128534	321393

Mean values of each parameter for 2003-2008 (Period 1) and 2009-2013 (Period 2).

Table 3: The Mean Values of Principle Component Analysis Factors Private Sector Banks

Bank	ICICI	ICICI	AXIS	AXIS	HDFC	HDFC	DCB	DCB	IndusInd	IndusInd
Period	1	2	1	2	1	2	1	2	1	2
Deposit	142686	238815	42692	184125	52333	212350	4273	5948	14100	35932
Advance	129070	231971	25165	139005	33416	163967	2613	4576	9139	28373
Profit	2442	5544	503	3427	860	4202	-25	2.412	123	587
Interest Income	15891	31277	3238	17360	4855	23074	366	654	1238	4189
Other Income	4893	7514	816	4688	1086	4848	95	111	270	819
Total Funds	185021	350144	45447	210454	55608	229648	4507	6819	14996	42023
Total Income	20084	38792	5011	22049	6748	27922	1699	765	2597	5008
GNPA	4128	9649	349	1602	518	1966	217	268	307	315
NNPA	1576	2978	203	466	130	427	49	70	240	116
Net Worth	20430	56670	3256	20234	5449	25538	316	736	917	4096
Total Assets	232589	434958	52345	239453	70346	284264	5174	7881	17069	47904

Mean values of each parameter for 2003-2008 (Period 1) and 2009-2013 (Period 2).

Table 4: The Mean Values of Principle Component Analysis Factors Foreign Sector Banks

Bank	CITI	CITI	SCB	SCB	HSBC	HSBC	Deutsche	Deutsche	DBS	DBS
Period	1	2	1	2	1	2	1	2	1	2
Deposit	28600	58810	26685	54875	24747	55622	5524	16224	1915	9687
Advance	23615	43261	22782	49153	16724	29936	3789	14186	891	8192
Profit	828	1819	1004	2157	575	1509	208	672	27	255
Interest Income	3312	7172	3213	6940	2558	5996	673	2088	211	1421
Other Income	1236	2102	1085	2840	993	2109	599	900	8	198
Total Funds	36064	81245	33099	66264	28946	65102	10436	20774	2514	20080
Total Income	5332	9274	5072	9780	4510	8105	2433	2988	1526	1619
GNPA	453	1224	611	2078	445	1115	24	193	5	197
NNPA	263	703	250	524	97	304	3	50	3	96
Net Worth	4738	14670	4583	13647	4518	13436	1755	5897	606	2087
Total Assets	47381	113829	46532	106868	40424	98319	13277	30216	3447	26429

Mean values of each parameter for 2003-2008 (Period 1) and 2009-2013 (Period 2).

The Table 5 lists the p values at 95% confidence interval for the given parameters.

Table 5: P Values of Two Sample T Test of Selected Banks of Principle Component Factors

Bank	Deposits	Advances	Profit	Interest Income	Other Income
SBI	0.0001	0.0004	0.0005	0.0006	0
PNB	0.0004	0.0004	0	0.0011	0
BOB	0.0013	0.0006	0.0002	0.0017	0.0001
BOI	0.0004	0.0004	0.001	0.0005	0.0002
CANARA	0.0005	0.0002	0.0002	0.0011	0.0003
ICICI	0.0412	0.0199	0.0074	0.01	0.0324
AXIS	0.0003	0.0004	0.0005	0.0011	0.0001
HDFC	0.0003	0.0004	0.0016	0.0007	0.0003
DCB	0.0557	0.0149	0.5915	0.0079	0.4072
IndusInd	0.0031	0.003	0.0133	0.0053	0.0053
CITI Bank	0.0005	0.0046	0.0243	0.0014	0.0859
SCB	0.0004	0.0009	0.0024	0.0009	0.0004
HSBC	0.0004	0.0148	0.0059	0.001	0.0066
DEUTSCHE	0.0011	0.0018	0.003	0.0006	0.0281
DBS	0.0032	0.0064	0.0001	0.0045	0.0021

Source: Calculated by the researcher

Bank	Total Funds	Total Income	Gross NPA	NNPA	Net Worth	Total Assets
SBI	0.0001	0.0003	0.0141	0.0028	0.0004	0.0001
PNB	0.0005	0.0007	0.1918	0.0749	0.0016	0.0005
BOB	0.0012	0.0012	0.3882	0.4177	0.0022	0.0012
BOI	0.0004	0.0004	0.0331	0.1219	0.0003	0.0004
CANARA	0.0004	0.0009	0.0651	0.0209	0.0011	0.0005
ICICI	0.0099	0.0125	0.0002	0.0759	0.0007	0.0099
AXIS	0.0004	0.0011	0.0004	0.0024	0.0013	0.0005
HDFC	0.0004	0.0007	0	0.0023	0.0004	0.0004
DCB	0.0363	0.5116	0.3102	0.4963	0.0036	0.032
IndusInd	0.0027	0.1439	0.8565	0.0005	0.0085	0.0029

Bank	Total Funds	Total Income	Gross NPA	NNPA	Net Worth	Total Assets
CITI Bank	0.0006	0.0105	0.0023	0.0041	0.0001	0.0004
SCB	0.0007	0.0026	0.0264	0.0985	0.0005	0.0001
HSBC	0.0005	0.0143	0.0085	0.0151	0.0001	0.0003
DEUTSCHE	0.0065	0.6674	0.0001	0.0154	0.0005	0.0019
DBS	0.0023	0.9495	0.0631	0.115	0.0015	0.0014

Source: Calculated by the researcher.

The p-values calculated on principle component reject the null hypothesis. The alternate hypothesis is accepted that there has been a significant difference in major parameters of banks. Except for couple of exceptions the eleven parameters which are considered are showing that the performance of selected commercial banks has been significantly different.

Conclusion

Commercial banks depend on deposits received from all types of depositors. Achieving and maintaining faith of depositors is a key to bank's success. Commercial banks need to check credit appraisal process to reduce the non-performing assets. It has been seen that couple of banks depend on borrowing for giving advances. Banks are better if they depend on deposit money rather than borrowed money for disbursing advances. It was seen that though the overall deposits of commercial banks have gone down. The credit growth has slowed down. This is not reflected in the banks analyzed for the study. This is because large national level banks are able to withstand business cycles better than regional banks. The objective of government to create bigger national level banks by merging smaller banks is justified by this study.

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Factors Affecting GDP (Manufacturing, Services, Industry): An Indian Perspective

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ABSTRACT

The study tries to investigate the impact of various macro economic factors on GDP components. The study used the secondary data for the period 2000-2001 to 2011-2012. Data was collected from the Economic survey of India and Reserve bank of India bulletins. The dependent variable in the study was GDP components and was expressed as a function of various macroeconomic measures of growth. These variables could be FDI, Net FII equity, Net FII debt, Import and Export. Multiple regression analysis was used to develop the relationship. In the analysis we found a significant affect of FDI, Net FII equity and Import on GDP components. But we could not found a significant affect of Net FII debt on GDP components. And it was also found that there was no significant affect of Export on GDP (Manufacturing, Industry) components but Service had a significant affect

Keywords: Export, FDI, GDP, Import, Industry, Manufacturing, Services

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Introduction

GDP is a very strong measure to gauge the economic health of a country and it reflects the sum total of the production of a country and as such comprises all purchases of goods and services produced by a country and services used by individuals, firms, foreigners and the governing bodies. It is used as an indicator by almost all the governments and economic decision-makers for planning and policy formulation. It enables one to judge whether the economy is contracting or expanding, whether it needs a boost or restraint, and if a threat such as a recession or inflation looms on the horizon. When government officials plan for the future, they consider the various economic sectors' contribution to the GDP. GDP was first developed by Simon Kuznets for a US Congress report in 1934. The volume of GDP is the sum of value added, measured at constant prices, by households, government, and industries operating in the economy. GDP accounts for all domestic production, regardless of whether the income accrues to domestic or foreign institutions.

The Organization for Economic Cooperation and Development (OECD), in a report released in November 2012, has also forecasted major shifts in global GDP by the year 2060. The report said that based on 2005 purchasing power parity (PPP) values, India is expected to overtake the U.S. economy to become the second-biggest in 2051. The report also forecasts that the combined GDP of China and India will exceed that of the combined G-7 nations (the world's richest economies) by 2025, and be 1.5 times larger by 2060 (Picardo, 2013).

The Gross Domestic Product in the country like India is experiencing a faster rate of growth in the recent years. With regards to the composition of GDP, the percentage shares of various sectors have largely changed. The percentage share of the agriculture in the total GDP has declined, on the contrary the percentage share of services in the GDP is rising faster. With this shift, the Indian economy which was considered, by and large, to be agriculture based economy but with the opening up of the economy post economic reforms of 1991, has become predominantly services-based with services accounting for 44.60% of the GDP and employing 35.70% of the population whereas agriculture accounts for 17.39% of GDP and employs 47.20% of the population and manufacturing and industry accounting for 25.75% of GDP and employing 24.70% of the population.

This change in composition of GDP puts forward an important question-since economic production & growth, as reflected by GDP, has a large impact on nearly everyone within that economy what is the role of services and manufacturing sector in economy and how does it affects the financial health of the country. It thus becomes important to understand the nature & direction of relationship between the economic growth of a country and its components. The purpose was to study the impact of various macro-economic factors (FDI, Net FII equity, Net FII debt, Import, Export) on GDP (Manufacturing, Service, Industry) components.

GDP Components (Manufacturing, Services, Industry)
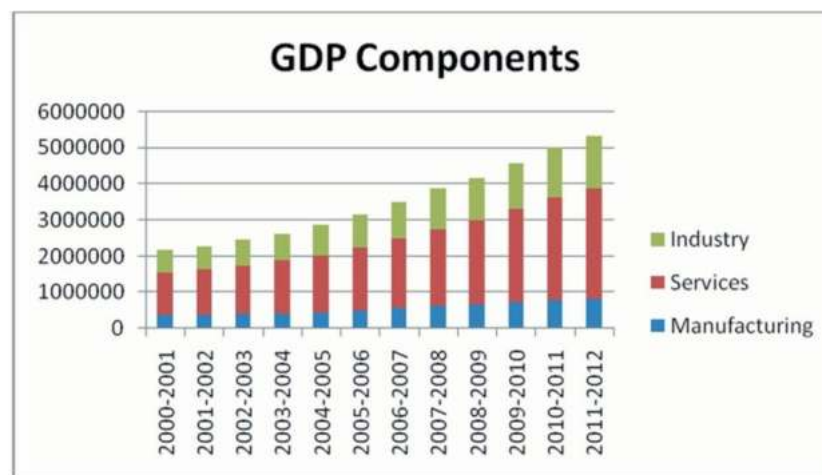
Figure 1
Source: Planning Commission 2013.

The last decade has witnessed a major shift in the composition of GDP. Share of manufacturing, service and industry in GDP has recorded a continuous increase over the years but w hen compared, this increase has been highest in service sector while it has been lowest in manufacturing sector, thus suggesting that in the time to come service sector is going to become the most attractive sector of Indian economy.

Foreign Direct Investment
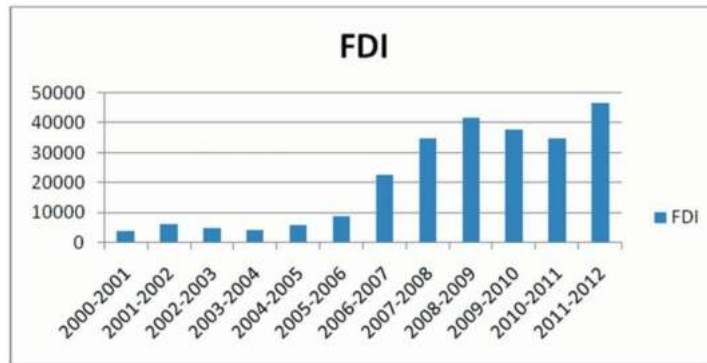
Figure 2

Source: Panning commission & Economic survey of India 2013.

FDI showed an overall increasing trend in the last decade. In the first half of the last decade FDI has remained more or less stable but 2006-07 onwards it has recorded a drastic increase, except for the years 2009-10 & 2010-11. This increase in FDI has been highest in year 2006-07 where it has more than doubled over the previous year.

Net FII Debt and Equity
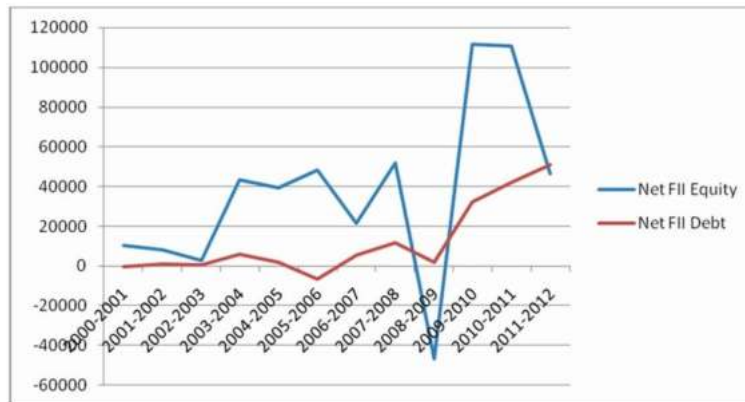
Figure 3

Source: Security Exchange Board of India.

Foreign institutional investment in equity witnessed a very volatile phase in the last decade as compared to debt which has shown an overall increasing

trend with a few minor corrections. This indicates that the Indian debt market has gradually won the investor confidence over the years and it will become more attractive in the coming time.

Import and Export Performance
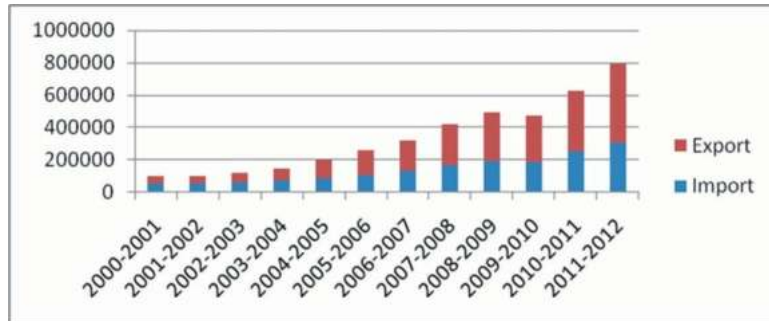
Figure 4

Source: Reserve Bank of India bulletin.

Though there has been an increase in the exports as well as imports in the last decade, the rate of increase in exports is more than that of imports, indicating that our service, manufacturing and industrial sector is not only becoming more and more self reliant but it is also increasing the foreign reserves of the country along with a favorable balance of trade.

Review of Literature

(Dasgupta, 2005) revisited the role of manufacturing and services in economic development in the light of a number of new phenomena: a faster growth of services than of manufacturing in many developing countries; the emergence of 'de-industrialization' in several developing countries, at low levels of per capita income; jobless growth in the formal sector, even in fast-growing countries such as India; and a large expansion of the informal sector in developing countries. Although they examined the phenomena in the specific context of the Indian economy, the analysis had a much wider application and implications, both for economic policy and for theories of growth and structural change.

(Chandana, 2008) assessed the proposition by subjecting industry-specific FDI and output data to Granger causality tests within a panel

co-integration framework. It turns out that the growth effects of FDI vary widely across sectors. FDI stocks and output were mutually reinforcing in the manufacturing sector, whereas any causal relationship was absent in the primary sector. Most strikingly, they found only transitory effects of FDI on output in the services sector. However, FDI in the services sector appears to have promoted growth in the manufacturing sector through cross-sector spillovers.

(Lall S. N., 2004) analyzed the *role* of multinational enterprises (MNEs) in industrial development in a 'learning system' perspective. They also studied the policy tools available for using FDI for economic development in a liberalizing, post-World Trade Organization world, and the constraints to doing this. While this was a nascent debate, the special issue points to a variety of 'soft' policy options that provide a pragmatic response to the complexities of globalisation.

(Alfaro, 2004) examined the various links among foreign direct investment (FDI), financial markets, and economic growth. They explored whether countries with better financial systems can exploit FDI more efficiently. They showed that FDI alone plays an ambiguous role in contributing to economic growth. However, countries with well-developed financial markets gain significantly from FDI. The results were robust to different measures of financial market development, the inclusion of other determinants of economic growth, and consideration of endogeneity.

(Mohammad, 1983) examined the impact of foreign ownership on export performance by the largest corporate firms in India, to analyse whether the 'monopolistic advantages' of multinationals survive in its highly restrictive and regulated environment. After controlling for industrial characteristics and export incentives, foreign ownership had a positive impact on export performance. The statistical significance of the result was not very strong, but they found counters earlier works based on simple comparisons of exports at the firm level. The analysis also shed light on other influences of policy significance on export performance.

(Griffith, 2004) examined the relationship between foreign ownership and productivity, paying particular attention to two issues neglected in the existing literature the role of multinationals in service sectors and the importance of R&D activity conducted by foreign multinationals. They reviewed existing theoretical and empirical work, which largely focused on

manufacturing, before presenting new evidence using establishment-level data on production, service, and R&D activity for Great Britain. They found that multinationals played an important role in service sectors and that entry of foreign multinationals by takeover was more prevalent than green-field investments.

(Chowdhury) suggested that it is GDP that caused FDI in the case of Chile and not vice versa, while for both Malaysia and Thailand, there was a strong evidence of a bi-directional causality between the two variables. The robustness of the above findings was confirmed by the use of a bootstrap test employed to test the validity of their results.

(Basu, 2003) investigated the impact of liberalization on the dynamics of the FDI and GDP relationship. A long-run co-integrating relationship was found between FDI and GDP after allowing for heterogeneous country effects. The co-integrating vectors revealed bidirectional causality between GDP and FDI for more open economies. For relatively closed economies, long-run causality appeared unidirectional and runs from GDP to FDI, implying that growth and FDI were not mutually reinforcing under restrictive trade and investment regimes.

(Hansen, 2006) analyzed the Granger causal relationships between foreign direct investment (FDI) and GDP. Using estimators for heterogeneous panel data they found bi-directional causality between the FDI-to-GDP ratio and the level of GDP. FDI had a lasting impact on GDP, while GDP had no long-run impact on the FDI-to-GDP ratio.

(Srinivasan, 2010) investigated the causal nexus between Foreign Direct Investment (FDI) and economic growth in Association of Southeast Asian Nations (ASEAN) economies. The Johansen Co-integration result established a long run relationship between FDI and Gross Domestic Product (GDP).

(Hsiao, 2006) examined the Granger causality relations between GDP, exports, and FDI among eight rapidly developing East and Southeast Asian economies. They estimated the VAR of the three variables to find various Granger causal relations for each of the eight economies. They found each country had different causality relations and does not yield general rules. They then constructed the panel data of the three variables for the eight economies as a group and then used the fixed effects and random

effects approaches to estimate the panel data VAR equations for Granger causality tests. The panel data causality results revealed that FDI had unidirectional effects on GDP directly and also indirectly through exports, and there also existed bidirectional causality between exports and GDP for the group. The results indicated that the panel data causality analysis had superior results over the time-series causality analysis. Economic and policy implications of the analyses were then explored in the conclusions.

(Tang, 2008) showed that while there was a bi-directional causality between domestic investment and economic growth, there was only a single-directional causality from FDI to domestic investment and to economic growth. Rather than crowding out domestic investment, FDI was found to be complementary with domestic investment. Thus, FDI had not only assisted in overcoming shortage of capital, it had also stimulated economic growth through complementing domestic investment in China.

(Choong, 2004) studied the development of domestic financial sector in transferring the technological diffusion embodied in FDI inflows to the chosen countries. It was evident in all the countries under study that both FDI and economic growth were not cointegrated by themselves directly, but rather through their dynamic interaction with the development of the domestic financial sector. Their results proved that the presence of FDI inflows created a positive technological diffusion in the long run only if the evolution of the domestic financial system had achieved a certain minimum level. From the short-run causality models, the striking similarity in the behaviour of FDI on economic growth across countries suggested the possibility of common financial sector development in different countries, despite differences in their fiscal policy, industrial development, and other domestic determinants.

(Liu, 2002) investigated the causal links between trade, economic growth and inward foreign direct investment in China at the aggregate level. The integration and co-integration properties of quarterly data were analysed. Long-run relationships between growth, exports, imports and FDI were identified in a co-integration framework, in which this study found bi-directional causality between economic growth, FDI and exports. Economic development, exports and FDI appeared to be mutually reinforcing under the open-door policy.

(Zhang, 2001) provided an empirical assessment of the issue by using data for 11 economies in East Asia and Latin America. Although FDI was expected to boost host economic growth, it was shown that the extent to which FDI was growth-enhancing appeared to depend on country-specific characteristics. Particularly, FDI tended to be more likely to promote economic growth when host countries adopted liberalized trade regime, improved education and thereby human capital conditions, encourage export-oriented FDI, and maintained macroeconomic stability.

(Elboiashi, 2002) investigated the causal relationships between foreign direct investment (FDI), domestic investment (DI) and economic growth (GDP) in Egyptian, Moroccan and Tunisian economies. The study found that FDI affected negatively the DI and growth (GDP) in the short-run and positively in the long-run. In addition, there was a uni-directional causality between FDI and growth (GDP) in Egypt and Morocco, and bi-directional causality between FDI and growth (GDP) in Tunisia. DI had played a great role for driving FDI into these countries more than growth (GDP). Also, FDI was more effective than DI for promoting growth (GDP). FDI was more effective for enhancing DI than growth (GDP). Furthermore, the results indicated that FDI crowded-out DI in the short-run and crowded-in DI in the long-run.

(Yao, 2006) focused on the effect of exports and foreign direct investments FDI on economic performance, using a large panel data set encompassing 28 Chinese provinces over the period 1978–2000. Adopting Pedroni's panel unit root test and Arellano and Bond's dynamic panel data estimating technique, it was found that both exports and FDI had a strong and positive effect on economic growth. The results suggested that two development policies adopted in China were useful for other developing and transitional economies: export promotion and adoption of world technology and business practices.

(Li, 2005) investigated whether foreign direct investment (FDI) affected economic growth based on a panel of data for 84 countries over the period 1970–99. Both single equation and simultaneous equation system techniques were applied to examine this relationship. A significant endogenous relationship between FDI and economic growth was identified from the mid-1980s onwards. FDI not only directly promotes economic growth by itself but also indirectly does so via its interaction terms. The

interaction of FDI with human capital exerts a strong positive effect on economic growth in developing countries, while that of FDI with the technology gap had a significant negative impact.

(Chakraborty, 2002) suggested the two-way link between foreign direct investment and growth for India was explored using a structural co-integration model with vector error correction mechanism. The existence of two co-integrating vectors between GDP, FDI, the unit labour cost and the share of import duty in tax revenue was found, which captured the long run relationship between FDI and GDP. A parsimonious vector error correction model (VECM) was then estimated to find the short run dynamics of FDI and growth. There VECM model revealed three important features: GDP in India was not Granger caused by FDI; the causality runs more from GDP to FDI; Trade liberalization policy of the Indian government had some positive short run impact on FDI flow; and FDI tended to lower the unit labour cost suggesting that FDI in India was labour displacing.

(Ozturk, 2007) investigated empirically the impact of FDI on economic growth of Turkey and Pakistan over the period of 1975-2004. To analyse the causal relationship between FDI and economic growth, the Engle-Granger co-integration and Granger causality tests were used. It was found that these two variables were cointegrated for both the countries studied. There empirical findings suggested that it was GDP that caused FDI in the case of Pakistan, while there was strong evidence of a bi-directional causality between the two variables for Turkey.

Research Gap

The above review of literature showed that there are a couple of studies on the relationship of GDP with FDI, GDP with FDI & Exports, GDP with import-exports and GDP with manufacturing & service sector but there was no study available on the relationship between GDP components (Manufacturing, Service, Industry) and FDI, Net FII equity, Net FII debt, Import, Export which are the major macro economic factors affecting GDP. Study of this relationship is all the more important keeping in view the growing contribution of these sectors in Indian GDP.

Objective of the Study

To study the impact of various macro-economic factors (FDI, Net FII equity, Net FII debt, Import, Export) on GDP (Manufacturing, Service, Industry) components.

Research Methodology

The study used the secondary data for the period 2000-2001 to 2011-2012. Data was collected from the SEBI, Planning commission report 2013, Economic survey of India and Reserve bank of India bulletins. GDP is measured by a number of components but in this study only manufacturing, service and industry were selected as major components for the period selected for the study. The dependent variables in the study was GDP components and was expressed as a function of various macroeconomic measures of growth. These variables could be FDI, Net FII equity, Net FII debt, Import and Export. Multiple regression analysis was used to develop the relationship.

Data Analysis and Interpretation

Table 1: India's Manufacturing Activity from 2000-2001 to 2011-2012

Year	Manufacturing	FDI	Net FII Equity	Net FII Debt	Import	Export
2000-2001	363163	4029	10206.7	-391.4	44076	49975
2001-2002	371408	6130	8293	659.9	43827	51413
2002-2003	396912	5035	2534.27	338.85	52719	61412
2003-2004	422062	4322	43483.5	5709.84	63843	78149
2004-2005	453225	6051	39346	1878.9	83536	111517
2005-2006	499020	8961	48069.9	-6765.6	103091	149166
2006-2007	570458	22826	21518.93	5367.11	126414	185735
2007-2008	629073	34843	51595.3	11771	163132	251654
2008-2009	656302	41873	-46700.7	1860.8	185295	303696
2009-2010	730435	37745	111442.8	32046.6	178751	288373
2010-2011	801476	34847	110529.7	42145.1	251136	369769
2011-2012	823023	46556	46493.1	50997.3	304624	489181

Table 2

Regression Statistics						
Multiple R	0.996187					
R Square	0.992389					
Adjusted R Square	0.986046					
Standard Error	19693.95					
Observations	12					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	3.03E+11	6.07E+10	156.4629	2.87E-06	
Residual	6	2.33E+09	3.88E+08			
Total	11	3.06E+11				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	287308.2	23719.09	12.11295	1.92E-05	229269.7	345346.7
FDI	4.288352	1.335161	3.21186	0.018324	1.02133	7.555374
Net FII Equity	0.776821	0.200366	3.87701	0.008199	0.286543	1.267099
Net FII Debt	-0.97686	0.819919	-1.19141	0.278478	-2.98313	1.029406
Import	1.961049	1.314712	1.491618	0.186397	-1.25594	5.178034
Export	-0.48552	0.863888	-0.56202	0.594458	-2.59938	1.628334

Multiple Linear Regression Model

The model obtained is:

Manufacturing = 287308.2 + (4.288 × FDI) + (0.7768 × Net FII equity) + (–0.9768 × Net FII debt) + (1.96 × Import) + (–0.485 × Export)

The value of R square in following model is 99.23%, showing that about 99.23% of total variation in Manufacturing in India can be explained by independent variables, like FDI, Net FII equity, Net FII Debt, Import, Export. Since calculated F value is greater than critical value of F, hence the model is accepted. It can be concluded that ratio of explained variance by this model to the unexplained variance is very high. Thus the regression variables are significant in explaining the dependent variable,

Manufacturing. FDI and Net FII equity has influence on manufacturing in India as it is statistically significant as P value is less than 0.01 at 1% level of significance. But Net FII debt, Import, Export has no influence on manufacturing in India as it is not statistically significant as P value is more than 0.001 at 1% level of significance. Coefficient of FDI parameter is 4.288 that tells about dependability of manufacturing in country on FDI, if FDI parameter changes by one unit, then manufacturing in India will increase by 4.288%. Coefficient of Net FII equity parameter is 0.776 that tells about dependability of manufacturing in country on Net FII equity, if Net FII equity parameter changes by one unit, then manufacturing in India will increase by 0.776%. Coefficient of Net FII debt parameter is -0.976 that tells about no dependability of manufacturing in country on Net FII debt, if Net FII debt parameter changes by one unit, then manufacturing in India will decrease by -0.976%. Coefficient of Import parameter is 1.961 that tells about dependability of manufacturing in country on Import, if Import parameter changes by one unit, then manufacturing in India will increase by 1.961%. Coefficient of Export parameter is -0.485 that tells about no dependability of manufacturing in country on Export, if Export parameter changes by one unit, then manufacturing in India will decrease by -0.485%.

Table 3: India's Service Activity from 2000-2001 to 2011-2012

Year	Service	FDI	Net FII Equity	Net FII Debt	Import	Export
2000-2001	1179976	4029	10206.7	-391.4	44076	49975
2001-2002	1261158	6130	8293	659.9	43827	51413
2002-2003	1349035	5035	2534.27	338.85	52719	61412
2003-2004	1457797	4322	43483.5	5709.84	63843	78149
2004-2005	1576255	6051	39346	1878.9	83536	111517
2005-2006	1748173	8961	48069.9	-6765.6	103091	149166
2006-2007	1923970	22826	21518.9	5367.11	126414	185735
2007-2008	2121561	34843	51595.3	11771	163132	251654
2008-2009	2333251	41873	-46701	1860.8	185295	303696
2009-2010	2578156	37745	111443	32046.6	178751	288373
2010-2011	2829650	34847	110530	42145.1	251136	369769
2011-2012	3061589	46556	46493.1	50997.3	304624	489181

Table 4

Regression Statistics						
Multiple R	0.995045					
R Square	0.990114					
Adjusted R Square	0.981875					
Standard Error	85458.32					
Observations	12					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	4.39E+12	8.78E+11	120.1791	6.27E-06	
Residual	6	4.38E+10	7.3E+09			
Total	11	4.43E+12				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	1018437	102924.7	9.894971	6.15E-05	766589	1270284
FDI	6.558991	5.79369	1.132092	0.300802	-7.61766	20.73564
Net FII Equity	2.369237	0.869451	2.724979	0.034415	0.241766	4.496708
Net FII Debt	-1.68196	3.557888	-0.47274	0.653104	-10.3878	7.023877
Import	1.018299	5.704955	0.178494	0.86421	-12.9412	14.97782
Export	2.968598	3.748685	0.791904	0.458572	-6.20411	12.1413

Multiple Linear Regression Model

The model obtained is:

Services = 1018437 + (6.558 × FDI) + (2.369 × Net FII equity) + (–1.681 × Net FII debt) + (1.018 × Import) + (2.968 × Export)

The value of R square in following model is 99.01%, showing that about 99.01% of total variation in Service in India can be explained by independent variables, like FDI, Net FII equity, Net FII Debt, Import, Export. Since calculated F value is greater than critical value of F, hence the model is accepted. It can be concluded that ratio of explained variance

by this model to the unexplained variance is very high. Thus the regression variables are significant in explaining the dependent variable, Service. FDI, Net FII equity, Net FII debt, Import, Export has no influence on service in India as it is not statistically significant as P value is more than 0.001 at 1% level of significance. Coefficient of FDI parameter is 6.55 that tells about dependability of service in country on FDI, if FDI parameter changes by one unit, then service in India will increase by 6.55%. Coefficient of Net FII equity parameter is 2.369 that tells about dependability of service in country on Net FII equity, if Net FII equity parameter changes by one unit, then service in India will increase by 2.369%. Coefficient of Net FII debt parameter is -1.681 that tells about no dependability of service in country on Net FII debt, if Net FII debt parameter changes by one unit, then service in India will decrease by -1.681%. Coefficient of Import parameter is 1.018 that tells about dependability of service in country on Import, if Import parameter changes by one unit, then service in India will increase by 1.018%. Coefficient of Export parameter is 2.968 that tells about dependability of service in country on Export, if export parameter changes by one unit, then service in India will increase by 2.968%.

Table 5: India's Industry activity from 2000-2001 to 2011-2012

Year	Industry	FDI	Net FII Equity	Net FII Debt	Import	Export
2000-2001	640043	4029	10206.7	-391.4	44076	49975
2001-2002	656737	6130	8293	659.9	43827	51413
2002-2003	704095	5035	2534.27	338.85	52719	61412
2003-2004	755625	4322	43483.5	5709.84	63843	78149
2004-2005	829783	6051	39346	1878.9	83536	111517
2005-2006	910413	8961	48069.9	-6765.6	103091	149166
2006-2007	1021204	22826	21518.9	5367.11	126414	185735
2007-2008	1119995	34843	51595.3	11771	163132	251654
2008-2009	1169736	41873	-46701	1860.8	185295	303696
2009-2010	1276919	37745	111443	32046.6	178751	288373
2010-2011	1393879	34847	110530	42145.1	251136	369769
2011-2012	1442498	46556	46493.1	50997.3	304624	489181

Table 6

Regression Statistics						
Multiple R	0.995952					
R Square	0.991921					
Adjusted R Square	0.985189					
Standard Error	34858.6					
Observations	12					
ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	5	8.95E+11	1.79E+11	147.3356	3.43E-06	
Residual	6	7.29E+09	1.22E+09			
Total	11	9.02E+11				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	513094.7	41983.15	12.22144	1.83E-05	410365.6	615823.7
FDI	6.397605	2.363256	2.707115	0.035241	0.614926	12.18028
Net FII Equity	1.486339	0.354651	4.190994	0.005743	0.61854	2.354138
Net FII Debt	-3.14767	1.451269	-2.16891	0.073172	-6.6988	0.403455
Import	2.95918	2.327061	1.271638	0.250568	-2.73493	8.653293
Export	-0.33387	1.529095	-0.21834	0.834399	-4.07543	3.407694

Multiple Linear Regression Model

The model obtained is:

Services = 513094.7 + (6.397 × FDI) + (1.486 × Net FII equity) + (–3.147 × Net FII debt) + (2.959 × Import) + (– 0.333 × Export)

The value of R square in following model is 99.19%, showing that about 99.19% of total variation in Industry in India can be explained by independent variables, like FDI, Net FII equity, Net FII Debt, Import, Export. Since calculated F value is greater than critical value of F, hence the model is accepted. It can be concluded that ratio of explained variance by this model to the unexplained variance is very high. Thus the regression variables are significant in explaining the dependent variable, Industry. Net FII equity has influence on industry in India as it is statistically

significant as P value is less than 0.01 at 1% level of significance. But FDI, Net FII debt, Import, Export has no influence on manufacturing in India as it is not statistically significant as P value is more than 0.001 at 1% level of significance. Coefficient of FDI parameter is 6.397 that tells about dependability of industry in country on FDI, if FDI parameter changes by one unit, then industry activity in India will increase by 6.397%. Coefficient of Net FII equity parameter is 1.486 that tells about dependability of industry in country on Net FII equity, if Net FII equity parameter changes by one unit, then industry activity in India will increase by 1.486%. Coefficient of Net FII debt parameter is -3.147 that tells about no dependability of industry in country on Net FII debt, if Net FII debt parameter changes by one unit, then industry activity in India will decrease by -3.147%. Coefficient of Import parameter is 2.95 that tells about dependability of industry in country on Import, if Import parameter changes by one unit, then industry activity in India will increase by 2.95%. Coefficient of Export parameter is -0.333 that tells about no dependability of industry in country on Export, if Export parameter changes by one unit, then industry activity in India will decrease by -0.333%.

Conclusion

It was found that the variable which affects the growth of GDP components (Manufacturing, Service, Industry) were FDI, Net FII equity, Net FII debt, Import, Export. The study found a significant affect of FDI, Net FII equity and Import on GDP components. But a significant affect of Net FII debt on GDP components could not be established. And it was also found that there was no significant affect of Export on GDP (Manufacturing, Industry) components but services had a significant affect. In this study, the impact of different macro economic factors on GDP components had been analysed. But for any future policy in designing the GDP components FDI, Net FII equity, Import, Export should also be taken into consideration but Net FII debt should not be taken.

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Implementing Dodd Frank Act: An Experiential Learning

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ABSTRACT

There are several organizations, which are working towards adopting Dodd Frank Act to improve their risk management capabilities and regulatory compliances, however due to sheer complexity and far reaching impact of the Act, there have been several challenges in adopting the Act. The purpose of the paper is to briefly explain the challenges and steps that need to be taken towards implementing Dodd-Frank Act in a financial services organization. The paper is in the form of a case study of adoption of the Act in a buy-side firm for its derivative and collateral business. The paper begins with the key provisions of the act; details some of the challenges and dilemma that the organization was faced with while adopting the Act. The paper goes on to illustrate as to how these challenges were resolved. Some lessons learned are given in the end.

Keywords: Collateral, Derivatives, Dodd-Frank Act, Implementation

Introduction

Dodd-Frank Act has been arguably the most significant financial legislation in modern history. The legislation has ushered in a breathtaking amount

of changes that result in fundamental shifts in the legal, regulatory and policy landscape affecting our markets and our economy in a short period of time. More and more organizations are adopting the Act to improve their risk management capabilities and regulatory compliances.

The purpose of the paper is to briefly explain the challenges and steps that need to be taken towards implementing Dodd- Frank Act in an organization. The author, by virtue of being associated with a team at Syntel Ltd – which provides consulting and technology support services to its clients on implementing Dodd Frank Act and improve risk management capabilities – has gained valuable insight on implementing the Act. He understood the 'pain' and has realized what would (or would not) work in an organization towards implementing the Act in an efficient and time bound manner. The details are presented in a form of case study and provide a solution that could potentially work for other organizations too, who have been struggling to implement the Dodd-Frank Act. The paper begins with the key provisions of the act; details some of the challenges and dilemma that organizations are faced with while adopting the Act. The paper goes on to illustrate as to how these challenges were resolved.

The Dodd-Frank Act touches every aspect of our financial markets, from consumer credit to proprietary trading at financial firms, from OTC derivatives markets to securitization markets, and from private fund registration and regulation to corporate governance at public companies.

The core purpose of this act is to avoid a repeat of the shocking realities of the financial crisis in 2008 by promoting "the financial stability of the United States by improving accountability and transparency in the financial system, to end 'too big to fail' notion, to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes."

Pursuing these objectives, the Dodd Frank act mandates multiple changes in the current industry best practices as regards risk, capital, liquidity, compliance and governance.

Dodd Frank Act

There are abundant literatures available on the Act in the print and digital media. A reader may refer to any of the articles to get a deep

understanding the Act per se. Nevertheless, a few of the key provisions[3] of the act are summarized below:

1. Increased Regulatory Supervision for Banks and Financial Institutions – aimed at providing regulators with a macro-perspective of emerging risks, authority to manage threats, regulate potentially dangerous consumer financial products and ensure overall stability of the financial system.

2. New Operating Restrictions – on various risky operational activities such as limits on proprietary trading and OTC derivatives, interchange fee limits and mandatory retention of at least five percent of many securitizations (qualified residential mortgages expected).

3. Improved Firm Governance – Incorporated mandates around risk management requirements such as annual stress testing, rapid liquidation plans for failed financial institutions, increased public disclosures and investor protection measures like shareholders vote of executive compensation.

4. Institutionalize more stringent standards around higher capital levels, definitions of eligible capital, liquidity requirements, leverage limits and capital requirements.

5. Banking and Financial services Institutions would have the greater resilience and stability to withstand future economic crisis due to stronger governance, risk and compliance practices resulting in higher capital and liquidity levels.

6. Reduced exposure to systemic risk for Banking and Financial Services Institutions due to lower cumulative leverage and higher liquidity buffers coupled with stronger and integrated risk management views.

7. Additional Consumer Protection due to greater transparency from misleading products and services.

8. Improved market efficiency due to comprehensive broker-dealer regulations and enhanced accountability on behalf of rating agencies

9. The stability of the macro economy would increase due to the improved resilience of banking and financial institutions thus reducing the breadth of future recessions.

However, beyond these intended impacts, the Dodd Frank Act poses several business challenges for Banking and Financial Services Institutions like:

- *Reduced profitability:* Reduced financial flexibility coupled with additional capital and liquidity requirements will result in increasing pressure on the profitability of Banking and Financial Institutions.

- *Increasing cost of compliance:* The sheer volume of rules and regulations in the Dodd Frank act would increase the compliance overhead and significantly impact the compliance cost at large banks and non- banks alike.

- *Potential shift of capital and business activity:* The Dodd Frank act goes beyond the issues of G20 and, therefore, may put banks under its purview at a competitive disadvantage in internationally competitive lines of business.

- *Moderation of long term growth prospect:* Reduced appetite for risky products and aversion to segments with poor credit performance will result in decreased credit availability for consumers and enterprises. This in turn would reduce the long-term growth prospects of the banking and financial services institutions.

- *Strategic planning:* Many financial services firms are likely to revisit their business strategies. For example, the "Volcker Rule" provision designed to separate banking from proprietary trading at some institutions, has generated strong reactions from all corners and will have far reaching impact on how the business is done

Besides, there are several implementation challenges faced by Banking and Financial Services Institutions like:

- *Overlapping regulatory scope:* There are different agencies and regulators monitoring compliance of various regulations already applicable to a financial institution. The instinct of each regulator is to view their rules in isolation. Given the overlapping and concurring actions, an organization has to consider all the applicable regulations as holistically as possible.

- *Defining a clear strategy and objectives:* There have been numerous delays in publishing regulations, making it hard for some companies

to define a clear strategy and objectives. Further, the changes envisaged in the Act impact several functions in an organization like operations, IT infrastructure, corporate governance, internal control frameworks, risk management, tax planning, regulatory and public disclosures, ethics, legal and compliance.

Incidentally, it may be mentioned that less than half of Dodd-Frank's nearly 400 required rules have been finalized: 235 rulemakings, already generating 41 reports, 71 studies authored by 11 different federal agencies and bureaus. Much work has been already done, 162 new rules have been finalized. But, we still have a long road ahead of us. 170 deadlines have been missed. 110 rules have yet to be proposed.

- *Hiring skilled staff:* Many financial services firms need to re-think their compensation structures and how they attract employees from other firms. Further, numerous rules in the Act and their delays in publishing pose a challenge towards arranging training of employees to use new business processes aligned with Dodd Frank Act and then obtaining commitment from employees in relation to the Act.

- Managing the volume of changes in the process, people and technology due to the Act.

- Communication and collaboration among various groups/ functions are difficult. There are so many moving parts, often involving different agencies and regulators, many companies have to scramble to find the resources necessary to analyze, define and communicate new rules and their implications.

Despite these challenges, several Banking and Financial Services Institutions are working towards adopting Dodd Frank Act, either to improve regulatory compliance or enhance their competitive positioning and thus, increase their market share and profitability.

Adoption of Dodd Frank Act in an Organization: A Case Study

The paper presents a case of adoption of Dodd Frank Act in one of the largest Financial Service Institutions, headquartered in USA. The organization is one of the world's leading providers of financial services,

in the buy-side, to institutional investors including investment servicing, investment management and investment research. With several trillion dollars in assets under custody & administration and management, the organization operates in more than 100 geographic markets worldwide, including US, Canada, Europe, the Middle East and Asia.

Several reasons that helped the senior management of the organization to decide in favor of implementing Dodd Frank Act included:

- It was believed that US stock market would grow, as valuations were still low in 2012, particularly compared to the previous all-time high. Even with a conservative estimate, economy was expected to grow at a two percent to four percent clip, despite fiscal austerity and ineffective stimulus. There was a room for multiple expansions as confidence returned to the markets in a post-recovery environment. The management considered implementing Dodd Frank Act as a tool to expand market share and deepen relationships with new and existing clients.

- While the regulations for Europe – European Market Infrastructure Regulation (EMIR) – were different, and there were different regulations that apply for different countries in APAC, it was believed that there were strong synergies amongst them (Ref: Table 1) and implementing Dodd Frank Act will help jumpstart implementing other regulations in other regions. Considering that 40% of the growth in financial assets was expected to come from emerging markets over the next decade (McKinsey, Sep 12), there was no reason to delay the implementation of the Act.

- There was already an investment committed towards implementing the new technology, which was aimed at capturing the new growth through investment in platforms and solutions, aligned to the long term growth trends. It was prudent that the organizational investment in technology take care of the existing/upcoming regulatory requirements.

- The ever changing investors' requirement for real time data and customized insights to enable them take better-informed decision making required that the organization had a better risk management ability.

- Regulators have been stepping up demands for increased transparency and compliance to various regulations, as and when new (and often complex regulations) emerged. Explicit demands were made to keep pace with the evolving regulatory environment. The organization had to work towards compliance with the new requirements, including: Dodd Frank (e.g. Volcker and Recovery and Resolution), Alternative Investment Fund Managers Directive (AIFMD) and Basel capital and liquidity requirements among others.

Table 1: Global Regulatory View – Key Regions

Dodd Frank (North America)	*European Market Infrastructure Regulation (EMIR)*	*APAC*

• Risk mitigation mandates for non-cleared derivatives covering:
   • Confirmation
   • Valuations
   • Portfolio reconciliation
   • Dispute resolution
 • Trade reporting
 • Clearing
 • Execution
 • Collateral and margin requirements for bi-lateral
	• Risk mitigation mandates for non-cleared derivatives covering:
	   • Confirmation
	   • Valuations
	   • Portfolio reconciliation
	   • Dispute resolution
	   • Trade compression
	 • Trade reporting
	 • Clearing
	 • Collateral and margin requirements for bi-lateral
	 MiFID
	 • Trade execution
		• Local derivative regulations impacting 8 different countries (Australia, China, Hong Kong, India, Japan, Singapore, South Korea, Taiwan)
		 • Regulatory requirements span across:
		   • Trade Execution
		   • Clearing
		   • Margin
		   • Trade reporting

Sometimes around early 2012, the Chairman of the organization conveyed his decision, in a key note address to senior executives in the organization to adopt the Dodd-Frank Act. A task force, comprising of senior executives from business, IT and with project management credentials, was entrusted with the responsibility of implementing the provision of Dodd Frank Act in a time bound manner.

Accordingly, an outlay of over $ 50 M over the previous year's level was approved to arrange for:

- Increased compensation and employee benefits (for additional personnel to meet increased work load)

- Changes in IT infrastructure

- **Information systems to support new reporting requirements**

- Training for new/existing employees to use new business processes aligned with Dodd Frank Act

- Other expenses (professional fee, etc.)

While the new regulations were implemented in different businesses in the organization, the scope of this paper is restricted to the implementation of the Act in Derivatives and Collateral services. The new regulation of swaps and derivatives in Title VII, constitutes arguably the greatest set of changes to a single sector of the financial services industry made by the Dodd-Frank Act. In fact, the combination of the Dodd-Frank Act, the European Markets Infrastructure Regulation (EMIR) and Basel III are bound to result in profound operational changes to how OTC derivatives are settled, collateralized and reported.

The organization provides end-to-end Derivatives and Collateral services, which constitutes over one-third of its total revenue. It has an integrated model to meet the derivative needs of all types of investment managers. They have a very big operations dealing in settlements, payments, servicing, collateral management and reconciliation with a buy-side focus.

Examples of derivatives which are subject to new swap regulation under Title VII include interest rate swaps, credit default swaps, non-deliverable FX forwards (NDFs), swaptions and equity total return swaps.

Some of the initial challenges that the Task Force in the Buy-side form was faced with included:

1. Understanding of the operational implications of the Act for the organization

2. Understanding the current state of their operations and readiness to modify our infrastructure.

3. Understanding of the requirements for various operational areas including central clearing eligibility, trade affirmation, collateral management, margining, reconciliations, etc.

4. Understanding of the changes required in the technology to support the new regulations

5. Making changes in the Transacting and Clearing processes.

6. Finalizing a legal agreement framework to negotiate terms with the executing brokers (EBs), future commission merchants (FCMs), and CCPs (clearinghouses)

7. Preparing a comprehensive communication plan to keep clients informed during the onboarding process

The next part of the paper describes as to how the organization dealt with all these challenges:

Operational Implications of the Act in the Derivatives Services

Regulators such as the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) have proposed and, in many cases, finalized numerous rulemakings in order to meet G20 objectives aimed at increasing transparency and reducing systemic risk in the derivative markets:

1. Increase transparency by pushing OTC derivative trading to central clearing and via swap execution facilities (SEFs) with trade repositories for the monitoring of all trading activity.

2. Reduce counterparty risk by significantly increasing the amount of collateral held against all OTC derivative transactions, whether centrally cleared or otherwise.

This translated into following actions required by the organization:

- Reporting swap transactions to a swap data repository (SDRs);

- Clearing sufficiently liquid and standardized swaps on central counterparties, or designated clearing organizations (DCOs);

- Where appropriate, trading standardized swaps on SEFs or designated contract markets (DCMs);

- Setting higher capital and minimum margin requirements for un-cleared swaps.

As per Title VII of the Dodd-Frank Act, sufficiently liquid and standardized derivatives transactions are subject to central clearing requirements, and many of these are required to be executed on new electronic trading platforms (known as "Swap Execution Facilities" or SEFs). However, some derivatives still fall into the category of over-the-counter (OTC), which means that their terms are privately negotiated between two parties, and some also remain un-cleared. Risk mitigation mandates for non-Cleared Derivatives covers:

- Confirmation
- Valuations
- Portfolio Reconciliation
- Dispute Resolution

Accordingly, the organization had to make a couple of choices (Table 2).

<p align="center">**Table 2:** US Regulations</p>

Areas Impacted by Dodd Frank Act	Regulations	Consideration for Implementation
1. Execution	(a) Mandates trading of required to be cleared products through Swap Execution Facilities (SEF) or Designated Contract Markets (DCM) (b) Creates fair access and choice of trading platforms for all market participants (c) Increases price transparency across all included instruments	SEF or DCM selection
2. Clearing	(a) Mandates that all designated, standardized swaps products move to a central clearing environment similar to the current futures industry (b) Requires open and fair access to clearing, allowing more market participants to utilize these services	• FCMs (Future commission merchants) Selection • CCPs (clearinghouses) Selection
3. Collateral	(a) All swaps transactions – cleared or un-cleared – require initial margin (b) Initial margin minimums for cleared products established by central counterparties (c) Heightened importance of collateral management supporting all transactions	• Identify eligible collateral and sourcing additional needs

Areas Impacted by Dodd Frank Act	*Regulations*	*Consideration for Implementation*
4. Reporting and Oversight	(a) Federal regulatory calls for additional transparency will require more robust, timely reporting (b) Creates regulatory oversight of market participants with no prior coverage	• Register for LEIs (Legal Entity Identifiers) • onfirm timely, compliant reporting

Understanding the Current State of Operations and Preparing a RoadMap

Due to complex and evolving nature of the Dodd Frank Act – which requires a lot of interpretation of the regulation – it is suggested that an organization choses an external consultant, who can objectively assess the true state of readiness to adopt the Act. The organization should insist on the 'Gap Analysis' report, which reveals the differences between the 'As-Is' state with the 'To Be' state in line with requirements of the Act, at granular level as possible. Then, the organization needs to continue focusing on design of their target operating model, execute risk management practices, and develop client onboarding methods to ensure operational excellence.

In this case, the external consultant helped the Buy-side firm to:

- Identify all impacted functions in the organization and develop business requirements for each of the impacted functions (Operations, Compliance, and Finance)

- Develop a front-office methodology to modify the OMSs to meet clearing requirements

- Establish governance and controls at key points to comply with the regulatory requirements

- Identify external middleware vendors and develop integration requirements; identify the changes in its ongoing/future technology (automation) initiatives for data and reporting requirements.

A plan or road map was essential to ensuring timely and effective compliance with Title VII. This effort began with understanding the CFTC regulations under Title VII, the current state of the organization

and how the regulations applied given the volume and type of a company's OTC derivative transactions. This required understanding how the company would use OTC derivatives and whether taking advantage of any exceptions to the clearing requirements would be advantageous. It also required putting into place procedures to comply with the collateral, reporting and record-keeping requirements of Title VII.

As the compliance deadlines were staggered by the OTC derivative asset class, there was not a single pinpointed date to meet all compliance deadlines, however, it was clear that Swap dealer counterparties (i.e., many large banks and other swap dealers) would not be able to trade with end users after May 1, 2013, unless derivative contracts were amended to conform to Title VII's requirements regarding business conduct standards.

Given this, a broad timeline was agreed upon in consultation with all the stakeholders (Table 3).

Table 3: Timeline
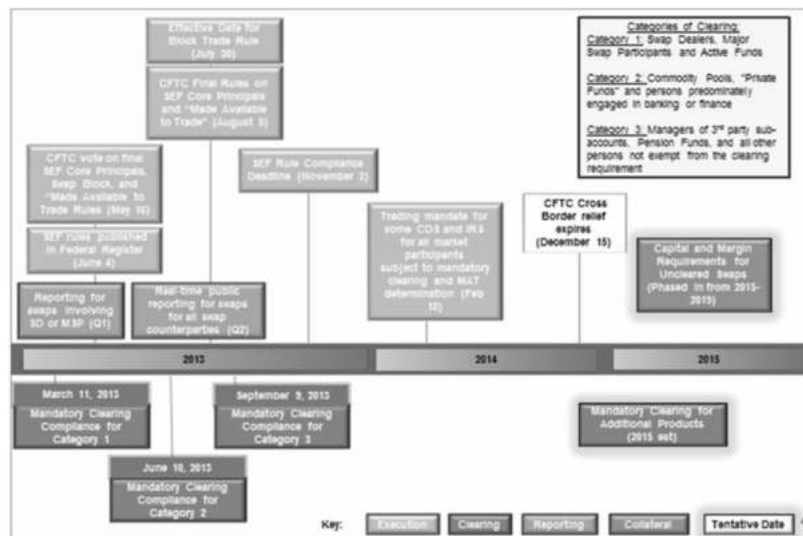
Understanding the Requirements for Various Operational Areas

All the required activities were identified and the compliance date for each of them was approved by the Steering Committee (Table 4). A monthly review mechanism was instituted where each Work-Stream Lead, in the Task Force, was required to given an update on:

- Process Migration Update
- Technology infrastructure update
- Resource and Training update
- Communication update: internal and external

Each Work-Stream Lead in the presented the report to the Steering Committee on:

1. Key Accomplishment during the review period
2. Upcoming Activities/Milestones
3. Issues/Risks and their impact on upcoming milestones

Table 4: Dodd Frank Compliance Date

Dodd Frank Requirements	*Required Activities*	*Compliance Date (*)*

Timely Confirmations	• Swaps Dealers (SDs)./ Major Swap Participants (MSPs) – Must establish, maintain and follow written policies and procedures to ensure that a confirmation is executed for each swap transaction as soon as technologically practicable or by:
	  o T+1 for contracts with SDs/MSPs or financial entities.
	  o T+2 for contracts with any other entity.
	  o Phase in with a reduction in timing thru August 2014.
	• SDs/MSPs – Required to send an acknowledgement to a counterparty not an SD/MSP as soon as technologically practicable or by T+1.
		March, 2013

Portfolio Compression	• SDs/MSPs – Must establish, maintain and follow written policies and procedures to facilitate bi-lateral offset and bi-lateral compression of trades when appropriate. • SDs/MSPs with other CPs – Each SD/MSP must establish, maintain and follow written policies and procedures to periodically terminate /engage in portfolio to the extent requested by any such counterparty.	March, 2013
Portfolio Reconciliation	• Each swap dealer/MSP shall engage in portfolio reconciliation for all un-cleared swaps in which it is counterparty on terms that differ based on the regulatory status of the counterparty. • Counterparties shall agree in writing to the terms of the reconciliation. • Frequency based on trade volume/CP type.	October, 2013

Dodd Frank Requirements	*Required Activities*	*Compliance Date (*)*
Dispute Resolution	• SDs shall have detailed procedures and processes related to identification, recording and monitoring of disputes (non-cleared derivatives) which should be resolved within 5 business days. • Reporting of disputes to authorities for valuations > 20M, within. o (3) business days – *between SDs/MSPs and SDs/MSPs.* o (5) business days – *between SDs/MSPs and other CPs.*	October, 2013
Margin/ Collateral Segregation	• Daily margin will have to be posted on all trades. • Under the LSOC (legally segregated, operationally commingled) model, FCMs must segregate swap client' property from their own property. • CCP prices will be used on a daily basis for margin calculations.	2014 -2018
Reporting and recordkeeping	• All swaps shall be reported to a SDR for real time public dissemination as soon as technologically practicable. Hierarchical reporting based on CP 1. Swap facility (SEF, DCM, DCOs), 2. A SD/MSP counterparty, and 3. A non-SD/MSP counterparty. • Non-cleared swaps must be reported to a registered "swap data repository" or, if one does not exist, to the CFTC or SEC, as applicable. • Legal entity identifiers (LEIs) will be required for each internal fund as well as for client accounts for reporting. • For non-cleared trades, swap dealers will have to provide daily mark even if not requested by counterparty. • Reporting dates: o CDS/IRS – SD real-time and SDR reporting – Dec 31, 2012 o FX/Equity/Other Commodity – SD real-time and SDR reporting – Feb 28, 2013 o CDS/IRS – SD historical swap reporting – Jan 30, 2013 o FX/Equity/Other Commodity - SD historical swap reporting – Mar 30, 2013	
Clearing	• Mandatory clearing for in place for certain IRS and Index CDS swap types. • March 11, June 10 and September 9, 2013.	3 phases in 2013
Swap Execution	• Made Available to Trade (MAT) determination which will result in mandatory Swap Execution Facility trading for some swap types.	March, 2014

(*): Actual target dates changed to protect identity of the organization.

Required Changes in Technology Infrastructure for Dodd-Frank Compliance

Though the formal announcement to adopt Dodd Frank Act was made in early 2012, the organization has been working since 2011 with clients, industry groups, the clearing-houses, and other industry participants to be prepared for the move to central clearing.

Broadly, there are two pre-requisites of the system for supporting OTC central clearing (Figure 1), to meet Dodd-Frank's requirements:

(a) *Data Quality:* The system must be capable enough to accurately capture the data points that represent the underlying contract. The ability to capture all the data points reflecting how the instrument is traded (for example the day-count-convention for an Interest Rate Swap) has a significant impact on the accuracy of calculation of risk exposure, profit/loss and reporting.

(b) *Reporting:* The system must have the ability to report on all data points captured at a contract, trade and positional level.

Technology development effort had already been underway for last a few years in the organization:

• Operating Model changes and technology enhancements in production and ongoing spanning key service areas of transactions, cash, pricing, reconciliations, margins and information delivery.

• Ongoing refinement of model as Clearinghouse, FCMs, SEFs and industry groups continue to address operational nuances coming to light with new mandates and increase in clearing volumes.

• From additional messaging and new data requirements systems enhancements are required throughout the industry.

The organization needed to make suitable modifications in its technology to:

(a) Enable 360° view of risk and performance (enterprise data management)

(b) Automate position valuation and generation of variation margin

(c) Automatically reconcile discrepancies between the organization and the transacting counterparty

(d) Improve straight-through-processing (STP) workflow for OTC swaps

(e) Provide transparency in trade transaction flow for full disclosure

(f)) Provide central overview and control over potential and actually used collateral to enable optimal use

(g) Communicate details of the trade and any collateral, on a real-time basis, to all relevant parties

(h) Provide broad instrument coverage that includes centrally and bilaterally cleared trades as well as instruments that fall outside the scope of Dodd-Frank

(i) Support real-time reporting to reflect the most up-to-date view of positions and trades

Besides, there were changes required to ensure Infrastructure connectivity with FCMs and CCPs, which meant:

• Utilizing the affirmation matching platforms for affirmation of the trade terms with the EBs

• Testing connectivity with the FCMs and CCPs

• Testing portability from one FCM to another FCM

• Building system to determine the products eligible for central clearing

• Developing new trade netting/collapsing processes to match the netting/collapsing at CCPs

• Developing a process to capture up-front trade level fees as well as maintenance fees.
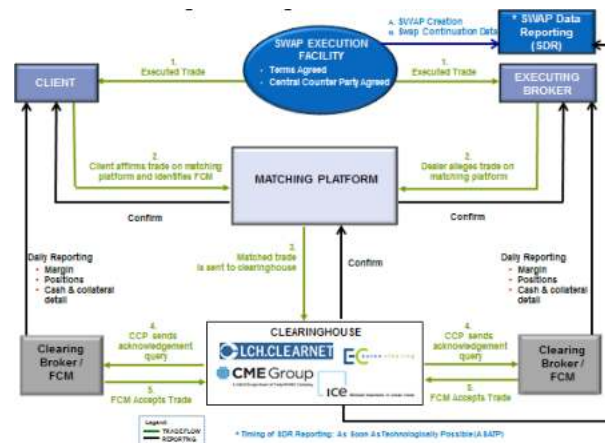

Figure 1: Processing of Transaction and Clearing a Trade

Changes Required in the Trade Process

It was evident post Dodd Frank Act, more than two-thirds to three-quarters of the existing bilateral trade volume would shift and be cleared through central counterparties (CCPs).

- When two SDs and/or MSPs enter into a centrally cleared transaction, both would be required to post initial margin, which would be held by the CCP. Variation margin would be passed through the CCP from one counter party to another.

- In common with current CCP operating practices, variation margin would move on a T+0 basis instead of the prevailing T+1 model used for bilateral transactions.

- While institutions trading bilaterally had long been required to post variation margin to account for daily price fluctuations, requiring initial margin was new and would substantially increase the amount of collateral required. For initial margin, CCPs would accept only highly liquid, high grade collateral, which would put pressure on supply as demand for this limited pool of collateral continues to increase. The influx of cash resulting from mandatory initial and variation margin was likely to prove challenging to the CCPs who had few options for managing that cash.

Key servicing changes that would be required to move from bilateral trades to CCPs are given in Table 5.

Table 5: Bilateral and Central Counterparties Trade

Activities	Bilateral	Central Clearing
1. Management	• Trades received from asset manager and settled • Status and fails managed	• Trades received from asset manager and settled • Affirmation and clearinghouse submission by asset manager on trade date • Settlement processes similar to bilateral • Fails managed, including trade fees, if applicable

Activities	Bilateral	Central Clearing
2. Management	• Cash flows calculated and settled • Fails managed	• Additional requirement for initial and variation margin management, which must be performed *daily* (which bilateral model does not require) • All other processes continue to be performed
3. Valuation and Pricing	• Prices acquired from internal or external source (e.g., Markit, SuperD) • Prices validated	• Source of pricing for variation margin calculation received from CCP/FCM; Vendor pricing may continue to be used as validation price or primary for valuation purposes

4. Collateral / Margin Management	• Collateral movements settled
	• Fails managed
	• Reconciliation and reporting conducted
		• Overall process/workflow is similar, with two exceptions:
		  o Initial margin movements received from investment manager or FCM
		  o Variation margin calculated/validated *daily* and movements managed accordingly

5.	• Reconciliation across record keeping, accounting, custody, collateral, and counterparties • Exceptions/disputes managed as required	• Processes similar, with some differences in counterparties • *Daily* margin management requires daily reconciliation (not all reconciliation performed daily in bilateral model) • Potential for more breaks as components of variation margin include gain/loss, accrual, PAI, credit event (if applicable)
6. Corporate Events	• Corporate events processed	• Similar process
7. Information Delivery	• Delivery of data through info delivery tools (e.g., online dashboard)	• Similar process

Finalizing a Legal Agreement Framework

Towards adopting Chapter VII of the Act the organization made several changes in its legal agreements with transacting counterparties, after:

- Negotiating give-up agreements with the EBs

- Negotiating clearing agreements with the FCMs including credit terms, fees, and collateral/margin processing

- Negotiating addendums for each of the CCPs

- Modifying IMAs with the clients wherever required.

Client Communication

A client tool kit and a comprehensive client communication plan were developed to be used with all their existing clients. The client accounts were identified where mandatory cleared swaps were currently being traded, or they could be potentially traded in future. The IMAs were identified that required modification for central clearing

Client readiness activities and outreach program was completed in North America and ongoing in EMEA and APAC to work with the organization's servicing clients as they move to the new environment

Lessons Learned and Next Steps

During the course of adopting Dodd Frank Act successfully for last several years, a few significant lessons were learned.

- While many argue the merits of Dodd-Frank and the potential negative impact on the profitability and global competitiveness of US asset managers, these regulatory reforms do not have to come at the expense of growth and value creation. The best practices mandated by the Act can be used beyond improving the transparency to fuel growth and expansion.

- Implementing the Act is a long journey that requires a significant commitment from all the participants, who are required to make profound operational changes resulting in rigorous demands on their infrastructure, and make operational excellence even more critical to business success and regulatory compliance. As a corollary to it, the organization is required to augment their operational processes, policies, technology and in some cases, their business model itself.

- Some of the organizations may get a surprise that the effort required for the infrastructure upgrade is much bigger than they originally anticipated. Most of the buy-side firms prefer a fully automated solution; however, the degree of automation that will be actually achieved may vary from organization to organization.

- Further, while the scope of this paper is limited to the provisions of Dodd-Frank relating to OTC derivatives, it is important to actively monitor other aspects of the reform as they evolve, including (but not limited to) Dodd-Frank liquidity, credit concentration and overall risk exposures.

- Lastly, a few key steps by an organization always play a crucial role in making the program successful, like:

  o An un-ambiguous mandate, arranging required resources and regular reviews on the progress of the initiative by the top management are key to success of any new program.

  o Clear communication and regular interaction with all internal and external stakeholders.

The SEC has issued a policy statement describing the order in which it expects new rules regulating the derivatives market would take effect. The policy statement does not estimate when the rules would be put in place, but describes the sequence in which they would take effect. The phased-in approach is intended to avoid the disruption that could occur if all the new rules took effect simultaneously.

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Investigating Causal Linkages between International Stock Markets in Hungary and Austria in Terms of Economic Globalization

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ABSTRACT

The main objective of this article is to investigate causal linkages between international stock markets in Hungary and Austria in terms of economic globalization. We consider data from January 2000 to December, 2013. ATX index represents Austria index where as BUX represents Hungary. We noticed that Hungary financial markets are comparatively more volatile and provides comparatively interesting opportunities for returns. There are strong evidences of no casual linkages of Austria markets (ATX) with Hungary market, both sides. None of the market excluded from global financial crisis. However the recovery scales are comparatively found higher in Hungary market where as ATX market follows lower escalation rates. We followed BDS and Granger casality tests. The results classified in comparative manner. This paper will support decision makings on escalation ratios depending on the international financial market transmitting patterns.

Keywords : Stock Market Linkages, Spillover Effects, Volatility Clusters, Granger Causality, Risk Management, Portfolio diversification

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Introduction

Financial market volatility has been the subject of greater interest for international investors, researchers and academicians. It has delivered plenty number of research in the areas of stock market volatility, transmitting pattern, risk evaluations, investment opportunity, international linkages and so on. This paper focuses particularly on the casual linkages between the stock market of Hungary (BUX) and Austria (ATX). According to FTSE Country Classification as at September 2014 which is the most recent official report, Austria is included in the category of developed countries and Hungary is included in the category of advanced emerging countries. Austria financial market follows comparative more stable investment opportunity for the international investors all over the world. The risk ratios and volatility patterns are less escalated with international financial market moments. The Hungary market (BUX) classified as the advance emerging markets which represents higher escalation rates at upper side and lower side with market volatility.

The advance emerging markets provides greener opportunities for risk taker investors. It is investigated from previous studies that not only developed countries but also financial markets of developed and developing countries become interrelated (Aktar, I. 2009). Eun and Shim (1989) have provided interesting results regarding the international transmission of stock market movements among several mature markets, such as: Australia, Japan, Hong Kong, U.K, Switzerland, France, Germany, Canada and U.S.A., considering the fact that a series of multilateral interconnections were identified. Panton, Lessig, and Joy (1976) investigated co-movements of international equity markets in the light of investment opportunities arising from portofolio diversifications.

There are vast number of research papers on financial market volatilites linkages and provided the greater support to investors in decision makings. This paper basically emphasized on the international financial market volatility linkages on advance emerging market and developed market. This paper will support decision makings on escalation ratios depending on the international financial market transmitting patterns. For instance Tokyo and New York major stock indices, namely Nikkei 225 and S&P500. Kasa (1992) investigated common stochastic trends in international stock markets. J. Trivedi & R. Birau (2013) investigated

the distinguishing characteristic is stability of developed capital market and stable emerging market.

Those groups of capital market stays in the particular bracket have spreading impact of volatility (bullish and bearish) reflected from stable and developed capital market. The impact spreads through inter-linkage between developed and emerging markets. These findings can be idle to bridging the pattern gap and impact on volatility.

Methodological Approach and Empirical Results

The empirical analysis is based on the daily returns of the major stock indices during the sample period between January 2000 and December 2013. The continuously-compounded daily returns are calculated using the log-difference of the closing prices of stock markets selected indices, ie ATX Index (Austria) and BUX Index (Hungary), as follows:

$$r_t = \ln\left(\frac{p_t}{p_{t-1}}\right) = \ln(p_t) - \ln(p_{t-1})$$

In the above formula, p represents the daily closing price. Data series consists of the daily closing prices for each sample stock index during the period between January 2000 and December 2013 with the exception of legal holidays or other events when stock markets have not performed any financial transactions. *Augmented Dickey-Fuller (ADF) test* is used in order to determine the non-stationarity or the integration order of a financial time series. A series noted y_t is integrated of order one, i.e. $y_t \sim I(1)$ and contains a unit root if y_t is non-stationary, but on the other hand Δy_t is stationary, i.e. $\Delta y_t = y_t - y_{t-1}$. Moreover, extrapolating the previous expression, a series y_t is integrated of order d, i.e. $y_t \sim I(d)$ if y_t is non-stationary, but $\Delta^d y_t$ is stationary. The ADF diagnostic test investigates the potential presence of unit roots divided into the following categories: unit root with a constant and a trend, unit root with a constant, but without a time trend, and finally unit root without constant and temporal trend. The ADF test is based on the following regression model:

$$\Delta y_t = c + \beta \cdot t + \delta \cdot y_{t-1} + \sum_{i=1}^{p} \gamma_i \Delta y_{t-i} + \varepsilon_t$$

where p represents the number of lags for which it was investigated whether fulfilling the condition that residuals are white noise, c is a

constant, t is the indicator for time trend and Δ is the symbol for differencing. In addition, it is important to emphasize the essence of a stochastic trend that can not be predicted due to the time dependence of residual's variance. Strictly related to the ADF test, if the coefficients to be estimated β and δ have the null value then the analyzed financial time series is characterized by a stochastic trend.

The null hypothesis, namely if the time series has a unit root, is rejected if t-statistics is lower than the critical value. We followed basic statistical characteristics of selected indices are represented by the following issues: Jarque-Bera test's statistic which allows to eliminate the normality of distribution hypothesis, parameter of asymmetry distribution or Skewness and Kurtosis parameter which measures the peakedness or flatness of the distribution, ie leptokurtic distribution.

The BDS test was used in order to determine whether the residuals are independent and identically distributed. BDS test is a two-tailed test and is based on the following hypothesis:

H_0: sample observations are independently and identically distributed (I.I.D.)

H_1: sample observations are not I.I.D.

This includes aspect involving that the time series is non-linearly dependent if first differences of the natural logarithm have been calculated. The BDS statistics converges in distribution to $N(0,1)$ thus the null hypothesis of independent and identically distributed is rejected based on a result such as $|V_{m,\varepsilon}| > 1{,}96$ in terms of a 5% significance level. The null hypothesis was rejected in both cases based on selected stock indices.

Granger (1969) suggested that, if some other time series Y_t contains information regarding the past periods which are useful in the prediction of X_t and in addition this information are included in no other series used in the predictor, then this implies that Y_t caused X_t. Moreover, Granger suggested that if X_t and Y_t are two different stationary time series variables with zero means, then the canonical causal model has the following form:

$$X_t = \sum_{j=1}^{m} a_j X_{t-j} + \sum_{j=1}^{m} b_j Y_{t-j} + \varepsilon_t$$

$$Y_t = \sum_{j=1}^{m} c_j X_{t-j} + \sum_{j=1}^{m} d_j Y_{t-j} + \eta_t$$

where ε_t and η_t play the role of two uncorrelated white-noise series, namely: $E[\varepsilon_t \varepsilon_s] = 0 = E[\eta_t \eta_s]$ for $s \neq t$ and simultaneously: $E[\varepsilon_t \varepsilon_s] = 0$ for $\forall_{t,s}$.

Practically, the very idea of causality requires that in the case when Y_t is causing X_t some b_j is different from zero and vice versa, i.e. in the case when X_t is causing Y_t some c_j is different from zero.

A different situation implies that causality is valid simultaneously in both directions or simply a so-called "feedback relationship between X_t and Y_t". The F-distribution test is used to test the Granger causality hypotheses based on the following formula:

$$ F = \frac{(RSS_R - RSS_{UR})/m}{RSS_{UR}/(n-k)} $$

where RSS_R is the residual sum of squares, RSS_{UR} represents the unrestricted residual sum of squares, m is the number of lagged X_t variables, K is the number of parameters in the restricted regression. According to representation theorem, the null hypothesis H_o implies that lagged X_t terms do not belong in the regression. The null hypothesis is rejected if the F-value exceeds the critical F value at the selected level of significance (5%) or if the P-value is lower than the α level of significance.
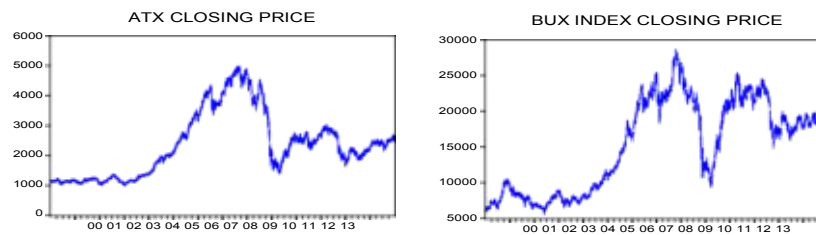
Figure 1: The Trend of ATX Index (Austria) and BUX Index (Hungary) Individual Graphics

Source: Author's computation using financial series of ATX and BUX stock indices.

The historical data series represents the financial indices from Jan 2000 to Dec 2013. Austria (ATX) index returns represents the developed country and Hungary (BUX) represents advance emerging market. We can notice that from the begininning of the study period there are comparatively more ups and down sketches in the advance emerging market comparated to the developed market. See stationary graph for more clerity.

(see Fig. 2). Emerging markets and advance emerging markets are always more volatiline compared to the developed markets. The transmitting pattern changes are clearly visible with higher escalation rates and with observation we can find that advance emerging markets follows the developed market with higher degree of escalation rates for both sides. It also increases the risk factor for the investors and offers exciting opportunities for the investors and researchers in daily based stock trading.
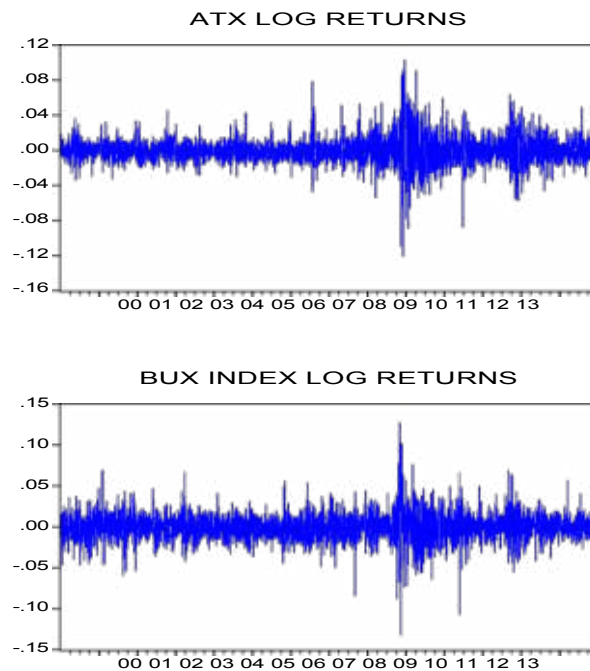
Figure 2: The Log-returns of ATX Index (Austria) and BUX Index (Hungary)

Source: Author's computation using financial series of ATX and BUX stock indices.

The basic stock statistics includes 3524 observations for Austria market and Hungary market. The log returns and histogram chats suggests higher degree of volatility and changes of stock prices at higher sides in advance emerging market during the comparative study (see Fig 3). It also increases the degree of standard deviations and min to max rates. We can see that Skewness is higher in ATX log returns where as Kurtosis is lower in BUX log returns. It means that stock moments are making more stronger impact on stock prices compared to the developed market of ATX.
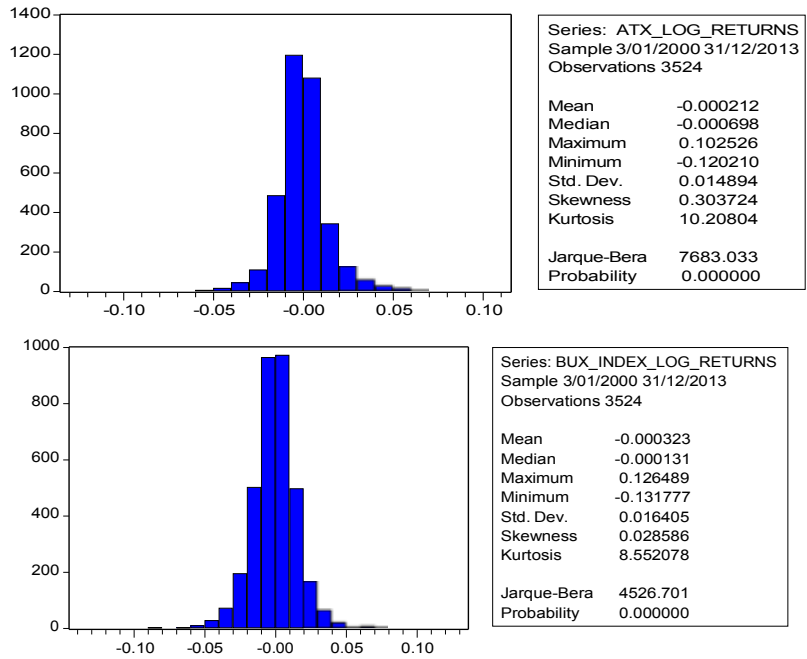
Figure 3: ATX and BUX Log returns Histograms – OBS 3524

Source: Author's computation using financial series of ATX and BUX stock indices.

Table 1: Augmented Dickey-Fuller (ADF) Test

Null Hypothesis: ATX_LOG_RETURNS has a unit root			
		t-Statistic	*Prob.**
Augmented Dickey-Fuller test statistic		−10.07775	0.0000
Test critical values:	1% level	−3.432033	
	5% level	−2.862169	
	10% level	−2.567148	
Null Hypothesis: BUX_INDEX_LOG_RETURNS has a unit root			
		t-Statistic	*Prob.**
Augmented Dickey-Fuller test statistic		−23.56008	0.0000
Test critical values:	1% level	−3.432022	
	5% level	−2.862164	
	10% level	−2.567146	

Source: Author's computation using financial series of ATX and BUX stock indices.

The Augmented Dickey-fuller test results are significant for Austria (ATX) and Hungary (BUX) (see Table 1).

Table 2: BDS Test for ATX and BUX Indices

BDS Test for ATX_LOG_RETURNS				
Sample: 3/01/2000 31/12/2013				
Dimension	*BDS Statistic*	*Std. Error*	*z-Statistic*	*Prob.*
2	0.029273	0.001645	17.79286	0.0000
3	0.059810	0.002619	22.83755	0.0000
4	0.082977	0.003124	26.55777	0.0000
5	0.097385	0.003263	29.84695	0.0000
6	0.104193	0.003153	33.04710	0.0000
BDS Test for BUX_INDEX_LOG_RETURNS				
Sample: 3/01/2000 31/12/2013				
Dimension	*BDS Statistic*	*Std. Error*	*z-Statistic*	*Prob.*
2	0.014479	0.001412	10.25199	0.0000
3	0.028827	0.002238	12.88295	0.0000
4	0.039747	0.002656	14.96375	0.0000
5	0.046320	0.002760	16.78362	0.0000
6	0.048644	0.002653	18.33404	0.0000

Source: Author's computation using financial series of ATX and BUX stock indices.

The BDS tests results suggests independent and identifyable distributions of Austria stock market and Hungary stock market. It represents that time series is non-linearly dependent in case of the first differences of the natural logarithm been calculated. In Table 2, it rejects the distributions of n(0,1) and thus the null hypotheses of independent and identically distribution is rejected for Austria (AUX) market and Hungary (BUX) market returns. It means that the statistical distribution of BDS tests arrives to result such as $|V_{m,\varepsilon}| > 1,96$ in terms of a 5% significance level. The null hypothesis was rejected in both cases based on selected stock indices of AUX and BUX from year Jan 2000 to Dec 2013.

BDS test results has identified and varified that there are no independent and identifyable relationship between the develop market and advance emerging market. However the transmitting pattern seems similer because of international transmitting pattern linkage and no evidence found for independent casual linkage. We now follow Granger casuality tests to check on result 1. We disclosed the theoretical quantile test results for AUX and BUX market visible in Fig. 4.
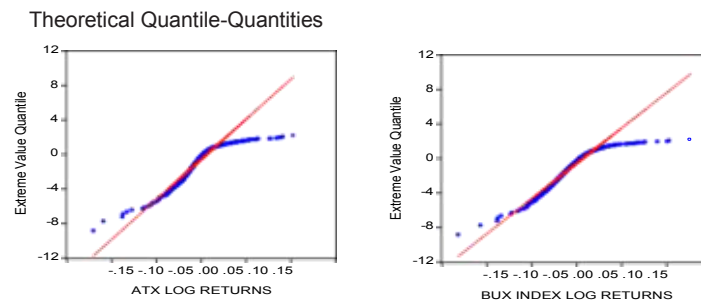
Figure 4: Theoretical Quantile Tests for AUX and BUX Stock Indices
(Extreme values)

Source: Author's computation using financial series of ATX and BUX stock indices.

Table 3: Granger Causality Tests

Pairwise Granger Causality Tests			
Sample: 3/01/2000 31/12/2013			
Null Hypothesis	*Obs*	*F-Statistic*	*Probability*
BUX_INDEX_LOG_RETURNS does not Granger Cause ATX_LOG_RETURNS	3522	0.01525	0.98487
ATX_LOG_RETURNS does not Granger Cause BUX_INDEX_LOG_RETURNS		0.36763	0.69240

Source: Author's computation using financial series of ATX and BUX stock indices.

As we have understood and learned in methodology chapter about the evaluation and analysis of Granger casuality tests, this tests strongly identifies the casual linkages where (if) Y_t contains information regarding the past periods which are useful in the prediction of X_t, in such case Y_t caused X_t. Moreover, Granger suggested that if X_t and Y_t are two different stationary time series variables with zero means, then the canonical causal model has the following form only if Y_t caused X_t.

$$X_t = \sum_{j=1}^{m} a_j X_{t-j} + \sum_{j=1}^{m} b_j Y_{t-j} + \varepsilon_t$$

$$Y_t = \sum_{j=1}^{m} c_j X_{t-j} + \sum_{j=1}^{m} d_j Y_{t-j} + \eta_t$$

In Table 3, we computed Granger casuality tests and we arrieve to conclude that the study data series of AUX and BUX markets are not being followed by the above mentioed form. The financial time series follows the feedback distribution forms since the F value exceeds the critical F value at the selected level of significance, i.e. 5% and in alternate if the P value is lower than the a level of significance. It proves that there is no casual linkage or significance between the developed financial series AUX (Austria) and BUX (Hungary).

Conclusions

This paper covers the empirical study based on casual linkages between developed specimen stock market (AUX) and emerging specimen stock market (BUX). Economic globalization can be defined as a dynamic process of growth and dependency links between national states with complex long-term implications. Austria and Hungary are neighboring countries with a significant common history and both are European Union member states. However, the empirical results of Granger causality tests between international stock markets in Hungary and Austria suggests the absence of a causal relationship. According to the methodology, the null hypothesis is rejected if the F-value exceeds the critical F value at the selected level of significance (5%) or if the P-value is lower than the α level of significance, so there is no particular causality between Hungary and Austria, in the period between January 2000 and December 2013. In other words, the null hypothesis of Granger causality is not rejected, so there is no causal relationship between selected stock markets. Nevertheless the financial series patterns seems to relevant and similar reasonwith international transmitting patterns of financial markets.

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Announcement Effect of Share Buyback on Share Price at National Stock Exchange: An Empirical Investigation

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ABSTRACT

This paper is an attempt to examine the returns on the announcement of share buybacks for a sample of 42 buyback announcements made through open market offer for a period of April 2010 to March 2014. The companies chosen for analysis are listed on the National Stock Exchange of India. The market model has been used in conjunction with the foundations of the event study methodology to arrive at the Abnormal Returns (AR). The returns on Nifty 50 over the estimation window of one year have been taken as the proxy for market returns. The study reports significant announcement effect on the share price in about 50% of the companies. However, the Average Abnormal Returns (AAR) have not been found significant. This indicates that the news of announcement of buyback of shares is already reflected in share price.

Keywords: Buyback of Shares, NSE, Stock Market, Market Model, Event Study

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Introduction

Share buybacks became popular in the US in 1980's although the concept was introduced in 1960's. The system of buyback was considered to be one of the most liberal one as it allowed companies to repurchase shares by borrowing funds and it wasn't mandatory that repurchase has to be made only out of the undistributed profits or reserves. This means companies can replace share capital by debt. Many other countries had adopted the idea but were more conservative in their approach.

In UK share repurchases were introduced in 1980's and in other European countries shares repurchases became popular in mid 1990's as government had either prohibited buybacks or the tax laws were very stringent. The restrictions were gradually released in late 1990's. The period between 1995 to 2000 witnessed lot of share buybacks in European countries like Finland, Germany, France, Denmark and Sweden. Even in Asian countries share buybacks became popular in late 1990's (Japan-1995, Malaysia 1997 followed by Singapore and Hong Kong in 1998 and Taiwan in 2000) (Gupta, 2005).

In India till 1998 Share buybacks were prohibited but the Companies (Amendment) Act 1999 introduced Section 77A, 77AA and 77B in the companies Act, 1956 permitting companies to buy-back their own shares and other securities. Buyback of equity shares is in a way a capital restructuring process. It means repurchase of its own share by a company. A company having substantial cash resources may like to buy its own share from the market when the prevailing market price of its share is much lower than its book value or what the company perceives to be its true value. Unlike US the rules for share buybacks in India are quite stringent. The terms and conditions are as follows:

Terms and Conditions of Buyback of Shares in India

- Buyback must not exceed 25% of aggregate of the paid up capital and free reserves and it shall be completed within 12 months of passing of resolution.

- The Articles of Association of the company must authorize the buyback and a special resolution has to be passed in the general meeting of the company. But if the amount of buyback is less than 10% of the

paid up capital and free reserves of the company, than the buyback decision can be made by a board resolution.

- The ratio of the debt owed by the company should not be more than twice the aggregate of capital and its free reserves after such a buy back, i.e. not more than 2:1.

- Section 68(1) of Companies Act says that the Shares could be purchased out of resources generated in the following manner:

  o Free reserves

  o Securities Premium Account

  o Proceeds that are generated out of Issue of any shares or other specified securities.

Objectives of Buyback of Shares

Signalling hypothesis: This concept is based on the assumption that management of the company can estimate the true value of their securities and when they feel that their security is undervalued (market value is less than the intrinsic value) they resort to buyback of shares. When the company buys back its own shares, the number of shares are reduced which in turn increases the EPS. In a way by resorting to share buyback the company is giving a positive signal to the investors that the value of their share is much higher than the prevailing market value.

Free cash flow hypothesis or agency cost: This concept is based on the assumption that the company should distribute the surplus cash amongst the shareholders, if it feels that there are no investment avenues available.

Optimum financing ratio or leverage hypothesis: Capital structure can be rationalised through share repurchase as it increases the debt content and reduces the equity in the share capital. Increased leverage results in increasing the volatility in the share price making it more attractive.

Substitution effect: Share buyback is generally considered as a substitute to dividends because of the rationale that dividends are taxed at a higher rate than capital gains.

Increase in promoters holding by offsetting an equity dilution caused by allotment of shares through ESOPs and otherwise.

Overcoming a takeover threat and to provide an exit route to the share holders in case of illiquid shares.

Methods of Buyback Prevalent in India

Buy back can be carried out in two ways in India:

- *Tender offer:* Shareholders may be presented with a tender offer whereby they have the option to submit a portion or all of their shares within a certain time frame (20-300 day period) and at a premium to the current market price. Tender offer is used when the buyback is slightly large.

- *Open market offer:* Shares are bought from the open market through brokers over a long term period. In this method, the company announces the minimum and the maximum buyback price, while the actual price is market determined. Open market purchases are used when the number of shares to be bought is relatively small.

The present paper is an attempt to understand the effect of announcement of buyback on the share prices at National Stock Exchange, India. The study is divided into five sections including this one on Introduction. Next section covers the past literature on the subject. Third section lays down the research methodology employed in the study. The empirical findings are reported in fourth section and finally, last section concludes the paper with an outline of implications of the study.

Literature Review

In line with the increasing popularity of share buybacks, there is a plethora of literature on the subject in both western markets and in Asian markets. A brief review of the same is presented below of the studies which are pertinent to the present study.

In the U.S. market, Asquith and Mullins (1986) pointed out that signalling role of dividends and stock repurchases is different but the objective is same behind both i.e to return excess cash to the shareholders. The firm offering dividend suggests that the firm has a promising future and when it goes for share buyback it suggests that the share is undervalued.

Ikenberry et al. (1995) took a long term perspective and have analysed the effect of share repurchases over a period of 10 years. The findings indicated that the average market response to the news of open market share repurchase was only 3.5%, despite the public endorsement made by the company that the shares were undervalued and it was a 'good investment'. This showed that managers are overly optimistic about the firm's value. For value stocks, undervaluation can be a reason for repurchasing wherein the AAR is 45.3% (four year buy and hold return) but for glamour stocks this was not the case.

Kahle (2001) examined how employee stock options affect the decision to repurchase shares in the U.S. Most of the studies have suggested that repurchase programs have been used by the companies to signal undervaluation to the investors and to return excess cash flow to the investors. However, in this study the author opined that the announcement effect was lower for the companies that have higher non-managerial options.

According to the findings of Grullon and Michaely (2002) the firms have gradually substituted repurchases for dividends. Majority of firms that initiate cash payments do so through share repurchases and many firms that have been paying dividends have also started to repurchase shares as well. It has also been suggested that differential taxes between dividends and capital gains matters a lot. The market's reaction to repurchases is more positive when the tax gains from repurchases are higher than dividends. Share repurchases as a percentage of total dividends increased from 13.1% in 1980 to 113.1% in 2000 in the U.S Market.

Li and McNally (2004) showed that firms choose tender offer when they have financial slack and large shareholders that monitor management and prefer open market repurchases in times of market turbulence or weak business conditions. There was a direct relationship between the choice of the repurchase program and the offer terms and the announcement period price reaction.

Mishra (2005) empirically examined the price reaction on announcement and whether management is acting in the best interest of non tendering shareholders when the company wants to go ahead with targeted share buyback. In many cases it was observed that the company that offered

buyback price far above premium had over subscription and the prices fell after the buyback. Share buyback could not ensure a sustained rise in the price of the scrip. The study pointed that the buyback norms should be made more stringent if the companies were to have a long term view.

In the Indian market, Thirumalvalavan and Sunitha (2006) emphasised on the fact that market reacts more favourably to share buybacks announcements than dividends announcements which in turn suggests strong signalling power of share repurchase announcements. The market reaction to share repurchase announcement recorded a high Cumulative Abnormal Return (CAR) two days of the event whereas dividend announcement recorded a high CAR within one day of the event. In the share price movement markets showed an immediate upward swing but this positive signalling existed for a very short period.

QUINTANA (2006) suggested that French companies have a positive correlation between the relative amount spent on buyback programs and the long run share price performance which further suggests a positive impact of buybacks on shareholder's value. However the immediate effect of buyback announcements was much smaller than in other countries (US and Germany) with an average abnormal return of 0.32% only. This study pointed out that when buyback announcements are not viewed as aiming at shareholder's value creation then there is an adverse reaction.

Hyderabad (2009) studied the market reaction to share repurchases in India documented and for this purpose 68 buybacks were selected for the period 1998 to 2007. The announcement day return was 2.83%, for days prior to announcement day the AAR was found to be negative as compared to the days nearer to the announcement day. The announcement day CAR was 6% but the overall CAR was 5.16% only. Year wise analysis of AAR and CAR for buyback returns indicates vast divergence in the returns over several years. In the year 2002-03 there were 22 buybacks but the announcement returns and CAR was lowest. However, we cannot say that higher number of buybacks impact the announcement day returns as such returns and CAR were found to be negative even in the years when buybacks were less.

Hyderabad (2009a) examined the excess returns on the announcements of share buybacks for the period 1999-2007. The overall CAR was found to be 7.24% for a 41 day window. However the positive reaction on

the announcement day was only temporary. According to this study the fixed price tender offers yielded higher announcements returns than open market repurchases in the Indian context. For a better market reaction and to strengthen the investor's interest the announcement date should be followed by repurchase so as to avoid the incidences of insider trading and information leakage as such activities provide unfair gains to some shareholders.

In another study, Hyderabad (2009b), studied the market reaction to multiple buyback announcements in India. Accordingly only 30% of initial repurchases return to the market with the offered second share buyback within a gap of 1.64 years. Market reaction to multiple offers was in contradiction to signalling hypothesis predictions. The overall Cumulative abnormal returns was negative which indicated that all positive returns were realised in pre offer period only.

Ishwar (2010) gave contradictory findings from the past Indian market studies and opined that there was absence of any change in the movement of stock price reaction to buyback which further led to the inference that market anticipates the information provided by these announcements and incorporates this before the announcements. In short, the study showed negative and insignificant abnormal returns for majority of the days in the event period.

Varma and Rao (2010) investigated the drivers of share repurchases in India and for this the companies that have gone in for buyback have been compared with control companies which were in the same industry with similar capitalisation. The findings indicated that repurchasing firms paid lower dividends and were undervalued in comparison to the non repurchasing firms. The motives for repurchase varied over years. It was also observed that high profitability firms usually go in for repurchase and the companies having low profitability over the years use repurchases for false signalling.

Horan (2011) reported that the buybacks are more frequent and more intense compared to past, having an increased accretive effect on EPS.

Chavali and Shemeem (2011) aimed to investigate the impact of share buyback on the share price performance and the findings indicated that market reacts positively with an AAR on announcement day of 1.07%

and CAR of 1.59%. However the result held true for the select sample of companies and it cannot be generalised.

Doan et al. (2012) examined whether the Australian firms used share buybacks to deter unwanted takeover risks. The results suggested that firm's share buyback activities will increase if it perceives a high takeover risk from the market.

Rajlaxmi (2013) the announcement effect was tested for which CAR with 5 day pre CAR and 5 day post CAR was calculated. The sample for this study comprises of 6 buyback announcements and the results indicated that the investors must view repurchase announcements as a short term gain only.

Thus it can be noted from the above literature review that buyback of shares have been extensively studied. However, in the light of recent developments in the Indian capital markets and increased activity level, it becomes imperative to take up such a study again to update the existing literature. This study attempts to understand the announcement effect and thus examine the market efficiency at India's leading stock excahnge, NSE.

Data and Methodology

The objective of this research paper is to examine the announcement effect of share buybacks. The present study uses the market model to analyse the announcement returns for buybacks. The study uses Nifty 50 index as a proxy measure of market portfolio over a 252 day estimation period. The event window comprises of 31 days (15 days prior to announcement and 15 days post announcement). The announcement date is designated as day "0" in the event period. Only the buybacks made through open market offers has been considered during the sample period of April 2010 to March 2014. The criterion for the selection of buyback sample is as follows:

- Availability of data in the event window and estimation period.

- No major events like Bonus issue, Mergers, Stock splits etc during the period of study as these events also influence the share price.

Only those companies were considered which fulfilled the above mentioned parameters. Thus 42 companies made it to the final sample

for the study. The public announcement date for buyback was taken from the website of SEBI www.sebi.gov.in and the data from the official website of NSE www.nseindia.com. The daily closing prices were used for computing the event returns.

According to the market model the Abnormal returns on a given trading day t is calculated as:

$$AR_{i,t} = R_{i,t} - \alpha_i - \beta_i R_{m,t} \qquad \dots (i)$$

where $AR_{i,t}$ is the abnormal return on security i for day t, and $R_{m,t}$ is the return on market portfolio, α_i and β_i are intercept and slope respectively and are estimated using the following equation:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \qquad \dots (2)$$

for calculating the values of $R_{m,t}$ and α_i, β_i the study uses Nifty 50 index as a proxy measure of market portfolio.

The Average Abnormal return on day t is calculated as:

$$AAR_t = \frac{\Sigma_{i=1}^{n} AR_{i,t}}{N} \qquad \dots (3)$$

where N is the number of announcements in the sample.

The daily AARs are cumulated over the window period to calculate the Cumulative Abnormal Return as:

$$CAR = \Sigma_{t=-d}^{d} AAR_{i,t} \qquad \dots (4)$$

where $-d$ and d represent the event window period.

To validate our findings statistically the study has employed one sample t test in two tables. In the first table t test has been employed on individual company's event window and in the second table t test has been done on Average Abnormal Return of all the companies. The significance level was taken as 5%.

Empirical Findings

The result of Market Model has been presented in Table 1. The intercept and slope have been arrived at by using Equation 2. In most

of the companies the intercept is negative indicating the riskiness of the companies compared to their expected returns.

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Table 1: Results of Market Model

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Sr. No.	Company	Announcement Date	Intercept	Slope	R^2	Standard Error
1	Allied Digital Services Limited	4-Apr-11	–0.0039	1.2018	0.1894	0.0273
2	Amtek Auto Limited	22-Nov-11	–0.0003	0.8403	0.1361	0.0265
3	Aptech Limited	11-Jun-13	–0.0017	1.1754	0.1387	0.0243
4	Bhagyanagar India Limited	2-Nov-11	–0.0007	0.8091	0.0726	0.0361
5	Cairn India Limited	14-Jan-14	0.0000	0.4839	0.1165	0.0152
6	Crisil Limited	13-Dec-11	–0.0016	0.4608	0.0096	0.0587
7	Crompton Greaves Limited	3-Jul-13	–0.0016	1.2366	0.1932	0.0210
8	DCM Shriram Limited	3-Mar-14	–0.0006	0.2552	0.0156	0.0234
9	De Nora India Limited	3-Nov-11	0.0015	0.7961	0.1088	0.0283
10	Deccan Chronicle Holdings Limited	6-May-11	–0.0026	1.3665	0.2434	0.0272
11	ECE Industries Limited	15-Jul-11	0.0001	0.7299	0.0673	0.0289
12	Eclerx Services Limited	20-Aug-13	0.0004	0.5499	0.0602	0.0191
13	FDC limited	24-Aug-12	–0.0002	0.1440	0.0106	0.0178
14	Garware Wall Ropes Limited	3-Oct-13	–0.0006	0.1577	0.0033	0.0303
15	GeeCee Ventures Limited	24-Jan-12	–0.0013	0.5670	0.0843	0.0248
16	Gemini Communication Limited	11-Nov-11	–0.0006	1.0023	0.1173	0.0343
17	Gujarat Apollo Industries Limited	27-Jan-14	–0.0005	0.4088	0.0417	0.0223
18	HT Media Limited	17-May-13	–0.0009	0.3368	0.0231	0.0182

Sr. No.	Company	Announcement Date	Intercept	Slope	R^2	Standard Error
19	India Bulls Real Estate Limited	29-Dec-11	−0.0020	-0.0422	0.0026	0.0258
20	Infinite Computer Solutions (India) Limited	7-Jun-13	0.0012	0.9712	0.0768	0.0282
21	JBF Industries Limited	27-Aug-13	−0.0017	0.4884	0.0726	0.0152
22	Jindal Poly Films Limited	1-Nov-11	−0.0045	1.2091	0.1078	0.0434
23	Jindal Steel and Power Limited	10-Sep-13	−0.0025	1.5319	0.2605	0.0239
24	J K Laksmi Cement Limited	13-Feb-12	−0.0001	0.8729	0.2837	0.0181
25	Kanoria Chemicals and Industries Limited	17-Aug-12	−0.0011	0.4575	0.0631	0.0224
26	Kirloskar Oil Engines Limited	16-Feb-12	−0.0004	0.6425	0.1002	0.0252
27	KRBL Limited	18-Feb-13	0.0010	0.8141	0.1110	0.0213
28	Maharashtra Seamless Limited	2-May-13	−0.0025	0.1032	0.0042	0.0131
29	Mastek Limited	3-Mar-14	0.0010	0.6416	0.0628	0.0286
30	Monnet Ispat and Energy Limited	22-Feb-12	−0.0007	0.2528	0.0517	0.0142
31	Motilal Oswal Financial services Limited	26-Jun-13	−0.0008	1.0011	0.1548	0.0199
32	Nitin Fire Protection Industries Limited	22-Aug-13	−0.0008	0.5943	0.0404	0.0255
33	Panama Petrochem Limited	1-Mar-13	−0.0026	0.3595	0.0204	0.0231
34	Pennar Industries Limited	11-Jun-13	−0.0010	0.4839	0.0523	0.0171
35	Praj Industries Limited	7-Dec-11	0.0015	1.3737	0.3525	0.0235
36	Reliance Industries Limited	23-Jan-12	−0.0003	1.1515	0.6076	0.0121

Sr. No.	Company	Announcement Date	Intercept	Slope	R^2	Standard Error
37	Sasken Communication Technologies Limited	27-Apr-12	–0.0006	0.6631	0.1040	0.0251
38	Selan Exploration Technology Limited	25-Sep-12	0.0001	0.7299	0.1960	0.0179
39	SMS Pharmaceuticals Limited	6-May-13	0.0018	0.2923	0.0073	0.0284
40	The Great Eastern Shipping Company Limited	16-Aug-13	–0.0008	0.2955	0.0263	0.0158
41	Tips Industries Limited	26-Jul-12	0.0032	0.7224	0.1005	0.0278
42	Zee Entertainment Enterprises Limited	13-Apr-12	0.0003	0.5577	0.1351	0.0180

The Abnormal returns (AR) for all the companies has been computed using Equation 1. A one-sample t-test has been carried out to determine whether the mean is significantly different from zero for all the days in the event period, for each of the companies separately. A summary of these tests is presented in the Table 2 is as follows:

Table 2: Summary of t-test for Individual Companies for the Event Window

Event window	Reject Null Hypothesis	% Rejected
–15	20	48%
–14	20	48%
–13	18	43%
–12	18	43%
–11	15	36%
–10	14	33%
–9	18	43%
–8	24	57%
–7	15	36%
–6	19	45%
–5	20	48%
–4	23	55%
–3	21	50%

Event window	Reject Null Hypothesis	% Rejected
–2	21	50%
–1	17	40%
0	19	45%
1	19	45%
2	16	38%
3	19	45%
4	15	36%
5	16	38%
6	15	36%
7	17	40%
8	12	29%
9	12	29%
10	16	38%
11	16	38%
12	15	36%
13	15	36%
14	13	31%
15	18	43%

H_0: The mean of Abnormal returns is not significantly different from 0.
H_a: The mean of Abnormal returns is significantly different from 0.
Alpha level = 5%.

It can be observed from the Table that for about 45% of the companies the abnormal returns are not significantly different from zero for the event day. Infact for most of days in the event window, the abnormal returns are significantly different from zero for not more than half of the companies in the sample.

These findings are in direct contrast with many past studies, where the announcement effect is pronounced and leads to significantly high (low) returns. However this may be an encouraging sign for the Indian Stock market. Buyback of shares is essentially a method of realigning the capital structure of the company and as such does not contradict the caveat of shareholder wealth maximization. The fact that the announcement of buyback is not having a significant effect on the share price implies that the information is quickly subsumed in the share price and thus the market is moving towards being informationally efficient.

Table 3: Average Abnormal Returns (AAR) and Cumulative Abnormal Returns (CAR) for the Event Window for the Sample Companies

Event Window	AAR	Count positive AR	p-value	A/R Null Hypothesis	CAR
−15	0.0067	24	0.378	Accept	0.67%
−14	0.0147	22	0.059	Accept	2.15%
−13	0.0013	24	0.8	Accept	2.27%
−12	0.0059	27	0.087	Accept	2.86%
−11	−0.0016	21	0.715	Accept	2.70%
−10	−0.0012	17	0.658	Accept	2.58%
−9	0.0023	22	0.478	Accept	2.82%
−8	0.0122	23	0.059	Accept	4.03%
−7	0.0028	21	0.429	Accept	4.31%
−6	0.0093	22	0.176	Accept	5.24%
−5	0.0015	21	0.8	Accept	5.39%
−4	0.0055	24	0.077	Accept	5.95%
−3	0.0011	21	0.907	Accept	6.06%
−2	0.0048	19	0.647	Accept	6.53%
−1	0.0063	23	0.142	Accept	7.16%
0	0.0042	18	0.453	Accept	7.58%
1	−0.0001	23	0.759	Accept	7.57%
2	0.0035	22	0.237	Accept	7.91%
3	−0.0005	17	0.795	Accept	7.86%
4	0.0032	22	0.328	Accept	8.18%
5	−0.0066	17	0.084	Accept	7.52%
6	0.0008	19	0.785	Accept	7.60%
7	0.0015	18	0.493	Accept	7.75%
8	0.0058	27	0.029	Reject	8.33%
9	0.0003	24	0.573	Accept	8.36%
10	0.0006	21	0.861	Accept	8.42%
11	0.0037	20	0.412	Accept	8.79%
12	−0.0008	22	0.863	Accept	8.71%
13	0.0024	21	0.546	Accept	8.95%
14	−0.0024	15	0.418	Accept	8.71%
15	0.0029	22	0.411	Accept	9.00%

H_0: The mean of Abnormal returns is not significantly different from 0.
H_a: The mean of Abnormal returns is significantly different from 0.
Alpha level = 5%.

It is evident from Table 3 that AAR (computed from Equation 3) is statistically insignificant at 5% level for the event window. This finding is in contradiction with many studies but in line with the conclusions of Ishwar (2010). One of the plausible reasons for the insignificance of results could also be due to the cancelling out effect of averaging returns of the sample companies – some companies have positive abnormal returns whereas some have negative abnormal returns.

This can be substantiated from the Table 3 whereby 18 companies exhibit positive AAR on the event day and remaining 24 give out negative AAR. This also indicates that the announcement of buyback has resulted in positive abnormal returns for fewer companies and for remaining companies buyback announcement has resulted in negative abnormal return. There is no discernible trend related to AAR in the event window.

The CAR (calculated from Equation 4) for the event date is 7.58% which compares favorably well with the findings of Hyderabad (2009, 2009a). The CAR for the event window is 9.00% which seems to be on the higher side given the sample of 42 companies.

Conclusion

The present study envisaged to understand the effect of announcement of buyback of shares on the share price. A sample of 42 companies was taken over the period of 4 years which announced share repurchases through open market offer. The market model methodology was adopted for the study to compute the abnormal returns. The Average Abnormal Returns were tested for statistical significance for each of the days of the event window.

The findings of the study reported significant results at individual company level on the event day for about 50% of the sample. However the Average Abnormal Returns was not found to be statistically significant for the overall companies. The results of the study imply that the information related to the announcement of the buyback is already reflected in the share price. This also throws light on the growing maturity and efficiency of stock market of India.

These findings may have important implications for all the market participants. The traders who look for abnormal returns about corporate

announcements may not get such gains. The companies proceeding for buyback may feel more confident about approaching the market since volatility in share price will be less.

More research can be taken up along the same lines for other corporate announcements taking the recent data to corraborate with the findiings of the study.

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Passbooks to Passwords – The Evolution of Personal Banking in Modern India

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ABSTRACT

This research article chronicles the growth of personal banking industry from the customer's point of view. It looks at the evolution of regulation, technological innovation and customer acceptance as modern delivery systems outpaced the old. The research article's emphasis is on how the customer has found it easier to perform personal banking transactions over time. From the passbook era to the password era, the article archives a timeline of events over the past three decades.

It begins with the process of cash withdrawal and money transfers in the 1980s, leading to the introduction of ATMs and MICR cheques in the 1990s, to the Internet revolution and its impact in the new millennium. The article does not purport to be a study of Indian banking industry but a compilation of events that made personal banking a friendly and time-saving process.

Keywords: Banking, Evolution, Password, Passbook

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Introduction

Like any human generational change, personal banking too has embraced change over the last three decades. While banking regulators gave the initial impetus, information technology (IT) and the communications revolution in India spurred the growth of personal banking sector to its present incarnation. Presented here are the milestones that helped the personal banking sector to where it is today.

The Passbook Period

My parents send me money every month for my boarding and lodging expenses. The money reaches my account in under 2 hours even though my parents live thousands of kilometres away. A remarkable feat indeed. But was it the same when my parents went to college, around 25 years back?

Apparently not. Personal banking was a tedious process then. Take, for example, withdrawing money from a bank. To begin with, one had to stand in a queue with either a cheque or withdrawal slip. Once you reached the head of the queue, the clerk at the bank would find your ledger, manually enter the transaction, place the withdrawal instrument on that page and pass on the ledger to a senior manager. You, in turn, would get a numbered token, which was to be submitted at the cashier counter.

Meanwhile, the senior manager would verify your signature and pass on the withdrawal instrument to the cashier. Your token would then be called by the cashier and you would eventually receive your money. For your own personal record, all the transactions were recorded in a Passbook.

The whole process had many flaws. Your ledger could already be in use since it had more than 100 other accounts. Personnel managing counters would often go missing. Passbooks were often taken and kept by the bank and had to be collected later after updation. To top it all, it could take an hour to receive your money, and maybe more at the beginning of the month, when salaries were credited. And mind you, you could only bank at the branch where you had opened your account and not at any other branch of the same bank.

The transfer of money was equally time consuming. If one issued a cheque, it could take 3-5 days before it got credited into the recipient's account in the same city. For outstation cheques, it could take 7-10 days or more for the money to reach. And top of it, some banks placed a charge for issuing outstation cheques. But change was around the corner.

The pace of cash transactions was slow and tedious and thus there was a need for better tools in personal banking to increase the satisfaction of bank users.

The Need for Speed

Obviously, there was a pressing need to increase the speed of money flow for personal banking customers. And the impetus came from the Reserve Bank of India.

In 1984, the country's central bank set up the Committee on Mechanisation in the Banking Industry. Its recommendations included:

- Banks should set up service branches at centres where they have more than 10 branches. The service branch so set up would exclusively be devoted to clearing operations of the bank at that particular centre.

- Banks to be in readiness for the introduction of MICR Clearing at the four metropolitan cities by assessing their requirements for encoders, adopting standardised cheque forms and reorganising work procedures where necessary, and training staff down to the branch level. (Dr. C. Ranga Rajan, 1984).

According to information available on

"In the first phase of computerisation spanning the five years ending 1989, banks in India had installed 4776 ALPMs (Advanced Ledger Posting Machines) at the branch level, 233 mini computers at the Regional/Controlling office levels and trained over 2000 programmers/systems personnel and over 12000 Data Entry Terminal Operators. The Reserve Bank too had embarked upon an ambitious program to bring about state-of-the-art technology in the clearing process and had introduced MICR clearing at 4 centres and computerized clearing settlement at 9 centres."   (Kannan, n.d.)

Based on this success, yet another committee was set up by the Reserve Bank of India, the Committee on Computerisation in Banks, in 1989.

Its recommendations included:

- Computerisation of the settlement operations in the clearing houses managed by Reserve Bank of India at Bhubaneshwar, Guwahati, Jaipur, Patna and Thiruvananthapuram.

- Operationalisation of MICR technology and the National Clearing of inter-city cheques at the four metropolitan cities.

- Introduction of one-way collection of cheques drawn on the 4 metros received from Ahmedabad, Bangalore, Nagpur and Hyderabad.

- Framing of Uniform Regulations and Rules of Clearing Houses.

- Branch level computerisation and the establishment of connectivity between branches.

- Improvements in customer service – introduction of on-line banking.

- Standardisation and rigorous security features to ensure an efficient and risk free transfer of funds electronically.

- Setting up a network of Automated Teller Machines (ATMs) in Mumbai. ATMs to be strategically located at airports, railway stations, hospitals, important commercial centres, as well as bank branches, to be used by the customers to perform a variety of functions such as deposits, withdrawals, balance enquiries, statement of accounts, etc., at any point of time during the day.

- Introduction of a single 'All Bank' credit card and advocated the need for its widespread acceptance by merchant establishments and usage by customers to reduce the load on cash and cheque transactions (Dr. C. Rangarajan, 1989).

In hindsight, three critical terms in the recommendations set the pace for personal banking to be more swift and forward-looking – online banking, ATMs and credit card.

Another hurdle were the banking unions who felt threatened by the automation of banks. However, after protracted negotiations, the Indian Banks Association (IBA) representing bank managements and the trade unions arrived at a settlement in 1993. It heralded a major breakthrough in the introduction of computerised applications and development of communication networks in Banks.

In other words, the RBI acknowledged the fact that the passbook system is a slow and tedious process. They issue recommendations to use new technology for benefit of bank users.

Money Moves

ATM Arrives

The introduction of ATMs in the early 1990s marked a major change for the personal banking industry. While foreign banks and private banks were first of the block (due to the restrictions on the number of branches imposed on them), they were soon followed by the public sector banks.

At first, ATMs were popular as cash dispersing machines. With the aid of bank-issued ATM Cards, one could only withdraw money from ATMs of banks where one had a banking relationship. For example, State Bank of India (SBI) customers could only take out money from SBI ATMs. However, as networking evolved banks came interconnected and inter-bank use of the ATM became the norm (with the restriction of free withdrawals from your non-bank ATMs).

The number of ATM installations in India has seen an explosive and exponential growth in India. The compounded average growth rate (CARG) was 29% in the period 2005-2010 and expected to be 34% in the period 2010-2016. In sheer numbers, it meant that the installation of base of 16,750 in 2005 increased to 60,153 in 2010 and was expected to touch nearly 175,000 in 2015 (Hota, 2013).

While dispensing cash was the first function of the ATM, technological revolutions would enable to perform various other tasks. However, from the personal banking perspective, the introduction of the ATM represented a cataclysmic change. It brought personal banking out of the branch and nearer to the customer.

Evolution of Features and Functionalities of ATMs

1988-1994	Deposit of Cash, Withdrawal of Cash (Initial Period)
1995-1999	Mini Statement, Balance Enquiry (Early Developments)
2000-2001	Coupon Dispensing (First Extension)
2002-2004	Fulfilling Requests from customers (Cheque Book)

2004-2006	Ticket Booking-Railway and Airlines, Bill Payments , Mobile Recharges (Non-Banking Services)
2007 to date	Check Deposit with Scanning, Customized ATMs, Ubiquitous Multifunction, ATMs Biometric ATMs.

Personal Banking becomes easier for cash withdrawals with the advent of ATMs. All the features and functions provided by the banks during this period were all helpful for bank users. It made life for bank users easier as they could do all these functions from anywhere at anytime.

MICR and CTS - 2010

"Many of you would have seen the magnetic inks bar codes printed on the bottom of your bank's cheque leaves. These bar codes are known as MICR code, an abbreviation for 'Magnetic Ink Character Recognition'. Actually, the MICR is the name given to the technology used in printing the code. In India in 1980 this unique system of MICR based cheque clearing system was introduced first time. Apart from being a security bar code to protect your transaction, the MICR code is also an indispensable part for online money transfers. Every bank branch is given a unique MICR code and this helps the RBI to identify the bank branch and speed up the clearing process." (simplydecoded, 2012)

The introduction of MICR cheques speeded up the transfer of money for intra-*bank, inter-bank, intra-city and inter-city transfers.* This technology was later upgraded to CTS 2010.

"CTS 2010 is the prescribed standard by the RBI for cheques issued by all Indian banks to facilitate faster clearing. Instead of the collecting branch sending the physical cheque to the paying bank, an electronic image of this cheque with relevant information like the MICR code, date of presentation, presenting banks etc. is transmitted to the drawee branch by the clearing house, hastening the entire cheque clearing process." (Shyam, 2013)

The CTS 2010 system further cut down the time for cheque clearing and made life much easier for transferring money. While the ATM and the modern cheque clearing systems enabled faster withdrawal and transfer of money, further revolutions would take place once the Internet took root in the country. Transferring funds to friends or families becomes

much easier for bank users. There is no need to waste a lot of time on waiting in bank offices.

Buy Now, Pay Later

Personal banking took another leap with the introduction of credit cards. Though they were introduced in the early 1980s, it wasn't till a decade later that their attraction started meeting their potential. If you met some financial conditions, banks would issue you a credit card with a prescribed limit. The banks had tie-ups with credit card companies like Visa, Mastercard and Diners, for example, to bring you the service.

At first, credit cards were limited to withdrawal of cash and for shopping at retail stores. Payments could be made later to credit card companies at fixed dates or later dates at a rate of interest. This heralded the 'buy now, pay later' culture among bank customers. More importantly, personal banking now brought the concept of short-term loans into its ambit.

It is basically short-term unsecured loans which is very helpful for some people who need money urgent. This is for people who may want to buy something who may not have cash at that particular time or have not received their salary, payment yet.

Debit Card

Many Indian customers shun the idea of debt. Enter the Debit Card. It signaled the movement away from the cash-based economy to an easier system for purchases. Essentially, a debit card allows you to withdraw cash or purchase goods or services by directly debiting your bank account. Not only did it keep spending habits in check but more importantly it got rid of the need to keep large piles of cash in your wallet. It is estimated that by 2017, debit cards will constitute nearly 90% of all card usage in India. (Wizbowski, 2014).

People do not like to keep a lot of cash in hand because it is not secure. Debit card users can swipe for any product or service they want to buy at anytime. The money will directly be deducted from the bank account.

Internet Innovations

Home Banking

Banking on the Internet has revolutionized personal banking as it brought the bank to your home. There is no need of waiting in lines or adjusting to bank hours any more, you can access your bank account online any time you want. It helps one to keep a tab on their money even on a daily basis. By keeping a close eye on your funds one always knows what is going on in your account.

Account Information is one of the functions provided by online banking. This provides a summary of your bank accounts. It also allows easy tracking of previous transactions. One can also enquire about their account balances and transfer money from one account to another if needed. This is also useful to check their savings account and also to pay of loans if needed. All this information is available anytime online which is a boon to all account holders. People can also ask for an E-statement which includes all transactions which have occurred during a particular period of time.

Pay Bills from Home

With banks and customers connected, the next logical step was to complete the triangle with service providers to make life easier for customers. Thanks to the Internet, a wide variety of utility bills and periodic payments can now also be made directly with a push of a button.

By using the "Pay Bills" facility, consumers can pay all their bills from their PC. This saves time and also travel cost to different service providers. Moreover, it serves as a link between the service providers and the consumers and benefits both of them. Telephone Bills, Electricity Bills, Internet/Landline Charges are a few common examples that can all be paid online. A standing instruction can also be made to pay these bills at a particular date on each month. Insurance Premium and credit card bills can also be paid directly to the respective insurance companies or banks. (CIBC, n.d.), (Shodhganga).

ECS

"ECS is an electronic mode of payment/receipt for transactions that are repetitive and periodic in nature. ECS is used by institutions for making bulk payment of amounts towards distribution of dividend, interest, salary, pension, etc., or for bulk collection of amounts towards telephone/electricity/water dues, cess/tax collections, loan installment repayments, periodic investments in mutual funds, insurance premium etc. Essentially, ECS facilitates bulk transfer of monies from one bank account to many bank accounts or vice versa."

ECS Credit: ECS Credit is used by organizations as a tool to pay employees or investors having their bank accounts in different locations. It was introduced by RBI and allows customer to directly get their salary, pension, dividend and interest into their bank account. The ECS credit payments can be initiated by anyone who needs to make a lot of payments to beneficiaries. The user has to give details of the beneficiaries and the transaction amount, date when it has to be done. This is known as the credit-push facility and is divided in parts of the year like quarterly half yearly or monthly.

ECS Debit: ECS Debit is used by an organization for raising debits to a large number of accounts (for instance, consumers of utility services, borrowers, investors in mutual funds etc. It is useful for payment of telephone, electricity bill water bills, cess/tax collections, loan installment repayments, periodic investments in mutual funds, insurance premium, etc., It can be used by anyone who has to receive or collect huge amounts from a large number of people. It takes care of automatic debit to customer accounts on due dates. Customers don't need to keep a track of when they need to pay their bills. It also saves time and money. It is known as debit–push–facility or many to one and payment can be easily made through institutions either corporate or government. (Rajan, 2008) (RBI, 2012)

NEFT and RTGS

"National Electronic Fund Transfer (NEFT) and Real Time Gross Settlement (RTGS) allow individuals, companies and firms to transfer funds from one bank to another. You can check the RBI website for a list of NEFT and RTGS-enabled branches of your bank. These facilities can only be used for transferring money within the country. To opt for these, you need to fill a

form providing your or the beneficiary's details — name, bank branch where the account is held, the Indian Financial System Code, a unique code for identifying the branch, and the account number and type. You have to submit a cheque while opting for this facility. You can also transfer funds through net banking. These are third-party transfers and the option is available under the same header on your net banking home page." (Gupte, 2011)

Transferring funds to friends or families becomes much easier for bank users. There is no need to waste a lot of time on waiting in bank offices.

Mobile Madness

The advent and rapid growth of mobile phones in India offered another platform for banking services using the Internet medium. Nearly all banking applications on PCs and laptops soon found their way to the mobile phone. In other words, all Internet Innovations were now ported to the smartphone.

"According to 2011 figures, a mere 7 percent of Indian customers used Internet banking. Mobile banking has also been on a low-volume high-growth trajectory – the user base in 2013 was 22 million, up 74 percent over the previous year, though transaction value grew 228.9 percent over the same period." (Mallya, 2014)

Moreover, mobile banking increases the depth and breadth for personal banking services. Especially in rural areas where the number of phones easily outnumber computing devices.

The mobile platform helps more consumers to enter as one can bank from anywhere as well as everyone has smartphones and an internet network with the emergence of 3G and 2G.

The Next Transactions

While information technology and communications technology will continue to drive customer-friendliness and ease-of-use of personal banking services, new devices would create new platforms for the delivery of these services. While the PC and laptop allowed customers to operate out of their home, the mobile aided them in banking on the move. Other innovations are also gaining ground.

Take for example, biometric ATMs. Introduced just a couple of years back, it is making rapid inroads in rural areas, where illiteracy is high. Villagers can now use their thumbprint instead of a PIN number to access their bank accounts. Add this to the Prime Minister Narendra Modi's initiative to expand the depth of bank accounts to reach every Indian as well as the Aadhar Card's biometric database, personal banking is poised for a leap in rural India.

Yet another milestone in personal banking is being crossed with the introduction of the Digital Mobile Wallet. It is essentially a mobile device that allows an individual to easily subscribe to and browse through many services, including payment cards, offers, vouchers, loyalty programmes, tickets and other items they need in their daily lives. The wallet will also be able to launch an application from a retailer, bank, transport operator or another service provider.

The next stop lies with Artificial Intelligence (AI). Take, the smart watch for example. Add voice recognition facilities. So in the future, you can speak into your watch and say "Transfer Rs. 50,000 to mom". The AI in your watch will translate the message into a personal money transfer service and execute the order. A few minutes later, a message from mom, "Thanks son". A far cry from the time you live in or your parents lived in.

Conclusion

From passbooks to passwords, personal banking has come a long way in modern reformist India. However, the pace and momentum of change is not slowing but increasing day by day, aided and abetted by technological changes in communications and information technology. Which in the end for the personal banking will only result in more customer choice and customer delight.

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Road to Sustainable Financial Inclusion: Diffusion of Smart Card Technology

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ABSTRACT

Smart Card is a top grossing technology which is being used in Public Policy Programs by Government of India. Mahatma Gandhi National Rural Employment Scheme (MGNREGS) is one such scheme which has significantly contributed in the financial inclusion uniformly across India. Considering the adoption and penetration of Smart Cards and changing trends in Financial Inclusion, this study will contribute in understanding the barriers of adoption of Smart Cards. The research also seeks to investigate the enablers of adoption of Smart Cards in MGNREGS to enhance financial inclusion. The research uses an in depth analysis of limited literature resulting in a model based on constructs. The constructs were carefully chosen from technology acceptance model (TAM) and innovation resistance theory. The constructs were then stitched in a model using Structured Equation Modeling (SEM). The research found social influence, perceived ease of use and perceived usefulness as some of the significant factors for

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readiness of adoption of Smart cards. On the contrary facilitating conditions was one of the non-significant factors found out from the study. Trust and credibility risk were also considered in the model and strangely the results pointed out that privacy and security risks were inversely proportional to behavioral intentions. Thus inclusion of these factors in the model was significantly important and added a new dimension to the existing literature. The results covering various vivid dimensions will help the public policy makers and banks to make the exercise of financial inclusion much more efficient.

Introduction

The usage of smart cards has been witnessing a paradigm shift in the past decade and its application has also been diversified. The usage of Smart cards has not only transformed the lifestyle of the customers but has also changed the dynamics of liquid cash in the market. The roots of Smart Cards have also started penetrating into rural regions using public policy framework (Das, 2013). The growth of public policy schemes in India have majorly contributed to financial inclusion by linking the rural masses with the mainstream financial supply chain. The role of smart card has been phenomenal in this process of inclusion. The diffusion of Smart Cards has been has not only used banking as a medium but also other areas like agriculture and livestock. The smart cards have evolved from contact cards to contactless cards depending on its application (Das, 2013; Mishra et al., 2014). The usage and diffusion of Smart Cards has been limited in rural areas. The world has gradually started witnessing growth in the customer base of Smart Cards with Kenya and Philippines being some of the pioneer countries in this change. In the Indian setup, where more than 70% population lives in rural areas, Smart cards can be handy in solving the problem of financial inclusion effectively. The present study aims at developing a conceptual model of factors responsible for behavioral intention of usage of Smart Cards for financial inclusion in India.

The paper proposes a reliable and valid construct "Readiness to Adopt Technology" (TAR) built upon 4 basic pillars of Perceived Ease of Use

(PEOU), Perceived Usefulness (PU), Facilitating Conditions (FC) and Societal Influence (SI). The paper also focuses on finding out Degree of Diffusion as a factor of Perceived Risk and therefore building a model which encompasses TAR as a construct in the behavioral intention of usage of Smart Cards for financial inclusion in rural areas. The model can be further expanded to different geographical areas and for different technologies in order to generalize the results at a later point.

Literature Review

The usage of Smart Card in India has been growing at a rapid pace.   It is maximum in the financial industry with banks being the biggest stakeholders of the same. The outreach of banks into rural frontiers has been increasing using public policy programs. Mahatma Gandhi National Rural Employment Scheme (MGNREGS) is one such scheme which has been one of the biggest public policy programs to cater the problem of financial inclusion in rural India. The scheme guarantees a 100 day job guarantee and in return of the work pays the workers via banks or post offices (Jain and Jain, 2013). The diffusion of the scheme has been in all the states in India and therefore it forms one of the only schemes launched by Government of India to eradicate the problem of unemployment and including the rural masses to financial supply chain simultaneously (Murthy et al., 2013). The scheme has been using different technology innovations to distribute the wages, the most of it being a Smart Card. A Smart Card in MGNREGS is an identity card which contains the basic information of the person along with the details of his/her job profile. The same card can be used to deposit or withdraw money from the banks (Singh and Gupta, 2013). MGNREGS therefore, has launched an all-in –one card which not only serves the purpose of proof of identity of a person but also used for financial transactions.

The usage of Smart Cards has been phenomenal in countries like Kenya and Philippines which has helped their economy to grow and overall increased financial inclusion. Considering the increase in number of bank accounts in rural India due to MGNREGS, Smart Card seems to a viable option to financially include a large mass of rural people. The transaction can be made using a finger print impression or a retina scan or both in rural areas as they face problems in remembering the security

codes. The transactions can be made at banks, Point of Sale, Post Offices, and Business Correspondents etc. Further researches have shown that hardly 10% of the cards are used frequently by the rural people (Singh and Gupta, 2013). The Smart Card technology unlike the mobile banking does not require complex methods to be memorized to do a transaction. The all purpose card can not only help the customer to use it as a proof of identity, but also to transact with banks of post offices (Jain and Jain, 2013). The advantages offered by Smart card technology are unmatched, yet there is a dip in growth rate of Smart card users in the country under MGNREGS. Therefore, there is a need to study the barriers and enablers of adoption and diffusion of Smart Card technology in Rural India. This study aims to dissect the minds of rural people to study the adoption rate of Smart Cards under MGNREGS. The study therefore reviews the existing models encompassing Behavioral Intention (BI) of customers towards technology adoption. It also aims to compare the existing models and derive useful and relevant constructs for the present study.

Technology Acceptance

The financial industry in its recent years has seen continuous infusion of innovation and technology. The adoption of these innovative technologies has been variable across various parts of the world due to difference in the set of technology like internet banking, mobile banking, e-commerce, etc. (Barczak et al., 1997; Black et al., 2001; Howcroft et al., 2002; Liao et al., 1999; Tan and Teo, 2000). There have been multiple models which measures the acceptance rate of any technology, some of which are Theory of Planned Behaviour (TPB), Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), etc. This research uses four of their common constructs which are relevant and justifiable in this research. A brief overview of the same is as follows:

Perceived Usefulness and Perceived Ease of Use

These two constructs are the building blocks of any technology based model as they intend to study the degree of ease and degree of usefulness of the technology. The constructs seems much more important when applied to a newly launched technology in an unexplored space. PU is defined as the degree of belief of an individual in enhancing the performance

of work using the new system (Davis, 1989). PEOU on the other hand refers to the degree of belief of an individual that there will be no efforts infused while using the new set of technology (Davis, 1989).

Studies have proved that both PU and PEOU influences attitude of an individual towards acceptance of any innovation in technology. The relation between the two constructs and behavioral intention has also been studied with reference to financial supply chain. While a handful of studies concentrate on the adoption of new technology in the rural geography especially in the financial supply chain. The studies have figured out that PU and PEOU have been positively correlated with the behavioral intention of the end user (Agarwal and Prasad, 1998; Davis et al., 1989; Davis and Venkatesh, 1996; Featherman et al., 2010; Hess et al., 2014). This study therefore is keen in proposing the following relations.

- PU will have positive significant effect on behavioral intention towards Smart Cards.

- PEOU will have significant effect on behavioral intention towards Smart Cards.

Societal Influence

Societal Influence as defined by Venkatesh et al. (2012), is a degree of belief an individual perceives about his/her joining the usage taskforce of the new technological product. The germination of SI was from TAR model which indicates a direct relation between SI and BI. The linkage of SI and BI broadly was also studied in image in innovation diffusion theory (IDT). Although different theories propose different representation of the same relationship, the degree of association between the two remains more or less the same. Studies have also indicated the peer pressure and society plays an important role in influencing a person to take a decision. The relevance of the construct increases many folds in a rural set up where the society or people are mostly illiterate or functionally literate.

The construct SI has therefore been a part of many studies with technology diffusion in financial studies being the central idea theme (Kleijnen et al., 2004; Nysveen, 2005; Venkatesh et al., 2012, Baker et al., 2014).

The usage of Smart Cards falls under the same ambit of technology adoption and therefore normative pressure or societal influence seems to

a key driver for higher adoption rate. This study deduces the following relationship:

• Societal influence will have a positive significant effect on behavioral intention to use the Smart Card.

Facilitating Conditions

The success of adoption of any technology is dependent on the facilitating conditions. It can be defined as the degree of belief of an individual regarding the existence of technical and organizational infrastructure to promote, support and enhance the usage of a system (Venkatesh et al., 2012). Facilitating conditions is an externally driven construct and it is the similar to the incubator which is used to hatch an egg. Therefore, facilitating conditions performs the functions of an incubator. Also, the presence to apt conditions helps in greater degree of diffusion of any technology. The conditions may be different dependent on demographic factors and the technology incorporated. The construct is important as the stakeholders providing services are different entities. It is therefore important to understand the role of synchronized supply chain to provide Smart Cards in the rural areas. Therefore it can be proposed that:

• FC will have significantly positive effect on behavioral intention of Smart Cards.

In the Indian context, studies related to Smart Card diffusion are limited. There are numerous studies which have used many of such constructs to examine the rate of adoption or diffusion of any particular technology, but very few attempts have been made to study this in the Indian context. The newly derived construct TAR forms the next level of the building blocks standing on the above mentioned four pillars. The present research proposes establishment of discriminant and convergent validity and reliability keeping in mind TAR as a key construct with reference to Smart Card diffusion in rural India. Therefore, the study proposes to hypothecate:

H1: TAR construct is a combination of PU, PEoU, SI,

H1a: Perceived Usefulness is a sub-construct of TAR.

H1b: Perceived Ease of use is a sub-construct of TAR.

H1c: Societal Influence is a sub-construct of TAR.

H1d: Facilitating Conditions is a sub-construct of TAR.

Perceived Credibility Risk

Smart Card is used for financial transactions in MGNREGS as well. The involvement of finance and technology in a rural set up where the audience has limited experience of both financial and technological systems involves a sense of risk in the minds of people. Perceived risk can be defined as the degree of belief of an individual about a system which is free from privacy threats and security threats (Wang et al., 2003). This dimension has been well researched on various platforms where financial and technological sides are simultaneously considered. As the definition quotes, the two dimension, i.e. privacy threats and security threats (Hernandez et al., 2008; Polatoglu and Ekin, 2001; Thakur and Srivastava, 2013) are also carefully studied. Most of the studies have indicated that they are also key determinants for studying the behavioral intention of an end user. Perceived privacy risk in the context of present study is the fear of the rural end users that their personal information about their finances will be shared. The risk includes the fear of sharing the personal information of the customer. The perceived privacy risk affects the customers trust on the technological way of handling their cash and thus prevents them to use technology or at times prevents them to keep any cash in the financial system. Therefore Perceived privacy risk has an inverse relationship with the behavioral intention of people. On the other hand, perceived security risk deals with the risk of losing money while a transaction is made. Studies have indicated that the risk is higher for technologies which involve internet and for customers who are relatively challenged in terms of their knowledge about technology and have a relatively less educational background (Chen, 2013). Therefore, the research proposes an inverse relationship of perceived security risk and behavioral intention of usage of Smart cards in rural India. The study proposes to test the following hypothesis for inclusion of this section.

H2: The construct Perceived Risk is a combination of Perceived Privacy Risk and Perceived Security Risk.

Behavioral Intention

Behavioral Intention is a terminology derived from TAM and its extended versions. It is an amalgamation of two separate terms. Intention as defined in TAR or TPB is "the degree of efforts by oneself to achieve any goal" while the amalgamated term can be restructured and redefined as "the degree of behavior or nature of oneself to enable to achieve any target goal" (Ajzen, 1991). It is also defined as "the subjective probability of performance of any particular behavior in any particular situation" (Fishbein et al., 1975).

The above mentioned constructs will be used in this present study. The constructs are used to develop a conceptual model which will help us in testing the basic hypothesis. The conceptual model presented in Figure 1 reflects a blueprint of the interdependence of the constructs of successful diffusion of Smart Cards in rural India.
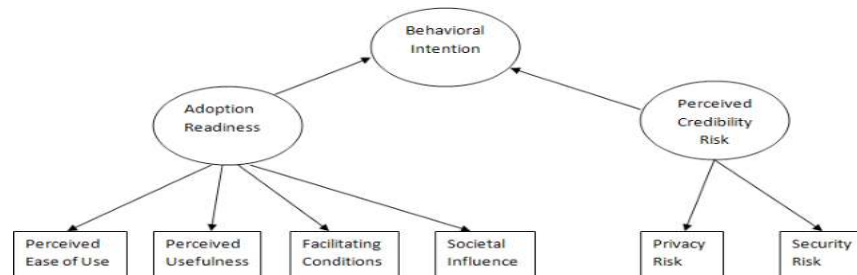

Figure 1: Conceptual Model with Hypothesized Relationship

TAM (Davis, 1989) and its subsequent avatars have proposed that dimensions of technology acceptance significantly impact BI to use a new technology. Researchers in different parts of the world have dimension of technology acceptance in internet banking, e-commerce and similar technologies positively impacting usage intention (Barczak et al., 1997; Sathye, 1999; Liao et al., 1999; Tan and Teo, 2000; Black et al., 2001; Howcroft et al., 2002; Flavián and Guinalíu, 2006).

Another aspect associated with the online environment which has been drawing a lot of importance in technologies involving financial transactions is credibility risk perception of users. PC risk has been found to be negatively impacting usage intention of online banking (Pikkarainen et al., 2004; Howcroft et al., 2002; Polatoglu and Ekin, 2001).

Researchers have found credibility risk to be significant obstacle to the adoption of online banking in Australia (Sathye, 1999) and in Singapore (Tan and Teo, 2000). Mobile commerce is a technological innovation with similar characteristics. Based on review of existing literature, we hypothesize:

H3. TAR positively influences BI towards usage of mobile commerce.

H4. PC risk negatively influences BI towards usage of mobile commerce

Research Methodology

The present study uses a structured questionnaire as a tool for data collection. As the present study uses constructs which are derived from earlier models or theories, special considerations were kept in mind regarding the reliability and validity of the tool. Face validity and Content validity was checked for each of the item related to every construct (Fornell and Larcker, 1981). The questionnaire comprised of two sections. The first section enquired about the demographic data of the respondents. The second section was used to record their awareness and their behavior and intentions of usage of Smart Cards. The answering pattern in the second section was 7 point likert scales 1-7 with 1 being strongly disagree to 7 being strongly agree.

The final version of the instrument was converted into local language as the target audience might not be aware of English/Hindi. The instrument was also supported by a Manual which was used to assign codes to answers obtained from the rural respondents. Ajmer, Rajasthan was selected to collect data for this study as it is one of the best performing districts in Rajasthan under MGNREGS (Bhargava, 2013). The rational of choosing Rajasthan is because of the initial launch of Smart cards in the state for pilot testing and Ajmer is one of the districts which have successful deployment of Smart Card technology. A total of 400 respondents were approached for data collection out of which only 292 complete questionnaire were filled. The questionnaire was self administered and special care was taken to collect data from both users and potential users of Smart cards in the district. Table I reflects a quick overview of the respondents.

Table 1: Demographic Profile of Respondents

Demographic Factor	Option	% of Respondents
Gender	Male	74
	Female	26
Educational Background	Literate	15
	Functionally Literate	85
Age	20-30	37
	30-40	50
	More than 40	13
Usage patterns	Users	57
	Potential Users	43
Awareness	Yes	91
	No	9

Data Analysis

The collected data was cleaned and missing values were carefully treated using SPSS. The analysis of the data was done using Structured Equation Modeling (SEM). The advantage of using SEM is to estimate the interrelation between multiple dependent variables (Hair et al., 2006). The present study also incorporated Confirmatory Factor Analysis (CFA) to confirm whether the measurement model is fit or not. The purpose of performing first and second order CFA was also to test the reliability and validity of the model. CFA was performed for both TAR and PC Risk due to the presence of multi item constructs while BI was neglected because of its nature being uni-dimensional. Chronbach alpha was higher than 0.7 which confirmed the reliability of the instrument, while factor loading for the three factors leading to BI was also greater than 0.7.

The result derived from performing CFA at level I led to omitting of three items (SI4, EE1, PE1). Similarly, after performing second order CFA, facilitating conditions as a construct was also eliminated due to a significantly high factor cross loading with the construct PC Risk (Anderson and Gerbing, 1988). The results derived after performing both the levels of CFA and eliminating the constructs or items wherever necessary results in the following results which are reported in Table 2 to 5. The tables also reveal that the measurement model has passed the degree

of fitness. The value of the critical ratio for each and every item with standardized loadings was found to be higher than 0.60 with significance level controlled at 0.001. On a parallel track, it was discovered that the average item to factor loadings exceeds the basic criterion of 0.7 which confirms the convergent validity of the constructs. Convergent validity was also confirmed by using variance extracted estimates for each of the factors and the estimates were found to be greater than 0.5 (Fornell and Larcker, 1981). The results also indicate a significant correlation thereby confirming the presence of nomological validity for the constructs. The results also indicate that the variance developed between the pairs of the set of constructs is lesser than corresponding value of variance extracted estimates which confirmed the presence of discriminant validity in the model. The results in total significantly indicate that the model developed was reliable and valid.

Table 2: Validation of Measurements – Reliability and Convergent Validity (TAR)

Variable	Indicator	Factor loading	CR value	LA	CA	Composite reliability	AVE
Perceived usefulness	PE4	0.77		0.80	0.87	0.77	0.63
	PE3	0.80	29.93				
	PE2	0.82	20.75				
Perceived ease of use	EE4	0.78		0.81	0.85	0.79	0.66
	EE3	0.80	23.24				
	EE2	0.86	19.13				
Social influence	SI3	0.76		0.81	0.84	0.77	0.59
	SI2	0.89	23.58				
	SI1	0.80	22.15				

Notes: Significant at: $^*p < 0.05$, $^{**}p < 0.01$; $^{**}P < 0.001$; LA – loadings average; CA – Cronbach's α; CR – critical ratio; AVE – average variance extracted; CMIN (df = 50) = 167; NFI = 0.98; CFI = 0.98; GFI = 0.97; RMSEA = 0.055

Table 3: Validation of Measurements – Reliability and Convergent Validity (PC Risk)

Variable	Indicator	Factor loading	CR value	LA	CA	Composite reliability	AVE
Security risk	SR4	0.779		0.75	0.831	0.74	0.56
	SR3	0.837	29.93				
	SR2	0.613	20.75				
	SR1	0.754					
Privacy risk	PR4	0.644	23.24	0.72	0.810	0.70	0.53
	PR3	0.813	19.13				
	PR2	0.802					
	PR1	0.621	23.58				

Notes: Significant at: $^*p < 0.05$, $^{**}p < 0.01$; $^{**}P < 0.001$; LA – loadings average; CA – Cronbach's α; CR – critical ratio; AVE – average variance extracted; CMIN (df = 13) = 12.7; NFI = 0.995; CFI = 1; GFI = 0.996; RMSEA = 0.0

Table 4: Validation of the Measurement Model – Discriminant and
Nomological Validity (TAR)

	1	2	3
1. Perceived usefulness	*0.63*	0.76	0.67
2. Perceived ease of use	0.58	*0.66*	0.72
3. Social influence	0.52	0.45	*0.59*

Notes: Significant at: $^{**}P < 0.001$; italic figures in diagonal represent the average variance extracted; above the diagonal interconstruct correlations are provided and below the diagonal shared variance (squared interconstruct correlations) are provided

Table 5: Validation of the Measurement Model – Discriminant and
Nomological Validity (PC Risk)

	1	2
1. Security risk	*0.56*	0.73
2. Privacy risk	0.54	*0.53*

Notes: Significant at: $^{**}P < 0.001$; italic figures in diagonal represent the average variance extracted; above the diagonal interconstruct correlations are provided and below the diagonal shared variance (squared interconstruct correlations) are provided

Hypothesis Testing

The remaining items after Confirmatory Factor Analysis were used to test the empirical model developed earlier. The empirical estimates can therefore be studied from Figure 2 and Table 6. The results from table 6 indicate that the data supports the conceptual model. The hypothesis can be therefore tested using the data from Figure 1. TAR for behavioral intention of usage of Smart Cards can be explained and derived from the four constructs, PEOU, PU, FC and SI. The path analyses showcase the results with respect to the association of each of the construct with TAR. The results indicate that facilitating conditions were not found to be a contributor of TAR while the remaining three elements, PU ($\beta = 0.98$), PEOU ($\beta = 0.44$) and SI ($\beta = 0.607$) contributed significantly. These results helped in testifying the H1.

The results from Figure 2 also indicate that TAR positively influences Behavioral Intention of Smart Card Usage ($\beta = 0.735$) which supports the H3 as well. A similar explanation can be interpreted from the figure about the classification of risks. The figure also reflects that SR ($\beta = 1.118$) and PR ($\beta = 0.512$) significantly support and contribute in predicting PC. Lastly the fourth hypothesis H4 which was trying to relate a significant

impact of PC risk on BI was also tested using the model. Results from the figure indicate that the higher the PC risk, the lower is the Behavioral Intention in the adoption of Smart Card in Rural India ($\beta = 20.21$).

Table 6: Hypothesis Testing

Hypothesis	Hypothesized path	Standardized estimate	SE	CR
H1	PEOU ← TAR	0.98	0.111	10.935[**]
	PU ← TAR	0.844	0.085	12.177[**]
	SI ← TAR	0.607	0.084	8.118[**]
H2	PR ← PC	0.512	0.15	4.838[**]
	SR ← PC	1.188	0.247	5.346[**]
H3	BI ← TAR	0.735	0.23	14.058[**]
H4	BI ← PC	−0.21	0.241	−3.838[**]

Notes: Significant at: [*]$p < 0.05$, [**]$p < 0.001$; SE – standard error; CR – critical ratio; CMIN (df) = 370 (113); NFI = 0.869; CFI = 0.904; GFI = 0.993; RMSEA = 0.07
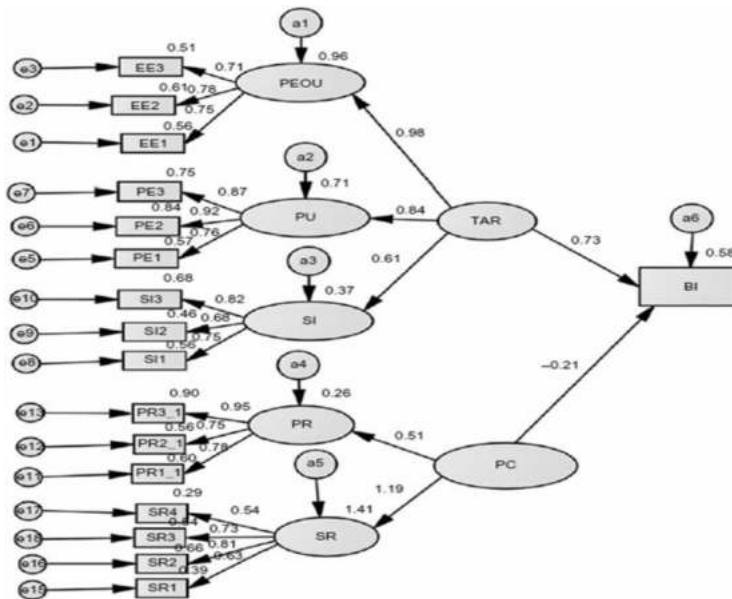

Figure 2: Measurement and Structural Model

Results and Discussion

The results indicate that the perception about risk by the customer, especially in the rural set up, forms a key factor in predicting the usage of Smart card adoption. The research therefore proposes a model which customizes the PC risk such that the customer can use Smart Cards and other such related technologies without any hassles. The tendency of

usage of Smart Card in a rural set up depends a lot on handling the risk portfolio which is evident from the results. The results found out in this study are in sync with the earlier found results (Luarn and Lin, 2005; Wang et al., 2003). The results of the study indicate a significant role of PR and security in the public perception towards the credibility of Smart Cards and the transactions made using it. The policy makers thus need to focus on the risk aversion strategies to eradicate this problem.

A strange yet important finding which contradicts with the earlier studies is the irrelevant role of facilitating conditions towards the intentions of individuals (Bhattacherjee, 2000; Taylor and Todd, 1995). This may be due to easy access to Smart Cards and remotely present Business facilitators present in the villages. Apart from this, constructs like Societal Influence have significant impact as indicated in previous studies. It was evident from the results that, the rural people tend to get highly influenced with the peers using and experiencing Smart Cards. On the same lines, research also points that the usage of the technology will increase if an individual perceives that the technology is useful and easy to operate. Thus, it is important to make the individuals believe about the uses and ease of usage of Smart Cards.

The results of the study contribute equally towards academia and industry. The research finding not only add to the existing literature related to technology diffusion but also gives a brand new dimension to study the diffusion of Smart Cards in a rural setup especially in a developing country like India. This would also help the policy makers of MGNREGS to re strategize the diffusion plans of Smart Cards in other areas. The results showcased a unique finding in this set up which is alarming for MGNREGS as spending only on infrastructure and distribution of Smart Cards alone will not serve the purpose. The study also contributed in exploring the dimensions of behavioral sciences towards technology which would be useful in understanding the perception and nature of individuals in rural areas.

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Is There Any Impact of Training on the Performance of Selected Public Sector Banks?

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ABSTRACT

HR is considered as Human Capital of any organization nowadays. In order to enable the staff/executives of the organization to perform efficiently, expenditure towards training should be considered as an investment and not as expenditure. The present study focuses on impact of training on the performance of selected two Public Sector Banks, i.e. Bank of Baroda and Union Bank of India. The study is based on the secondary data, i.e. total training expenditure incurred by the banks, expenditure towards HR and NPA related training and its impact on the performance of the bank. The data related to certain important parameters from April 2008-09 to March 2012-13 is analyzed to find out as comparison between both the banks. The authors arrive to the conclusion that the bank which has invested more in training is able to perform better than the bank which invests comparatively less in the area of training and especially in the area of HR and NPA related training. Thus Bank of Baroda has an upper hand in various parameters as compared to Union Bank of

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India. The authors also opine that there is a need to take a detailed research in this area and also a comparative study between some of the Public and Private Sector Banks and suggest a suitable training model for them.

Keywords: Banks, Expenditure, Human Resource, Impact, Non Performing Asset, Training

Introduction

Training is an ancient art. It had been practiced in one form or the other since the beginning of human civilization. However, the emergence of training as a modern science is of recent origin. Today, it comes under the most dynamic and fastest growing area of modern management, i.e. the Human Resource Management (HRM).

In order to survive and succeed in the fast changing competitive environment, banks need to organise, develop and manage their human resources effectively. The major responsibility of banks in this regard is to build up a right mix of skills, attitude and conceptual understanding amongst their employees. For achieving this, a continuous process of training interventions in banks is a must. Despite years of training and huge investment, the effectiveness of training programmes of the Indian Public and Private Sector Banks is a matter of concern. In many instances, it has been observed that the trainees consider training as a relaxation from office work. The selection of staff for the training programmes is not always need based. It is also a fact that the staff imparted training in a particular area are not given opportunity to utilize it, as they are posted in some other areas. It is therefore, necessary to study the effectiveness of training programmes by evaluating the context, inputs, process and outcomes of training between the various sectors of banks in India.[1]

Literature Review

A. Mani and Dr. P.A. Joy in their study regarding effectiveness of training among bank employees: A comparative study of selected public and private sector banks in India state that their study focuses on effectiveness of the training among bank employees to analyse the training system and

context of public and private sector banks in India. The primary data was converted into tabulated and percentage analysis, Z test, t-test and Rank analysis were used. The objective of the study was to study the training system of public and private sector banks in India, to analyse the effectiveness of the training system towards selected public and private sector banks in India, to find out whether there was any significant difference regarding the effectiveness of training between different public and private sector banks and to suggest measures to enhance the effectiveness of the training programmes. The study was limited to 400 as sample size due to the geographical coverage of public and private sector banks. They have arrived to the conclusion that structural barriers in the public sector banks are adversely affecting the training effectiveness. The t-test analysis show that the negative figure of table value indicated that private sector bank training context was more effective than the public sector bank context. They recommended that a separate body should be allocated to continuously assess the technological and social changes to inherit the same in the aspect of training. The primary objective of the training should focus on socio-techno changes and challenges and also a continuous survey and monitoring in the aspects of customer satisfaction which covers 360 degree of the environment. They have concluded that a detailed longitudinal study which covers the entire banking industry under the auspices of the RBI regarding training and development will be useful as detailed information can be made available and the Government must give more attention and support to the training of employees in all the different kinds of organization taking into consideration the larger interests of the nation.[2]

P. Akilandeswari and Jayalakshmi in their study are of the view that training and development are continuous process in improving the calibre of employees. It is an attempt to improve their current and future performance but the organization should keep a track on their performance after imparting them training it means training needs assessment it is a systematic process of altering the behaviour of employees in a direction to achieve the organization's goals. A training programme is an effort by the employer to provide opportunities for the employees to acquire job related skills, attitudes and knowledge. In order to meet the ever-growing needs of business and household banking has to become dynamic and updated in modern scenario and also to take up this industry to the heights of

international excellence requires best combination of new technology and skilful and talented manpower. Therefore most of the commercial banks either private or public adopt training and development programmes at the time of induction, promotion and other situation. In this research paper an attempt is made to learn that training and development exist in banks and their impact to generate efficiency of employees to cater to the need of their customers. The objective of the training was to study training and development programmes undertaken by banks for their employees, to analyze effectiveness of training and development programmes for employees to discharge their duties and to study how training and development programmes helps to achieve customer satisfaction. The primary data included data collected through questionnaire filled by the bank employees. Secondary data included reference books, journal, research papers and internet. They had taken random sampling of 50 respondents from employees from different banks like HDFC, ICICI, Vijaya Bank, Bank of Baroda, Repco Bank located in suburban area of Chennai. They have inferred from the study that employees were aware of the training programme and had attended the training programme conducted at their organization. Training programme had helped them to pick up new technical skills and soft skills. Attending training programme leads to perform better at work. Topics are covered at the right time and the quality of topics covered reflected high level of satisfaction among the employees at the organizations. To study also showed that the training and development programmes help to achieve customer satisfaction.[3]

Athar Mahmood, is of the view that training has been an integral part of day-to-day life since times immemorial. Every new employee regardless of his previous training and experience needs to be introduced to the work-environment of his new job and taught how to perform specific tasks. Most organizations expect trainings to result in learning that translates into performance at actual workplace. It has been found that when training is performance management oriented, it helps in contributing to contribute to company's goal. The objective of the paper was an attempt to explain the interplay between training, learning and performance on one side while defining the parameters of performance on the other specifically for the banking sector. The paper was divided into three distinct parts. In the first part, the relationship between training, learning and performance had been studied using a theoretical model represented diagrammatically. Next, the

factors impacting an individual's performance have been broadly listed. Finally, performance dimensions in banking sector had been identified. As a part of methodology a comprehensive review of literature provided meaningful insights into performance dimensions in banking sector. They were identified and put in the context of environmental factors. The findings was that there was a positive co-relation between the three with training leading to learning and considered successful only when desired performance is the same as actual performance. Ten variables determine performance in banking sector which operate within four environmental conditions forming the context. Also important are organization's vision, mission & strategies and the immediate supervisor's attitude.[4]

G. Ramanathan related in his study job satisfaction to various factors like personal nature, social atmosphere, cultural impact, environmental and financial conditions. The nature of the job is also an important factor in deciding the level of job satisfaction of employees. Job satisfaction is the long-term prospect of employment in an organization, which creates a sense of involvement and commitment to the job among employees. The results revealed that majority of the respondents had moderate job satisfaction, 30 per cent of the respondents have revealed low job satisfaction and 12 per cent of the respondents have enjoyed high level of overall job satisfaction in the selected banks. The respondents perceive poor job satisfaction with regard to organizational related factors. It is was established that it is not just financial and technological capital that provide companies with the competitive edge, but people, or human capital. In order to retain and attract the talent pool in to the organization employees should be satisfied. Banking sector is no exception and the banking organizations have to ensure that their work force is satisfied with their jobs so that they can enjoy the benefits stemming from contented employees.[5]

Profile of the Banks

Bank of Baroda

The banks website states that the visionary Maharaja of Baroda, who foresaw into the future of trade and enterprise in the country, on July

20, 1908, under the Companies Act of 1897, with a paid up capital of Rs.10 Lacs started the legend that translated into a strong, trustworthy financial body, The Bank of Baroda. It has been a wisely orchestrated growth, involving corporate wisdom, social pride and the vision of helping others grow, and growing itself in turn. The founder, Maharaja Sayajirao Gaekwad, with his insight into the future, saw "a bank of this nature will prove a beneficial agency for lending, transmission, and deposit of money and will be a powerful factor in the development of art, industries and commerce of the State and adjoining territories."

Between 1913 and 1917, as many as 87 banks failed in India. Bank of Baroda survived the crisis, mainly due to its honest and prudent leadership. This financial integrity, business prudence, caution and an abiding care and concern for the hard earned savings of hard working people, were to become the central philosophy around which business decisions would be effected. This cardinal philosophy was over years of its existence, to become its biggest asset. It ensured that the Bank survived the Great War years. It ensured survival during the Great Depression. Even while big names were dragged into the Stock Market scam and the Capital Market scam, the Bank of Baroda continued its triumphant march along the best ethical practices.

Bank of Baroda is a pioneer in various customer centric initiatives in the Indian banking sector. Bank is amongst first in the industry to complete an all-inclusive rebranding exercise wherein various novel customer centric initiatives were undertaken along with the change of logo. The initiatives include setting up of specialized NRI Branches, Gen-Next Branches and Retail Loan Factories/ SME Loan Factories with an assembly line approach of processing loans for speedy disbursal of loans.

The major ongoing initiatives of the Bank are detailed below:

Business Process Reengineering (BPR)

Bank had initiated a major Business Process Reengineering to give a big boost to sales growth by enhancing customer satisfaction and by making possible alternate channel migration thus reinventing itself to challenges of the 21st century. Bank's BPR project known as "Project-Navnirmaan" has altogether 18 activities covering both the BPR and organisational

restructuring, aimed at transforming the Bank's branches into modern "sales & service" outlets.

The most important initiatives planned under this project include –
(1) Conversion of all metro and urban branches into modern centres known as Baroda Next branches; (2) Creation of Automated and Leaner Back Offices like City Back Office (for automated cheque processing. etc.), Regional Back Office (for faster account opening, etc.), Establishment of two Call Centres, Creation of Academy of Excellence, Introduction of Frontline Automation at select branches for customer convenience and Organisational Restructuring.

People Initiatives

Bank is endowed with a competent and motivated employee base which is engaged in handling the extensive business operations of the Bank across the globe. Strategic HR interventions like, according cross border and cross cultural work exposure to its managers, hiring diverse functional specialists to support line functionaries and complementing the technical competencies of its people by imparting conceptual, managerial and leadership skills, gave the Bank competitive advantage. People initiatives were blended with IR initiatives to create an effectively harmonious workplace, where everyone prospered.

Bank launched a comprehensive leadership development program 'Project UDAAN' during 2010-11 with the prime objective of creating leaders for the future. Such a massive and comprehensive leadership development effort is unparalleled in the Indian banking industry and first of its kind for any Indian state-owned Bank. These kinds of elaborate man management policies have made the Bank a breeding ground for business leaders. The Bank provided several leaders to the industry-men who went on to build other great institutions.

New Technology Platform

Bank has made substantial progress in its end-to-end business and IT strategy project covering the Bank's domestic, overseas and subsidiary operations. All Branches, Extension Counters in India, overseas business

and five sponsored Regional Rural Banks are on the Core Banking Solution (CBS) platform.

Bank has been providing to its customers Internet Banking, viz., Baroda Connect and other facilities such as online payment of direct and indirect taxes and certain State Government taxes, utility bills, rail tickets, online shopping, donation to temples and institutional fee payment. Bank has a wide network of ATMs across the country and has also launched mobile ATMs in select cities. Initiatives have been taken to provide corporate customers with facilities like direct salary upload, trade finance and State Tax payments, etc. Bank has introduced Mobile Banking (Baroda M-connect) and prepaid gift cards.

Bank has implemented the Global Treasury Solution in its key territories like UK, UAE, Bahamas, Bahrain, Hong Kong, Singapore and Belgium. Bank has taken various technological initiatives in overseas operations such as implementation of Centralized SWIFT activity through Data Centre in Mumbai, Payment Messaging System with Anti Money Laundering check, Anti Money laundering Compliance and Online List Matching solution. While Bank implemented Transaction-based Internet Banking facility for its customers in Uganda, Botswana, UAE, New Zealand, Kenya, Mauritius and Seychelles, a Viewbased e-banking facility was made available in Fiji, Oman, Tanzania and UK.

Marketing Initiatives

Ever since its rebranding in 2005, Bank has consistently promoted its major strengths viz. large international presence; technological advancement and superior customer service, etc. Bank had introduced the sub brand BARODA NEXT-State of the Art-Straight from the Heart to showcase how it has utilized technology to nurture long term relationships for superior customer experience. The sub brand has been reinforced by alternate delivery channels such as internet banking, ATMs, mobile banking etc and robust delivery outfits like Retail Loan Factories, SME Loan Factories, City Sales Office, etc. Bank's constant endeavor to strengthen its branch/ATM network combined with well informed staff offering personalized service at its various touch points have enhanced customer interactions and satisfaction. Thus the Bank has firmly positioned itself as a technologically advanced customer-centric bank.

Corporate Social Responsibility (CSR) Initiatives

Bank has always upheld inclusive growth high on its agenda. Bank has established 36 Baroda Swarojgar Vikas Sansthan (Baroda R-SETI) for imparting training to unemployed youth, free of cost for gainful self employment & entrepreneurship skill development and 52 Baroda Gramin Paramarsh Kendra and for knowledge sharing, problem solving and credit counseling for rural masses across the country, as on 31.03.2011. Bank has also established 18 Financial Literacy and Credit Counseling Centres (FLCC) in order to spread awareness among the rural masses on various financial and banking services and to speed up the process of Financial Inclusion, as on 31.03.2011.

The Future

Revolutionary and discontinuous changes in the operating environment are stark reminders that business success is 'impermanent'. Bank has achieved substantial progress in technology and is continuously integrating multiple platforms of technology to generate synergies. Bank continuously attempts to adapt to the dynamic economic environment while engaging in long term relationships to provide superior customer service.

Bank's constant endeavor to delight its customers, which is built on its strong fundamentals will make it stronger, more resilient and enable to achieve its vision of to be the Most Admired Bank.

The bank's website also states that it has Head Office at Mumbai, 971 branches in Metro, 861 in Urban, 1306 in Semi-Urban, 1818 in Rural, i.e. a total of 4956 in India and 104 branches Overseas making a global tally of 5060 branches. It has 13 Zonal and 56 Regional Offices. As regards the HR Staff position as of 01.04.2013, there were 17631 Officers, 16397 Clerks, 8186 sub-staff and 1 on contract basis, a total of 42215 staff. It has branches in Australia, Bahamas, Bahrain, Belgium, China, Fiji Islands, Hongkong, Mauritius, Republic of South Africa, Seychelles, Singapore, Sultanate of Oman, United Arab Emirate, United Kingdom and United states of America. It has subsidiaries in Botswana, Ghana, Guyana, Kenya, New Zealand, Tanzania, Trinidad and Tobago and Uganda. They have Joint Ventures in Zambia and Malaysia and a Representative Office in Thailand. The bank has its presence as Lead District Bank in 44 districts

of which 12 in Gujarat, 14 in U.P., 2 in UTTARANCHAL, 12 IN Rajasthan, 2 in Madhya Pradesh and 2 in Bihar.[6]

Union Bank of India

The banks website mentions that the Union Bank of India was established on 11th November 1919 with its headquarters in the city of Bombay now known as Mumbai.The Head Office building of the Bank in Mumbai was inaugurated by Mahatma Gandhi, the Father of the nation in the year 1921, and he said on the occasion:

"We should have the ability to carry on a big bank, to manage efficiently crore of rupees in the course of our national activities. Though we have not many banks amongst us, it does not follow that we are not capable of efficiently managing crore and tens of crore of rupees."

His prescient words anticipated the growth of the bank that has taken place in the decades that followed. The Bank now operates through over 4000+ branches across the country. The Bank's core values of prudent management without ignoring opportunities is reflected in the fact that the Bank has shown uninterrupted profit during all 93 years of its operations.

Union Bank has been playing a very proactive role in the economic growth of India and it extends credit for the requirements of different sectors of economy. Industries, exports, trading, agriculture, infrastructure and the individual segments are sectors in which the bank has deployed credit to spur economic growth and to earn from a well diversified portfolio of assets.

Resources are mobilized through Current, Savings and Term Deposits and through refinance and borrowings from abroad. The Bank has a large clientele base of over 49 million.

On the technology front the Bank has taken early initiatives and 100% of its branches are computerized. The Bank has also introduced Core Banking Solution with connectivity between branches. 100% of the business of the Bank is under Core Banking Solution making it a leader among its peers in infusion of technology. Many innovative products are developed using the technology platform to offer an array of choices to customers, adding speed and convenience to transactions. Technology will

also enable the Bank to derive substantial cost reduction while creating the requisite capacity to handle the ever increasing volume of business in a competitive environment that offers immense opportunities.

At the end of March 2014 the Bank achieved total business level of Rs. 5,32,007 crore (Rupees five lakh thirty two thousand seven crore). Behind all these achievements is a dedicated team of staff, which is truly cosmopolitan in its composition. Many generations of members of staff have contributed in building up the strong edifice of the Bank. The present team of over 31,000 members of staff distinguishes itself with its customer centricity, willingness to learn and adherence to values enabling us to be recognized as a caring organization where people enjoy their work and relationship with customers.[7]

Objective of Research Study

The objective of the research study is to:

(i) Analyze growth of Branches, Employees, Profit Per Employees, Deposits, Advances and Net Non-Performing Assets of Bank of Baroda and Union Bank of India from 2008-2009 to 2012-2013.

(ii) Analyze the said growth between Bank of Baroda and Union Bank of India from 2008-2009 to 2012-2013.

(iii) Analyze the said growth of Bank of Baroda and Union Bank of India with PSBs.

Analyze between the training expenses of Bank of Baroda and Union Bank of India related to HR and NPA related trainings.

Methodology

The study is an exploratory research. As the study of the research paper is mainly related to analyze the growth of selected parameters related to the performance of Bank of Baroda and Union Bank of India and their comparative growth and also their comparative growth with PSBs and to compare the training expenses of both the banks related to HR and NPA related training the findings are based on the secondary data and percentage of progress for the period 2008-09 to 2012-13 is calculated

from the data available in the Annual Report of RBI for the year 2012-13, the findings are based on the secondary data.

Analysis/Findings of Data

It can be analysed from the findings in the Tables 1 to 8 as follows:

Growth of Branches, Employees, Profit Per Employees, Deposits, Advances and Net Non-Performing Assets of Bank of Baroda from 2008-2009 to 2012-13.

There was an increase of branches for the period April 2008 – March 2013 by 1371, i.e. 45.61%. The employees too increased by 6668, i.e. 18.30%, Profit per employee by 0.40 million, i.e. 66.67%, Deposits increased by 2814863 million, i.e. 146.30 million, Advances by 1849344 million, i.e. 129.10% and Net Non-Performing Assets too increased by 0.97, i.e. 312.90%.

Growth of Branches, Employees, Profit Per Employees, Deposits, Advances and Net Non-Performing Assets of Union Bank of India from 2008-2009 to 2012-13 There was an increase of branches for the period April 2008 – March 2013 by 976, i.e. 36.36%. The employees too increased by 2784c, i.e. 9.60%, Profit per employee by 0.07 million, i.e., 11.11%, Deposits increased by 1250588 million, i.e. 90.16%, Advances by 1115680 million, i.e. 115.57% and Net Non-Performing Assets of the bank increased by 1.27, i.e. 373.53%.

Comparison of growth of Branches, Employees, Profit Per Employees, Deposits, Advances and Net Non-Performing Assets of Bank of Baroda's with Union Bank of India from 2008-2009 to 2012-13 – Bank of Baroda had 717 branches more, i.e. 19.59% as compared to Union Bank of India, Employees too were more by 11310, i.e. 35.57%, Profit Per Employee was more by 0.30 million, i.e. 30%. The bank of baroda's Deposits were also more by 2101217 million, i.e. 79.66%, the bank had advanced more by 1200836 than Union Bank of India, i.e. 57.70. BoB was successful in keeping its NNPA's less by 0.33 million, i.e. -25.78%.

The trend in selected parameters of PSBs all together for the period from 2008-09 to 2012-13 – Branches increased by 17800, i.e. 30.70%, Employees increased by 70135, i.e. 9.59%, Profit Per Employee by 0.16 million, i.e. 34.04%, Deposits by 26329501, i.e. 84.59%, Advances by 22135623, i.e. 97.98% and NNPAs also went high by 1.08 million, i.e. 114.89%.

Share of Bank of Baroda & Union Bank of India for the period 2008-09 to 2012-13 for selected parameters as compared to PSBs – Bank of Baroda share of branches was 5.78%, Employees 5.38%, Profit Per Employee was more by 58.73%, Deposits 8.25%, Advances 7.38% and NNPAs were less by -36.637%. Whereas Union Bank of India's share of branches was 4.83%, Employees 3.97%, Profit Per Employee was more by 0.70%, Deposits by 4.59%, Advances 4.65% and NNPAs were less by -20.29%.

Training Expenditure of Bank of Baroda towards HR and NPA related training for the period 2008-09 to 2012-13 – There was an increase in overall training expenditure by 43.0 million, i.e. 46.34%. HR related training expenses by 8.6 million during 2012-13 as compared to 2008-09, i.e. 46.34%. There was also in increase in NPA related training expenses by 6.45 million during the said period, i.e. 46.34%.

Training Expenditure of Union Bank of India towards HR and NPA related training for the period 2008-09 to 2012-13 – There was an increase of overall training expenditure by Rs.12.7 million, i.e. 9.64%. HR related training expenses reduced by -31.14%, i.e. 62.91% and NPA related increased by 9.3 millions, i.e. 31.00%.

Comparison of Training Expenditure related to HR & NPA of Bank of Baroda with Union Bank of India: Bank of Baroda has 30.30 million towards total training expenditure, i.e. 70.47% more, 39.74 million, i.e. 462.09% more towards HR related training expenses and 11.07 million, i.e. 54.34% more towards NPA related training expenses as compared to Union Bank of India.

Table 1: Bank of Baroda (Rs. in Millions)[8]

	2008-09	2009-10	2010-11	2011-12	2012-13	Prog Apr 08 to Mar 09	Analysis of % Incr/Dec
Branches	3006	3182	3447	3993	4377	1371	45.61
Employees	36440	38152	39385	41447	43108	6668	18.30
Profit Per Employee	0.60	0.80	1.10	1.20	1.00	0.40	66.67
Deposits	1923970	2412619	3054395	3848711	4738833	2814863	146.30
Advances	1432514	1750353	2286764	2873773	3281858	1849344	129.10
NNPAs	0.31	0.34	0.35	0.54	1.28	0.97	312.90
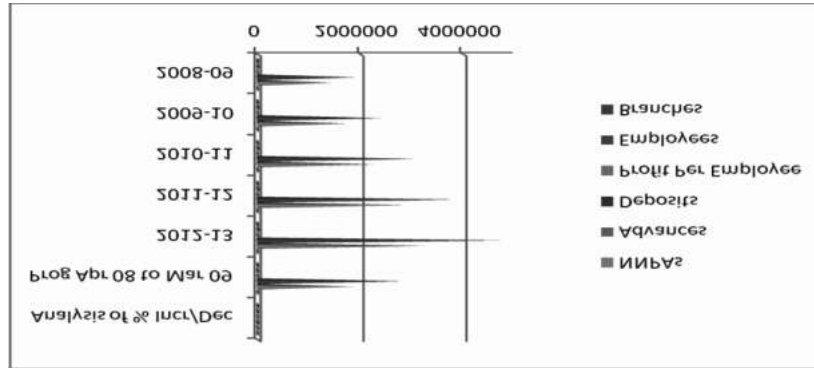
Table 2: Union Bank of India (Rs. in Millions)[8]

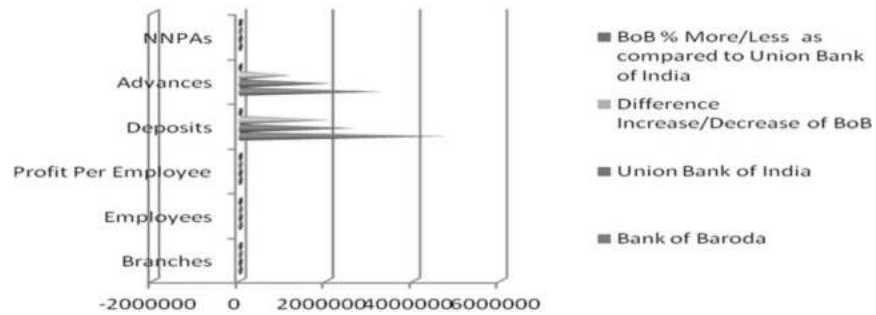|	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Prog Apr 08 to Mar 09*	*Analysis of % Incr/Dec*
Branches	2684	2941	3150	3344	3660	976	36.36
Employees	29014	29419	27746	30838	31798	2784	9.60
Profit Per Employee	0.63	0.75	0.80	0.60	0.70	0.07	11.11
Deposits	1387028	1700397	2024613	2228689	2637616	1250588	90.16
Advances	965342	1193153	1509861	1778821	2081022	1115680	115.57
NNPAs	0.34	0.81	1.19	1.70	1.61	1.27	373.53
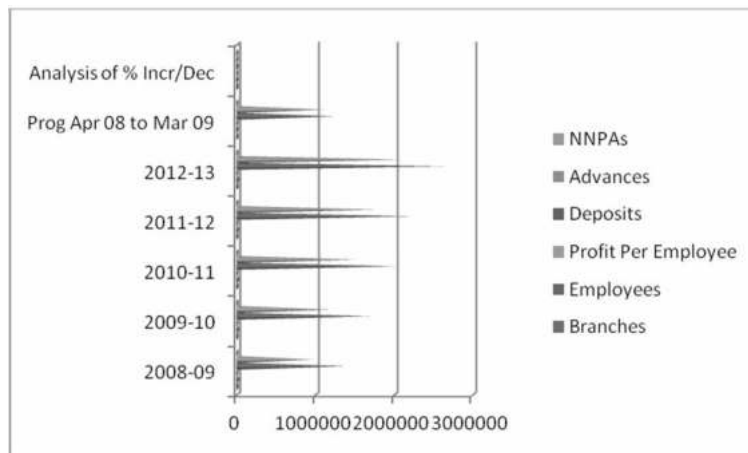
Table 3: Bank of Baroda's Comparison with Union Bank of India
(in Millions)[8]

	Bank of Baroda	Union Bank of India	Difference Increase/ Decrease of BoB	BoB % More/Less as compared to Union Bank of India
Branches	4377	3660	717	19.59
Employees	43108	31798	11310	35.57
Profit Per Employee	1.00	0.70	0.30	30.00
Deposits	4738833	2637616	2101217	79.66
Advances	3281858	2081022	1200836	57.70
NNPAs	1.28	1.61	-0.33	-25.78

Table 4: Public Sector Banks (Rs. in Millions)[8]

|	2008-09	2009-10	2010-11	2011-12	2012-13	Prog Apr 08 to Mar 09	Analysis of % Incr/ Dec
Branches	57979	62080	65800	70969	75779	17800	30.70
Employees	731524	739646	755102	774329	801659	70135	9.59
Profit Per Employee	0.47	0.53	0.59	0.64	0.63	0.16	34.04
Deposits	31127471	36920194	43724487	50020134	57456972	26329501	84.59
Advances	22592117	27010187	33044329	38773075	44727740	22135623	97.98
NNPAs	0.94	1.10	1.09	1.53	2.02	1.08	114.89
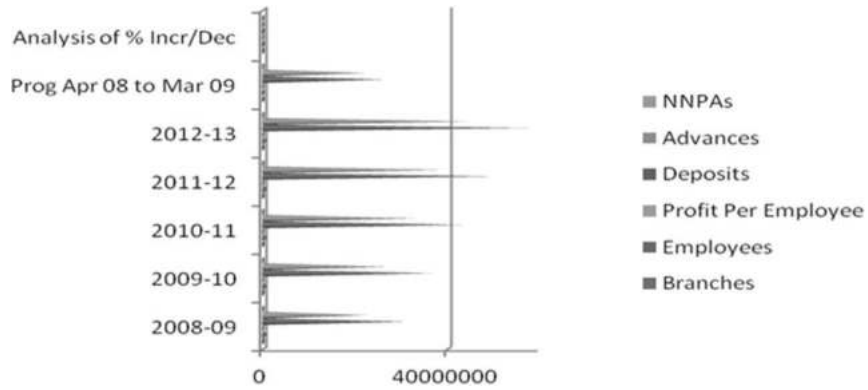
Table 5: Bank of Baroda & Union Bank of India's Comparison with PSBs (in Millions)[8]

	PSBs	Bank of Baroda	% As Compared to PSBs	Union Bank of India	% As Compared to PSBs
Branches	75779	4377	5.78	3660	4.83
Employees	801659	43108	5.38	31798	3.97
Profit Per Employee	0.63	1.00	58.73	0.70	11.11
Deposits	57456972	4738833	8.25	2637616	4.59
Advances	44727740	3281858	7.38	2081022	4.65
NNPAs	2.02	1.28	0.63	1.61	-20.29
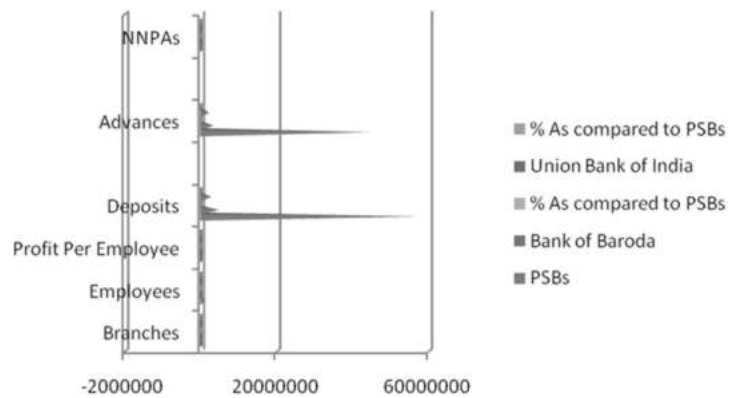
Table 6: Bank of Baroda Training Details[9]

Training Details	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Prog Apr 08 to Mar 09*	*Analysis of % Incr/Dec*
Total Training Expenditure	92.80	100.70	137.90	131.20	135.80	43.00	46.34
HR related Training Programme	18.56	20.14	27.58	26.24	27.16	8.60	46.34
Basel related Training Programme	4.64	5.04	6.90	6.56	6.79	2.15	46.34
NPA related Training Programme	13.92	15.11	20.69	19.68	20.37	6.45	46.34
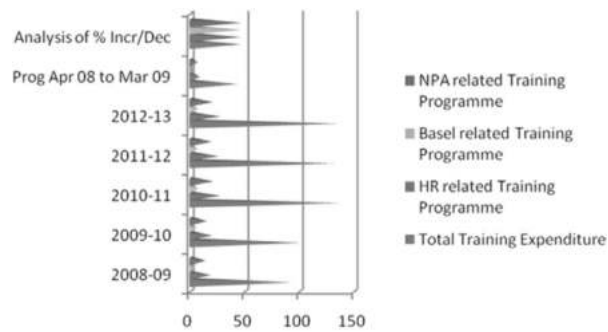
Table 7: Union Bank of India Training Details[9]

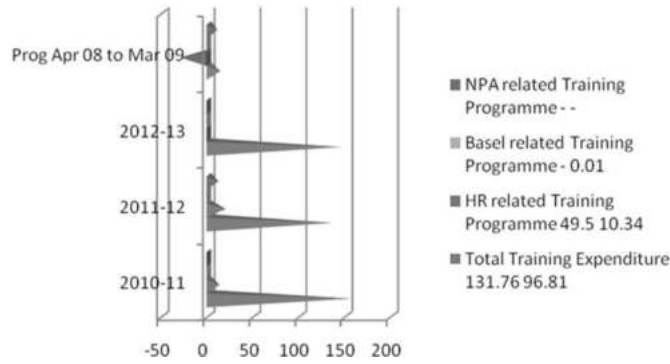| *Training Details*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*Prog Apr 08 to Mar 09*	*Analysis of % Incr/Dec*
Total Training Expenditure	131.76	96.81	155.69	134.56	144.46	12.70	9.64
HR related Training Programme	49.50	10.34	11.73	18.36	0.01	-31.14	62.91
Basel related Training Programme	-	0.01	0.01	-	-	0.00	0.00
NPA related Training Programme	-	-	0.03	10.33	0.04	9.30	32.00

Table 8: Bank of Baroda's Training Exp. Comparison with
Union Bank of India (in Millions)[9]

	Bank of Baroda	*Union Bank of India*	*Difference Increase/ Decrease of BoB*	*BoB % More/Less as Compared to Union Bank of India*
Total Training Expenditure	43.00	12.70	30.30	70.47%
HR related Training Programme	8.60	-31.14	39.74	462.09%
NPA related Training Programme	20.37	9.30	11.07	54.34%
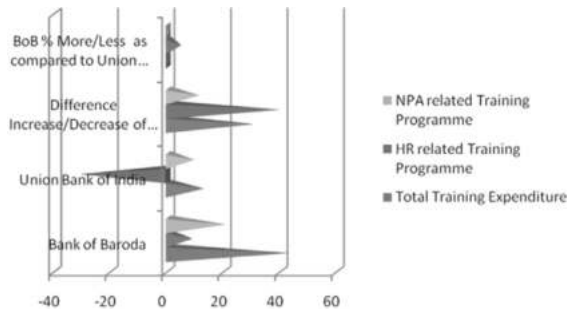
Conclusion of Study

From the above analysis of the total training expenses, related to HR and NPA Programmes it can be seen that Bank of Baroda has invested more in training needs of the executives/staff not only in HR and NPA area but

also overall training expenses incurred by it as compared to Union Bank of India, thus Bank of Baroda has realized that training is need of the hour, especially when the business worldwide is going through a tough time due to the economic recession, it is necessary to place the training and development at the heart of the business strategy, so as to enable the banks to build its competence as a domestic and internal player. Thus Bank of Baroda has applied training as the most effective tool to develop its available resources. They have also seen that the training system is pro-active and has the foresight of the changed environment for future development, and also taking effort to convey a positive message to the staff that their future is safe, if one is interested to unlearn and relearn. The study concludes that there is definitely an impact of training on the performance of banks, but there is a need to take up a detailed research in this area and also a comparative study between some of the Public and Private Sector Banks and suggest a suitable training model for them.

Limitations and Scope for Future Study

Limitations

The Limitations of the Study is that it is on secondary data. The Preliminary Data is not taken up for study to study the attitude of the various levels of bank executives towards training.

Scope for Future Study

- Study of the effectiveness of selected Public Sector Banks can be taken up taking into consideration the Preliminary Data and Secondary Data to study the attitude of the bankers towards effectiveness of training in the area of NPA and HR Study

- Also same study can be taken up of selected Private Sector Banks related to NPA and HR related areas to have a comparison between the effectiveness of training of PSBs and Private Sector Banks.

- There is a need to take up a detailed research in this area and also a comparative study between some of the Public and Private Sector Banks and suggest a suitable training model for them.

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Real Estate Investment Trusts (REITs) – An Innovative Approach to Real Estate Sector

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ABSTRACT

Indian real estate is undergoing through a phase of evolution in the process of its development. The Indian real estate sector is slowly moving from an unorganized sector to a more organized one. If India is to magnificently compete with other real estate markets, it has to take an innovative approach but at the same time not lose the sense of urgency. The new stimulus behind the development of REIT regime is a welcome positive step.

The Government of India gave priority to real estate sector because of its potential to boost economic growth significantly. In view of the crucial role that REITs could play as an investment vehicle, the SEBI came out with the draft of REITs regulations in December, 2007 in order to encourage and facilitate a healthy growth of REITs in India. However, these regulations could not be finalized for various reasons including the global economic slowdown. In a welcome move, SEBI once again taken out draft REITs Regulations, 2013, which were approved and announced by SEBI on 26th September, 2014.

Keywords: Real Estate Sector in India, REITs, SEBI Regulations

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Introduction

A REIT, or Real Estate Investment Trust, is a company which owns or finances income-producing real estate. REITs are *investment trusts* that work similar to mutual funds with the only big difference being that instead of using the money collected from investors to buy stocks and bonds. It's like a pooling vehicle through which capital is deployed to own real estate assets. REITs provide investors of all types regular incomes, diversification and capital appreciation in the long term. REITs usually pay out all of their taxable income as dividends to the shareholders. In turn, shareholders are supposed to pay the taxes on those dividends.

REITs allow investments in portfolios of large-scale properties as the investment is made in other industries by purchasing the stock. In the same way shareholders are benefited by owning stocks in other companies, the holders of a REIT can earn a share of the income created through real estate investment – without actually having to go out and buy or finance property.

Today, REITs are existing in almost all aspects of the economy, including apartments, hospitals, hotels, industrial facilities, infrastructure, nursing homes, offices, shopping malls, storage centers, student housing, and timberlands.

There are internationally three types of REITS. In India however, a beginning is made with the third type, the hybrid one.

Equity REITs: These REITs own and operate income-producing real estate and perform leasing, development, and construction activities.

Mortgage REITs: Such REITs hold mortgages on real property and make mortgages i.e. lend money usually on existing property or buy mortgages.

Hybrid REITs: Hybrid REITs syndicate both the investment strategies of owning properties and making loans. REITS in India will be primarily of the Hybrid type.

Sector-Specific Types of REITs

Housing REITs – Such REITs purchase, revamp, lease and manage housing properties located in the markets to generate rental income. They hold

properties over the long term and generate virtually all revenue by leasing the properties. The income generated is used to pay for operational costs and distribute among shareholders as dividends.

Industrial REITs – Industrial REITs procure, own and manage industrial properties, such as warehouses, buildings, undeveloped land, business parks and high-tech space. The tenants of industrial REIT properties are wide ranging and cut across all kinds of businesses.

Hotel REITs – Hotel REITs own hotel, lodging or resort properties and could include different types of properties such as limited service, resorts, conferences center, suite and airport properties. Hotel REITs derive price from the underlying value of hotel properties the REIT owns and from the income generated by those properties.

There are also private, non-listed and public REITs. Majority of the REITs are dealt on the most recognized stock exchanges. Individual investors are allowed to invest in REITs either by purchasing their shares directly on an open exchange or by investing in a mutual fund that specializes in public real estate sector. An added privilege in investing in REITs is the fact that many are accompanied by dividend reinvestment plans (DRIPs). The utmost benefit will be that of quick and easy liquidation of investments in the real estate market unlike the traditional way of disposing of real estate.

An Innovative Approach to Real Estate – REIT

According to CREDAI (2013) The Indian economy witnessed annual average growth of 7.2% during 2000-2012, due to the rise in the interest of consumers, higher investment activity, and productivity gains. As per CEBR's World Economic League report, it is expected that India may become the World's third largest economy with a GDP of around $7 trillion by 2028, next to China and the US. Both the service and manufacturing sectors have also posted positive growth to meet the growing demand and increasing consumption level during the previous couple of years. Notably, the real estate sector was estimated to contribute 6.3% to India's GDP and provides employment opportunities to around 7.6 million during the year 2013.

In 2007–08, the Indian economy was impacted at large due to global economic crisis and the real estate sector in particular. The real estate industry in India faced the heat of the global crisis in terms of a demand slowdown and a severe liquidity crisis. In spite of the substantial impact of the global slowdown, the Indian real estate sector managed to develop without too much distress due to the sound fundamentals of the economy.

The real estate sector encourages the demand for more than 250 ancillary industries, including steel, cement, paint, and construction material, and the focus is at the construction industry. The sector is one of the key drivers of the Indian economy as it is considered as the second largest generator of employment opportunities next to agriculture.

The Real Estate Investment Trusts (REITs) were announced in the Union Budget 2014–15 to enable investors to collectively invest in commercial properties and earn a profit from such investments.

The draft consultation paper on Real Estate Investment Trust (REIT) Regulations, 2013 was announced by Securities & Exchange Board of India (SEBI) On October 10, 2013. However, in 2008, SEBI had issued certain draft regulations for introducing REITs. I-REITs (REITs in India) would issue securities, which will be listed on the stock exchanges and REITs will invest in completed rent generating properties in India (to comprise minimum 90% of net asset value) and mortgage-backed securities. Initially I-REITs are supposed to be available only to high net worth individuals and institutions to extend the market. Eventually, it will be opened to retail investors.

The demographic dynamics in India are changing fast, leading to an ever growing demand for quality real estate that continues to be higher than supply. REITs can help bring the needed investments for meeting this increasing demand.

Significant Reasons for Introducing REITs in India

1. *Rise in demand due to changing demographics and growing urbanization:* As per UN estimates, India has the highest rate of change of urban population among the BRIC nations. It is projected that 843 million people will reside in Indian cities by the year 2050, which is the

same if we combine the population of the Japan, Brazil, Russia, US and Germany.

More than 300 million persons are expected to be added to India's working age population by the year 2050. Needless to say, this will add to growing urbanization and the need for providing housing/ accommodation facilities for this section, which includes the increasing number of women in the work force as well.
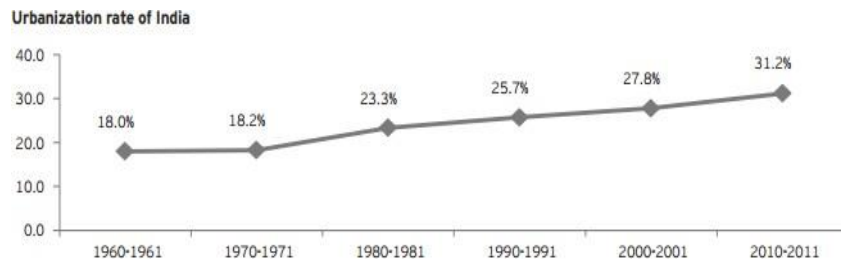

Figure 1: Urbanization Rate of India
Source: Census of India, 2011.

2. *REITs will bring transparency –* REITs will assist to streamline the real estate sector by creating a transparent mechanism for raising finance in the real estate market. REITs will have to be registered with SEBI in India which will have stringent regulation and monitoring by the regulator.

3. *Improvement in debt-equity proportion –* There will be an improvement in the debt-equity proportion in the real estate market with the introduction of REITs as it is the source of the pure equity capital. This will bring in the growth in more stable and mature real estate market.

4. *Medium for addressing non-performing assets (NPAs) –* REITs can be used as a medium to wipe out NPAs/sick or defunct companies holding large values of real estate mostly in the form of land. Disposal of such NPAs/companies to REIT's will have a dual effect— realization of true value for the real estate and ease in liquidating the sick company after removal of the high value of real estate from its books.

5.   *A new avenue for investment –* REITs are suitable for those investors who wish to diversify their assets beyond gold and equity markets. REITs would be able expected to provide a safe and diversified investment option at the lower risk, all under professional management, which ensures the highest return on the investment. An investor can earn two types of income from REITs. One is through the capital gains when the units of REITs are sold on stock exchanges and the other is through dividend income.

Financing Real Estate Development in India

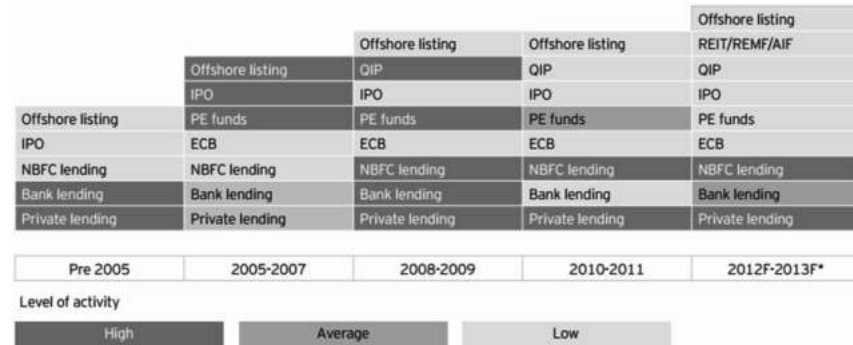Channels of Financing Real Estate Development in India:

		Offshore listing	Offshore listing	Offshore listing
				REIT/REMF/AIF
	Offshore listing	QIP	QIP	QIP
	IPO	IPO	IPO	IPO
Offshore listing	PE funds	PE funds	PE funds	PE funds
IPO	ECB	ECB	ECB	ECB
NBFC lending	NBFC lending	NBFC lending	NBFC lending	NBFC lending
Bank lending	Bank lending	Bank lending	Bank lending	Bank lending
Private lending	Private lending	Private lending	Private lending	Private lending
Pre 2005	2005-2007	2008-2009	2010-2011	2012F-2013F*

Level of activity

High	Average	Low

Figure 2: Channels of Financing Real Estate Development in India

Source: Real Estate Intelligence Service (Jones Lang LaSalle)

* F - Forecast.

From the above figure, we come to know that for the period pre 2005 bank lending and private lending were the major channels for real estate development in India. Consequently followed by offshore listing, IPO, PE funds for the period 2005-2007, QIP, PE funds, NBFC lending, bank lending and private lending were the major sources of finance for the development of real estate sector in India for the year 2008-2009. However, for the year 2010-2011 NBFC lending and private lending could prove to be the major contributors in Indian real estate sector. Eventually, in the year 2012F-2013F*, NBFC lending and private lending were expected to have major contribution in real estate development in India.

Literature Review

According to the Securities Exchange Commission (2008), "REITs principally invest in different kinds of real estate or real estate related assets, including shopping malls, office buildings, hotels, and secured mortgages by real estate". Bodie et al. (2008, pp. 97-99) currently define a REIT similar to a close-end fund. In other words, investors who "wish to cash out must sell their shares to other investors".

Real estate has traditionally been identified as one of the main asset classes for investment in portfolio planning (Geltner, Miller, Clayton & Eichholtz, 2007). Its status as an inflation hedge and consistent cash flow generator, plus its ability to diversify investors' portfolios due to their low correlation of returns with other asset classes, have made this particular asset category attractive to portfolio investors (Geltner et al., 2007). However, direct investments into the real estate market also usually entail large capital outlays, lengthy lead time to acquire and dispose of the properties as well as intensive involvement in property management activities (Imperiale, 2006; Sing & Ling, 2003).

On the overseas continent, the regulated form of real estate investment trust is not new. Originally, the essence of REITs was born back in the 1880s. The concept already consisted of tax-exempt in the case that beneficiaries received trusts income. REIT specificity resides in their legal status meaning that Real Estate Investment Trusts are not like traditional corporations but benefits from financial advantages. After the WorldWar II, the US Congress judged necessary to encourage investments in real estate, to promote its interest and to aspire for reconstruction (Brueggman and Fisher, 2008, p. 621).

In some of the Asian countries such as China, India, Philippines, Indonesia, Pakistan and Middle East that has REITs-like structure. These countries have got draft REITs law and have planned to launch REITs in the future. However, due to the current economic environment and market structure, REITs do not exist for the moment. Thus, it is quite important for global investors to give some attention to real estate markets in these countries as well (Guannan YU, 2009).

Compared with REITs of United States and European countries, Asian REITs start relatively late. However, the Asian REITs market is growing

and expanding rapidly. Most institutional investors increase allocation to Asian real estate as part of global portfolios. In the global REITs market's prospect, Asian REITs have learnt the pattern from the U.S. REITs; however, have their own unique regulations and structures. Furthermore, the probability of creating a portfolio with less risk under the same return by adding Asian REITs seems an attractive idea to global investors. After all, the topographical differences are likely to cause a small correlation between assets.

In the context of such scenario the need is felt to take the review of real estate sector in India, REITs and the potential for REITs development in India.

Challenges and Opportunities of Investment in REITs

The real estate industry is at the centre of construction industry which in turn encourages the demand for more than 250 ancillary industries, including steel, cement, paint, and construction material. It also provides the huge employment opportunities and it is considered as the key drivers of the Indian economy.

But, this industry has faced many ups and downs in the last few years such as increase in input costs, rising financing costs, inadequate funds, etc., are some of the serious concerns that are impeding the performance of the Indian real estate industry.

REITs will offer another opportunity to the investors. It will offer dividend which is comparatively higher than other investments. Thus, the investor can earn high annual dividends as well as there will be capital appreciation in the value of the properties.

REITs – Guidelines

As per the guidelines given by SEBI, it is obligatory for REITs to invest at least 90% of the value of the REITs assets in revenue generating properties. Flexibility has been given to invest the remaining 10% in other assets such as property development, listed or unlisted debt of companies, mortgage-backed securities, and equity shares of companies deriving not less than 75% revenue from real estate activities, securities issued by government, money market or in cash.

Securities and exchange board of India (Real Estate Investment Trusts) Regulations, 2014 were recently announced for the creation of real estate investment trusts (REITs) in India. This announcement of rules regarding setting up of Real Estate Investment Trusts (REITs) is likely to spur $20 billion property development in India, also allowing the investors to participate in the country's real estate market.

The crucial aspect that has to be resolved is tax transparency, which is out of SEBI's realm and has to be addressed by the Union Finance Ministry. According to Anshuman, the Chairman of CBRE South Asia addressing media, REITs may find it difficult to launch in India unless the country's tax code is revised. He also stated that if these issues are not resolved, property developers cannot presume incentives to take the trust route. REITs may be launched about six-nine months after Budget 2015.

REITs will probably provide a new source of funding to the debt loaded developers in India. But the tax rules are making it unappealing to sell securities within 3 years and it may result in delay for greater transparency.

Potential for REITs in India

REITs provide mix options for investors who errand bonds and stocks:

The underlying property in REITs generates recurring income until it is sold. Given the nuances of the Indian property market coupled with the returns that an investor could expect from REITs in the Indian context, we performed a comparative analysis of fixed deposit rates (as a proxy for risk free return), dividend yields, and rental yields (as regular income to the investors).
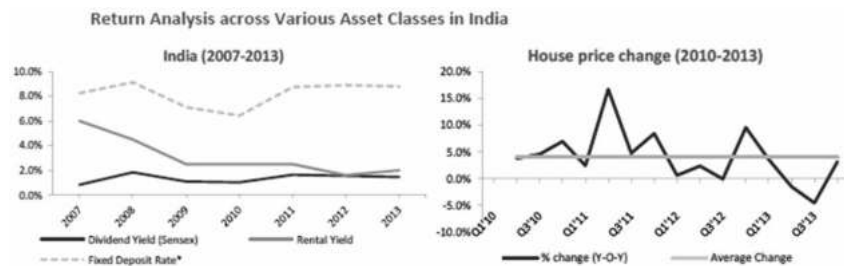
Source: Bloomberg, National Housing Bank; *SBI 1 year fixed deposit interest rate.

As shown in the above figure, across the period, rental yields are continuously lower than the FD/bank deposit rates as against to mature markets where rental yields are higher than the interest rates. The figure indicates that investors in India who prefer to have a lower risk may prefer fixed deposits over REITs, at least in the short run.

However, it is clear that the rental yields are slightly higher than the dividend yields. Therefore, REITs could draw investment from those investors who value recurring income more than capital appreciation. Since the rental income is more persistent as compared to dividends that can be moved back by the corporate sector during the times of crises. Hence, REITs could draw interest from both the stock and bond investors.

Moreover, REITs have characteristics of the stocks which grow and there is the possibility of increase in value through escalation in the prices of properties. Jones Lang LaSalle, a global real estate consultancy firm, has observed that the potential capital appreciation of REITs could be as high as 20%. Thus, in the long run, REITs may prove to be a better option to invest in than FDs. Furthermore, Indian economy is recovering; interest rates have likely peaked out in India. The major focus of new government is on roads and infrastructure development. This will in turn lead to the property demand in India which could generate capital appreciation.

Conclusion

Though the real estate sector in India is remarkable, but it still suffers from great complication in generating funds from banks and the major hurdle is REITs cannot lift off until the changes are made in the tax rules. Even real estate IPOs at this instant are tormenting. So REITs also provides very vigorous machinery for funding of real estate projects.

REITs in India may emerge as a new source of investment for the investors. The listed real estate and real estate investment trusts (REITs) may prove to be efficient and effective investment opportunities due to their transparency and liquidity. REITs have been implemented worldwide, and, in some markets, they have become very successful as investors look for investments which produce systematic income. The apparent choice of investors is the dividends associated with REITs. At the end, India has

the entire gradient to witness a successful REIT regime in the long-term. All that is required is a well-organized regulatory system framed which ensures the best interest of the investors, the market and the nation.

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Green Entrepreneurship: Role of Entrepreneurs in Energy Economics in Nepal

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ABSTRACT

Purpose: The Purpose of this paper is to put light on the role and opportunities for Green Entrepreneurs in changing energy economics in Nepal.

Background: Purely landlocked country like Nepal is dependent on other countries for its energy requirement. The energy economics is entirely dependent on the traditional energy supply system like imported fossil fuel and imported technology for hydropower generation. The decentralized and sustainable energy supply system is a dire need of Nepalese population. This paper aims to put forward the opportunities available for entrepreneurs in sustainable development of energy resources in Nepal.

Methodology: This paper is purely based on secondary qualitative data.

Findings: The research reveals that there is a mounting scope for Ecopreneurs or Environmental entrepreneurs in Nepal to lead its sustainable development in coming years. Few government initiatives

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are helping to trigger the growth of entrepreneurs in this field but there are few policies which should be made to boost the growth.

Significance: The research will significantly contribute to streamline the renewable energy and environmental entrepreneurial sector and to help the Ecopreneurs grow in organized manner and also help government policy makers design policies for the growth of Environmental Entrepreneurs and Ecopreneurs thus boosting the Nepalese economy.

Keywords: Ecopreneurs, Environmental Entrepreneurs, Green Entrepreneurs, Renewable Energy, Sustainable Development, Nepal

Background

There is a general consent that entrepreneurs are generally driven by a special motivation and acts on a valuable opportunity (Miller 2003). The creation of new organizations that includes certain innovation is called Entrepreneurship. This creation occurs as dependent social and economic process (Thornton1999).

Berle (1991) first adopted the notion 'Green Entrepreneurship' in his book *"The Green Entrepreneur: Business opportunities that can save the earth and make you money"*. Green Entrepreneurs are the entrepreneurs making use of opportunities and starting business for sustainable development which is structure transforming, socially devoted and technologically advanced generally based on eco-friendly process and Environmental product (Walley & Taylor, 2002). Green Entrepreneurship is generally taken as technological innovation that mitigate the human impact on environment and address the problems regarding environment and address the problems regarding environment in the present scenario such as global warming, biodiversity loss, etc. (F. Farinelli, M. Bottini, S. Akkoyunlu and P. Aerni, 2011).

Green Entrepreneurship is a process of pursuing a business with a new innovation mandatory to address the problem of the society and solve it completely or up to a certain extent along with taking care of environmental condition and its maintenance. This type of business basically does not only seek for profit but tends to conserve and improve

the present condition of the environment and also providing something new and eco-friendly to the society.

Research is surprisingly thinner in the Green Entrepreneurship field although there is an abundant prospect of sustainability in this area for the country like Nepal given its geological position. Green Entrepreneurship has been established in the other parts of the world and many have innovated several eco-friendly ideas and technologies which are very economic but these cannot be practiced in the country with low economy like Nepal. Countries like Nepal need region based ideas and technologies and that's why they need more number of entrepreneurs working in this field.

Objectives

1. To study the green entrepreneurship in Nepal. About the establishment of this in Nepal, how it emerged in Nepal and what is its present scenario and how can it be developed and sustained keeping in mind the economy of the country.

2. To gauge the opportunities for Environmental entrepreneurs in the energy sector in Nepal.

Research Methodology

This research paper is principally based on secondary data which has published in various research journals, leading magazine, websites and government reports.

Green Entrepreneurship in Nepal

In Nepal there is the huge chance of sustainable development and improvement of Green entrepreneurship but it has not been discussed as in the other regions of the world. As compared to other countries; Green/ environmental entrepreneurship is still at its nascent stage.

Nepal

Nepal is a landlocked country between India and China in the lap of

Himalayas with the population of 26,494,504 (Census 2011). Among these population 17% of the population lives in urban areas (Census 2011). The basic mode of fulfillment of the energy requirement of the people in Nepal is the fuel, i.e. Oil or petroleum product which is not available in Nepal. It is landlocked country without any source of organic fuel or energy such as petroleum products and crude oil and that's why it has to import fuel from other countries. As the majority portion of import of Nepal comprises of petroleum products it is always bearing losses in International trade or foreign trade.

Energy Economics and Green Entrepreneurship in Nepal

As per a report by SARI (South Asia regional Initiative for Energy Integration), Feb 2002, "Biomass and hydropower are two native energy sources in Nepal. Fuel wood is the prime source of energy which fulfills almost 80 percent of total energy demand. It is a non sustainable way of extraction of energy which is resulting in deforestation. Electricity being a secondary source supplies only 1 percent of total energy consumption."

It was confirmed by the author of the book "*Nepal in Crisis: Growth and Stagnation at the Periphery"* that Nepal is in crisis and it will face and currently faces serious challenges when it comes to economic development.

In Nepal, the generation and use of alternative source of energy took place long back in 1930 with the establishment of Pharping Hydro power project. This hydroelectricity was 2nd of its kind in Asia. Before that the source or energy used to be wood and coal. After the revolution of hydroelectricity in Nepal, electricity became one of the major sources of energy in Nepal after the establishment of several hydroelectric projects. But in the present scenario, the demand for electricity is more but the production is very less and hence, there is opportunity for the renewable forms of energy other than hydroelectricity and with this comes the opportunity for green entrepreneurship.

Green Entrepreneur does not only means the entrepreneur work related to renewable energy but any entrepreneur work that promotes the environment and works toward the welfare of society and environment hand to hand. There are many importance of green entrepreneurship. In context of Nepal, there is huge opportunity too. Nepal is an agricultural

country with more than 75 percent of its population relied on the agricultural work. So the organic farming and agriculture can also come under green entrepreneurship. Green entrepreneurship is one of the hot topics in the whole world to be discussed and adopted. Several large commercial companies are adopting the concept of eco-friendly and greenery. The marketing strategy of the companies has also shifted from price and power to energy efficient and eco-friendly.

Green entrepreneur work in the context of Nepal will be more effective as many entrepreneurs have been involved in renewable form of energy like solar energy, biogas energy, wind energy, etc. Also few of the entrepreneurs have been involved in recycling work like recycling of plastic products and papers that can conserve the environment by reducing the cut down of trees on earth.

The Current Scenario

Green entrepreneurship in Nepal is at the phase of its establishment. Many of the youth in Nepal has now been attracted towards entrepreneurship and mostly in the environmental sector. So this type of field has still to do a lot for its sustainability and proper development in Nepal. The main field where Green Entrepreneurship can be practiced in Nepal is energy sector, agricultural sector and recycling sector.

There are many companies working towards the production of energy through different means of renewable energy other than hydroelectricity like biogas, solar and wind. Hydro electricity in Nepal was first established by Government of Nepal and it used to be built by several private contractors under Nepal Government through the investment by Nepal government or any other aids like foreign investment. But now the Government of Nepal has come with different plans and policies through which the private sector can also come up with project and invest in hydropower project under construct, use and hand over basis.

The policy of Nepal Government of micro and Pico hydropower projects has provided some opportunity to the green entrepreneurship in Nepal. Another policy which Nepal Government has come up with is PPP (Private Public Partnership). Under this policy, any hydroelectricity project

can have the ownership of the Nepal Government, Private sectors and Public who will buy shares.

Nepal's micro-hydropower system programme places a strong emphasis on community involvement. It works to ensure that systems are installed by community teams, in collaboration with District Development Committees and Village Development committees. Local NGOs are engaged to act as support organizations and carry out the process of community mobilization.

Within the MHS programme, the process of community mobilization is guided by six basic principles (the 'Mul Mantras'). These principles include organizational development, skills enhancement, capital formation, technology promotion, environmental management, and empowerment of vulnerable groups and communities.

The support organizations work with villagers to establish community organizations, and ensure that at least one male and one female from each household are members of this community organization which can make strategies for regional development. (UNDP, APEC 2005)

Due to lack of proper electricity and availability of other energy sources in the whole country especially in the rural areas the solar power has got an enormous opportunity. Many private companies are working in this sector. The government is also providing the subsidiary for the establishment of Solar plants in rural areas in order to attract more people willing to establish solar power. The other form of renewable energy in Nepal is Biogas Plant. Biogas plant is extremely helpful in country areas as these rustic areas are mostly agricultural and animal husbandry based which can supply the material required for the generation of energy through biogas plant. Nepal government has established itself several biogas plants in its rural areas in order to fulfil the demand of electricity in that place. Besides some of the community in Nepal collects the drainage waste and has established a system of biogas production which is a community based initiative.

Nepal is suffering from load shedding regularly. Thus several green entrepreneurs have come up with the idea of solar lamps (saurian lilting in Nepali) which work on the principle of renewable low cost energy generation. They make solar panels and solar lamps. They put this on

the market for the load shedding affected rural population of Nepal and gain profits from their innovative business and serve the people as well and establishes example of green entrepreneurship.

Opportunities

There are several private as well as community based hydropower project like micro and Pico hydropower plant which work on the community investment and government subsidy and sell the produced energy to the local residence and industries and thus earn profits.

There are numerous hydropower projects built and many are lined up. These kind of projects further the development of the place and also increase the living standard of the people and become a windfall for the education of the children of the local residence. Many organizations are operational in solar and wind energy sector. They help establish solar plant at every household in the rural as well as urban areas.

Although the solar plant is very expensive for the people of Nepal, Government of Nepal supports purchasing the solar equipments and provides assistance to the people of rural area so that they can use solar energy and improve their living standard. Various financial institutions are also helping out through financial aids to the people who wish to start ventures in the green/renewable energy sector.

Green Entrepreneur has a great opportunity of growth and establishment in energy sector in Nepal. All the discussed factors explain the need of Entrepreneurs in energy sector that can help boost Nepal economy and help Nepal be self sufficient in energy needs.

Role of Government

The Government of Nepal has been playing a pioneer role in the establishment of green entrepreneurs in Nepal. It has been providing subsidies for the import of energy producing equipments and technologies that are likely to resolve the problem of people of Nepal; especially in the rural areas where the living standard of the people is much lower.

But as discussed above, Nepal is the country with lower economy; people and government as well cannot bear the costs of such expensive materials

on its own and hence depends upon the donations. Hence government should support the innovators in the country and let them create new innovations which are practical and economic so that the people can bear the expenses. This is the condition of most of the South Asian countries. The innovations in the developed countries are somehow economic to them and they can afford it too but lower economy countries cannot. Hence initially government should praise the work of innovators and not let them leave the country and take their help for the promotion and development of the people and the country.

Role of Common People

Every citizen of a country has certain responsibilities towards the country and its people. The main role of common people in developing the green entrepreneurship is to praise the local innovation and use it. Whereas they should also help the innovators in different aspect as much as they can so that the country can be economically stable.

Role of Entrepreneurs

The role of entrepreneurs can be providing the green products in more cheap and economic rates. Also promoting the local innovation and investing on the ideas to make it practically possible to provide cheaper energy options to all and find out solutions to the present problems which can be more economic and practical and relevant in the low economic countries.

Result and Discussion

The Government of Nepal is promoting the green entrepreneurship concept and providing the subsidies to the entrepreneurs working in green energy sector. Government, rather than importing the ideas and techniques form the other countries which is neither practical and nor economical, and should accentuate the innovation and production of such ideas within the country which might be economic and can be practiced easily. It should promote Entrepreneurship Development Programs for budding entrepreneurs to boost creativity and innovation.

Suggestions

• For the promotion of green entrepreneurship in Nepal, Nepal government can provide financial support to the entrepreneurs as well as to the customers.

• In Nepal, several incentives are provided by government, such as custom duty reductions for imported small hydropower related machinery or equipment, VAT exemption and income tax exemptions for the first 10 years from the date of plant commissioning, thereafter 50 percent for the next five years.

• The government should make the process of trading the materials required for the establishment of the renewable energy source easier.

• Government should support the innovators and their innovations in the country and provide them financial support as well as friendly environment where they can improvise some more ideas and techniques.

• The government should provide the employment opportunities in the country itself and praise the quality of its citizens so that they won't leave the country and their ideas and young minds can be utilized for the promotion and development of the country.

Conclusion

Hence we can conclude that there is the massive competence of establishment of green entrepreneurship in Nepal. After a long struggle and huge support from government this field is finally in its pace of development and sustainability. It's now time for young entrepreneurs to make use of the opportunity to utilize their young and powerful minds within the country for the people for a sustainable development of the economy. In house production of energy through renewable resources by Entrepreneurs will be an implausible sustainable strategy as compared to the traditional system which will save upon capital in all senses.

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Challenges of Effective Implementation of Micro-Insurance in India: A Case Study of Bhartiya Agro Industries Foundation (BAIF)

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ABSTRACT

Almost 70 percent of India's population is rural, majority of which lives in poverty. In order to achieve sustainable economic development, it is necessary that poor people get benefits of inclusive policies. Micro insurance is a necessary step in this direction as poor are most vulnerable to several risks.

In India, insurance has got low penetration and situation is worse in case of poor section of the society. Even though insurance can provide risk coverage to vulnerable section of the society, insurance companies have failed to draw attention of target customers. Micro insurance provides a way out for this issue, but there are various hindrances to successful implementation; from supply as well as demand side. Some of the supply side issues are, lack of appropriate products, reach of organization, reluctance of personnel to work in rural area, pushing of products giving more premium rather than needed products; whereas

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demand side issues include illiteracy, lack of trust; lack of knowledge about the importance of insurance, etc.

The objective of this paper is to identify challenges in effective implementation of micro-insurance in India. A few organizations have tried and achieved success, in this direction. In this paper, we discuss one of the successful micro insurance schemes developed and implemented by an organization called Bhartiya Agro Industries Foundation (BAIF). They work on community based micro insurance program for their self-help groups. Since micro insurance is at its nascent stage in the country, we hope the discussion will provide an insight to others in implementing similar activity.

Keywords: Micro Insurance, Community, Developing Country, BAIF

Introduction

Insurance Regulatory Development Authority (IRDA) of India, the regulatory body to channelize insurance industry in the country has developed a special category of insurance products to cater to the needs of the vulnerable section of the society. These insurance products are called as micro-insurance policies. The IRDA Micro-insurance Regulations, 2005 defines a micro-insurance policy as a life or non-life insurance policy as specified in the table below.

Product Boundaries as per Microinsurance Regulation, 2005

Type	Sum insured (Rs. 000)	Term (in years)	Age (in years)
Term life	5-50	5-15	18-60
Endowment	5-30	5-15	18-60
Health (individual)	5-30	1-7	Insurer's discretion
Health (family)	10-30	1-7	
Accident rider	10-50	5-15	18-60
Livestock/assets	5-30	1	NA
Accident(non-life)	10-30	1	5-70

Source: Mukherjee et al. (2012).

Almost all areas are covered by the micro-insurance policies as covered in conventional insurance policies both in life and non-life segments. India

has the second largest population in the world and the potential for growth of insurance is very good. However the penetration of insurance in the country is very shallow. Almost one- third of India's population still lives below poverty line. These people being at subsistence level cannot afford insurance unless it is made cheaper and affordable to them.

To eradicate and eliminate disparity in the society, judicious allocation of economic and financial resources could be ensured only if poor are also brought under the umbrella of financial inclusion through the access to bank accounts and insurance coverage.

The potential of micro-insurance is very high, for a developing economy like India where despite efforts of the governments a major portion of population lives below poverty line. Making life better for poor people is essential for sustainable development. The below average purchasing capacity of individuals, lack of awareness, high transaction cost are few bottlenecks to reach them.

The importance of insurance has widely been accepted across societies. It is more so in case of poor people. The risk without insurance coverage leaves poor households vulnerable not only to financial losses but also gives mental agony. In case of unexpected events in their life like health issues and natural calamities, they incur huge losses, which severally affect their financial condition. Micro-insurance brings them solace on the event of any such loss or damage.

The present paper is divided into four parts. The first part offers a general understanding of micro-insurance and its linkage with rick mitigation for the poor in the society. The second part of the paper discusses literature review followed by case study of BAIF. Last part deals with discussion and practical implications of the research.

Literature Review

The precarious financial situation of poor will be upset by major shocking events such as death, hospitalization, loss of home and that of working assets. Protecting them from these events will help them from remain out of poverty. They have informal mechanisms to do so by borrowing, maintaining savings accounts, investing in assets, and participating in revolving savings and credit groups. There has been weakening of these mechanisms due to increasing urbanization and migration.

Poor people hesitate in paying for some future events that might not happen; especially when when they face problems in meeting their day to day needs. The concept of insurance is alien to them as they do not see any point in paying for something which may or may not give any financial return (Forbes, 2012). In many developing countries more than 3% of households faced catastrophic health expenditure which exceeded 40% of their disposable income (Ransona et al., 2006). Micro-insurance increases chances of economic growth for poor (Apostolakis et al., 2015).

Micro-insurance conceptually is not different from other insurance schemes both in life and non-life categories. The premium contribution by individuals is also low for obvious reasons.

Ito and Kono (2010) observed that there are common problems associated with micro insurance (1) low take-up rates, (2) high claim rates, and (3) low renewal rates. This is explained on the basis of prospect theory, hyperbolic preference, and adverse selection. The prospects theory makes an assumption that people are risk averse while evaluating gains and they become risk loving when it comes to loss (Kahneman and Tversky, 1979). As insurance covers losses people might act as risk loving and may not purchase insurance. Another aspect of it is undervaluing losses with low probability.

Bauer et al. (2008), explains peoples participation in micro credit through hyperbolic behaviour. It is associated with self-control problem of individuals who are tempted to spend rather than save the money. This behaviour is more pronounced when there is lack of mechanism to do so. In case, it is available they are more likely to save. This is applicable to micro insurance also.

The households having more sick members are more likely to purchase insurance. This can be explained on the basis of adverse selection (Ito and Kono, 2010). Information asymmetry only complicates things further, by adding the problems of adverse selection, and ex-ante and ex-post moral hazard. Moral hazard is in terms of engaging and increasing risky behaviour once individuals get insured.

Lack of awareness of insurance is identified as one of the causes of low take-up as well as low renewal rates. In addition relatively large lump sum payments, significant transaction costs, and dependence on relationships with unfamiliar parties act as hindrances. This is also need for financial literacy as majority of the clientele are illiterate. Xavier et al. (2008) explain

the decision of rainfall insurance take up is dependent on household wealth, income fluctuations and familiarity with insurance vendor.

Sinha et al. (2006) identified four stages as barriers to insurance (1) Barriers to hospitalization, (2) Barriers to claims submission, (3) Problems in claims processing, and (4) Problems after decision. Barriers to hospitalization include lack of funds; inconvenience caused in the family; distance from hospital. Barriers to claims submission comprises lack of clarity about documents, noncooperation from doctors, transaction cost, delay in claim submission, fear of rejection, lack of clarity about terms and conditions by employees and weak linkage with employees. At third stage there are problems in claims processing like issuance of incorrect or incomplete documents by the doctor or government official. Even after the claim is sanctioned, some members face difficulties in encashment cheque when they had no bank account.

Radermacher and Dror (2006) classified institutional mechanism for delivering microinsurance as (1) partner-agent, (2) charitable insurance, (3) healthcare providers, and (4) mutual.

Type of Provider	*Examples*
Partner-agent model	1. VimoSEWA and ICICI Lombard 2. Shepherd and United India Insurance Company (UIIC) 3. Karuna Trust and National Insurance Company (NIC)
Charitable insurance model	1. Voluntary Health Services (VHS), Chennai 2. Vimo SEWA operated its health insurance under this model from 1996 to 2002. 3. Yeshasvini Trust is a mixture of the charitable insurance model and the provider-driven model
Healthcare providers model	1. Grameen Kalyan, Bangladesh 2. BRAC MHIB, Bangladesh 3. Nkoranza Community Health Insurance Plan, Ghana
Mutual model	1. Union des Mutuelles de Santé de Guinée Forestière (UMSGF) 2. ILO's STEP programme 3. French NGO CIDR SHEPHERD 4. Organisation for Development of People 5. Solapur Cooperative Federation 6. Bihar Milk Cooperative Federation 7. Mahasemam Trust 8. BAIF

Source: Radermacher and Dror (2006).

In partner-agent model, NGOs/MFIs act as an intermediary between insurance company and policyholders. Charitable insurance model has two main features namely being non-profit and not putting the risk on the insured. The first feature primarily differentiates this model from the partner-agent model as well as healthcare provider-driven model. The second feature distinguishes it from mutual model.

In Healthcare provider model insurance is provided by health care provider with an idea to increase volume of their primary business. The mutual model is also known as community-based health insurance schemes. It is based on voluntary non-profit systems to spread the risk with the help of mutual assistance and solidarity. In this case risk is being borne by the insured.

Government also is directly engaged in promoting the microinsurance. They have come up with different products given in the table below.

Type of Product	Natural and Accidental Death for SHG Members	Natural and Accidental Death for Landless Labours	Livestock (for mortality)	Agriculture (area yield)	Agriculture (weather index)
Name of Product	Janashree Bima Yojna	Aam Admi Bima Yojna	Livestock Insurance Scheme	National Agriculture Insurance Scheme (NAIS) Program	Weather Based crop Insurance Scheme
Starting Year	2000	2007	2006	1999	2007

Case Study: Bhartiya Agro Industries Foundation (BAIF)

The study carried out on micro- insurance is exploratory in nature. A case based analysis had been done on the micro-insurance initiatives taken by 'Bhartiya Agro Industries Foundation' (BAIF), a well reputed voluntary organization. It was founded on August 24, 1967 by a Gandhian patriot Late (Shri) Manibhai Desai at Urulikanchan village, Dist. Pune, in the state of Maharashtra with a mission of promoting sustainable rural development.

It started community development by introducing livestock development and sustainable water management in the remote areas. It is a well-known fact that livestock is one of the major sources of livelihood for the population living in villages. Subsequently it came up with community insurance scheme for the poor. This was a mile stone in the initiative of financial inclusion promoted by the Govt. of India under which people who do not have access to basic financial services like bank accounts and insurance against their livestock and health care facilities within the ambit of their reach.

Community and Micro-Insurance

BAIF came up with self-help groups to introduce insurance facilities for the people living in rural areas. A self-help group is the one which works as a financial intermediary usually composed of 10 to 20 men or women. BAIF runs several such self-help groups with anti-poverty agenda. These SHGs are operating micro-insurance for the rural people.

Salient Features of Micro-Insurance Scheme

The self-help groups in BAIF contain only women. There are two kinds of micro insurance products are being provided by BAIF. They are life and health micro-insurance. In the case of life insurance the premium is Rs. 250 per member per year. The insurance is provided for the entire family. Accidental death receives a claim of Rs. 50000 per person. The compensation varies if a person meets with permanent disablement. In the case of medical insurance, if a person is hospitalized for two or more days, he is entitled of a Rs. 5000 compensation on account of his treatment. Apart from these facilities health check-ups are conducted free of cost under the micro-insurance scheme. If a person receives no benefit for 5 years, he is entitled of Rs. 300 compensation.

Initially, BAIF was working under partner-agent model, wherein United India Insurance Company (UIIC) was insurance company and BAIF acted as agent for them. But, conflict arose between them when claim ratio reached more than 100 percent. Reacting to the situation, UIIC decided to increase the premium by 80 percent. The beneficiaries of the schemes were SHG members, and majority of them were poor. This

increase might have forced them to leave the scheme. At the same time, justifying the huge rise in the premium was difficult for BAIF as they were the ones who had direct contact with the beneficiaries. Subsequently, BAIF decided to turn its operating system for providing insurance scheme from partner-agent to mutual model.

The premium amount for each contributor is Rs. 250 per annum, out of which Rs. 80 goes to Life Insurance Corporation (LIC); the only state owned Life Insurance Company and additional Rs. 50 is contributed by the Government of Maharashtra and the Central Government. Thus, the total per unit contribution becomes Rs. 130.

The amount collected from villagers who seek benefits of insurance is not enough to create a sizeable corpus, it becomes essential for the SHGs to divert a small chunk of premium for reinsurance with LIC. This mechanism is known as reinsurance. Since most of the micro- insurance schemes are related with life insurance schemes, it becomes obvious that the LIC would play the role of reinsurer.

Earlier micro-insurance scheme was reinsured with United Life Insurance Company, but the policyholders' higher rate of claims made the insurance company to increase the premium. Since SHG members are poor and were not able to afford premium at a higher rate, they shifted to the LIC.

The claim settlement mechanism reads that in case the claim is made by the group, payment is made by cheque. Individual's settlements are done on cash basis. In case of no claim during the last one year period, a 50 percent no-claim rebate is given to the policy holders for the next one year period for renewal of the policy.

In order to avoid false and exaggerated claims thorough scrutiny is done. Since the SHGs are closely knit and small groups all members know each other very well. The detailed information about each other enables the SHGs to avoid false and exaggerated claims.

SWOT Analysis of Micro-Insurance Scheme

Strengths

1. *Elimination of fake claims:* false and exaggerated claims put a pressure on the profitability of insurance companies. SHGs are small and

close knit formal groups of individuals living in close vicinity and are known to each other. It helps in eliminating the chances of false and exaggerated claims.

2. *High speed claim settlement:* Since all members of SHGs are known to each other, the complexity of investigation about genuine claims is pretty less. This enables the SHGs for speedy claim settlement.

3. *Affordability:* Small instalments of premium amounts are affordable for the members of SHGs who live below poverty line.

4. *Reach:* it gives a great outreach for microinsurance products.

Weaknesses

1. *Small corpus:* Due to small amount of premiums, the corpus money collected does not have a large pool of funds prevent them from scaling up.

2. *Designing micro:* insurance products to suit to the individual needs and requirement is a difficult task.

3. *Financial sustainability:* The products are subsidized or donors funded and are not financially self-sustainable.

Opportunities

1. *The Government support:* The Government of India has supported Micro Insurance. Any innovative scheme is likely to be encouraged.

2. *Market potential:* The large number of population qualifies as consumer of these products. It offers huge business opportunities for the organizations operating in this area.

3. *Lack of competition:* Many insurance companies are reluctant to enter into this market; providing wider space for existing players.

Threats

1. *New entrants:* As the insurance sector is being liberalized, there is a threat of new entrants.

2. *Lack of professionals:* Many a times NGOs lack specialized professionals to run these types of schemes.

Benefits to Different Stakeholders

Beneficiaries are getting risk cover, which otherwise is not being catered by insurance players. As health problem has been cited as one of the reasons for poor remaining poor, the micro-insurance policy helped these poor people from getting into poverty trap because of health issues. Affordability of the products has acted as a hindrance for the success of micro-insurance; it got resolved by provision of small instalments. Issue of delayed claim settlement has prevented many customers from taking insurance. In this scheme, claims were getting settled smoothly, encouraging the customers to go for the products.

Fraudulent claims have been always been a serious concern for insurers. The arrangement by BAIF and its distribution through SHGs has helped in resolving this issue. It has also given wider reach to the products, which otherwise was difficult for insurer.

BAIF is providing full-fledged services to its beneficiaries and this has helped in enhancing its image among the stakeholders in general and beneficiaries in particular. By providing insurance, BAIF has widened its product portfolio of financial services for its poor customers.

Discussion and Conclusion

The challenges faced by micro- insurance schemes may be the learning lesson for the generations to come. Product development, regulatory modification, financial literacy drive, distribution optimization for insurance products are a few steps to ensure better and deeper micro-insurance penetration in rural areas for people living below poverty line.

If rightly implemented micro insurance schemes could bring in sea change in the living standard of rural population living below poverty line. The customization of products could better suit to the need and requirement of individual customers and hence could favourably impact the demand for micro-insurance products.

Training programs for insurance professionals especially sales agent in large number could not only generate employment among the educated work force sitting idle without job but will also ensure deeper penetration and higher demand of insurance products in the market.

The financial inclusion initiative taken by the Government of India has opened new vistas for micro- insurance in the country. Micro-insurance is fast-growing sector with immense potential of growth in India. Almost one-third of India's total population lives below poverty line and hence is the target beneficiary of micro-insurance schemes. Through the causal relationship between micro- insurance schemes and poverty eradication this paper could prove to be helpful. Based on the findings, the government and the non-government organizations should increase their efforts to ensure deeper penetration of insurance in the remote areas where the major chunk of population lives below poverty line.

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Financial Access: Inclusion and Literacy

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ABSTRACT

Financial inclusion efforts have been recognised as an effective strategy to ensure access to financial services all over the globe. During the last ten years, countries – both developed as well as developing have been engaged in efforts ensuring financial inclusion to all, enabling access to financial services. Financial access helps the citizens to participate in the economic opportunities and derive the fruits of development which lead them to economic well-being.

This paper traces the importance of financial access in the financial sector development of an economy. Financial education or literacy has been identified as a key factor influencing the demand side of the financial inclusion. Financial education as a key element to enhance inclusion is explored in detail and the national and international experiences in this regard are documented.

Keywords: Financial Access, Financial Education, Financial Inclusion, Financial Literacy

Introduction

The role of financial access in the economic development and growth of an economy has been debated by researchers, and various studies in this regard have substantiated the positive contribution between financial access

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and inclusive growth. To ensure financial access, financial inclusion policies have been put in place by policy makers, banking and financial institutions all over the world. Financial inclusion paves the way for mobilization of untapped savings in the society and channelizing these savings towards investment and results in growth of different sectors of the economy. Researchers have identified various reasons for financial exclusion. Financial Inclusion has the ability to generate positive externalities – it leads to enhancement in savings and investment and thereby, spurs the process of economic growth. It also provides a platform for inculcating the habit of saving money, especially amongst the lower income category that has been living under the constant shadow of financial distress. Availability of banking services and products aim to provide a critical tool to inculcate savings habit. Likewise access to credit is an important issue among the small borrowers, micro and small enterprises. Access to insurance and pension services need to be mainstreamed.

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Supply Side factors in Financial Inclusion
Financial Literacy
Benefits of Financial Inclusion
Financial Education – International Experience
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Findings
Conclusion

Methodology

The objective of this paper is to trace out the extent of financial exclusion experienced by countries across the globe and India in particular. An extensive literature review approach is undertaken to reveal the gravity of the situation. The financial inclusion strategy has been debated in terms of the demand side factors and supply side factors. The demand side factors influencing financial inclusion have been illustrated with reference to

various studies in the field, citing the examples wherever possible. Likewise the supply side factors affecting financial inclusion are discussed. To what extent financial literacy and education as a determinant to financial inclusion is debated in detail tracing out the methodology, target segment, content, etc., in designing a well though financial education programme.

Literature Review

Rodrik and Rosenzweig (2009) argue that expanding financial access holds the promise of increasing economic growth by promoting investment in underfunded enterprises. Expanding access to reliable low cost savings accounts promise to increase the capital stock and helps to reduce the poverty and inequality. The authors illustrate the transformative power of financial access by citing experience in microfinance programs in Asian countries. The power of access to financial services has transformed the fortunes of poor households, as access to micro credit and other financial services enable households to enhance their income and avail the long denied opportunities.

The Centre for Financial Inclusion (2011) offers comprehensive views on the dreams of achieving *full financial inclusion* a reality.

> *Full financial inclusion is a state in which all people who can use them, have access to a suite of quality financial services, provided at affordable prices, in a convenient manner, and with dignity for the clients. Financial services are delivered by a range of providers, most of them private, and reach every one who can use them, including disabled, poor and rural populations.*

The above definition rests financial inclusion on five pillars, viz., (i) a full product suite, (ii) quality, (iii) reaching all who can use the services, (iv) in diverse competitive market place, and (v) to an informed clientele. All the five pillars are equally significant as success in one area may produce the social and economic benefits desired if accompanied by good progress in other areas.

The organisation of Economic Cooperation and Development (OECD) defines financial inclusion as the "process of promoting affordable, timely and adequate access to a wide range of regulated financial products and services and broadening their use by all segments of society through the

implementation of tailored existing and innovative approaches including financial awareness and education with a view to promote financial well being as well as economic and social inclusion". OECD, thus relies its focus on three elements, viz., affordability, timeliness and adequacy of the financial services. Likewise the definition focuses on the need for creating awareness or educating the masses on the features or characteristics of financial services.

Kempson and Whyley (1999) discuss five forms of financial exclusion in the society, viz., access exclusion, condition exclusion, price exclusion, marketing exclusion and self exclusion. The financial service providers restrict the access to members of the public in the name of risk management and the access is denied. Under condition exclusion, the service providers impose different terms and conditions which make the public ineligible to make use of the financial services. Due to high level prices, some segment of the public are unable to afford the financial services which make them excluded. The service providers undertake different marketing strategies and often focus on middle and high income clients and leave the lower segment of the population neglected. Owing to the indifferent attitude and policies of service providers, many of the people especially those belonging to the lower strata of society decide not to opt for a financial product because of the fear of refusal to access by service providers.

Greg Fischer (2011) relates finance to financial inclusion by linking access to finance as central to risk management. Finance allows firms and farms to protect against loss of productive assets and insure against shocks arising out of natural disasters like flood or drought. A household that cannot respond to an investment opportunity for want of finance loses out on earning income and growth.

Vijay Kelkar (2008) explains the need for financial inclusion in terms of risk management or risk mitigation services vis-à-vis economic shocks. People especially the vulnerable community are affected by shocks due to adverse weather conditions or natural disasters or due to a high level of unexpected expenditure, etc. Financial inclusion provides economic security to this segment of population. The author argues that access to financial services enables the poor to save money, prevents concentration of economic power with a few individuals and helps in mitigating the

risks that the poor face as a result of economic shocks. While the financial sector reforms carried out in the economy succeeded in achieving the objectives of financial sector stability, Kelkar advocates for the second wave of financial sector reforms to reach the whole community in coverage of financial services and achieve financial inclusion.

Miriam Bruhn et al. (2013) argues that during the global financial crisis, low level financial literacy is an important factor that made the home owners in the U.S. to avail mortgage loans exceeding their means.

Demand Side Factors in Financial Inclusion

Ghatak (2013) identifies the factors – Accessibility, Culture, Assets, Income and Literacy as the key factors that influence the demand for financial inclusion. The study observed that Accessibility has the highest correlation (0.650) which is followed by Literacy (0.447), Income (0.442), Culture (0.303) and Assets (0.054). To ensure accessibility the author suggests branch expansion policies in rural areas, penetration of ATMs and technology adoption, expansion of mobile banking and BC facilities etc. The level of financial literacy is to be enhanced to create an awareness among the younger generation about the several benefits of being financially included. The school curriculum should take care of the financial literacy needs.

Tuesta and Others (2013) in the 'ENIF Survey on Demand factors that influence financial inclusion in Mexico' finds income as the most important criteria as demand factor that influences financial inclusion as 62% of adults in Mexico aged between 15 and 70 are not included in the financial system. In other words they do not have a current, payroll or savings account, or credit at a formal financial institution. The main access barrier to the financial system is income as 77% of the people excluded say they do not have sufficient income or that their income is variable and do not allow them to have an account or credit at a formal institution. The second reason suggested by 47% of those not using banking services is that they are not interested or do not need a financial product, which could be considered a position of self exclusion. Personal reasons are argued by 24% of those who are not linked to the financial system, and reasons of access are those alleged by fewest, at 21%. The study mentions education level as one of the factors as the extensive use

of the informal market may be related to the lack of financial literacy and the lack of knowledge regarding formal saving and credit products. This throws light that awareness has to be raised with respect to the advantages of the financial system and financial literacy for being able to take informed decisions on participating in formal financial markets.

Shankar (2013) argues that financial literacy and financial capability are regarded as important demand side factors that influence financial inclusion efforts. While financial literacy refers to the basic understanding of financial concepts, financial capability refers to the ability and motivation to plan financials, seek out information and advice and apply these to personal circumstances. The author cites the examples of microfinance institutions that maintain close relationship with the community and spread knowledge and literacy among the clients on the prudent usage of financial resources.

The Centre for Social Impact, Australia explains four major causes that lead to financial exclusion viz. self exclusion by individuals, low levels of financial literacy, exclusion due to limited resources and new technologies. Self exclusion exists when individuals and households voluntarily decide not to participate in the formal financial system. Financial capability or education is an essential skill that leads to inclusion. Resource exclusion exists where low income households are unable to use specific financial products due to limited access to funds. The ability to use new technology to engage in financial services is also found to be a hurdle as many low income households are not used to adapt technology.

Chakraborty (2012) analyses the barriers as (a) Low literacy levels, lack of awareness and understanding of financial products, (b) Irregular income, (c) frequent micro-transactions, (d) Lack of trust in formal banking institutions, (e) cultural obstacles (e.g., gender and cultural values) as the demand side factors for financial exclusion.

Supply Side Factors in Financial Inclusion

The supply side factors are equally significant like the demand side factors in determining financial inclusion. Chakraborty (2012) cites a list of supply side barriers and this include Outreach, Regulation, Business models, Services, Age factor, Bank charges etc. Commercial banks show

less enthusiasm in spreading financial services to low density areas and low income population as they feel the services are not financially sustainable under traditional banking business models. The regulatory practices followed by countries are often not adapted to local contexts and more often it is the macro character that is reflected in policies. The business models practised by commercial banks and service providers are often with high fixed costs and to recover the cost, they rely to serve on profitable zones. On age factor, the financial service providers often focus on middle of the economic actively population, overlooking the design of appropriate products for older or younger potential customers. There are hardly any policies or schemes for the younger lot or the old people who have retired, as the banks do not see any profitable business from this segment. Banks often pass on the transaction cost to the clients irrespective of the income status and this result in distancing the low income households in availing the services.

Researchers cite the non availability of suitable products as supply side factor in financial exclusion. This is often visible in loan products as banks attach lots of conditions, fix the rate of interest and charge uniform across all types of loans. The micro and small entrepreneurs are the worst hit in this situation and they often depend on informal sources for their credit needs. Physical barriers also cause exclusion and it is unviable for banks to spread its wings to rural and far flung areas. The stringent 'know your client' (KYC) rules also distances migrant labourers and other segments in accessing formal financial institutions.

Shankar (2013) narrates solution to the supply side factors in financial inclusion by citing the experiences of microfinance institutions. MFIs provide financial products more or less tailored to the requirements of low income groups. In the case of micro credit disbursements, collateral is not usually insisted upon and loan repayment amounts are small and frequent. MFIs usually provide door step services at the convenience of the borrowers. Further, MFIs do not insist on elaborate documentation procedures. Loan officers in MFIs generally rely on address checks and neighbour references rather than documents.

Burkett & Sheehan (2009) study report has been quoted by the Centre for Social Impact, Australia in analysing the supply side causes of financial exclusion. The five key dimensions are termed as five A's of financial

exclusion. These are Availability, Access, Awareness, Appropriateness, and Affordability. Availability means issues regarding the lack of financial products which are in demand but do not exist at all in the vicinity of the individual. Poor credit record, language issues or physical barriers etc limits the access. The lack of awareness of individuals of financial services due to poor promotion measures is a significant cause of exclusion. Many times, the financial products are not appropriate to some individuals' needs.

It is well recognized that the supply side and demand side factors are to be analysed carefully to understand its role in achieving inclusion and driving inclusive growth. Commercial banks and other financial services players are largely expected to mitigate the supply side processes that hamper poor and disadvantaged social groups from gaining access to the financial system. Access to financial products is constrained by several factors which include lack of awareness about the financial products, unaffordable products, high transaction costs and products which are inconvenient, inflexible, not customized and of low quality.

Programs to Achieve Financial Inclusion

In India, various programmes have been designed and implemented by commercial banks with the objective of ensuring financial access to all the households in India. However, one reason or other, meaningful inclusion could not take place. An inclusive financial system should ensure access, availability and usage of financial services by all the concerned. The commercial banks have been involved with various strategies and programs to make the households rely on institutional agencies for their financial services requirements.

The recent policy level prescription to launch Pradhan Mantri Jan Dhan Yojana (PMJDY) is praiseworthy in the context of financial inclusion. The PMJDY was announced by our Hon'ble Prime Minister in his independence day address on 15th Aug 2014. The scheme envisages universal access to financial services to each household in India. Towards this end, at least one basic banking account for every household would be opened and access to credit, insurance and pension would be made available. The account holder would be entitled to a Ru Pay Debit Card with in built accident insurance cover of one lakh rupees. The PMJDY comprises of six pillars.

Six Pillars of Prime Minister's Jan Dhan Yojana

Pillar	Description
Universal access to banking services	Every habitation has access to banking services within a distance of average 5 kms
Providing basic banking accounts with Overdraft Facility and RuPay Debit Card to all households	Ensuring opening of savings bank accounts, providing overdraft after six months of satisfactory operation of the account
Financial Literacy Program	Financial literacy programs to be provided to households so as to make best use of the financial services
Creation of Credit Guarantee Fund	To cover the defaults in overdraft accounts, Credit Guarantee Fund is to be created
Micro Insurance	To provide micro insurance services to all willing and eligible persons by 14 Aug 2018
Pension Scheme for unorganised sector	To implement pension to unorganised sector in line with Swavalamban scheme by 14 Aug 2018.

As on Dec 26, 2014, the number of accounts opened under PMJDY scheme stood at 10.08 crores, as against the target of 7.5crores by 26 January 2015, thanks to the efforts taken by commercial banks in a mission mode.

In 2011, the government launched Swabhiman scheme targeting to bring 74,000 villages with population below 2000 under the banking network. The programme focussed on providing basic banking services like no-frills savings account, micro credit, remittances, micro insurance, and micro pension through multiple banking channels including banking correspondents. Thus, PMJDY is an improved version of Swabhiman scheme.

To deepen and further financial inclusion, in November 2014, Reserve Bank of India has issued norms for setting up Payment Banks, and Small Finance Banks in the country. Payment banks would be allowed to accept deposits, with a cap of rupees one lakh per individual customers and they would be allowed to issue ATM/Debit cards. They are not allowed to undertake lending activities. The Small Finance Banks would undertake basic banking activities of acceptance of deposits and lending to unserved and underserved sections including small business units, small and

marginal farmers, micro and small industries etc. A minimum of 50 per cent of the loan portfolio of small finance banks should constitute loans and advances of upto Rs 25 lakhs.

Financial Literacy

The financial education or financial literacy as the key demand side factor enabling financial inclusion is recognised by researchers. The literature on development studies often use the terms – financial literacy, financial education, and financial capability to describe the situation of the need for acquiring more knowledge and skills in dealing with personal finance. Financial literacy is associated with the consumer who is supposed to know the features of the product he purchases and understands the contracts he signs. It needs knowledge, skills and attitudes. Financial education is a key tool to reach this goal of financial literacy. Financial capability, on the other hand, relates to the ability and opportunity to use the financial knowledge and skills to appropriate decision making.

Huston (2010) opines that spreading financial literacy is a public policy objective and in U.S., recent incidents on financial sector vouch for the increasing attention given to the financial education. The mortgage crisis, consumer over indebtedness and household bankruptcy rates are the evidences to substantiate the statement.

The US Government Accountability Office (GAO) defines financial literacy as *"the ability to make informed judgements and to take effective actions regarding the current and the future use and management of money. It includes the ability to understand financial choices, plan for the future, spend wisely, and manage the challenges associated with life events such as job loss, saving for retirement, or paying for a child's education"*. This definition takes care of the ability to make informed choices on the decisions on management of personal finance is concerned. Financial planning, prudent management of expenditure, situation to deal with contingencies, retirement planning needs, etc., are taken care. The US based non profit Jumpstart defines financial literacy as "an evolving state of competency that enables each individual to respond effectively to ever changing personal and economic circumstances". This definition relates the capability to manage personal finance depending on the circumstances of life cycle event of a household.

Financial education is the ability to make appropriate decisions in managing the personal finance of an individual or household. Financial education is often synonymous with financial literacy and both the terms are used interchangeably to explain the situation of acquiring more knowledge and skills in dealing with personal finance. Financial education enables one to understand the basic financial concepts like interest, risk, reward, etc., understand the key financial products like savings accounts, deposit accounts, loan accounts, insurance schemes, pension products, etc., and make good financial choices about saving, investment and managing debt, and respond competently to changes that affect everyday financial well being.

Financial education is the process of building knowledge, skills, and attitudes to become financially literate. It introduces people to good money management practices with respect to earning, spending, saving, borrowing, and investing. The role of financial education is to enable people to shift from reactive to proactive decision making and work towards fulfilling their financial goals. When linked to the financial inclusion agenda, the implicit argument is that financial education will motivate the learner to understand the products and adopt available formal financial services.

Financial capability includes the ability and opportunity to use the knowledge and skills implied in financial literacy. Financial capability is a broader concept that takes care of an individuals' capacity to make use of the financial product and its availability. Thus, the concept financial capability warrants building the capacity for an individual to make use of the financial services together with the required knowledge, skills and attitudes. Cohen and Nelson (2011) argues that while consumers have a responsibility to inform themselves about products they are purchasing, financial service providers have a responsibility to understand their market, and respond with a range of appropriate and affordable services. Financial capability brings together informed clients and appropriate products in the market place together.

OECD (2005) defines financial education as *"the process by which financial consumers/investors improve their understanding of financial products, concepts and risks, and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and*

opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well being". Thus, OECD look forward to achievement of financial well being as an ultimate goal of financial education and to achieve this, advocate the need for understanding the financial products in terms of its features and take a decision based on the risks and opportunities.

OECD (2006) justifies the need for financial education across all countries. "For emerging economies, financially educated consumers can help ensure that the financial sector makes an effective contribution to real economic growth and poverty reduction. But financial literacy is also crucial for more developed economies, to help ensure consumers save enough to provide an adequate income in retirement while avoiding high levels of debt that might result in bankruptcy and foreclosures".

Cohen and Nelson (2011) has made an enquiry into the emerging elements of financial education and list five elements in an effective financial education. These include (a) target audience, (b) relevance, (c) Use, (d) Quality, and (e) Delivery Channels. Target groups for financial education can be categorised by age, gender, and employment status. Financial education targeting youth is more likely to derive more benefits as they negotiate with parents on spending money and its prudent management. Aflaton, an NGO headquartered in Netherlands had introduced financial education available to school children and has been campaigning in 75 countries. The education to be imparted on personal finance would yield its maximum result when the design is made relevant. The basic tenets of personal finance management are save often, spend carefully, borrow cautiously and invest wisely. However, this can be practiced keeping in mind the specific needs or stresses that the target group faces. To ensure the relevance of financial education, the financial behaviours of the target groups are to be understood carefully. The characteristics of the groups in terms of their sources of income, their spending habits, influencing factors on their expenditure, controlling forces, beliefs or cultural practices shaping their decisions etc are to be understood to decide on the relevance of the financial education. People are adaptable to the benefits of financial education when they are exposed to real use of some of the products. When people start to open savings bank account or use mobile banking, or becomes a recipient of a government cash transfer programme, this is an opportunity to

put in practice the benefits of new knowledge acquired out of financial education. The quality of financial education is related to the training methodology and the availability of good trainers. Participatory training methodologies are to be used widely to impart financial education. The delivery channels as an element of financial education assumes importance when financial education is to be scaled up. The mix of dissemination methods, viz., print, mass media and technology are to be explored. The various elements as discussed above can serve in achieving the objectives of a financial education programme.

Benefits of Financial Education

Financial education, if organised and conducted in a serious manner, derives good number of benefits. The financial education programmes benefits an individual through enhancing his money management skills, assisting him manage his debt more effectively and enable to develop consumer skills, knowledge and behaviour in relation to money. Russian Trust Fund (2013) lists out six benefits of financial education for the unbanked community. Firstly, financial education enables improved understanding of mainstream financial services and encourages to avoid the services availed from informal sources. Secondly, the community is benefited with a deeper understanding of risks and benefits of financial services such as credit. This is true in the case of many cases in Indian villages where the members approach the informal sources resulting into higher pay out of interest and other charges. Thirdly, education results into getting right information to the community with no cost or lesser cost. Fourthly, the education drives the community towards higher level savings, as the habit of savings is inculcated among the members of the community. Fifthly, consumer education on personal finance protects against unfair, discriminatory practices, etc. Finally, financial education results into reduced cost of money transfers. Money transfers as a financial service is much required for migrant workers and not only cost, but the risks, security, etc., is very much significant.

Lusardi (2008) observes that low financial literacy affects financial behaviour, and literacy is to be carried out in mass scale to influence saving and wealth accumulation. Two avenues pointed out by the author in this regard are delivering financial literacy through schools and workplaces.

From a macro perspective, Chakraborty (2013) writes, financial literacy together with financial Inclusion and consumer protection form a triad which, collectively, has an important bearing on financial stability. The three legs of the triad have strong inter-linkages, with each element having a vital bearing on the others. The absence of any one would make it difficult to attain the remaining goals.

Financial Education – International Experience

Research conducted for the OECD's study on financial education (OECD 2006) indicates that the level of financial literacy is low in most countries, including in developed countries. In Japan, for instance, 71% of adults surveyed knew nothing about investment in equities and bonds, while surveys in the US and Korea found that high school students failed a test designed to measure students' ability to choose and manage a credit card or save for retirement. Consumers often over estimate how much they know. In an Australian survey, 67% of those taking part claimed to understand the concept of compound interest but only 28% could find the correct answer to a problem using the concept. The commitment of respective government in countries is required before planning, devising and implementing financial education programmes. The level of financial literacy tends to vary according to education and income levels, but the actual situation shows that highly educated consumers with high incomes can be just as ignorant about financial issues as less educated lower income consumers.

The financial education experience in some of the countries viz. Australia, UK, USA, Uganda and New Zealand are enumerated below.

Financial Education Methodologies Across Select Countries

Country	*Methodologies*
Australia	• New consumer Websites – Moneysmart and Understanding Money • Curriculum on Financial Capability for Schools • Financial Literacy Options for Vocational Education & Training (VET) • Indigenous Education – Department of FaHCSIA targeting indigenous Australians • Education at Work Place • Australian Defence Force on Financial Literacy to its Members

United Kingdom	• Education – Schools and Colleges • Young Adults • Partnership Programme with Non Profit Organisations • New Parents • Work Place Programme • Consumer Communications
United States	• National Financial Education Website • Dedicated Hotline • Work Place Financial Education • Public Private Partnership
Uganda	• Annual financial Literacy Weeks – Seminars and Workshops • Civil Society Initiatives • Financial Education to Adolescent Girls
New Zealand	• *Children*: Imparting education to senior secondary student level. • *Adults*: Adults graded into three groups on knowledge, and financial education imparted each group.

Financial Education – Indian Experience

In India, financial education has been taken as priority by all the financial regulators. Apart from this, the commercial banks in the country and many civil society organisations have also embarked on initiatives on financial education. The initiatives of Reserve Bank of India, Securities and Exchange Board of India, commercial banks and civil society are documented below.

Financial Education Initiatives in India

Institution	*Activities*
Reserve Bank of India	• A link on Financial Education on RBI Website providing financial education materials in 13 languages • Project Financial Literacy – disseminating information on banking system to the public • Undertaking outreach programme wherein top executives of RBI interact with villagers • Young Scholar Award on Financial Literacy for undergraduate students
Securities and Exchange Board of India	• Project titled as 'SEBI Financial Education Resource Persons Programme' wherein around 900 Financial Education Resource Persons involving in organising workshops on financial education to various segments, viz., School children, College children, Middle income group, Executives, Retirement Community, SHGs, etc.

Institution	*Activities*
Commercial Banks	• Commercial Banks engage in financial literacy through setting up Financial Literacy Counselling Centres (FLCs) by all lead banks in the country
Civil Society	• SEWA Bank's initiative on Financial Literacy • National Financial Literacy Alliance (NAFiL) by Indian School of Microfinance for Women

Findings

The unbanked and under banked population in the world is huge, to the extent of two to three billion. Rodrik and Rosenzweig (2009) explain the gaps in financial access across the globe. While more than 80 per cent of households in Western Europe and North America have an account with a financial institution, 60 to 80 per cent households maintain account in Central Asia and Eastern Europe. The situation is worse in Latin America, with less than 20 percent adults in Nicaragua, covered under banking network. In Asian countries, the inclusion figures range from 40 per cent to 60 per cent. Citing World Bank study report, the authors say that in rural India, 20 per cent of households have loan accounts, 40 per cent have deposit accounts and 15 per cent have insurance in their names. Financial access is good for the poor as the result is yielded both through trickle down effects and individual gains in economic wellbeing.

Rama Pal and Rupayana Pal (2012) explain the financial exclusion situation in India by estimating the percentage of households using formal financial services. The study based on All India Debt and Investment Survey 2002-13 identifies Kerala (73.5%), Chandigarh (66.9%), Himachal Pradesh (62.5%) Andaman Nicober (62.3%), and Dadar Nager Haveli (57%) as top five states in financial inclusion. On the flip side, the study reveals Bihar (18.4%), Mizoram (22.4%), Arunachal Pradesh (22.4%), Meghalaya (22.7%), and Manipur (25.5%) performing poorly in financial inclusion standards. The study also reveals that rich households also suffer from financial exclusion even though the poor households are badly affected.

The demand side factors responsible for financial inclusion are lack of financial literacy, less financial capability, lack of regular income streams, psychological barriers, cultural barriers, lack of trust, etc. The supply side factors responsible for exclusion are lack of customised products

and services, distance from the bank branch, stringent Know Your Client rules, rigid terms and conditions, age factor, faulty business model, cumbersome documentation procedures etc. Of the various demand side factors, financial literacy or education is the foremost one that determines the extent of financial inclusion. This is well visible in the Alliance for Financial Inclusion (AFI) global survey 2010 wherein financial education tops in the enabling factors for financial inclusion, the other factors being product range, technology enabled delivery channels, credit bureaus, client protection, institutional capacity building and a sound regulatory framework.

The benefits of financial education/literacy range from enhancement of money management skills, effective and prudent management of debt, inculcating the habit of savings, sound financial behaviour, effective financial planning, less dependence on informal sources, etc. Financial literacy along with financial inclusion and consumer protection is advocated for financial stability.

Various countries have deployed financial education measures in order to enhance the level of financial literacy. Countries – UK, US, Australia, Newzealand, Uganda etc. have focussed attention and activities under financial education and the target segments covered for literacy are school and college students, working people, young adults, housewives, retired community etc. In India, dedicated effort are made by financial sector regulators especially RBI and SEBI in designing and implementing financial education programme.

In designing financial education programmes, five issues are to be dealt with, these being, target segment, relevance, methodology, quality and delivery channel.

Financial access, inclusion and literacy are very important aspects to be dealt in to arrive at a holistic view of financial inclusion. Access of financial services is to be ensured by policy makers, practitioners and civil society. Financial inclusion policies of government and banking institutions should include ensuring infrastructure to all the places so that access is ensured. Along with access, usage of financial services by the public is to be ensured and this can be accelerated through financial literacy efforts. One significant pillar of the Jan Dhan Yojana is financial literacy where public is to be educated on the benefits of opening and using bank accounts,

the need for relying institutional finance, the significance of insurance as a risk management tool, and pension service as social security measure. JDY find many solutions to the problems of access, inclusion and literacy.

Conclusion

Financial Literacy education which is aimed at enhancing a person's level of knowledge or ability should be tailored to suit different demographics, life stages and learning styles and not to be treated as a one-size-fits-all approach.

In a world of increased individual financial responsibility, where workers are in charge of their financial well-being and where financial markets offer new and complex financial products, financial literacy is essential. It has proven to be impossible to succeed in the modern world without the ability to read and write, so it will be impossible to succeed in the present-day financial system without knowing the abc's of economics and finance.

Financial education should go hand-in-hand with improving access to financial markets and services. Financial Literacy aids financial inclusion initiatives as it creates awareness about the benefits of linking with the formal financial system and hence, creates demand for financial products. Financial literacy supports consumer protection as it aids consumers better understand the features and risks inherent in financial products, thereby reducing the risk of mis-selling. It also generates awareness and willingness to approach the grievance redressal system available, in case of disputes connected with the financial products.

This paper makes a new contribution to the existing literature through bringing to light the gravity of the incidence of financial exclusion and justifying the need for better financial education programmes. The findings of the study would enable the policy makers to focus added attention to financial literacy and education. At a time when the nation is implementing Prime Minister's Jan Dhan Yojana (PMJDY) to achieve meaningful financial inclusion, efforts are to be made to pursue financial education efforts so that the public at large understand the benefits of accessing and using financial services.

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Issues in Development and Intangible Asset Finance: A Case Study of Village Devbag, Coastal Maharashtra, India

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AbstrAct

Coastal development along the Maharashtra coast popularly known as 'Konkan', has many issues in development. Growing tourism in Southern Konkan especially in Sindhudurg district is causing rapid changes in both physical and social environments. Village Devbag (15 57' to 16 01' north latitude and 73 29' to 73 31' east longitude) is 6 km long spit bar about 16 km south of Malvan in Sindhudurg district on Maharashtra coast. Traditional knowledge of local people, their culture and set skills, built heritage in the village, aesthetics and beauty of the region are intangible assets which can be integrated for sustenance of tourism with an ecotourism approach as United Nations Sustainable Development – Agenda 21 demands. Integrated Coastal Zone Management (ICZM) challenges along the Maharashtra coast in general and along the Devbag coast in particular. This paper critically analyses challenges and opportunities for 'intangible asset finance' and how local people in village Devbag will benefit from it.

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The paper also provides an insight of organizations that are providing finance for "Sustainability" to the region.

Keywords: Agenda-21, Integrated Coastal Zone Management (ICZM), Intangible Asset, Konkan, Sustainability

southern Maharashtra coast in transition

Coastal and marine areas have been regions of contestation for decades, with the introduction of commercial trawlers and industrial-scale aquaculture being strongly opposed by local traditional fisher communities since the late 1970s. But the rapid rise in large-scale commercial exploitations is only one source of conflict. The coasts are increasingly being viewed as suitable sites for industries, tourism complexes and trade hubs (as ports). Once again, this period of globalization has dealt a heavy blow to fledging attempts at conserving the ecological and livelihood integrity of this part of India, which sustains a third of its population (Shrivastava and Kothari, 2012).

These recent observations and documentations by some of the eminent environmentalist have been consistently ignored in Indian scenario in general and for village Devbag in particular. Some high lightening issues of development in village Devbag are:

1. Change in land use pattern manifesting in increasing constructions and decreasing natural habitats.

2. Alterations of beach sand dunes infesting increasing vulnerability of the region especially in monsoon due to surges.

3. Relative positions of the village plots, boundaries and eroded regions from creek and seaside need detailed mapping with the help of geospatial technologies.

4. Episodic incidence of beach and creek erosion has now, almost became annul phenomenon.

5. Change in livelihood pattern from traditional trade to service sector (tourism) manifesting inequality in the society.

6. Increased tourist activities are degrading quality of potable water.

7. Rapid rise in solid and liquid waste deteriorating local environment and aesthetics.

8. Development of unplanned infrastructure and constructions neglecting past built heritage and traditionally built houses which can be integrated for sustenance of tourism.

9. Neglecting local culture.

10. Neglecting local traditional knowledge, local products produced from indigenous knowledge, art and culture as potential assets to be in included in development pattern.

International Accounting Standards 38 (IAS 38) defines an intangible asset as – "an identifiable non-monetary asset without physical substance." This definition is in addition to the standard definition of an   asset which requires a *past event* that has given rise to a resource that the entity *controls* and from which *future economic benefits* are expected to flow. Thus, the extra requirement for an intangible asset under IAS 38 is *identifiability*. This criterion requires that an intangible asset is separable from the entity or that it arises from a contractual or legal right (IAS, Intangible Assets, 2014). Prior to 2005 the Australian Accounting Standards Board issued the Statement of Accounting Concepts number 4 (SAC 4). This statement did not provide a formal definition of an intangible asset but did provide that tangibility was not an essential characteristic of asset. Intangible assets have become important factors of value creation in today's knowledge economy. However, individually they are often commodities and only create value in combination with other production factors (Lev and Daum, 2004).

The term 'cultural heritage' has changed content considerably in recent decades, partially owing to the instruments developed by UNESCO. Cultural heritage does not end at monuments and collections of objects. It also includes traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts. While fragile, intangible cultural heritage is an important factor in maintaining cultural diversity in the face of globalization. Understandings of the intangible cultural heritage of different communities help with
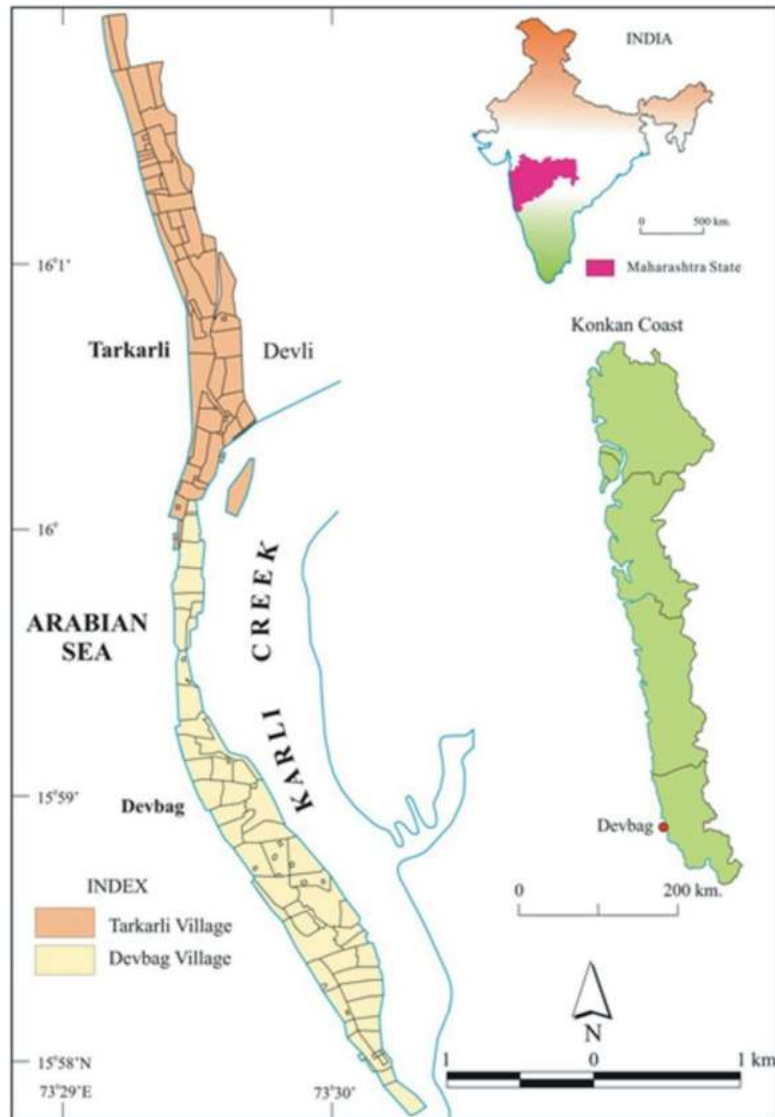
intercultural dialogue, and encourage mutual respect for other ways of life. The importance of intangible cultural heritage is not the cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through it from one generation to the next. The social and economic value of this transmission of knowledge is relevant for minority groups and for mainstream social groups within a State, and is as important for developing as for developed states (UNESCO, 2003).

Efforts undertaken so far in and around Devbag through international and national funding are as follows:

1. *United Nations Development Programme under project titled –* Mainstreaming Coastal and Marine Biodiversity Conservation into Production Sectors in the Sindhudurg Coast, Maharashtra, India is working on – the most vulnerable, including women and girls and government at all levels for enhancing abilities to prepare, respond and adopt/recover from sudden and slow onset of disasters and environmental changes. Project tenure 2011-16 with the budget US$15,438,292.

2. *Indira Awas Yojana (Government of india) –* Financial assistance up to INR 75000 is provided to local Self Help Groups (SHGs) for producing local food products.

3. *The International Training Programme on Integrated Sustainable Coastal Development (ISCD),* in cooperation with SIDA aims at contributing to poverty alleviation, by supporting capacity building for an Integrated Sustainable Coastal Development. SIDA covers the candidate's participation fee and accommodation fee along with travel expense. Course Highlights – Increased understanding of the importance and benefits of an integrated sustainable coastal planning management for socioeconomic development, Increased knowledge about the planning process for an integrated sustainable coastal development, Increased knowledge about experiences, methods and tools for organizational change,Extended international and national networks for working with coastal development.

4. *Indian National Trust for ART and Cultural Heritage (INTACH) –* in the form of Research Scholarships allocate research grants up to INR 300000 for Heritage Conservation for Indian Citizens which can be utilized for conservation of local cultural heritage.
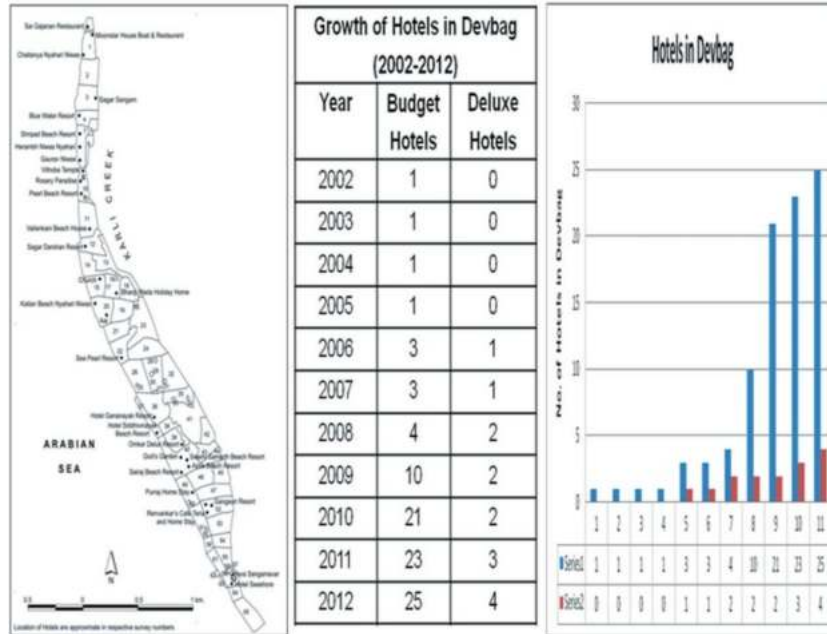
5. *National Bank for Agriculture and Rural Development (NABARD)* is an apex development bank in India and offers research project grants INR 1000000 for rural area's sustainability.

Location of Study Area

Source: Pisolkar, 2008, 2013.

Locations and Growth of hotels in Devbag

Growth of Hotels in Devbag (2002-2012)		
Year	Budget Hotels	Deluxe Hotels
2002	1	0
2003	1	0
2004	1	0
2005	1	0
2006	3	1
2007	3	1
2008	4	2
2009	10	2
2010	21	2
2011	23	3
2012	25	4

Source: Pisolkar, 2013.

Some Solutions for Village Devbag:

1. Alterations of beach sand dunes should be stopped immediately for hotel constructions and tourism activities (MoEF-CRZ Notification, 2011) and traditional houses or similar structures with ecotourism approach should be used for the tourism.

2. Detailed mapping of tangible assets like traditional houses, temples, churches drama theatres and infrastructural developments in last two decades on cadastral map with the help of remote sensing and GIS is necessary for planning.

3. Respecting local culture and traditions as a part of the development planning (Agenda 21, 1992).

4. Local products produced from indigenous knowledge like wooden toys produced at Sawantwadi, art and culture in the form of local Koli (fishing community) dance, Dashavtari – local peoples traditional

knowledge of drama on mythological stories must be integrated for sustenance of tourism in the study area (UNESCO, 2003).

5. Traditional fishing practices of European Sangh (traditional method of fishing by a group of fishermen) be made tourist attraction (Ujjani, 2014).

6. Integrating local stakeholders, including hotel owners, local governance and people for appropriate solid waste management (Swaminathan et al., 2009).

7. Be proactive – generate lots of ideas, intensive inventory of traditional customs, art, culture, drama, music. Planners employed by the establishment and freelancers have been fighting shy of putting force, visionary ideas and standing by them (UNESCO, 2003 and Kalamdani, 2011).

conclusion

It is utmost importance now that the policy makers must have an Integrated Coastal Zone Management (ICZM) approach to study area. The policies must promote local traditions, culture, art and local products in development planning and also to sustenance of tourism in Sindhudurg district in particular. Capacity building of the local governance and environmental education is the need of the hour. Environmental awareness for tourist, local people and government officials should be addressed at the earliest.

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Retail participation in IPOs –
An Assessment in the Backdrop
of Reforms

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AbstrAct

The market for initial public offerings is India is significant in view of the fact that it not only provides access to capital to corporates for their growing needs, but also has the potential to deepen the market with wider Retail participation. Among the different categories of investors participating in an IPO, retail investor's participation has been a substance of much debate for policy makers and market intermediaries and Issuers alike with greater retail participation symbolizing buoyancy and revival of the primary market and dwindling participation suggesting lack of investor confidence.

Arising out its core objectives of protecting investors while regulating and developing the Capital market, SEBI, the capital market regulator has brought in a host of reforms in the public issue process to revive the interest of retail investors. While summarizing the reforms since 1992, the paper focuses on the reforms between the periods 2007-2013 and studies the retail participation interms of oversubscription in the 263 IPOs floated between the periods from 2007 to 2013. The methodology of the paper is doctrinal as well as

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empirical. The data with respect to the reforms has been collected by SEBI's notifications and circulars issued from time to time. The retail response in the IPOs has been accessed from Prime database.

The findings suggest that while a host of reforms with specific focus on retail investors have been introduced since 2012, the response from the investors has been marginal. The reforms have not been able to revive their confidence significantly. The Lack of activity in the IPO market post the reforms and the general economic conditions have also contributed to the retail investor's apathy towards IPOs. The study adds to the existing body of literature on IPOs and serves as an assessment of the reforms from the point of retail investor participation.

Introduction

The market for Initial Public Offerings (IPOs) in India is governed by a comprehensive regulatory framework involving the SEBI (ICDR) Regulations, 2009, the provisions of the Companies Act, 2013, the Securities Contract Regulation Act, 1956 and the provisions of the listing agreement. While creating an environment that is conducive for fund raising, the regulations aim at protecting investors at every stage of the Issue process. The market for primary issues in India is significant in view of the fact that it not only provides an access to capital to corporates for their growing needs, but also serves as a potential tool to deepen the market with wider Retail participation.

Among the different categories of investors participating in an IPO, retail investor's participation has been a substance of much debate for policy makers and market intermediaries and Issuers alike with greater retail participation symbolizing buoyancy and revival of the primary market and low participation suggesting lack of confidence.

retail Investor's Participation in IPOs: the Historical Perspective

The historical perspective of share ownership of Indian middle class households reveals that prior to 1980's share ownership was limited a small

segment of wealthy individuals. However shares become popular when foreign companies were required to reduce their shareholding in Indian subsidiaries up to 40% under the Foreign Exchange Management Act of 1973. Shares of highly profitable foreign controlled Indian Companies were issued at low prices prompting retail investors to apply through multiple applications. The Controller of capital issues (CCI) was the main authority regulating all matters relating to the capital issues. While regulating the entry of new issues, it acted as an investment advisor to retail investors. There were strict norms laid out for new issues and the pricing of the issues was as per a laid out formula. This ensured that the issues had little premium and the retail investor could make returns on listing as most of the issues listed at a substantial premium. This aided rapid spread of share ownership among retail investors. (SCMRD, Indian Household Investor's survey, 2004).[1]

Literature review

Investor sentiment translates into investor confidence or the lack of it and acts as a proxy for collective investor behaviour as maintained by Sehgal Sanjay, G.S Sood and Namita (2009). A study by Saroja S (1991) and Vinayakam N (1994) explores the areas where investor's need protection these being proper allocation of securities, proper use of the issue proceeds for the stated purpose and a liquid market to enable them to sell the shares. Rakhi Kumar (2010) maintains that historically, India has had a large retail base of domestic investors, who are often unaware of their rights as the owners of the company and have limited understanding of corporate governance. While IPOs are a well researched topic in the area of financial studies, a substantial part of literature has focused on price performance of the IPOs post listing. Under pricing of IPOs and the resultant listing gains to the investors is a well documented phenomenon captured by the works of T P Madhusoodanan, and Thiripalraju (1997) Rock (1986), Sanjeev Kumar (2006), Alok Pandey and R. Vaidyanathan, (2009). However according to Rock (1986), Retail investors might not get the benefit of under pricing because they might get allocations in those

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[1] Society for Capital Market Research and Development (SCMRD), *The Indian Households Investor's Survey* (2004) at p. 117.

securities which are going to earn very low returns on the day of listing and are rationed in case of those securities which give high returns on the day of listing because of high demand for these securities. Rock (1986) terms this as the 'Winners curse problem'.

Traditionally, IPOs have been perceived as a good investment opportunity by small investors. The fact that maximum numbers of Demat accounts are opened at the time of an IPO validates the perception that's small investors envision IPOs as good entry points. However recent studies (Virendra Jain, 2011) reveal that while IPOs of public sector undertakings have created wealth for investors in the last decade, those of private enterprises destroyed the wealth of investors in view of aggressive pricing.

research Gap

Since 2011, the regulatory framework for IPOs has been transformed with frequent regulatory interventions amending the eligibility norms and the IPO process. A plethora of reforms have been undertaken by SEBI to revive the market for public offering and bring retail investors back into the market. So far the efficacy of these reforms on the extent of retail participation has not been studied.[2]

Methodology

Retail participation in an IPO is gauged by the extent of subscription received in the retail category. Issues could be undersubscribed or oversubscribed. Oversubscription is indicative of confidence that the investors have reposed in the Issue/Company as perceived by the sector, issue size and price and the Institutional response for the issue. Based on a premise that oversubscription serves as a proxy for retail investor confidence, the papers captures retail investor's participation interms of oversubscription in all the 263 IPOs that have floated during the period 2007-13. The rationale for selection of period for the study was firstly, in this six year period, large numbers of IPOs were floated which makes it reasonable to draw inferences. Secondly, during this period, the markets

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[2] SEBI undertook an in house study in 2012-13 to gauge the retail response to reforms introduced in 2012. However the study was limited to only 45 IPOs that opened between 2011-12 and 2012-13.

have seen an economic cycle starting with boom in 2007-08 followed by meltdown of the securities market in 2009-10 and a subsequent recovery by the end of the 6 year period. The Retail subscription data was taken from Prime Database.

significance of the study

Bringing in more retail participation has been in the core focus for SEBI and consequently a host of retail investor friendly measures like grading of IPOs, ASBA and Anchor Investor and Electronic IPO etc have also been introduced. Major reforms in the regulations have been implemented by SEBI during this period with the enactment of SEBI (ICDR) REGULATIONS 2009 replacing DIP guidelines 2000. The investment limit for retail investors in an IPO has also been doubled during 2010. Therefore is important to note to what extent retail investors have responded to these reforms in terms of subscriptions.

A Stock taking of the reforms introduced for retail investors

The eligibility norms for IPO bound companies have been progressively tightened through frequent regulatory interventions with the intention to expose investors only to issues based on profitability and minimum operating history.[3] There has been a gradual increase in the investment limit for retail investors in IPOs from Rs 50,000 to Rs 1,00,000 to the existing Rs 2,00,000 for in an IPO.[4] The increase in the investment limit is based on the presumption that it will enable the investors to bid more and increase their chances of allotment and also in view of the higher valuations of shares due to inflation. This increase in the investment limit was supplemented by an increase in the application size to Rs 10,000-Rs 15,000 from Rs 5,000-Rs 7,000 (SEBI, 2012. To enable retail investors garner more shares in an IPO within the investment limit, with effect

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[3] Substituted By SEBI (Issue of Capital and Disclosure Requirements) (Fourth Amendment) Regulations 2012 http://www.sebi.gov.in/cms/sebi_data/attachdocs/1346045569469.pdf, w.e.f 12.10.2012.

[4] Vide SEBI (Issue of Capital and Disclosure Requirements) (Fourth Amendment) Regulations, 2010, w.e.f. 12.11.2010; see also SEBI '*Discussion Paper on proposed changes to SEBI(ICDR) Regulations, 2009 for Enhancement of limit for defining Retail Individual Investor in public issues'*.

from June 15, 2011,[5] retail investors have been allowed to apply at a price net of discount.

While uncertainty of allotment has always been a concern for retail investors, Reg 50(1A) of SEBI (ICDR) Regulations, 2009 as ammended now provides that every retail investor irrespective of the application size will be allotted a minimum bid lot subject to the availability of shares in the aggregate.[6]

Excessive swings in the prices of the shares post listing, unnerves the retail investors. While the Green Shoe Option (GSO)[7] and the anchor investment have been introduced to provide stability to the post listing price, as an investor protection measure especially for the benefit of retail investors, SEBI imposed trade controls on the listing day in view of the high volatility experienced in the IPO process.[8] With an intent to further rationalize the demat charges to suit the requirements of small investors, a Basic Services Demat Account (BSDA)[9] with limited services and low cost has been offered. Individuals whose value of securities held in demat does not exceed Rs 2, 00,000 are eligible for BSDA.

To spread the reach of IPOs among retail investors through a nationwide net work of stock exchanges, SEBI provided for an electronic offering of IPOs in a phased manner.[10] Reg 50(1A) of SEBI (ICDR) Regulations, 2009 now provide that every retail investor irrespective of the application size will be allotted a minimum bid lot subject to the availability of shares in the aggregate.

A stock taking of the reforms initiated by SEBI, lead to the conclusion that, the capital market regulator has gradually simplified the process of IPO investing for retail investors. Retail investors want safety of trading, assured allotment and capital protection along with a healthy market. To a large extent the concerns of IPOs have been addressed with the recent reforms in the year 2012-13. Technology to a large extent has eliminated

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[5] Vide Circular CIR/CFD/DIL/2/2011 dated 16.05.20113.

[6] Inserted by SEBI (Issue of Capital and Disclosure Requirements) (Fourth Amendment) Regulations, 2012, w.e.f. 12.10.2012.

[7] Reg 2(1)(0) of SEBI(ICDR) Regulations, 2009.

[8] CIR/MRD/DP/ 01/2012 dated January 20, 2012.

[9] Circular CIR/MRD/DP/22/2012 dated August 27, 2012.

[10] Vide CIR/CFD/14/2012 dated October 04, 2012.

the technical glitches in IPO investing. Problems of refund delays, allotments letters have been taken care. The issue process has shrunk in terms of timelines and along with dematerialization and electronic booking have been the manner if applying in an IPO faster aiding in liquidity. Gradually a level playing field has been achieved between the retail investors and other classes of investors.

retail Participation in the IPOs in terms of Oversubscription

Under Regulation 43(1) of SEBI, ICDR Regulations, 2009, the allocation in the net offer to public category when the issue is made through the Book Building process is 35% of the net offer to the public if an issuer is able to make a public issue under Reg 26(1) of SEBI (ICDR Regulations)2009 through the profitability route. If the issuer is making the issue under Reg 26(2) of SEBI (ICDR), 30% of the net offer to the public is reserved for retail investors.

In the present study, subscription levels in the retail category was collected and classified into different classes ranging from 0-1.5 times to above 25 times and the percentage of issues in each class was studied.

Results and Discussion

The retail response, during the period 2007-2013 (Fig. 1) shows that in the year 2007, retail response has been overwhelming with over 25% of the issues have seen oversubscription of more than 25 times. In 26% of the issues, the response was good with oversubscription ranging between 10-25 times. Remarkable response has been witnessed in case of Vishal Retail Ltd (58.08), Everonn Systems India Ltd (133.52), Omnitech Info Solutions Ltd. (57.08), Religare Enterprises (89.14) and Transformers and Rectifiers (India) Ltd (56.85) All these issues were from growth sectors. Owing to stringent entry norms and growing institutialisation of the markets, all the issues had come from established companies and promoters and not from new promoters of green field projects. One an average there have been 4 issues tapping the market every month in the year 2007.
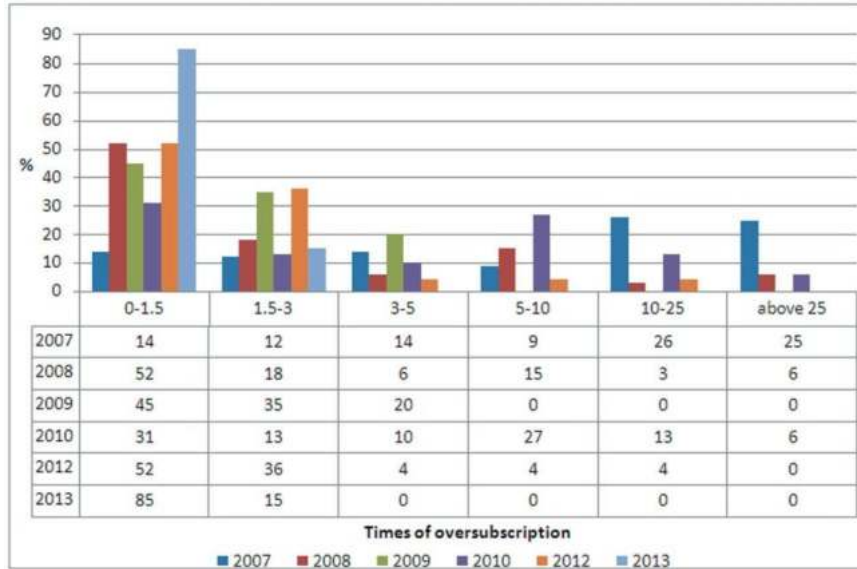
Figure 1: Comparative Percentage of Oversubscription (No. of Times) in the Retail Investor Category in the IPOs during the Period 2007-2013

However the year 2008 has seen a decline in the response with 52% of the issues has seen oversubscription of less than 1.5 times indicating that retail investors have withdrawn from the market. Retail participation of more than 5 times, was seen in the IPOs of Future Capital Holdings Ltd, Reliance Power Ltd, and Rural Electrification Corp Ltd, Aishwarya Telecom Ltd, AVON weighing systems Ltd and SEJAL Architectural Glass Ltd.

Two reasons can be attributed to the decline in retail investor response. Firstly the performance of the IPO launched in the year 2007-2008 shows that 20% of the IPOs listed on the NSE gave negative returns to the investors on the day of listing and 45% of the issues were trading below their offer price by the end of March 2008 (NSE, 2008).[11] Reliance Power IPO which got oversubscribed 13.57 times in the retail investor category gave negative returns of 22.4% on the first day of trading and generated losses upto 29.33% by the end of March 2008(NSE,2008).[12] The general

[11] Indian Securities Market Review, 2008 at p. 37.

[12] Ibid.

downturn in the economy leading a bearish secondary market also kept investors away from IPOs.

The lack of retail participation has continued in the year 2009 with none of the issues seeing oversubscription of more than 5 times and 45% of the issues have seen less than 1.5 times oversubscription clearly indicating lack of retail investor participation. The performance of 47% of IPO listed on the NSE gave negative returns on the day of listing and by the end March 2009, 78.9% of the issues gave losses to investors (NSE, 2009).[13] There has been a slight revival in the retail participation in the year 2010 more so due to the IPOs of public sector undertakings with 6% of the issues enjoying the oversubscription of more than 25 times and 13% of the issues between the range of 10.0 to 25.0 times. 31% of the issues saw retail over subscription of less than 1.5 times.

The revival of retail interest continued in 2011. However the response was moderate with 75% of the issues seeing oversubscription of 1.5 to 10 times. Retail Investor participation reduced in the year 2012, 52% of the issues were subscribed in the range of 0 to 1.5times and 36% of the issues were subscribed in the range of 1.5 to 3.0 times. In the year 2013 until March, there were only 13 issues, majority of them have shown very low participation between 0-1.5 times.

Overall the inference is that retail investors have withdrawn from the market post 2007 indicating lack of interest in the Initial Public Offerings and the reforms have not been able to significantly revive the interest of retail investors.

retail Participation in IPOs of Public sector Undertakings

IPOs of Public Sector Undertakings have received good response from retail investors as seen in the Fig. 2. Despite a low market sentiment, IPOs' of PSU's have done well with all issues being fully subscribed. PSU IPOs have been able to revive the IPO market which had declined post 2008. A case in point is the IPOs of Rural Electrification Corp Ltd, Oil India Ltd and Coil India IPOs which have been offered during the bearish market between 2008-2010 and have seen an oversubscription despite the huge

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[13] Ibid. at p. 42.

size of the issues. The biggest IPO was Coal India Ltd with an issue size of Rs 15,19,944.02 lakhs which was oversubscribed to the extent of 2.21 times. The inference is that retail investors prefer IPOs of PSUs.
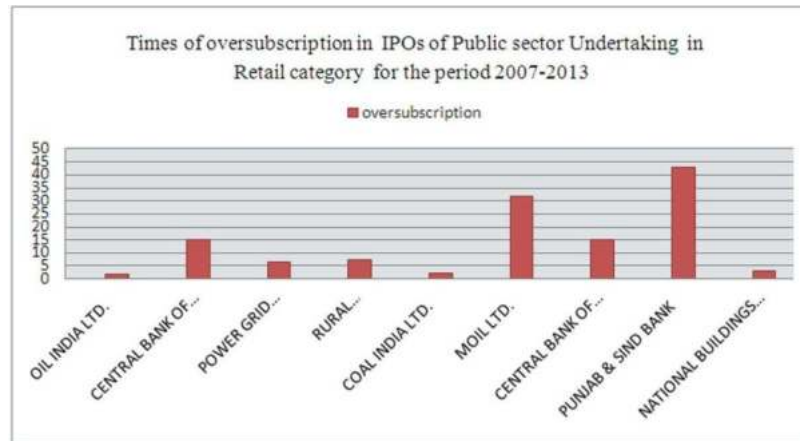

Figure 2: Retail Participation in IPOs of Public Sector Undertakings

Conclusion

The vigorous pace at whom reforms have been introduced by SEBI in the last few years have been in response to the dwindling retail investor population. The global economic downturn has affected the IPO market which is evident from the decline of the IPO activity during 2008-2010. While there has been a revival in the market in the year 2010-11, the IPO activity has not come back to the buoyancy witnessed in 2007-2008. It is noticed that when the market sentiment is favourable as in the year 2007, there has been a rush of issues. There appears to be an intention on the part of the Promoters to float issues when the market sentiment is positive. Retail investors have responded marginally to reforms and the IPO market is suffering from lack of retail participation.

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Development and Performance Evaluation of Three Novel Prediction Models for Mutual Fund NAV Prediction

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ABSTRACT

The paper compares the performance of three adaptive models based on Functional Link Artificial Neural Network (FLANN), Multi-Layered Perceptron (MLP) and Radial Basis Function (RBF) Networks employed for prediction of the net asset value (NAV) of a mutual fund scheme of a company through simulation study. The statistical features extracted from the past data are used to train the models. The prediction performance is evaluated using real life data. It is observed that the simple FLANN model predicts better for the NAV fifteen days ahead and higher. But for a short range prediction, the RBF model yields the best performance amongst the three models.

Introduction

A mutual fund is a type of professionally managed investment fund that pools money from many investors to purchase securities. It is most commonly applied only to those collective investment vehicles that are

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regulated and sold to the general public. Most mutual funds are open-ended, meaning stockholders can buy or sell shares of the fund at any time by redeeming them from the fund itself, rather than on an exchange.

A fund's net asset value or NAV equals the current market value of a fund's holdings minus the fund's liabilities, sometimes referred to as 'net assets'. It is usually expressed as a per-share amount, computed by dividing net assets by the number of fund shares outstanding. All mutual funds' buy and sell orders are processed at the NAV of the trade date. However, investors must wait until the following day to get the trade price.

Thus, in a way, the net asset value describes the company's current asset and liability position. An increasing value of NAV usually indicates that the company is growing and vice-versa. It is an important judging parameter for a potential investor or a sponsor to consider, so as to be able to make a wiser and adequately informed decision.

The day to day tracking and further analysis of the NAV of a mutual fund, hence, assumes prime importance. The present challenge is to foresee a fund's future performance with the least possible error.

Statistical methods have been widely employed previously for linear modeling of time-series data. The K-Nearest Neighbour (KNN) and Support Vector Machines (SVM) (Gao & Cherkassky, 2006) have been used for training the Linear Regression Model for real time pricing. The Auto Regressive Integrated Moving Average (ARIMA) (Priyadarshini & Chandra Babu, 2011), also known as Box-Jenkins model, has been used for forecasting of NAV of Indian mutual fund. The methods employ linear programming of the time-series data for the prediction. One major drawback of these models is their inability to capture the non-linearity in the data, which contributes to inaccuracy in the forecast. This calls for an inclination towards the usage of non-linear models. Soft and Evolutionary Computing (SEC) based techniques, with excellent non-linear model development properties, have been chosen for forecasting of currency exchange rates using the adaptive ARMA model with differential evolution (DE) based learning (Panda & Majhi, 2013), forecasting of retail sales using DE (Panda & Majhi, 2009), and active control of nonlinear noise processes using FLANN (Panda & Das, 2003). Neural networks have also been used widely in economic forecasting for market analysis

and forecasting time series of political economy (Chakraborty, Mehrotra, Mohan & Ranka, 1992; Freisleben & Ripper, 1995).

The review of existing literature reveals that very little work has been reported on the development of adaptive nonlinear model for the long and short range prediction of NAV. Hence, in this paper, three nonlinear adaptive models based on the MLP, the FLANN and the RBF have been proposed. The MLP network is a standard adaptive structure but its complexity is high. On the other hand, though the RBF network finds extensive applications in many fields, fixation of required number of centres is a difficult task. The FLANN structure with trigonometric expansions reduces the number of layers to one thus leading to a simple adaptive structure. In the following section a brief overview of these three adaptive structures has been provided.

Functional Link Artificial Neural Network

As an Adaptive Predictor, the Functional Link Artificial Neural Network (FLANN) based adaptive model consists of a simple structure shown in Fig. 1. Its inputs are chosen to be the statistical features extracted from the past NAV time series. The inputs are expanded trigonometrically, multiplied with their respective weight values, and the products are then summed up to get the predicted output.

Let x_1, x_2 and x_3 be the features extracted form a given dataset. Then the trigonometric expansion consisting of 2P+1 terms for the first input x_1 would be of the form:

$\{E_{1-1}, E_{1-2}, …, E_{1-2} P + 1\} = \{x_1, \sin(x_1), \cos(x_1), \sin(3x_1), \cos(3x_1),…, \sin(Px_1), \cos(Px_1)\}$. Each input term is similarly expanded.

The output obtained from the model becomes

$$y = \sum_{i=1}^{i=3} \sum_{j=1}^{j=2P+1} (E_{ij} . w_{ij}) \qquad \text{… (1)}$$

Error, e = d – y, where d is the data succeeding the last data in the dataset.

The weights are adjusted according to the Least Mean Square (Pradhan, Routray & Basak, 2005) update equation

$$\Delta_{wij} = -\frac{de^2}{dw_{ij}} \qquad \text{… (2)}$$

$$w_{ij} = w_{ij} + \mu \Delta w_{ij} \qquad\qquad \dots \ (3)$$

where, μ is a learning parameter which is adjusted suitably between 0 and 1 so that the best possible convergence is achieved.
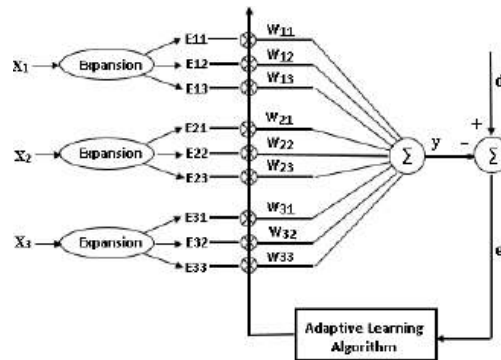

Figure 1: Functional Link Artificial Neural Network Based Prediction Model

Multi-Layered Perceptron

As an Adaptive Predictor, the Multi-Layered Perceptron (MLP) uses sigmoid functions as its base function.

The logistic function has been used as the sigmoid activation function for the present case. The choice is governed by the fact that output of the model is expected to be positive, and the normalised inputs lie well in the activation range. Two-sided sigmoid functions, whose output also lies in the negative region, have been avoided on grounds of positive-only output values.
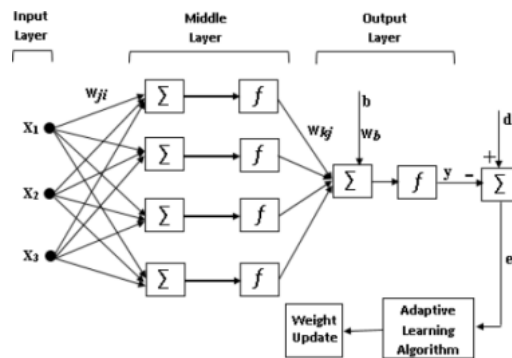

Figure 2: Multi-Layered Perceptron Based Prediction Model

The equation for the function is:

$$f(z) = \frac{1}{1 + e^{-z}} \qquad \text{... (4)}$$

The first layer of a three layered MLP shown in Fig. 2 consists of three inputs which correspond to the features extracted from NAV data. The middle layer produces a non-linear response given by (4) and is computed as weighted sum of first layer data as the input for the sigmoid function.

$$y_j = f\left(\sum_{i=1}^{3}\sum_{j=1}^{n} x_i . w_{ji}\right) \qquad \text{... (5)}$$

The final layer, similarly, uses the weighted sum of the output from the middle layer, combined with a weighted bias function, which is 1, as an input to the sigmoid function to get a non-linear response. The final output from the model is given as

$$y = f\left(\sum_{j=1}^{n} (y_j . w_{kj}) + (w_b . b)\right) \qquad \text{... (6)}$$

The weights of the MLP prediction model are updated according to (7) and (8)

$$\Delta w_{ij} = \frac{de}{dw_{ij}} , \Delta w_b = \frac{de}{dw_b} \qquad \text{... (7)}$$

$$w_{ij} = w_{ij} + \mu\Delta w_{ij}, wb = wb + \mu_b\Delta w_b, \qquad \text{... (8)}$$

where μ_b and μ are constants whose values lie between 0 and 1 and in the present case is adjusted by trial and error to give the best training performance. The error term, $e = y - d$, is computed and used for updating the weights.

Radial Basis Function Network

As an Adaptive Predictor, the Radial Basis Function (RBF) Network uses Gaussian functions as the base functions to achieve nonlinear relation between input and output data of the predictor. Sums of radial basis functions are typically used to approximate given functions. This approximation process can also be interpreted as a simple kind of neural network.
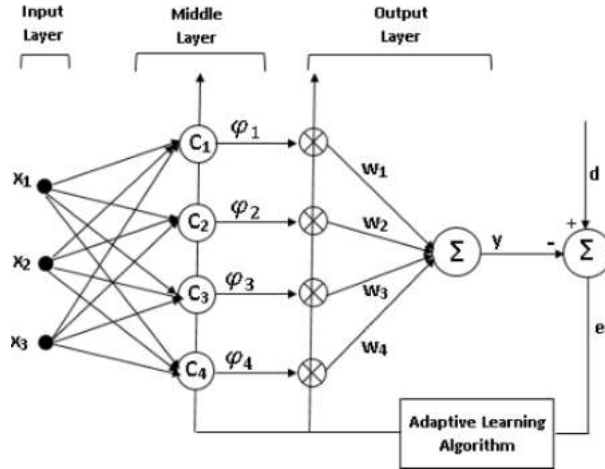
Figure 3: Radial Basis Function Network Based Prediction Model

The function used in the present case is

$$f(z) = \frac{e^{-z^2}}{2\sigma^2},$$ ... (9)

where σ is the spread of the function.

The input represents the features extracted from the data. It forms an N-dimensional input vector. The hidden layer consists of centres of N-dimensions each of which produces a response based on the radial distance between the centre and the input vector.

The radial distance of the input vector from the ith centre is given by

$$z_i = ||x - c_i|| = \sqrt{\sum_{j=1}^{N}(x_j - c_{ij})^2}$$ ... (10)

N-dimensional centre, $c_i = [c_{i1}, c_{i2}, \ldots, c_{in}]$,

N-dimensional input, $x = [x_1, x_2, \ldots, x_n]$

The non-linear response from the ith centre is given as

$$\varphi(i) = f(z_i)$$ ... (11)

where $f(z_i)$ is defined in (9).

The final output is a weighted sum of the non-linear response

$$y = \sum_{i=1}^{h}(\varphi(i) \cdot w_i)$$ ... (12)

Error, e = y – d, where d is the data after the last data in the training set.

The centres and weights are updated based on the gradient descent method given in (13)-(15).

$$\Delta c_{ij} = -\eta_1 \frac{\partial e}{\partial c_{ij}} \qquad\qquad \ldots (13)$$

$$\Delta_{wi} = -\eta_2 \frac{\partial e}{\partial c_i} \qquad\qquad \ldots (14)$$

$$c_{ij} = c_{ij} + \Delta c_{ij}, \; w_i = w_i + \Delta w_i, \qquad \ldots (15)$$

where, η_1 and η_2 are arbitrary constants with values ranging between 0 and 1.

Methodology

The NAV values of the HDFC Top 200 Mutual Fund was collected for 300 consecutive trading days, from 15-Oct-2012 till 2-Jan-2014, respectively. The data is normalized, with the maximum value at 0.9.

Mean and variance are the features which are subsequently extracted from the dataset to be applied as inputs to the models for training. A set of 10 consecutive data is taken at a time from the above obtained dataset, starting from the first data, corresponding to 15-Oct-2012. The extracted features, along with the last data in the set, are fed as inputs to the respective models, whose outputs are then expected to predict the data for the next trading day.

The difference the obtained outputs from the respective models and the actual value for the next day is the error in the prediction, and is used for updating the parameters of the respective models using (2), (3), (7), (8), (13), (14) and (15).

The next pattern of inputs is formed by taking the next day's data and removing the first data from the previous set. A total of 291 patterns are formed for training and testing purposes. Out of the 291 patterns of features, about 80% are used for training various prediction models and the rest are used for testing purposes.

An epoch based learning scheme is used for updating the weights of all the models. This involves application of the 233 of the 291 training patterns to the models and storing the respective weight changes for each

applied set. Afterwards, the average of the 233 weight changes obtained is computed and the weight of each of the models is updated by adding this average weight change calculated.

The above steps constitute one step of the iteration process, which is subsequently repeated for several iterations until the mean square error attains the minimum value.

Weight change for a particular iteration is given as

$$\Delta w_{i} = \frac{\sum_{p=1}^{n} \Delta w_{ip}}{n}, \qquad\qquad \dots (16)$$

where, n = number of training patterns applied.

The trained models, now, are used to predict the data not used earlier for training, and their respective prediction errors are recorded. The heuristic parameters of the models are now varied and the above training process is repeated again. The parameters yielding the lowest percentage error amongst the trial values are used for the final prediction of the NAV values for a 15 day window.

Results

Simulation studies are made to find out the best set of parameters for each model. In case of FLANN model, nine trigonometric expansions provides the best possible prediction performance. The same is achieved by considering five middle layers in case of MLP (Fig. 4) and five
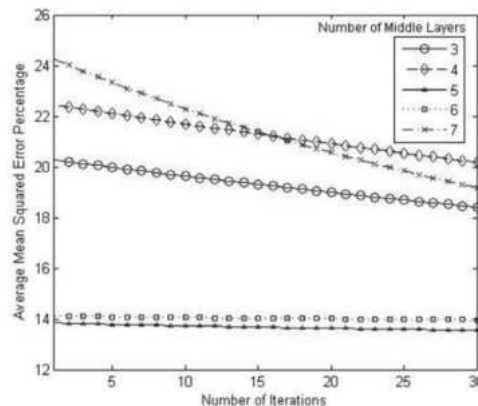

Figure 4: Comparison of Convergence Characteristics of MLP Using Different Number of Hidden Layers
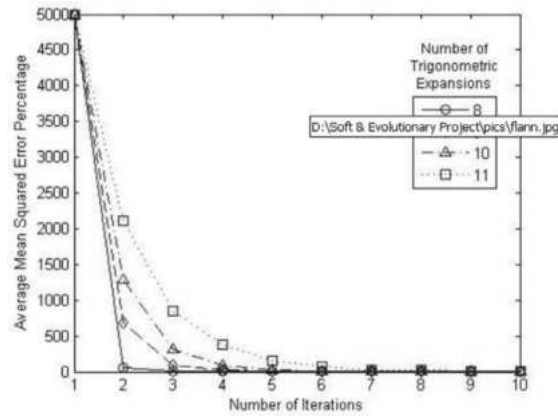
Figure 5: Comparison of Convergence Characteristics for FLANN Predictor for Different Number of Trigonometric Expansions

centres in case of RBF (Fig. 6) by using Gaussian basis function. The relative performance of a particular model for different testing patterns is unaffected by using other heuristic parameters in the model.

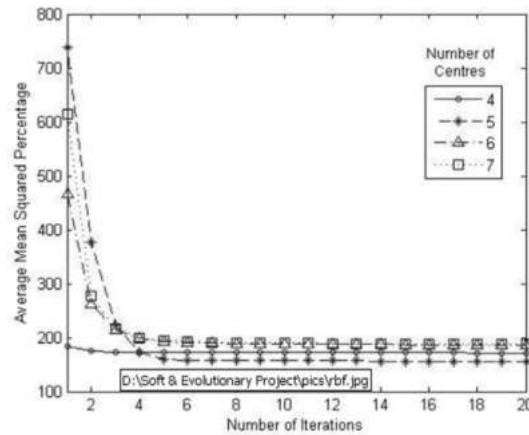**Figure 6:** Comparison of Convergence Characteristics for RBF Predictor for Different Number of Centres

The trained models are used to predict 15 days' ahead NAV values. Table 2 shows the performance of the models for fifteen working days' ahead prediction using optimized parameters and 3000 iterations each. The set of parameters used in the simulation study for the models are shown in Table 1.

Table 3 shows the performance of the models for seven as well as fifteen days' ahead prediction.

The NAV predicted by the models have been plotted alongside the actual values (Fig. 7) after denormalisation.

The FLANN model closely predicts the true NAV values. However, the RBF model provides lesser errors for short term prediction, with accuracy decreasing with prediction time. But it does not replicate the shape of the original NAV series. The prediction error is higher in case of the MLP model.

Table 1: Set of Heuristic Constants Used for the Prediction Models

Functional Link Artificial Neural Network	Multi-Layered Perceptron	Radial Basis Function Network
$\mu = 0.05$	$\mu = \mu b = 0.25$	$\sigma = 0.9, \eta_1 = \eta_2 = 0.45$

Table 2: NAV Prediction Error Using the Three Different Models

Days Ahead	Actual Data	FLANN		MLP		RBFN	
		Predicted Data	Error %	Predicted Data	Error %	Predicted Data	Error %
1	231.489	228.781	1.192	245.621	6.105	234.011	1.089
2	231.541	228.789	0.951	245.153	5.879	233.404	0.804
3	230.988	228.485	0.211	242.655	5.051	230.920	-0.029
4	228.969	227.291	0.769	240.623	5.090	229.096	0.055
5	229.053	227.401	0.131	239.424	4.528	228.172	-0.384
6	227.701	226.599	1.879	241.071	5.872	230.346	1.161
7	230.94	228.687	0.673	243.833	5.583	233.618	1.159
8	230.238	228.291	1.837	245.272	6.530	235.396	2.240
9	232.564	229.715	1.083	247.436	6.395	237.928	2.306
10	232.232	229.542	0.142	244.853	5.435	235.436	1.379
11	229.869	228.118	1.585	244.173	6.223	234.750	2.123
12	231.793	229.291	1.728	247.638	6.836	238.414	2.856
13	233.324	230.172	1.804	250.267	7.262	241.065	3.317
14	234.403	230.745	1.468	251.216	7.173	241.742	3.130
15	234.185	230.580	-0.255	247.015	5.479	237.003	1.203

Table 3: Average Performamce of the Three Models for 7-Day and 15-Day Span

Mean Absolute Error %	FLANN	MLP	RBFN
7 Days	0.831%	5.444%	0.668%
15 Days	1.0132%	5.962%	1.549%

Conclusion

The FLANN model predicts very closely the actual NAV values. However, the RBF model provides the best prediction results for short term prediction of one week. It has lesser error but does not replicate the shape of the original NAV curve better than the FLANN model. It provides the best performance among the three. While for long term prediction of 15 days and above, the FLANN model predicts better on an average, while the RBF model tends to lose accuracy with time. Overall, the FLANN simulation results based on real life data demonstrates better prediction consistency among the three models.

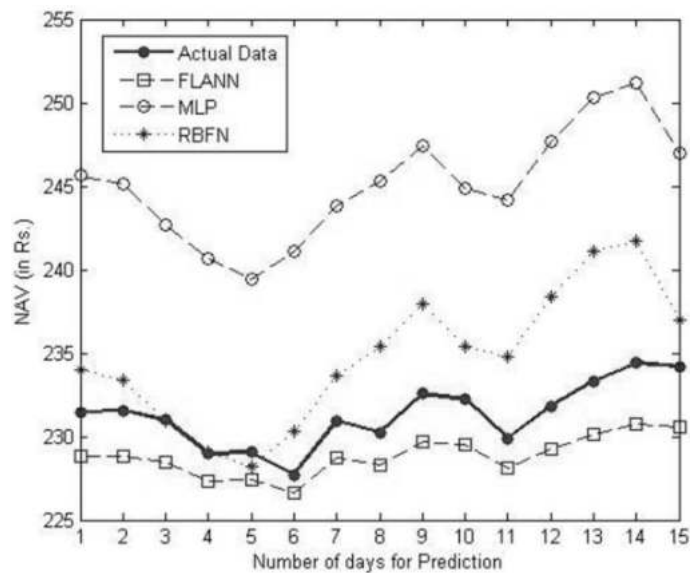**Figure 7:** Comparison of Actual NAV with that Predicted by the Three Different Prediction Models

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Worker Participation in Management Decision Making Within Selected Establishments in Uttar Pradesh, India

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ABSTRACT

This paper is concerned with an investigation of the existing level of worker participation in management decision making within the Indian work environment. The study involved a survey in which a total of two hundred and twenty seven (217) non management employees drawn from two work organizations in Uttar Pradesh (Flour Mills and Sugar Mills) were used as subjects. Interview schedule and in-depth interview were the main research techniques adopted for data collection while percentage distribution and chi-square statistical techniques were used to analyze the data collected for the study. Results show that employees in both organizations demonstrate a high interest in participation in the decision making process within their respective work places. However, the actual level of involvement in management decision making demonstrated by the employees was found to be relatively low. There is significant relationship between education and employees' involvement in decision making at Flour Mills. In Sugar Mills, there is a significant relationship between age and employees' involvement in decision making as well as between frequency of employees' consultation and organizational commitment.

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The study reveals a growing desire of non-management employees in the Indian work environment to exercise greater involvement in the decision making process of their enterprises.

Introduction

The concept of worker participation represents a popular theme in the analysis of the world of work among scholars in the fields of Industrial Sociology, Industrial Relations as well as management. It refers to any arrangement which is designed to involve low cadre employees (workers) in the important decision making within the workplace. This implies that rather than saddling only a group within the enterprise (for instance, management) with the responsibility of making decisions, all those who are to be affected by these decisions (including the workers) would be involved in its formulation and implementation.

In recent time, scholars have directed increasing attention to the issue of worker participation and its broader corollary, industrial democracy (Mankidy, 1984; Yesufu, 1984; Adewumi 1989; Verma and Syha, 1991; Weller 1993; Kester and Pinaud, 1996; Adu-Amankwah and Kester, 1999). These concerns reflect a growing interest in finding ways to make work more meaningful and satisfying to the workers. This rest on the belief that the organizational goals of high productivity and harmonious industrial relations are best achieved when the higher level needs of the human elements (workers) are satisfied. Worker participation implies arrangements designed to involve workers in the enterprises decision making process. This allows for workers' involvement in the initiation, formulation and implementation of decisions within the enterprise. The concept can also be understood in terms of a new approach to industry and society in which people want to be interested with the taking of decisions which have direct bearing on them. MacGregor (1960) contend that worker participation consists basically in creating opportunity under suitable conditions for people to influence decisions which affect them. It is a special case of delegation in which the subordinate gain greater control, greater freedom of choice with respect to bridging the communication gap between the management and the workers. This serves to create a sense of belonging among the workers as well as a conducive environment in

which both the workers would voluntarily contribute to healthy industrial relations.

The Problem

The spread of democratic value to virtually every society today has brought the need to examine the implications of this trend to other spheres of life. With respect to economic sector, employees are faced with the dilemma of how to cope with authoritative management in the work places while living in a democratic society which guarantee basic fundamental freedom. In addition, the denial of workers active involvement in decision making is held to be one of the major causes of the problems which are manifested daily in the work lives of the modern employees. The implication of these to employees of increasing exposure to a monetized society, rising education and wider contact among people resulting from the break-up of artificial barriers was to shift these aspirations to a more satisfying work experience, greater control over the organization of work, greater opportunity for personal development and wider scope in exercise of initiatives. Specifically, the refusal of work organizations to recognize the human factor in industrial production through greater involvement of employees in its management decision making would tend to create several human problems in this setting. A worker is a social being who brings his personality, hopes, aspirations, anxieties, feeling and attitude to the work place. He seeks satisfaction and meaning in his work as he does in other spheres of life. However, when he finds that his work does not provide him with the opportunity to realize his potentials (for instance, through strict management control) he tends to engage in negative behaviours like absenteeism, apathy, low commitment and low productivity. The implication of these negative tendencies resulting from strict management control has therefore raised serious concern among scholars interested in healthy industrial relations.

Objectives of Study

The central objective of the study is to determine the level of worker participation in management decision making in the Indian industry. The specific objectives are to:

- ascertain workers level of involvement in the decision making process of their work places;

- establish the general attitude of workers towards worker participation in management decision making;

- determine factors which aid or hinder the observed level of participation; and

- investigate the implications of worker participation to worker and their organizations.

Rationale for the Study

The rationale for the study is anchored on the need to raise the productivity level of workers through appropriate motivational techniques. The involvement of workers in management decision making is considered as a means for inducing motivation in the workers leading to positive work attitude and high productivity.

The study is also deemed desirable in view of the benefits of worker participation to organization and the society at large. Worker participation has been seen as capable of providing workers conducive work environment, opportunity to exercise their innate potentials and willingness to pursue corporate goal of the organization.

Review of the Literature

Worker participation has been explained as a plank of industrial democracy (Adewumi, 1991). Mills (1977) described the spread of industrial democracy to Western Europe in the 1970s a story of capitalism in transition. In his words, in countries where it is occurring, industrial democracy, affects the nature, control and even ownership of private enterprise; the nature control, power and bargaining areas of the labour union and the roles and contributions and rights of the individual worker in contemporary and future industrial society (cited in Heisler and Houck (eds.) (1977: 116).

The description above shows that industrial democracy affects many aspects of lives of different people in modern society. This reason may

explain the wide clamour for the introduction of worker participation arrangement in most countries.

Mills (1977) identified four basic forces underlying the clamour for industrial democracy. The first one was political in nature, pushed primarily by socialists and moderate labour and political leaders. The second was an industrial or economic force championed by innovative and socially-oriented management and at times, by unions. The third was an intellectual and theoretical force pushed by MacGregor (1960) Maslow (1964) and Emery, Thosrud and Trist (1964).

Growing public distaste, desire and disillusionment with traditional institutions and their leadership, growing aberrant social behaviours including crime and drug abuse new demand for participative right of every kind including women's rights (p. 122)

This fervor explains rising workers demand for increasing influence in management decision making. The increasing interest in worker participation has been traced to a number of factors. First, is the real or anticipated political pressure which was designed to extend the popular democratic dispensation in the larger society to the economic sphere. Second, is the growing pressure on the collective bargaining system arising from continuing difficulties from negotiating in the context of high inflation and in some instances increasing disenchantment with the dialogue of confrontation. More importantly, is the endemic problem within the modern industrial system which may tend to encourage employers to consider experimenting with different forms of participation. Lastly, the growing interest in participation was encouraged by the problem associated with denying powerful groups (for example, shop stewards and work groups) formal and legal means of exercising their rights. When such situation arises, the workers concerned will employ informal bargaining methods and illegitimate facts to achieve their goals. To forestall these negative trends; management is forced to introduce certain participation schemes (Mills 2009).

The industrial democracy movement can be seen therefore as part of the Quality of Work Life Movement (QWLM) which spread throughout Europe during early 1970s. A major impetus to this movement was provided by the Workers Constitution Act Passed by the German

Bundestag in 1972. The Act imposed a mandatory Worker Council on every German enterprise employing more than five employees.

In the 1990s, the industrial democracy movement took the form of what Freeman and Rogers (1993:13) called employee representation. Like worker participation and other stands of industrial democracy, employees representation connotes greater influence of workers in several aspects of the work. It also involves restructuring management to meet the new demands of efficient management, international competition, rapid technological change and changing work force expectation of work (Freeman and Rogers 1993: 111).

A related concept to employee Participation is joint Governance. The concept was developed by Verma and Cutcher-Gershanfield (1991) who defined it as:

An ongoing formal process where workers and their immediate supervisors or union and management bear joint responsibility for making decisions which may be narrow (for instance, involving a single tissue) or it may be broader covering a wide range of issues (p. 200).

Joint governance would then be taking to imply statutory arrangements that are meant to provide equal decision making power to subordinate employees. However, like other programmes with similar objectives, joint governance provides little opportunity for real decision making power to employees. Wellins-Byham and Wilson (1991) argued that in some joint governance programs, workers are involved at the shop floor levels in issues relating to production and equality. How-ever, in this instance, rarely were these workers provided with any concrete decision making power. In some of the programmes, employees were given advisory role which in few cases may confer them with an influential voice. But this is still far short of sharing decision making power which a full worker participation arrangement would imply.

Levine and Tyson (1990) distinguished between consultative and substantive forms of participation. In consultative forms, employees provide information or advice, but management retains the right to make decisions. In more substantive participatory systems workers have greater autonomous control over methods and pace of work and make decisions that substantively affect the production process. This distinction between

consultative and substantive forms of participation is what Rubestein, Bennett, and Kochan, (1992) called "off-line versus "on-line" participation. These terms distinguish between workers who make suggestions to management through problem-solving groups off the job and workers who make decisions with respect to work tasks or quality control as part of their daily work responsibilities (Kester, Zammit, and Gold, 2002).

Studies have also focused on the effect of worker participation on organizational performance (Kelly and Harrison, 1992; Levine and Tyson, 1990; Lawler et al. 1992). These studies found that participation programs have positive, or in some cases, ambiguous effect on productivity. Furthermore, employee participation and industrial relations practices may interact so that the sum of the effects on plant performance are stronger than the effects on the individual practices themselves (Cooke, 1994). Lastly, effects on productivity are expected to be greatest when the organization adopts a coherent system of work organization and industrial relations practices (Dunlop, 1958; Cutcher-Gersenfeld, 1991; Kochan and Useem, 1992). In the view of Kester, Zammit and Gold (2002), democratic participation is no longer primarily a battleground between capital and labour, implying a win-lose game, but a common challenge, a win-win game that forces all parties to reconsider the rules of the game and the roles of the actors.

With respect to the status of worker participation in the developing world, Mankidy (1984) Kester and Schiphorst (1986) have argued that in these countries, labour relations are characterized by a break-up of existing patterns. In many of these countries, there is an increasing awareness that the labour relations produced in these countries are grossly defective. Trade unions are also seen as very weak in many of them. Lastly, on the ideological ground, collective bargaining is rejected because of its emphasis on the dependent wage labour position of the worker.

Kester and Thomas (1981) have demonstrated that there is a fast growing interest in the development of worker participation in developing countries. In their studies, they found one form of worker participation or the other in these countries. In some cases, worker participation was introduced an essential part of development strategy. For instance, in Tanzania, the idea of worker participation formed an important aspect

of her socialist ideology. This is anchored on the notion of man centered development strategy.

In Indian, the institutionalization of worker participation within the nation's industrial relations system was championed by several scholars. Fashoyin (1992), Adewumi (1993) and Imaga (1994) have suggested that worker participation in management decision making represents a means of reducing industrial conflict, raising workers productivity and ensuring rapid socio-economic development.

Adewumi (1990:7) contended that the Indian Industrial relations system is guided by the underlying philosophy of industrial democracy. This implies the establishment of institutions and machineries though which management and workers meet on equal footing to discuss, consult and negotiate the terms and conditions of employment. In reiterating the principle of industrial democracy as the guiding spirit of Indian's industrial relations system, the National Labour Policy states:

If management must participate in decisions for determining the share of the worker from the results of the co-operative use of labour and capital, then the worker is equally entitled to participate in the decisions relating to share of capital, namely, profit and indeed all decisions hitherto arrogated to itself by the employer or management relating to the whole organization and operation of the enterprise; determining objectives and policies, the relative share of the co-operating factors of production (Yesufu, 1992: 142) .

Adewumi (1993:76) argued that the only avenue for the realization of the objective of worker participation in management decision making in Indian is through the collective bargaining machinery. However it is evident that this machinery is very defective in India because of its restrictive nature. Consequently, such arrangement cannot confer effective participation right to the workers.

Theoretical Framework

The human relations and participatory democratic theories are adopted to guide our study on worker participation in management decision making. The human relations theory stems from the understanding that the co-operation of workers is desirable for the attainment of the objectives of

high productivity and industrial peace. It contends that workers would be better motivated if they are treated like human beings rather than as irrational objects. For instance, by making them have a feeling that the organization accords them recognition by involving them in the decision making process. In the light of the theory, the worker is to be perceived in terms of his membership of a social group rather as an individual. Consequently, his behaviour is seen as a response to group norms rather than simply being directed by financial consideration. Workers should then be expected to react to group norms so that when they are given the opportunity to take part in management decision making, they are likely to respond positively to organizational issues.

The democratic participatory theory emphasizes on conditions which are necessary for effective participation and function performed by participation to the individuals and society. For instance, Rosseau (1956) contended that through participation in decision making, individual sense of freedom is increased since it gives him a very real degree of control over the course of his life and structure of his environment. Again, it serves to increase the value of individual freedom by enabling him to be his own master.

Mills (1965) sees industry as an area where the individual could gain experience in the management of the collective just as he could in government. The theory views the political arena as a kind of market place in which individuals constantly attempt to maximize the benefits, minimize losses they could secure from the political process. It assumes that man is selfish in the sense that each participant would be motivated by the desire to protect or enhance his own personal interest. The theory assumes that increase participation is likely to increase the feeling of political efficiency that ordinary citizens possess. This helps to increase the potential so that their actions can have effect on public policy and lead to a greater sense of control over their communal lives. In essence, greater participation in one sense of life leads to greater participation in other spheres, i.e. the work place (Pateman, 1970).

Methodology

The study adopted the case study approach for the purpose of conducting an empirical investigation on the issue of worker participation in

management decision making in the India work environment. The study was conducted between the months of October 2012 and November 2013. Main data were collected both through the primary and secondary sources. Primary sources of data were derived from the questionnaire and in-depth interview while secondary sources were got from company records, bulletins and other official documents. The adoption of these tools helped to collect both quantitative and qualitative data. The questionnaire was in three sections – the first contained questions on respondent's personal data, the second on the level of worker participation while the third is on worker participation structures.

The study population comprises of workers in two selected organizations in Uttar Pradesh, namely; Flour Mills and Sugar Mills, Uttar Pradesh. A total of two hundred and twenty seven (227) subjects drawn from the two selected establishments constitute the sample for the study. The subjects were selected through a combination of clustering and systematic sampling methods.

Hypotheses

The following testable hypotheses were formulated to guide the attainment of the research objectives. There is a relationship between employees' socio-economic status and the level of involvement in decision making such that:

1. An employee in higher job position tends to exercise more involvement in management decision making than another in lower job position.

2. An employee who posses higher educational qualification would tend to have more influence in management decision making than other who possess lower educational qualification.

3. A young employee would more likely demonstrate more involvement in management decision making than his older counterpart.

Findings and Discussions

As evidenced from tables 1 to 8 the demographic composition of the subjects reflects the majority are male, middle age with low educational qualification. This finding is a reflection of the structure of the Indian

Industrial labour force in which middle age male workers are more represented than their female counterpart. It also reflects on the occupational status of the subjects of the study all of whom are lower cadre workers.

Findings on respondent's frequency of involvement in the decision making process of their organization as reflected in Table 4 shows that respondents in the two study organizations demonstrated generally low measure.

Table 1: Sex Distribution of Respondents

Sex	*Flour Mills*		*Sugar Mills*	
	No.	*%*	*No.*	*%*
Male	60	66.6	77	56.2
Female	30	33.4	60	43.8
Total	90	100	137	100

Source: Author Field Work, 2013.

Table 2: Age Distribution of Respondents

Sex	*Flour Mills*		*Sugar Mills*	
	No.	*%*	*No.*	*%*
30 years or less	35	38.8	53	38.7
Between 30-40 year	41	45.6	65	47.4
41 years and above	14	15.6	19	13.9
Total	90	100	137	100

Source: Author Field Work, 2013.

Table 3: Respondents Educational Qualification

Educational Qualification	*Flour Mills*		*Sugar Mills*	
	No.	*%*	*No.*	*%*
Primary Sch. Cert.	2	2.2	6	4.4
Sch. Cert & Equivalent	38	42.2	43	31.4
OND/NCE Certificate	30	33.3	64	46.7
First Degree	11	12.2	16	11.7
Post Graduate	9	10	8	5.8
Total	40	100	137	100

Source: Author Field Work, 2013.

Table 4: Distribution of Respondents by Frequency of Involvement in the Decision Making Process of the Work Place

Frequency of involvement	Flour Mills		Sugar Mills	
	No.	%	No.	%
Not at all	25	27.8	14	10.2
Occasionally	43	47.8	76	55.5
Often	20	22.2	45	32.8
No Response	2	2.2	2	1.5
Total	90	100	137	100

Source: Author Field Work, 2013.

Table 5: Respondents Involvement in the Decision Making in Administration of Social Facilities

Frequency of involvement	Flour Mills		Sugar Mills	
	No.	%	No.	%
Not at all	38	42.2	59	43.0
Not at much	32	35.6	54	39.4
Much	20	22.2	24	17.6
Total	90	100	137	100

Source: Author Field Work, 2013.

However we found that employees in Sugar Mills have a higher frequency of involvement than those in Flour Mills this variation could be explained by the relatively higher educational status of respondents from Sugar Mills. In addition in this company, there are a larger number of professionals who are more willing to seize the opportunity of participation in management decision making:

Results of in-depth interview conducted with some respondents attest to our findings. When asked about the extent to which he is involved in the making of decisions within the company, an insurance clerk in the insurance underwriting office of Sugar Mills replied:

"The management in this company does not consider it as its duty to contact junior employees on how decisions are made"

A factory operator in Flour Mills has this to say on similar question:

"I am always busy in the factory, may be this is why I don't know about decision making".

It is possible to observe the obvious variation in reasons advanced by the two informants on why they demonstrated low involvement in management decision making. While the informant from Sugar Mills expressed that his low or lack of involvement was due to management unwillingness, the respondent from Flour Mills, indicated that he was not much involved in management decision making because of his busy schedule work.

It is also interested to know that a number of the respondents indicated that they had no interest in participating in the management decision making of their work places. This category of employees demonstrated a non-challant attitude towards their involvement in the management decision making. As a respondent in Flour Mills says:

"I am in this company to work and earn my salary. I have no business with decision making. I am not paid for such job."

An opinion like this reflects the instrumental orientation of some of the workers in the two study establishments. Being mostly junior workers, these respondents tend to demonstrate more interest in earning a living from work rather than to satisfy the higher order needs of self expression through participation.

However, in spite of this tendency, our findings show that a substantial proportion of respondents in both study organizations reported that they are involved either regularly or occasionally in the management decision

Table 6: Relationship between Respondents Educational Level and Involvement in Management Decision Making

Organization		Educational Level		Involvement in Decision Making	
		None	Occasionally	Often	Total
Flour Mills	Low	6(50%)	4(33.3%)	2(16.6%)	129(100%)
	Moderate	7(10.3%)	34(50%)	27(9.7%)	68(100%)
	High	1(5%)	5(25%)	14(70%)	20(100%)
	Sub-Total	14(15.6%)	43(47.8%)	33(36.7%)	90(100%)
$x^2 = 3.74$.d.f. 4; $P \geq 05$					
Sugar Mills	Low	4(18.2%)	14(63.6%)	4(18.2%)	22(100%)
	Moderate	10(9.4%)	57(53.8%)	39(36.80%)	106(100%)
	High	2(22.2%)	5(55.6%)	2(22.2%)	9(100%)
	Sub-Total	16(11.7%)	76(53.5%)	45(32.8%)	137(100%)
$x^2 = 3.74$.d.f. 4; $P \geq 05$					

Table 7: Relationship between Respondents Age and Involvement in Management Decision Making

Organization		Age group		Involvement in Decision Making	
		None	*Occasionally*	*Often*	*Total*
Flour Mills	30 yrs or less	6(17.1%)	21(60%)	8(22%)	35(100%)
	31-40 yrs	4(10%)	18(45%)	18(45%)	40(100%)
	41yrs& above	3(21.4%)	4(28.6%)	7(50%)	14(100%)
	Sub-Total	13(14.6%)	43(48.3%)	33(37.1%)	89(100%)
x^2 = 6.6; d.f. = 4; P ≤ 05					
Sugar Mills	30 yrs or less	4(18.2%)	27(51.9%)	16(30.8%)	52(100%)
	31-40 yrs	10(9.4%)	42(64.6%)	17(26.2%)	65(100%)
	41yrs& above	0	2(36.8%)	12(63.2%)	14(100%)
	Sub-Total	15(11.1%)	76(53.5%)	45(33.12%)	136(100%)
x2= 6.61;d.f.= 4; P ≤ 05					

Table 8: Relationship between Respondents Job Position and Involvement in Management Decision Making

Job Position		Involvement in Decision Making			
		Not at all	*Occasionally*	*Often*	*Total*
Flour Mills	Low cadre	8(21.6%)	20(54.1%)	9(24.3%)	37(100%)
	Middle cadre	3(7.5%)	16(40%)	21(52.5%)	40(100%)
	High cadre	1(16.7%)	3(50%)	2(33.3%)	6(100%)
	Sub-Total	12(14.5%)	39(47%)	32(38.5%)	83(100%)
x2=7.5;d.f.= 4; P ≤ 05					
Sugar Mills	Low cadre	8(16.0%)	30(60%)	12(24%)	50(100%)
	Middle cadre	5(6.4%)	43(55%)	30(85.5%)	78(100%)
	High cadre	0	1(33%)	2(66.7%)	3(100%)
	Sub-Total	13(9.9%)	74(56.5%)	44(33.6%)	137(100%)
x2= 6.54;d.f.= 4; P ≤ 05.					

making process of their companies. In the words of a respondent in Sugar Mills:

"Management in this company does not hesitate to involve some of us in the decision making process whenever it is necessary"

This opinion is similar to another expressed by a Foreman in Flour Mills:

"As a senior staff, I and other Foreman in the various units are made to contribute to the decisions in matter relevant to our department"

Views like the one above shows that respondents have some measures of involvement in the decision making process of their organization.

On the factors which could influence employee involvement in management decision making. Tables 4 to 8 show the relationship between age, education and job position and respondents level of involvement. As shown in table 6 above, there is a statistically significant relationship between respondents educational attainment and their involvement in management decision making in Flour Mills while such relationship was absent in Sugar Mills. This finding demonstrates that respondents' measures of involvement are related to their educational qualification in Flour Mills. In this company, while those who possess low educational qualification exercise low measure of involvement, those with higher education demonstrated equivalent level of involvement in management decision making.

It is evidenced from these findings that an individual's educational qualification could influence the level of involvement he could exercise. This finding is not surprising since those with higher educational qualification tend to have more knowledge about management decision making and are also more likely to seize the opportunity to be involved in the affairs of their organizations.

Conclusion and Recommendations

Based on the findings of the study it could be concluded that workers in the study establishments are generally not much involved in the management decision making within their respective establishments. On the other hand, the workers generally demonstrated high interest in management decision making. The study therefore confirmed that while the workers demonstrated positive attitude towards involvement in decision making, the actual level of involvement they exercise is negative. However, we found that workers in Sugar Mills demonstrated more involvement in management decision making more than their counterparts in Flour Mills. This implies that workers in the service sector are more involved in management decision making than those in the Manufacturing sector of the Indian economy.

Workers who are subjects of this study generally demonstrated willingness to accept the responsibility of involvement in management decision making whenever such opportunity arises. However many hold the view that management decision making is the preserve of the management. This implies that while the workers are willing to accept the responsibility of greater involvement in management decision making they are not ready to challenge the management in this regard. Another conclusion reached from the study is that respondent's level of income in management decision making have implication on certain organizational factors. Specifically, the commitment level demonstrated by the workers is a factor of the extent of influence they exercise in management decision making.

Finally, from the respondents' assessment of management attitude towards workers participation, it could be concluded that the management in the Indian work enterprises are not favorably disposed towards granting workers significant measure of involvement in management decision making. This finding would lead us to conclude that a lot needed to be done to change the current negative disposition of the Indian management towards workers involvement in management decision making. More importantly, the current obstacles against effective workers participation in Indian could be tackled through:

- Enlightenment program for workers on their rights to seize the opportunity of involvement in decision making.

- Provision of monetary and other incentives for workers to encourage them sustain the current interest in participation.

- Liberalizing management structure so as to allow for greater workers involvement, and lastly,

- Training programmes for workers in management functions as a way of properly equipping them on their decision making role.

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