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MERGER AND ACQUISITIONS IN INDIAN BANKING SECTOR

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ABSTRACT:

The primary objective of an organization towards M &A's is to create a niche of core competencies and improve transform the organizational culture to a better and improved form. It helps in design and develops systems in accordance to the changing face of business across all industrial sectors. An organization aims in Mergers and acquisitions are committed to extend the relationship with clients beyond the professional horizons to provide them high level of satisfaction and assurance. Merger deals are grouped into 3 categories viz, Voluntary Merger, Compulsory Merger and Universal Banking Model which is based on the motives.

INTRODUCTION:

The primary objective of an organization towards M&A's is to create a niche of core competencies and improve transform the organizational culture to a better and improved form. It helps in design and develops systems in accordance to the changing face of business across all industrial sectors. An organization aims in Mergers and acquisitions are committed to extend the relationship with clients beyond the professional horizons to provide them high level of satisfaction and assurance. Merger deals are grouped into 3 categories viz, Voluntary Merger, Compulsory Merger and Universal Banking Model which is based on the motives. The ICICI Bank Merger with Bank of Rajasthan is the seventh voluntary merger and the latest in India after the merger of HDFC Bank - Centurion Bank of Punjab in the year 2008, compared with other voluntary mergers. This deal also has background of the merger including various regulatory interventions of authorities like the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI) and Foreign Investment Promotion Board (FIPB). Because of poor corporate governance of the target bank and cancellation of Extra Ordinary General Meeting (EGM) by the Calcutta District Civil Court this deal also got lots of attention. In this case, an attempt has been made to analyze the probable impact of strategic tools and features of the banks on pre and post merger performance.

LITERATURE RIVIEW:

By- Jagriti kumara M.Sc. Environment Economics (1st year)Madras School of Economics: Primary purpose of mergers and acquisition is to reduce competition and protect existing markets in the economy. Overall mergers and acquisitions have their own pros and cons. But mergers are good for the growth and development of country only when it does not give rise to competition issues.

By-Ms. S. RevathyAssistant Professor, Department of MBA K. S. Rangasamy College of Technology,

Tiruchengode: Based on the trends in the banking sector and the insights from the cases highlighted in this study, one can list some steps for the future which banks should consider, both in terms of consolidation and general business. Firstly, banks can work towards a synergy-based merger plan that could take shape latest by 2009 end with minimization of technology-related expenditure as a goal. There is also a need to note that merger or large size is just a facilitator, but no guarantee for improved profitability on a sustained basis. Hence, the thrust should be on improving risk management capabilities, corporate governance and strategic business planning.

OBJECTIVE OF THE STUDY

1. To study the purpose of mergers and acquisitions in Banking sector.
2. To study the motives behind consolidation in the Banking sector.
3. To study the risk involved in merger and acquisition.
4. To study the major Banks involved in Merger and acquisition.

SCOPE OF THE STUDY

1. The study will help to know the positive or negative effects of merger and acquisition on both the banks.
2. Study the different scenario after and before the merger.
3. Also it helps to know how it affects profitability.

HYPOTHESIS OF THE STUDY

A research hypothesis is the statement created by researchers when they speculate upon the outcome of a research or experiment.

The hypothesis will be in this research...

H1: Merger and acquisition creates the synergy to both banks.

LIMITATIONS OF STUDY

1. The purpose of study is academic only.
2. The project will be done for 45 Day only.

RESEARCH METHODOLOGY

The process used to collect information and data for the purpose of making business decisions. The methodology may include publication research, interview, survey and other research techniques, and could include both present and historical information.

Data Collection:

The analysis is based on the secondary data.

It is based on:

1. Business Magazines
2. Internet Sources
3. Finance Book
4. Journals

Analysis of Data:

Analysis of the data will be done on the basis of various statistical techniques. The interpretation will be based on the analysis. The research is descriptive in nature.

Tools of Research:

To analyze the available financial information to study the selected banks (ICICI Bank and BoR), various techniques of applied research and accounting tools like comparative ratios and balance sheets have been employed.

The six comparative ratios are:

1. Operating Profit Ratio
2. Net Profit Ratio
3. Return on Assets
4. Return on Equity
5. Debt Equity Ratio
6. Dividend Payout Ratio

COMPANY PROFILE

ICICI BANK is India's second largest bank with total assets of Rs.3634 billion at March 2010 and profit after tax Rs.40.25 billion for the year ended 31st March, 2010. The Banks has a network of 2035 branches and about 5518 ATMs in India and presence in 18 countries. ICICI Bank offers a wide range of banking products and financial

services to corporate and retail customer's through a variety of delivery channels and through its specialized subsidiaries in the areas of investment banking, life and non-life insurances, venture capital and asset management.

BANK OF RAJASTHAN with its stronghold in the state of Rajasthan, has a nationwide presence, serving its customers with a mission of "together we prosper" engaging actively in Commercial Banking, Merchant Banking, Consumer Banking, deposit and Money Placement services, Trust and Custodial services, International Banking, Priority Sector Banking.

At March 31, 2009, BoR had 463 Branches and 111 ATMs, total assets of Rs. 172024 billion, deposits of Rs.151087 billion and advances of Rs.77.81 billion. It made a net profit of Rs.1.18 billion in the year ended March31, 2009 and a net loss Rs. 0.10 billion in the nine months ended December 31, 2009.

WHY BANK OF RAJASTHAN?

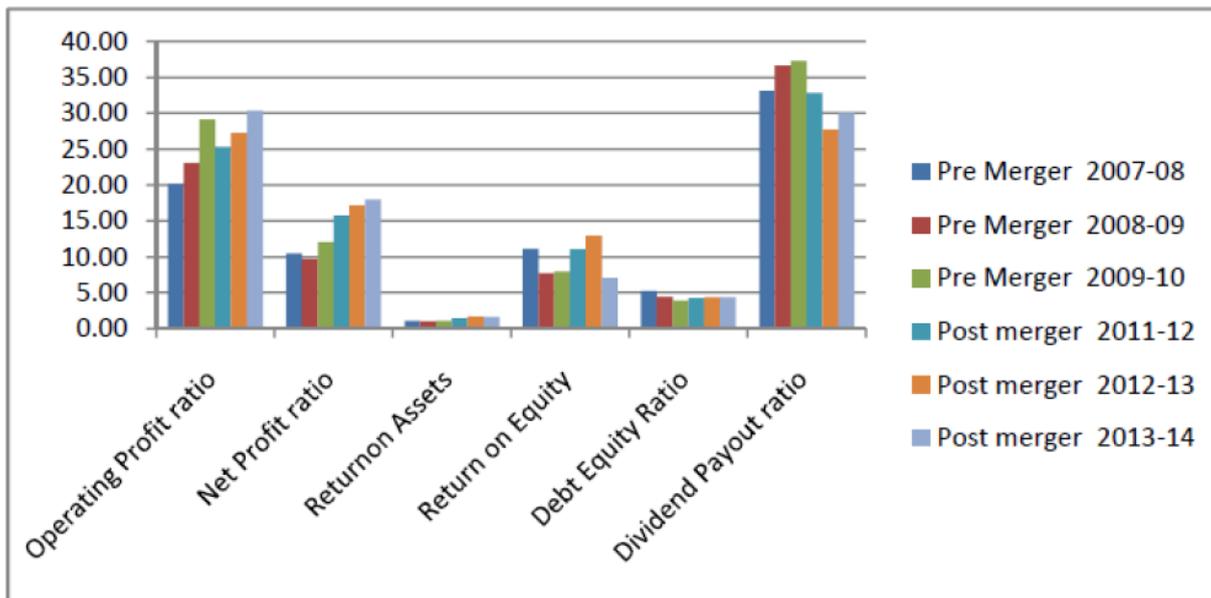
- ✓ ICICI Bank Ltd, India's largest private sector bank, said it agreed to acquire smaller rival BoR Ltd to strengthen presence in northern and western India.
- ✓ Deal would substantially enhance its branch network and it would combine BoR branch franchise with its strong capital base.
- ✓ The deal, which will give ICICI sizeable presence in the northwestern desert of Rajasthan, values the small bank at 2.9 times its book value, compared with an Indian Banking sector average of 1.84.
- ✓ Besides getting 468 branches, India's largest private sector bank will also get control of 58 branches of a regional rural bank sponsored by BoR.

DATA ANNALYSIS AND INTERPRETATION

Financial Performance of ICICI Bank

	Pre-Merger				Post-Merger			
	2007-08	2008-09	2009-10	Avg.	2011-12	2012-13	2013-14	Avg.
OPR	20.10	23.06	29.15	24.10	25.30	27.26	30.38	27.65
NPR	10.50	9.71	12.06	10.76	15.75	17.19	17.97	16.97
RoA	1.10	1.00	1.10	1.07	1.44	1.66	1.64	1.58
RoE	11.10	7.70	7.90	8.90	11.09	12.94	7.03	10.35
EPS	39.39	33.76	36.14	36.43	56.11	72.20	84.90	71.07
DER	5.27	4.42	3.91	4.53	4.23	4.39	4.31	4.31
DPR	33.12	36.60	37.31	35.68	32.82	27.71	30.00	30.18
Share price (NSE/BSE)	770	333	953	685	887	1045	1245	1059

GRAPH



Interpretation:

From the above graph, it is analyzed that the financial performance of ICICI Bank are fluctuating before and after merging with Bank of Rajasthan.

PURPOSE OF MERGERS AND ACQUISITIONS IN BANKING SECTOR:

- To improve liquidity.
- To avail tax Benefit.
- To offer better satisfaction to consumers or users.
- To standardized product specification and improvement of quality of product.

BENEFITS OF MERGERS AND ACQUISITIONS IN BANKING SECTOR:

Growth and Diversification

Synergism

Income Tax Advantage

Acquiring New technology.

Increased Managerial Skills.

MOTIVES BEHIND MERGER AND ACQUISITION:

Growth

Strategic Motive

Regulatory Intervention

Synergy

Major Banks Involved In Merger And Acquisition

Date Of Merger	Acquirer Bank	Target Bank	Assets Of Target Bank (%)	No. of Branches Of Target Bank
August 2010	ICICI Bank	Bank Of Rajasthan	0.05	463
February 2008	HDFC Bank	Centurion Bank of Punjab	20	394
August 2007	ICICI Bank	Lord Krishna Bank	11	110
April 2007	Centurion Bank Of Punjab	Sangli Bank	0.5	190
March 2007	Indian Overseas Bank	Bharat Overseas Bank	6	102

IS MERGER AND ACQUISITION CREAT SYNERGY?

		N	Mean	Std. Deviation	Std. Error
Net Profit Ratio	Pre-Merger	3	10.3200	0.54286	0.31342
	Post-Merger	3	14.5567	2.10165	1.21339
	Total	6	12.4383	2.69619	1.10072
EPS Ratio	Pre-Merger	3	35.9967	2.98791	1.72507
	Post-Merger	3	45.8400	9.99719	5.77188
	Total	6	40.9183	8.52150	3.47889
Debt Equity Ratio	Pre-Merger	3	4.7600	4.42539	2.55500
	Post-Merger	3	4.0800	0.16093	0.9292
	Total	6	4.4200	2.82537	1.15345
Current Ratio	Pre-Merger	3	0.5733	0.71591	0.41333
	Post-Merger	3	0.5533	0.67308	0.38860
	Total	6	0.5633	0.62157	0.25375

To create synergy, expanding the operations, cutting costs and economies of scale Firm need to go for the merger-
H1 is accepted.

CONCLUSION

Mergers and Acquisition is a useful tool for the growth and expansion in any Industry and the Indian Banking Sector is no exception. It is helpful for the survival of the weak banks by merging into the larger bank. This study shows the impact of Mergers and Acquisitions in the Indian Banking sector.

- ✓ M&As is the need of business enterprises for achieving the economies of scale, growth, diversification, synergy, financial planning, Globalization of economy.
- ✓ For achieving higher profit and expanding market share companies go for Merger and Acquisitions (M&A's).
- ✓ To replace the competitor and to occupy the best position in the market Merger and Acquisition is the best strategic tool which a firm needs to follow.

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DISTRIBUTION IS KEY FOR SUCCESS FOR INDIAN MUTUAL INDUSTRY

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ABSTRACT

The total asset under management of Indian Mutual fund industry stand at 12.02 lakh crore as on Feb, 2015. Equity forms merely a small part of the total household savings as compared with the US where equities comprised 45%. Even this small position of equity is mostly collected from top 15 Indian cities. Low customer awareness level and financial literacy pose the biggest challenge to channelizing household saving into mutual funds. Other than Bank deposit investors need advice in all type of financial investment. The situation under these cases is such that even if the ability to invest exists, these savings are prevented from being directed into mutual fund products. The objective of this paper is to study the distribution of Mutual Funds in India. What are the changes required in the distribution network to increase the penetration level of mutual funds in India

(Keywords: Mutual funds, Equity schemes, Distribution of MF, Role of distributors, Mutual fund industry, Mutual fund investment)

Introduction

Mutual funds have been in existence for more than a century and played an active role in financial markets all round the world. In India, mutual funds have been in existence for more than half a century. The mutual fund industry was supposed to tap the savings of common man as it provides an option of diversified investment structure with varying degrees of risk. According to the Mutual Fund Industry body AMFI, there is huge scope for expanding the reach of mutual funds and channelizing household savings into the stock market. The assets of the mutual fund industry have hit an all-time high, crossing Rs 12 lakh crore for the first time in its history. Of this about 12 lakh crore assets, Income funds and liquid funds account for the largest proportion of AUM. Income funds account for Rs.5.22 lakh crore. Meanwhile, equity funds accounted for Rs.3.06 lakh crore. Liquid funds had assets of Rs.2.76 lakh crore. Equity Linked Savings Schemes (ELSS) schemes which offer tax benefits, had AUM of Rs 39,235 crore. Normally, the equity-debt mix is determined largely by the performance of the capital markets and interest rate cycles. At present the percentage of equity mutual funds is little more than a quarter of the AUM of 12 lakh crore. Even though the stock market is reaching new highs and interest of the investor in the stock market is all-time high in recent times.

MF Industry Challenges

While the average AUM of the industry has grown little above 12 lakh crore. A recent study report titled, "Penetration of Mutual Funds in India: Opportunities and Challenges" prepared jointly by two senior Sebi officials and an ED and a Research Associate from Bharti Institute of Public Policy, Indian School of Business, Mohali, picks up lack of penetration, low supply of products in cities beyond the top 15 as major reasons for the slow growth of mutual funds. The Securities and Exchange Board of India points out that lack of healthy participation from a large part of the country is a major reason for this slow pace of growth. While the top 15 cities contribute to 87 per cent of the industry's AUM,

Pointing out the reasons for low penetration beyond top 15 cities, the report attributed it to both demand and supply related issues. While low levels of financial literacy, cultural attitude towards savings are the issues on the demand front, low supply of mutual funds from AMCs outside major cities and lack of quality manpower in these areas have been suggested as supply related issues.

This skewed origination of AUM in India is its single biggest challenge and its biggest opportunity at the same time," said the report adding that, "This under penetration of financial inclusion is not unique to mutual funds, but a deeper structural problem characteristic of the Indian financial sector. More than half of India's population does not have any access to formal banking services."

If financial inclusion is an issue, financial literacy is another hurdle that mutual funds need to overcome along with the traditional investment practices that people have. The report states a large number of households are extremely risk averse and they also do not know how and where to invest in a mutual fund.

If knowledge and comfort of investing is an issue the report further highlights the fact that the different kinds of large number of schemes often end up intimidating an uninformed investor as a result of which they move towards less complicated investment options which they understand.

“This combination of ignorance, risk-aversion and mutual fund complexity are huge hurdles that AMC’s in India will have to overcome if there is to be any increase in retail participation in mutual funds,” the report said.

On the supply side the report finds that mutual fund houses are not doing enough in terms of expanding their distribution beyond the top 15 cities as 89.7 per cent of all the distribution cost by AMC’s is incurred in the top 15 cities and their corresponding districts itself, leaving very little for the rest of the country.

It was also noted that the mutual fund industry has only 52,000 ARN (AMFI Registration Number) holders out of which 48,000 are individual ARN holders and 4,000 are corporate ARN holders, however only 18 per cent of them are currently active. This is substantially lower to the 2.5 million agents that the insurance industry has.

The concentration of independent financial advisers is also more in the top cities with 65 per cent of the independent financial advisers (IFAs) in districts forming the first decile and approximately.

“If the reach has to be increased to tier II and tier III cities, the distribution network needs to be overhauled and innovative incentive structures need to be adopted,” said the report while stating that the insurance agents earn up to 35 per cent commission on the premium for signing up of a new customer.

Increasing Penetration to Non-metro

Despite constant endeavor of the SEBI to increase penetration of mutual fund products beyond top 15 cities, the AUM composition has only marginally changed since SEBI directive on additional TER on inflows from smaller cities was implemented from October 2012. Contribution from the smaller cities has remained at around 13 per cent for the last two years. Drivers like lack of financial education and awareness, limited distribution network, cultural bias

towards physical assets are some of the key impediments to growth in B-15 cities.

In order to increase the geographical reach of mutual funds, the fund houses are now allowed to charge an extra load of 30 basis points from existing schemes subject to meeting certain conditions. The regulation has incentivized fund houses to push mutual fund products to non metro cities & towns. The industry has adopted multi-pronged approach to reach out to investors in B-15 cities which includes investor awareness, training and enrolling new cadre of distributors. In addition, fund houses are paying additional commission to source applications from these cities & towns. But, the biggest challenge that financial companies including mutual fund face with regard to

engaging investors is the low level of financial literacy among Indian consumers, which leads the average investor to view options like shares & mutual funds with suspicion and caution. The SEBI recognized this issue and took action by mandating that all mutual fund companies set aside a portion of their revenue for investor education and awareness initiatives. Companies have also stepped in to help educate. Increasing consumer financial literacy may be a long-term project, but it is already yielding some dividends.

The other critical issue for fund houses to distribute their products in smaller cities is the availability of quality distribution infrastructure. Fund houses need infrastructure like branches, adequate number of relationship managers and sales service staff in these locations to be able to increase their sales volume coming from these geographies. Cost of establishing a distribution network in non metro cities is quite high. It is the cost per transaction or the low sales volume that makes the pursuit economically unviable or at the least challenging. Although, additional TER can be levied to extend of inflows from these cities (up to 30 bps); entering these cities & towns have a long gestation period and requires a capital investment for distributors.

Unique problems call for innovative solutions. The distribution landscape, the cost dynamics, underlying cultural imprint and investor behavior in the smaller cities is much different than metros. Therefore, the fund houses could look at some innovative sales strategies for these non-metros.

Even today the financial investments including Mutual Funds are mostly driven by trust and relationship. In such cases, investors would prefer to buy from a known face rather than an unknown one. Independent Financial Adviser (IFAs) serves as an important link between the sellers and buyers of the financial products. They have a good hold and influence over their clients and their purchasing decisions. Therefore, it is important to tap the IFAs that have a client base in smaller cities & towns. To increase the base of mutual fund distributors, the regulator has permitted a new cadre of distributors which includes postal agents, retired government and semi government officials, retired teachers, retired bank officers and other persons (such as bank correspondents) to sell mutual fund schemes. IFAs have the potential to widen the distribution network and expand the reach on a sustainable basis. IFAs have comparatively performed well in non-metro region than other channels. However, not much has been done to strengthen IFAs channel. In fact, new norms and regulations are putting pressure on the very existence of IFAs. One of the major threats to IFAs arises out of direct plan option for investors. With SEBI incentivizing the direct plans in 2012, it would be detrimental to the business of the IFA if investors shift their focus to direct plans. To retain clients and prevent them from opting for direct plans, the quality of advice and service has to be improved. Their approach needs to be more service oriented rather than transaction oriented.

Traditionally, large distribution networks were developed by the Life Insurance Corporation of India and the private insurance companies for their own products. The Insurance model involved engaging deeply with distributors and agents, by educating and equipping them to sell. Agents were well-compensated and penetration was deep. In return, the agents worked exclusively with insurance company and did not sell other products. Unlike this, the

mutual fund distribution network evolved in an open architecture mode. All distributors were free to distribute or offer products from multiple Mutual funds companies. As a result, the bond between the AMC and the distributor was relatively weaker. Hence, Mutual funds companies as to learn so these distribution skills of insurance and develop a long standing relationships with their distributors specially IFAs. IFAs primarily target regular retail investors. Direct and IFA channels could remain key to unlocking growth in terms of sourcing equity inflows from non metro cities & towns.

When it comes to relying someone with one's hard earn money, banks are the most entrusted of all institution especially in India. So much so that even today despite there being plenty of investment avenues, average Indian investors continue to trust banks with their savings. Mutual Fund Houses partnering or forming a strategic alliance with bank especially with public sector banks that as vast presence in non metro areas would help fund houses in amassing assets from non metro cities and towns. Fund houses could leverage from large network of bank branches covering the length and breadth of the country. Apart from bank branch the funds house can use banks employees, ATM network, banking correspondents to reach out to investors.

Conclusion

Low customer awareness levels and financial literacy pose the biggest challenge to channelizing household savings into mutual funds. The low awareness levels among retail investors have a direct bearing on the mutual fund sales in the retail segment. A large majority of retail investors lack an understanding of risk-return, asset allocation and portfolio diversification concepts. Therefore, developing a professional cadre of advisers and planners is very important for the success of Mutual Fund industry. Mutual fund industry manifests big opportunity for growth and further penetration, and this can be achieved over time, with a professional cadre of advisers and planners support by technology. While banks and the national distributors target mostly targets wealthy and corporate clients, the regional distributors like IFAs primarily target regular retail investors. IFAs have comparatively performed well in attracting retail investors to the mutual funds amongst all distribution channels. SEBI should focus on strengthen and widen the distribution network of IFAs to reach retail investor in non metro regions. When it comes to retail investors from semi-urban or a rural zone, IFAs are better than the rest of the channels in understanding the varied needs of the Investors & customize the product delivery system as per the investment need and make mutual fund investor-oriented. With a focused distribution network like insurance industry, mutual fund industry can increase the penetration level to retail masses and ensuring a viable business model for the distributor is essential for the success of Mutual fund industry.

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A STUDY ON NON-PERFORMING ASSETS IN BANK OF MAHARASHTRA

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ABSTRACT

The Bank of Maharashtra system plays a significant and commendable role in the growth and development of economy and its components. The bank system mobilizes the funds from the surplus units and distributes them to deficit sectors for their productive and efficient utilization. Modern trade and commerce would almost be impossible without the availability of suitable banking services and it facilitates it in innumerable ways. Bank of Maharashtra play an important role in the mobilization, allocation of capital, progress and development of an economy. The modern bank is not only confined to traditional business of the accepting and lending money but have diversified their activities into new fields of operations like merchant banking, leasing, housing finance, mutual funds and venture capital. They have introduced a number of innovative schemes for mobilizing deposits. In addition to the above they are providing valuable services to their customers, issuing drafts, traveler cheques, gift cheques, accepting valuables for safe custody and modern banking facilities.

Keywords: NPA, Net profit,

Introduction:-

The main business of bank is to accept deposits for lending, so it mobilises funds by issuing claims against itself and lends this money to others in the form of loans, which are assets for bank. The liabilities and assets of banks are in the form of claims unlike other forms of business. The mobilised money is lent in the form of loans, which is major and main activity of bank and comprises the largest asset in the asset portfolio of the bank. The money lent are called loans or advances which earn income for the bank in the form of interest, in addition to this banks invests a portion of money in securities (both debt and equity) and a minor portion of total funds is invested in real assets like land, building for carrying the operations of banking. The money is advanced in the form of loans and invested in securities in expectation of income and repayment of principle at periodic intervals as per the contractual obligations between the lender and borrower. The assets which is performing as per the contractual obligations i.e. payment of interest and repayment of principal as and when it fall due, it is called non performing asset or standard asset. The asset which fails to meet obligation of payment of interest and repayment of principal within a specified date from due date is called non performing asset or non standard asset. Non-performing asset (NPA) is one of the major concern and problem for bank in India. NPAs reflect the degree of risk and quality of assets of bank and profitability of a bank.

After the liberalization in 1991, they faced high-level competition from public sector banks. Due to this fierce competition and challenge on their survival, they were forced to improve the performance and weakness. The biggest weakness and problem they faced was huge NPA'S in their portfolio. This study aims to check what is the position and level of nonperforming assets of bank of Maharashtra, which is core and heart of bank of Maharashtra in India and which handles the major portion of bank business in India. Non Performing Asset means an asset or account of borrower, which has been classified by a bank or financial institution as sub-standard, doubtful or loss asset, in accordance with the directions or guidelines relating to asset classification issued by RBI. An amount due under any credit facility is treated as "past due" when it has not been paid within 30 days from the due date. Due to the improvement in the payment and settlement systems, recovery climate, up gradation of technology in the banking system, etc., it was decided to dispense with 'past due' concept, with effect from March 31, 2001. Accordingly, as from that date, a Non performing asset (NPA) shall be an advance where

- Interest and /or instalment of principal remain overdue for a period of more than 180 days in respect of a Term Loan,
- The account remains 'out of order' for a period of more than 180 days, in respect of an overdraft/ cash Credit(OD/CC),
- The bill remains overdue for a period of more than 180 days in the case of bills purchased and discounted,
- Interest and/ or instalment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purpose, and
- Any amount to be received remains overdue for a period of more than 180 days in respect of other accounts.

With a view to moving towards international best practices and to ensure greater transparency, it has been decided to adopt the '90 days overdue' norm for identification of NPAs, from the year ending March 31, 2004. Accordingly, with effect from March 31, 2004, a non-performing asset (NPA) shall be a loan or an advance where;

Interest and /or instalment of principal remain overdue for a period of more than 90 days in respect of a Term Loan,

- The account remains 'out of order' for a period of more than 90 days, in respect of an overdraft/ cash Credit(OD/CC),
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted,
- Interest and/ or instalment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purpose, and
- Any amount to be received remains overdue for a period of more than 90 days in respect of other accounts.

Types of NPA

Gross NPA

Gross NPAs are the sum total of all loan assets that are classified as NPAs as per RBI guidelines as on Balance Sheet date. Gross NPA is advance which is considered irrecoverable, for bank has made provisions, and which is still held in banks' books of account Gross NPA reflects the quality of the loans made by Banks. It consists of all the nonstandard assets like as sub-standard, doubtful, and loss assets.

It can be calculated with the help of following ratio:

Gross NPAs Ratio = Gross NPAs / Gross Advances

Net NPA

Net NPAs are those type of NPAs in which the bank has deducted the provision regarding NPAs. Net NPA shows the actual burden of banks. Since in India, bank balance sheets contain a huge amount of NPAs and the process of recovery and write off of loans is very time consuming, the provisions the banks have to make against the NPAs according to the Central bank guidelines, are quite significant. That is why the difference between gross and net NPA is quite high.

It can be calculated by following

Net NPAs = Gross NPAs – Provisions / Gross Advances – Provisions

Categories of NPAs

Banks are required to classify nonperforming assets further into the following three Categories based on the period for which the asset has remained nonperforming and the Realise-ability of the dues:

I. Substandard Assets

ii. Doubtful Assets

Iii. Loss Asset

Substandard Assets

With effect from 31 March 2005, a substandard asset would be one, which has remained NPA for a period less than or equal to 12 months. In such cases, the current net worth of the borrower/ guarantor or the current market value of the security charged is not enough to ensure recovery of the dues to the banks in full. In other words, such an asset will have well Defined credit weaknesses that jeopardise the liquidation of the debt and are characterised by the distinct possibility that the banks will sustain some loss, if deficiencies are not corrected.

Doubtful Assets

With effect from March 31, 2005, an asset would be classified as doubtful if it has remained in the substandard category for a period of 12 months. A loan classified as doubtful has all the weaknesses inherent in assets that were classified as sub-standard, with the added Characteristic that the weaknesses make collection or liquidation in full, – on the basis of currently known facts, conditions and values – highly questionable and improbable.

Loss Assets

A loss asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly. In other words, such an asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value

Review of Literature:

NPA is a burning topic for the bank of Maharashtra and many authors tried to study the reasons of NPA, the

problems created by NPA and the impact of NPA on the bank, and moreover came to a solution or remedies of the growing problem of NPA. A number of papers have been written and gone through, and this part of this paper is attempting to present a review of all those are available in the same area of non-performing assets of the bank of Maharashtra. This survey has conducted a study on the existing papers, articles, journals, and reports provided by different authors, groups and committees from time to time.

Dutta, A (2014): This paper studied the growth of NPA in the bank of Maharashtra in India , and analyzed sector wise non-performing assets of the public banks. For the purpose of the study data has been collected from secondary sources such as report on Trend and Progress of Bank in India, RBI, Report on Currency and Finance, RBI Economic Surveys of India.

Das, S. (2010): In this paper the author has tried to analyze the parameters which are actually the reasons of NPAs, and those are, market failure, willful defaults, poor follow-up and supervision, non-cooperation from banks, poor Legal framework, lack of entrepreneurial skills, and diversion of funds

Ahmad, Z., Jegadeeshwaran, M. (2013): The current paper is written on the NPA, and causes for NPA. Secondary data was collected for a period of five years and analyzed by mean, CAGR, ANOVA and ranking bank. The bank was ranked as per their performance in managing the NPA"s. The efficiency in managing the NPA by the nationalized bank of Maharashtra was tested.

Ranjan, R., Dhal, S.C. (2013): This paper explores an empirical approach to the analysis of the bank of Maharashtra' nonperforming loans by regression analysis. The empirical analysis evaluates as to how the NPLs are influenced by three major sets of economic and financial factors, *i.e.*, terms of credit, bank size induced risk preferences and macroeconomic shocks.

Meenakshi Rajeev, H P Mahesh (2010) studied bank of Maharashtra reforms and NPA"S in Indian public bank to examine the trends of NPA"S in India from various dimensions and to explain how immediate recognition and self monitoring has been able to reduce it to a great extent. The study analysed the different aspects of NPA"S like NPA in India, NPAS of bank of Maharashtra as per the different sectors and recovery of naps through various channels. It was found that NPAS in the contributory factor for crisis in the economy and root cause of the recent global financial crisis. It was observed that NPA"S in priority sector is still higher than that of the non priority sector due to socio economic objectives of banks.

Objectives

- To understand the NPAs sector wise.
- To understand the relationship between NPAs and net profit Bank of Maharashtra.
- To understand the recovery of NPAs through various channels.
- To present an overview of the magnitude and dimensions of NPAs Bank of Maharashtra
- To study the impact of recovery process on NPAs of Bank of Maharashtra.

Research Methodology

Hypothesis

- The occurrence of NPAs affects the profitability and financial health of a bank very adversely.
- Monitoring of advances is better in bank of Maharashtra.
- The management of NPAs in is better in Bank of Maharashtra

Scope

- It will be useful to know in which sector bank is more efficient in recovering its credit.
- It will be useful to know about different credit recovery methods adopted by banks.
- It will be useful to know how to reduce the NPAs level of the bank

Limitation

- The study is limited to only five financial years.
- The study is limited only to Bank of Maharashtra.

Primary Data

- Questionnaire

Secondary Data

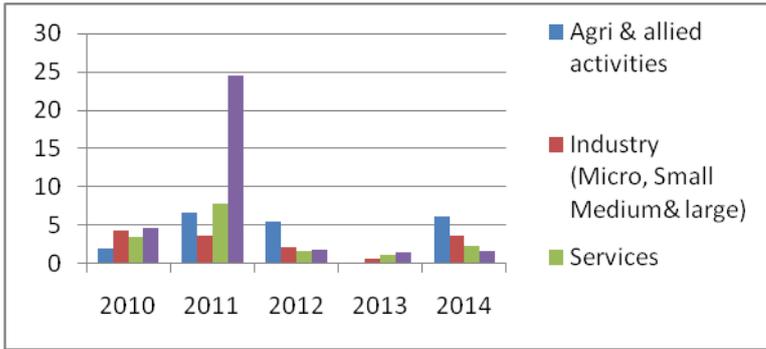
- Annual reports of the bank
- Manual of instructions on loans and advances
- Articles and Research Papers
- Internet

Data Analysis and Interpretation

Table No.1 Sector wise NPA's (in %)

Sr. No.	Sector	% of NPAs to total Advances in that sector				
		2010	2011	2012	2013	2014
1	Agri& allied activities	2.06	6.66	5.53	5.54	6.13
2	Industry (Micro, Small Medium& large)	4.4	3.63	2.2	0.73	3.64
3	Services	3.56	7.83	1.61	1.13	2.26
4	Personal loans	4.64	24.47	1.84	1.5	1.7

Graph No. 2 - % of NPAs to Total Advances in that sector



Bank of Maharashtra Gross NPAs Ratio and Net NPAs Ratio

Graph No. 3 -Total Advances in that sector Gross & Net NPAs (%)

Particular	Years				
	2010	2011	2012	2013	2014
Gross NPA to Gross Advances	2.96%	2.47%	2.28%	1.49%	3.16%
Net NPA to Net advances	1.64%	1.32%	0.84%	0.52%	2.03%

Graph No. 4

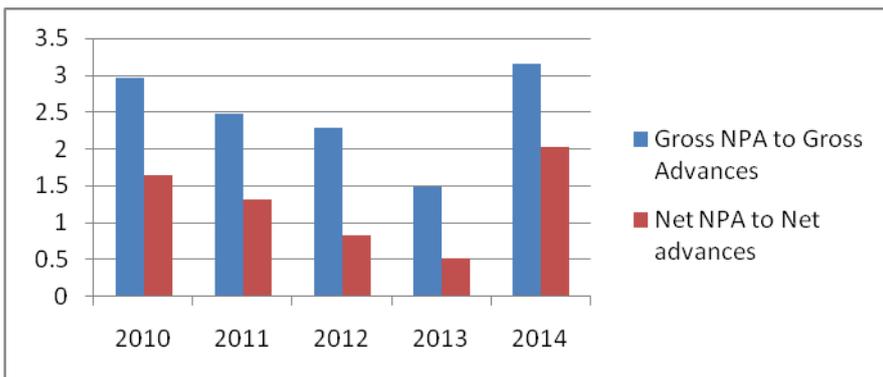
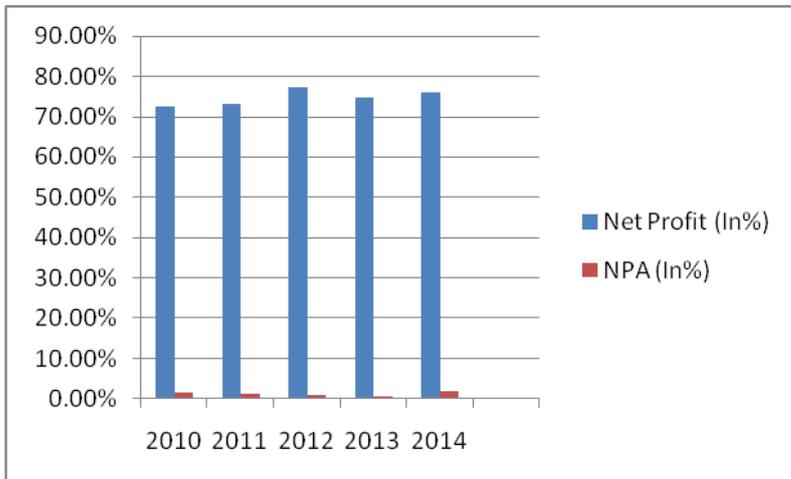


Table No.5 Relationships between Net Profit Ratio and Net NPAs Ratio

Particular	Years				
	2010	2011	2012	2013	2014
Net Profit (In %)	72.66%	73.21%	77.21%	74.81%	76.00%

Net NPA (In %)	1.64%	1.32%	0.84%	0.52%	2.03%
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Graph No. 6



SUGGESTIONS TO CONTROL NPAs:

The Bank should adopt the following general strategies to control NPAs.

The suggestions are as follows:

- Projects with old technology should not be considered for finance
- Large exposure on big corporate or single project should be avoided.
- Operating staffs' credit skills should be up graduation.
- There is need to shift banks approach from collateral security to viability of the project and intrinsic strength of promoters.
- Timely sanction and or release of loans by the bank is to avoid time and cost overruns.
- Bank should prevent diversion of funds by the promoters.
- Operating staff should scrutinize the level of inventories/receivables at the time of assessment of working capital.
- The Credit section should carefully watch the warning signals viz. non-payment of quarterly interest, dishonor of check etc.
- Effective inspection system should be implemented.
- Identifying reasons for turning of each account of a branch into NPA is the most important factor for upgrading the asset quality, as that would help initiate suitable steps to upgrade the accounts.
- The bank must focus on recovery from those borrows who have the capacity to repay but are not repaying initiation of coercive action a few such borrows may help.
- The recovery machinery of the bank has to be stream lined; targets should be fixed for field officers / supervisors not only for recovery in general but also in terms of upgrading number of existing NPAs.

- In the bank there should be a proper manpower planning.
- Bank should try to establish the branches in competitive market, so it will increase their profit.
- Bank has required increasing the cash and bank balances by reducing the unnecessary expenses for future plan

Future Scope

- This project can be used for comparing the performance of the bank with others
- This can also be applicable to know the reasons of increase in NPAs
- This project also gives light upon impact of NPAs
- Concept of NPAs can be made clear

Conclusion

Growing NPAs is one of the biggest problems that the Bank of Maharashtra are facing today. If proper management of the NPAs is not undertaken it would hamper the efficiency of the banks. If the concept of NPAs is taken very lightly it would be dangerous for the banking sector. The NPAs destroy the current profit and interest income and affect the smooth functioning of their cycling of the funds. Banks also redistribute losses to other borrowers by charging higher interest rates. Lower deposit rates and higher lending rates repress savings and financial markets, which in turn hampers the economic growth of the country. Thus, it is highly essential for the banks to focus their attention on growth of NPAs and take appropriated measures to regulate their growth.

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APPLICATION OF HIGHEST COST EXIT METHOD MODEL FOR OPTIMISING TRANSPORT COST

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ABSTRACT

The Transportation Models were originated in 1941, when F.L. Hittchcock presented a study entitled “**The Distribution of Product from Several Sources to Numerous Localities**”, and this presentation Is thought to be the first important contribution to the solution of Transportation Problems. Further, in 1947T.C. Koopman presented an independent study called “**Optimum Utilization of the Transportation System**”. These two contributions assisted in the development of transportation models. Transportation problem is a particular class of LPP. It deals with the situation in which a product is shipped from sources to destination. In nutshell transportation problem is used to optimize the distribution cost. It would be easy to explain the transportation problem by the following case:

INTRODUCTION

The Transportation Models were originated in 1941, when F.L. Hittchcock presented a study entitled “**The Distribution of Product from Several Sources to Numerous Localities**”, and this presentation Is thought to be the first important contribution to the solution of Transportation Problems. Further, in 1947T.C. Koopman presented an independent study called “**Optimum Utilization of the Transportation System**”. These two contributions assisted in the development of transportation models. Transportation problem is a particular class of LPP. It deals with the situation in which a product is shipped from sources to destination. In nutshell transportation problem is used to optimize the distribution cost. It would be easy to explain the transportation problem by the following case:

Suppose a company has three warehouses W, X and Y having limited supply or capacity. From three warehouses, the product is transported to four stores A, B, C and D with specific or limited demand. Each warehouse can transport to each store but the cost of transportation varies for all the combinations. The problem is to find out the quantity that each warehouse should transport to each store in order to **MINIMIZE** total transportation cost.

Supply	Warehouse	Stores	Demand
S1	W	A	D1
S2	X	B	D2
S3	Y	C	D3
		D	D4

Objective

The Transportation Problem is one of the sub-classes of L.P.P in which the objective is to transport various quantities of a single homogeneous commodity that are initially stored at various origins, to different destinations in such a way that the total transportation cost is minimum.

Objective of introducing new method is to simplify the quick solution than any other traditional methods.

PROCEDURE FOR TRANSPORTATION PROBLEM

A method for determining where to locate multiple facilities in order to minimize the total cost of transportation is called transportation method. We begin with an initial basic feasible solution and then obtain an optimal solution by making one improvement to IBFS until; no further decrease in transportation cost is possible.

There are various methods available for finding the IFS of given transportation problem, that are

1. North West Corner Method
2. Row Minima Method
3. Column Minima Method
4. Least Cost Entry Method
5. Vogel's Approximation Method.

Above methods used for calculating IBFS, we come to know that there is no suitable method available or it is difficult to answer to the question: which method is the best one? For this a new and simple technique is discussing here for finding the NEARLY OPTIMAL SOLUTION, which require less computation and steps to reach optimality in comparison to other traditional methods. The technique is called

“HIGHEST COST EXIT METHOD” The other advantage of this technique is that the problem of degeneracy will not arise in IFS. This method is also better than VAM and is based on min-max criteria of Game theory.

APPLICATION

This method is applied with the help of following example and steps:

	I	II	III	IV	Supply
A	190	300	500	100	70
B	700	300	400	600	90
C	400	80	700	200	180
Demand	50	80	70	140	

Step 1

Choose the maximum cost from the table i.e. 700 at cell B II and C III. In case of tie, choose the maximum cost arbitrarily, say C III

	I	II	III	IV	Supply
C	400	80	700	200	180
Demand	50	80	70	140	

Step 2 (a)

Allocate the maximum possible quantity to the minimum cost cell

	I	II	III	IV	Supply
C	400	80	700	200	180
Demand	50	80	70	140	

Step 2(b)

Find the total cost of this allocation i.e. $80 \times 80 = 6400$

	I	II	III	IV	
A	190	300	500	100	70
B	700	300	400	600	90
C	400	80	700	200	180
	50	80	70	140	

Step 3

Repeat step 2 for the column containing maximum cost cell i.e. B I

Step 4

Choose for allocation the cell with minimum cost. In case of tie, select arbitrarily

Step 5

Delete the row or column when the allocation becomes complete. In case of a tie delete either row or column.

Note: if both row and column are required to be deleted, then put ZERO in the minimum cost cell of row or column which are not yet deleted to avoid degeneracy.

Select minimum cost cell i.e. 400 at B III and allocate maximum quantity i.e. 70 units

	I	II	III	IV	

A	190	300	500	100	70
B	700	300	400 (70)	600	90
C	400	80 (80)	700	200	180
	50	80	70	140	

Find the total cost of this allocation i.e. $400 \times 70 = 28000$

Again select the maximum cost cell i.e. still B1 and minimum cost in the row is 600 and at B1v allocate maximum available quantity i.e. 20 units

	I	II	III	IV	
A	190	300	500	100	70
B	700	300	400 (70)	600	90
C	400	80 (80)	700	200	180
	50	80	70	140	

	I	II	III	IV	
A	190	300	500	100	70
B	700	300	400 (70)	600	90
C	400	80 (80)	700	200 (20)	180
	50	80	70	140	

Now out of the available cost left, we have the cell C I with maximum cost. Select that row and obtain the cell with least cost i.e. C I V with Rs 200. Allocate the maximum quantity there and allocate 50 units at A I V. The required matrix is as :

	I	II	III	IV	
A	190 (50)	300	500	100 (20)	70
B	700	300	400 (70)	600 (20)	90
C	400	80 (80)	700	200 (100)	180
	50	80	70	140	

The initial cost is Rs 77,900. If we find IFS by using VAM'S Method, we reach the same solution. But this technique is favorable because:

It requires less computation

Total number of occupied cells is equal to $m+n-1$. Hence, avoiding the degeneracy problem.

FOREIGN DIRECT INVESTMENT, ECONOMIC GROWTH AND FINANCIAL CRISES

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ABSTRACT

The paper studied co-integration between India's FDI inflows and GDP growth rate during 1990-2014 through Johansen co-integration test and Vector Error Correction Model and found one co-integrating equation with unstable VEC model having speedy adjustment of error corrections. This paper also verified that historically FDI inflows declined during the course of all financial crises but in recent US subprime and Euro debt crises East Asian FDI inflows had not found downward. In India, financial crises had negative impact on FDI flows and growth respectively.

Introduction

Foreign Direct Investment has several dimensions. It affects host countries balance of payments and development process. It has long run effects on economic growth and sustainable development which depend on the character of FDI. However, the nexus between growth and FDI is indeterminate since it varies from region to region, country to country and from period to period although the globalization, liberalization and privatization drives accelerated the speed of the nexus towards positive direction irrespective of the distribution of income. Historically, FDI changes from merchants' capital to multinational investments, from imperialistic attitude to trade domination through economic integration (via financial integration) in international trade and finance.

FDI does not cause crises directly, but it has indirect causes of bubbles and busts. Debt finance through FDI may stimulate debt burden under recession. Financial and banking crises may emerge if FDI in banking sector find losses and shut downs. Yet we cannot avoid the fact that FDI does not Granger cause of financial crises but financial crises do Granger cause FDI changes which were observed in all the financial crises in the world .This paper will endeavor to verify those propositions in the world economy as well as in the Indian Economy using econometric analysis and other important studies.

II.Economic growth-foreign direct investment nexus

[A] Literature review

The nexus between Growth and FDI inflows varies from country to country, from one period to another and from one sector to other in which there are many economic literatures that represent economic relevance. Ragimana (2012) studied that FDI growth nexus is positive in Solomon Island during 1970-2010 which was verified through Granger Causality test and Co-integration test. Adelake (2014) found that FDI has positive over all effect on economic growth in Sub Saharan Africa, although the magnitude of this effect depends on some country specific features during 1996-2010 of 31 SSA countries of panel data where role of governance should positive on encouraging FDI inflows. Tintin (2012) showed that FDI spurs economic growth and development in developed ,developing and the least developed countries which was found from the study of a sample of 125 countries (38 developed,58 developing and 29 least developed countries) over the 1980-2010 period by using least square method of the panel data. Stehrer and Woerz (2009) verified the relation in OECD and non OECD countries during 1981-2000 and found that a 10% increase in FDI can increase 1.2% in growth rate per year. Li and Liu (2005) studied 84 countries using data of 1970-1999 period and concluded that a 10% increase in FDI can stipulate 4.1% growth rate per year. Johnson (2006) took 90 developed and developing countries using data of 1980-2002 period and concluded positive relation through OLS method. Ewing and Yang (2009) studied 48 states in USA during 1977-2001 in manufacturing sector and found direct relation between growth and FDI. Hansen and Rand (2006) used co-integration and causality tests in 31 developing countries during 1970-2000 and showed positive relation. Herzer et.al (2008) verified the nexus in 28 developing countries during 1970-2003 and found positive nexus. Nair (2010) showed that FDI has a positive and highly significant effect on overall growth in India during 1970-2000 in regression results which leads to an increase in market size. The result proves that it cannot be rejected that the FDI does not Granger cause GDP growth at the 5% level, but it can be reflected that GDP growth does not Granger cause FDI. Tiwari and Mikhai(2011) verified that exports and FDI show a significant and positive impact on economic growth in a panel of 23 Asian countries during 1986-2008.Chakraborty and Basu (2002) suggest that GDP in India is not Granger caused by FDI ,the causality seems to run more from GDP to FDI. Oluwatosin, Oluoegun, Fetus and Abimbola (2012) showed that FDI has positive linkage over economic growth in five ECOWAS countries during 1970-2005 which was verified through Granger causality tests in VEC model. Yesuf and Tsehaye (2012) investigated the causal link between FDI and economic growth in Ethiopia during 1974-2010 and did not find any causality running from FDI to growth or vice versa but there was an evidence of co-integration between FDI and growth. The flow of FDI is too small to translate into growth. Using the VAR Granger causality/Block Exogeneity Wald Test in Cote d'Ivoire during 1980-2007, N'guessan and Yue (2010) concluded that there is a long run relationship between FDI, trade openness and growth which stated that about 10% increase

in trade openness would lead to about 97% growth of output and 10% increase in FDI would result in about 1% in growth of output.

[B] A Case Study: India

[i] Nature, Methodology and data

Since the Baring crisis in 1870, India's FDI was dominated by British imperialism through East India Company whose chief competitors were Dutch East India Company, Danish East India Company, Portuguese East India Company, French East India Company and Swedish East India Company respectively. In 1913, India's foreign investment stood 35% of GDP and per capita foreign investment was 6 dollar at 1900 US dollar and foreign direct investment as percent of domestic capital stock was 9% and FDI as of GDP is 19.39% in 2014. The highest share was occupied by Mauritius,36%, followed by Singapore,12%,UK , 10%,Japan,8%,and USA,6% respectively. Service sector is leading the sectoral distribution of FDI ie 18%, followed by construction development,11%,telecommunication and computer , 6% each, and drug and pharmaceuticals, 5% respectively in 2013-14 .

In applying econometric models, we have studied the nexus between growth and foreign direct investment inflows in India during 1990-2014. We have collected data of foreign direct investment inflows in million dollars and GDP growth rate percent per year from the World Bank for the above mentioned period. To regress the estimated relationship between the two, we use double log model. We tried to analyse the co-integrating relation using the Engle-Granger Methodology of Cointegration (1987) and Johansen Test of cointegration (1988). Finally we used Cointegration and Vector Error Correction Model of Johansen (1991)

[ii] Observations from the Econometric models.

The semi-log linear model suggests that India's FDI inflows has been increasing at the rate 21.76 % per year during 1990-2014 that is given below,

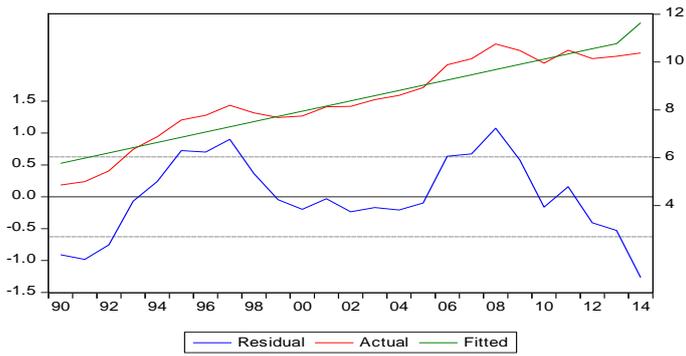
$$\text{Log}(y) = 5.5518 + 0.21761t$$

$$(21.85)^* \quad (12.918)^*$$

$R^2=0.878$, $F=166.87^*$, $DW=0.43$, where y =FDI inflows and t =year.*= significant at 1% level

This test is statistically significant and the fitted and the actual trend line of FDI are moving upward which are seen in the Fig.1

Fig-1: Growth of FDI inflows during 1990-4



Source-Computed by author

Again, the estimated double log linear model suggests that one percent increase in foreign direct investment inflows per year in India induced to increase GDP growth rate by 0.1339% per annum during 1990-2014 which is statistically significant. The estimated regression equation is given below.

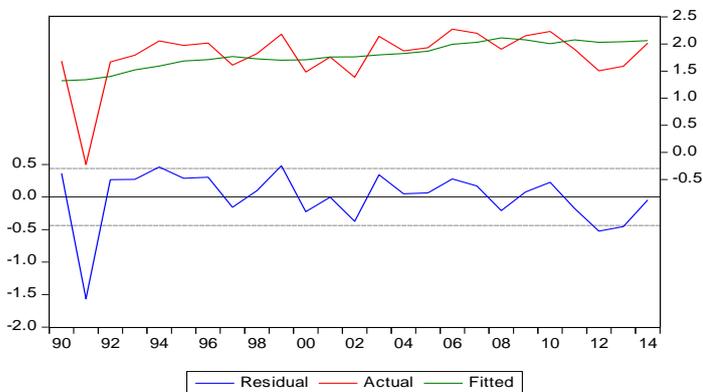
$$\text{Log}(x) = 0.67055 + 0.133923 \log(y)$$

$$(1.470) \quad (2.5231)^*$$

$R^2=0.2322$, $F= 6.956^*$, $DW= 2.17$, where * = significant at 5% level , $y=$ FDI inflows and $x=$ GDP growth rate

In the Fig- 2 , the estimated trend line which is non-linear and the actual line is given below.

Fig-2: FDI inflows and GDP growth rate of India during 1990-2014



Source- Computed by author

ARIMA(1,1,1) test proves that the FDI inflows series is non-stationary which is estimated below,

$$Y_{1t} = 33449.47 + 0.938989Y_{1t-1} + \varepsilon_t - 0.2413\varepsilon_{t-1}$$

$$(0.814) \quad (9.2419)^* \quad (-0.998)$$

$R^2 = 0.749$, $F = 31.476^*$, Inverted AR root = 0.94 and Inverted MA root = 0.24, * = significant at 5% level.

Using ML-ARCH(Marquardt) normal distribution, the GARCH(1,1) model shows that FDI is strongly volatile.

$$h_t = 2.32E+08 + 1.845774\varepsilon_{t-1}^2 - 0.52166h_{t-1}$$

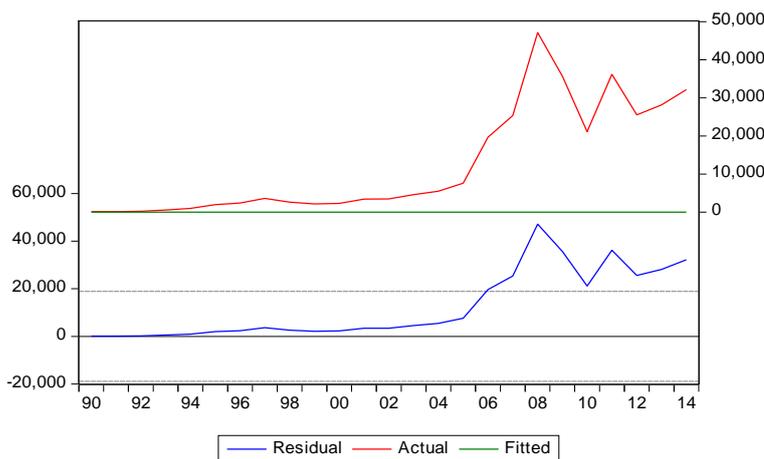
$$(1.652) \quad (0.789) \quad (-2.645)^*$$

$R^2 = -0.778$, $AIC = 22.09$, $SC = 22.24$, $DW = 0.153$, $\log \text{likelihood} = -273.1179$, * = significant at 1% level.

This GARCH(1,1) is plotted below in Fig-3 which is heteroskedastic with conditional variance i.e. the model suffers from GARCH error having conditional heteroskedasticity in which conditional variance of the error process is h_t where $E_{t-1}\varepsilon_t^2 = E_{t-1}v^2h_t = h_t$

The conditional variance of the error process is not constant. With the appropriate specification of the parameters of h_t , it is possible to model and forecast the conditional variance of the X_t process.(Fig-3). This behavior of India's FDI inflows does not assure positive signal for FDI-led economic growth.

Fig-3: GARCH (1,1) of FDI inflows



The Granger Causality Test using two period lag showed that y does not Granger Cause x where F statistic is 0.3376 which is not significant ($\text{prob} = 0.7179$) and x does not Granger Cause y where F statistic is 1.21768 which is not significant ($\text{prob} = 0.319$). So, this test proved that x and y are not co-integrated.

Engle and Granger Method of co-integration(1987) suggests that when conducting ADF test of residual including first order constant and no trend values of the estimated co-integrating equations of $\log y$ and $\log x$, we get $ADF = -$

5.2936 at level series which is significant at 5% level. So, it has unit root .Therefore, null hypothesis of no co-integration is rejected.

Lastly, the Johansen Co-integration test verified that there is co-integration between log values of GDP growth rate and FDI inflows in India during 1990-2014 because both the Trace Statistic and Max-Eigen Statistic were found significant at 5% which showed one co-integrating equation. These are verified in Table-1.

Table -1: Johansen Co-integration Test

Unrestricted Co-integration Rank Test(Trace)				
Rank	Eigen value	Trace statistic	0.05 critical value	probability
None*	0.481157	16.46251	15.49471	0.0357
At most1	0.057865	1.370956	3.841466	0.241

Trace test indicates one co-integrating equation at the 0.05 level,*Denotes rejection of the hypothesis at the 0.05 level,**Mackinnon –Haug-Michelis (1999) p-values

Unrestricted Co-integration Rank Test(Maximum Eigen value)				
Rank	Eigen value	Max-Eigen statistic	0.05 critical value	probability
None*	0.481157	15.09156	14.2646	0.0369
Atmost1	0.057865	1.370956	3.841466	0.2416

Max Eigen test indicates one co-integrating equation at the 0.05level

Since , the FDI inflows and growth rate of GDP is co-integrated ,therefore ,it is better to verify the nexus between growth and FDI inflows during 1990-2014 in India using Vector Error Correction Model following Johansen (1996) that is estimated as given below,

$$\Delta X_t = 0.286138 + 0.11831\Delta X_{t-1} + 6.35E-06\Delta Y_{t-1} - 0.9479EC_t + V_t$$

(0.78) (0.589) (0.1309) (-3.824)*

$$R^2=0.534 , F=7.26 , AIC=4.096 , SC=4.29 , \text{loglikelihood}=-43.1102$$

$$\Delta Y_t = 1671.78 - 689.6229\Delta X_{t-1} - 0.24246\Delta Y_{t-1} + 1576.934EC_t + V_t$$

$$(1.024) \quad (-0.7712) \quad (-1.1229) \quad (1.428)^*$$

$R^2 = 0.145$, $F = 1.0749$, $AIC = 20.898$, $SC = 21.096$, $\text{loglikelihood} = -236.38$, * = significant at 10 % level

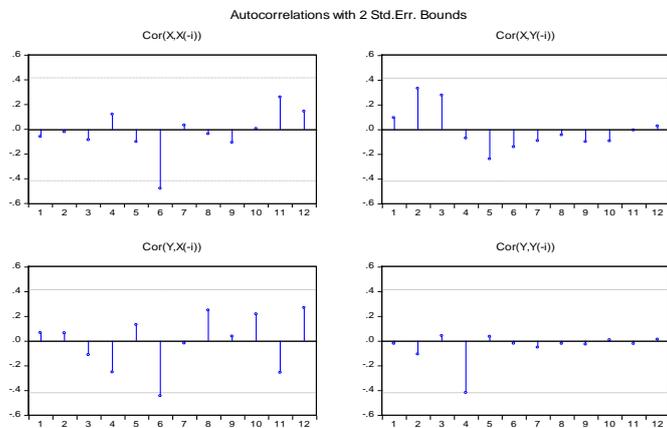
The estimated equations are not significant but the error corrections terms became highly significant in reaching equilibrium very speedily per year. The diagnostic tests for residuals are given below.

Diagonostic Test

[1] Autocorrelation test

The residuals contains problem of autocorrelation as are shown in the Fig- 4 below,

Fig-4: Autocorrelation test



Source- Computed by author

Therefore, the null hypothesis of no autocorrelation is rejected

[2] ARCH test

For equ-1, LM statistic = 0.00459 with ρ value = $\chi^2(1) > 0.00459 = 0.9459$

For equ-2, LM statistic = 0.220319 with ρ value = $\chi^2(1) > 0.220319 = 0.6387$

Therefore , Null hypothesis of no ARCH error is rejected

[3] Normality test

The Chi-square distribution of skewness ,Kurtosis and Jarque-Bera in both component and joint are not significant at 5% level,therefore, Ho=residuals are multivariate normal is rejected.It is shown in Table- 2.

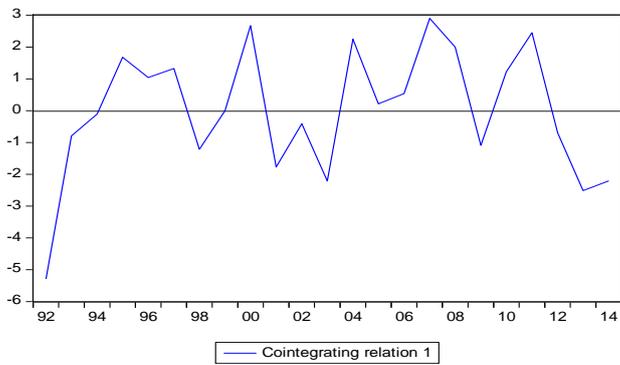
Table-2: Normality Test

Component	Skewness	Chi-sq	df	Prob.
1	-0.138454	0.07348	3	0.7863
2	-0.235330	0.21229	0	0.6450
Joint		0.28577	3	0.8669
Component	Kurtosis	Chi-sq	df	Prob.
1	2.304255	0.46389	2	0.4958
2	5.279504	4.97963	4	0.0256
Joint		5.44352	6	0.0658
Component	Jarque-Bera	df	Prob.	
1	0.537375	2	0.7644	
2	5.191924	2	0.0746	
Joint	5.729299	4	0.2203	

Source- Computed by author

The cointegration are volatile and unstable which showed in Fig-5,

Fig-5:Co-integration graph



Source-Computed by author

The VEC roots of characteristics polynomial showed that there are one unit root, two imaginary roots and one is negative root all of which lie inside the unit circle which is shown in the Table-3 and in Fig-6, and it proves that the cointegration between FDI inflows and GDP growth rate of India during 1990-2014 is in the order of CI(1).

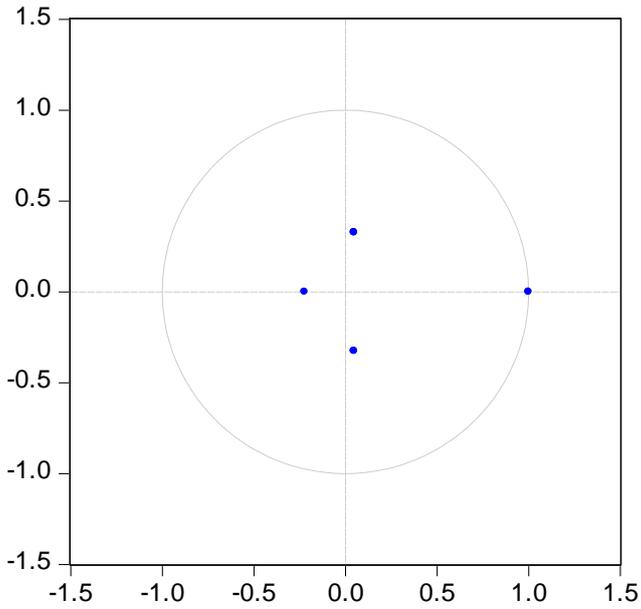
Table-3: Values of roots

Root	Modulus
1.000000	1.000000
0.046780 - 0.327016i	0.330345
0.046780 + 0.327016i	0.330345
-0.222746	0.222746

Source-Computed by author

Fig-6: Unit root circle

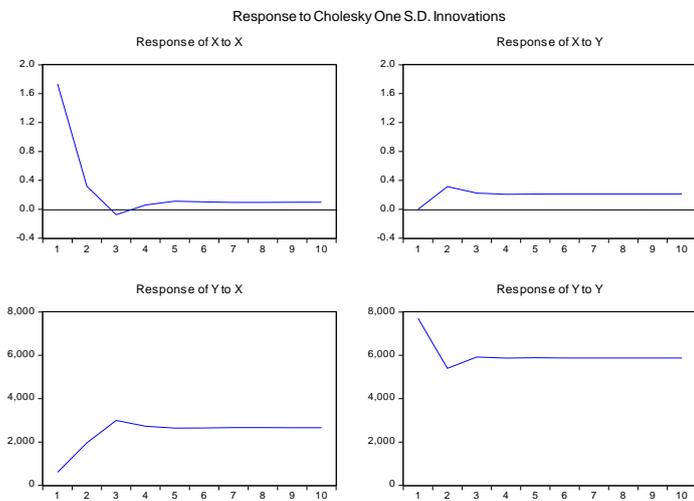
Inverse Roots of AR Characteristic Polynomial



Source- Computed by author

Moreover, the Impulse Response Function in a combined figure, we found that they are not converging, which proved that the co-integration is unstable. In Fig-7, it is clearly given in the diagram.

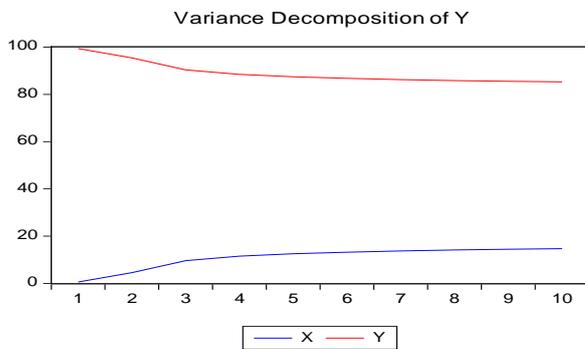
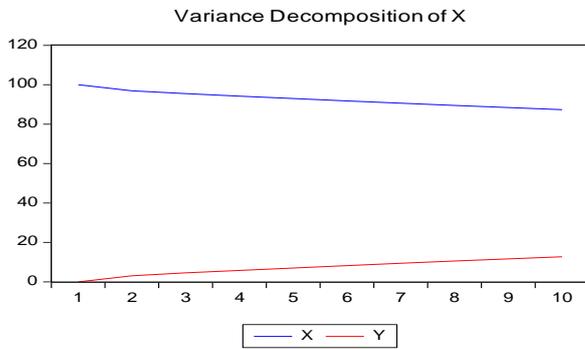
Fig-7: Impulse Response Function



Source- Computed by author

Even the variance decompositions are diverging from zero which is also verified by the VEC model and is shown unstable in Fig-8.

Fig-8: Variance Decomposition



Source- Computed by author

[iii] Limitations and future studies

Econometric models discussed here are limited to single determinant of FDI but there are number of variables by which inflows of FDI depends on. Of them policy variables are liberal industrial policy and trade policy, foreign exchange policy, tax policy etc. FDI depends on the market size and other economic variables namely, [i] foreign exchange reserves, [ii] infrastructure, [iii] cost of capital/interest rate, [iv] cost of labour, [v] degree of openness, [vi] exchange rate and so on. The important determinant of FDI inflows is economic stability which covers the areas of [i] debt/GDP ratio, [ii] industrial dispute, [iii] inflation rate, [iv] BOP deficit. Even we cannot ignore the political stability of the host country as the crucial determinant of FDI. Therefore, the application of multivariate co-integrated VAR model is the appropriate task to study determinants of FDI in India.

III. Analytical framework of financial crises and FDI

Capital inflows played a great role in financial crises in which foreign direct investment is of primary importance because current account imbalance during financial crises is somehow corrected through capital inflows or huge foreign direct investment for getting boosting output and growth. The general findings are that a severe decline of trends in FDI in the period of crises and decline in growth rates were observed. The impact of the crisis varies widely depending on region and country. A 1% increase in FDI/GDP ratio is followed by a 0.80% increase in future domestic investment/GDP in Africa. The anticipated decline crisis would therefore adversely affect the country's performance. (Mwega, 2009)

In 1914, total foreign investment of USA (FI = FDI + FPI) was 19.5% of GNP while FDI was 4.7%. By 1918, the total (FI) was down to 3.9% while FDI was 1.3%. The 1920s did not change these percentages very much but the 1930s raised them so that by 1939 they stood at 6.8-9.6% and 3.2%, respectively. By the end of World War II, total FI was 3.7% and FDI was 1.3%. Wilkins's rich account of foreign investment in the U.S. is also a major part of the story of the retreat from the pre-World War I high-tide of globalization.(*Wilkins,2005*)

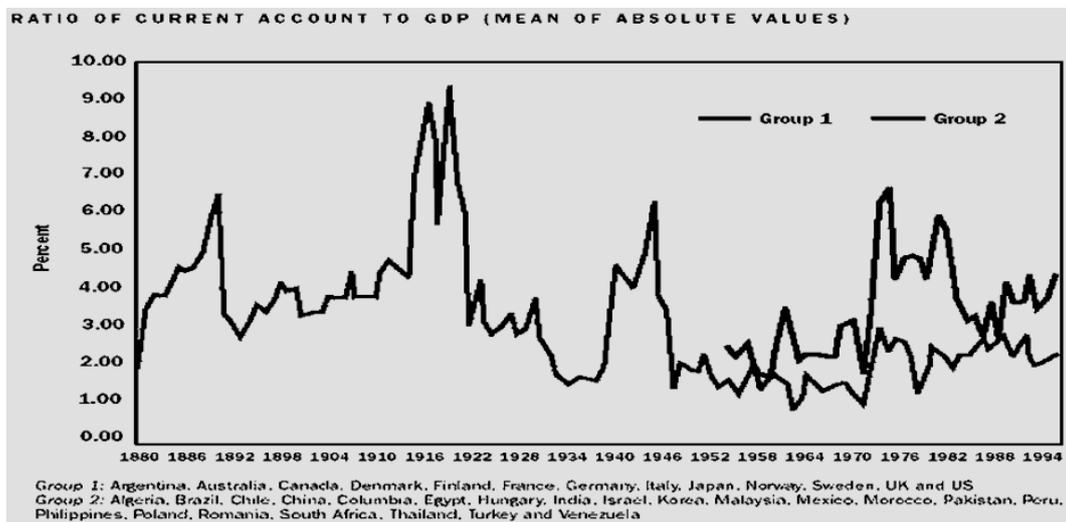
In the post war period, British and France lost foreign investment amounting in all to somewhere between 4 and 5 billion dollars ie approximately 25% of British and 50% of French prewar foreign investment although in 1914,34 countries (10 developed and 24 less developed countries) produced 97% of world GDP and received 92% of British capital which spread into wider area and moved to Brazil, Mexico, Chile, Egypt, South Africa, India, Russia and Far East. During and after the War Germany lost practically all her foreign investment amounting to sum 5-8 billion dollars .After the first world war ,British foreign investment in third world was stagnant, the Netherlands, Belgium and Japan all expanded their investment into their colonies rather continually up to world war II , while not having appreciable FDI in the rest of the third world.(*Twomey,2002*)

In 1915, the British FDI was 43 million pound which increased to 110 million pound in 1916 and then started to decline and stood 60 million pound in 1917 and 23 million pound in 1918 respectively. On the other hand, during 1924-30, 10-11 billion dollar capital flowed in the world in which 60% came from USA, 15% from UK and France and balance from Switzerland, Netherland, Czechoslovakia and Sweden respectively. In the 1930s the crisis was global because the great depression was global. Assuming 1929 as 100, the world trade index fell to 39,export value and import price declined to 74 and 52 respectively and world industry production , Europe and North American industry production fell down to 64,42, and 54 respectively in 1932 as 1929 as the base. Even the value of export sharply fell to 45 for Germany, 39 for France, 36 for UK and 40 for Europe.

FDI had a strong negative effects in the Baring Crises of 1890,the American Panic of 1907,the Financial Crises of July-August 1914,the banking crises of the Great Depression of the 1930s,the Financial Instability of the early 1970s ,the International Debt Crisis of 1982,the Japanese Banking Crisis of 1997-8,and the US Financial Debacle of 2007-8, and Euro crisis of 2009-10,respectively.

In the Fig- 9, the extent of capital flows as measured by the ratio of current account and GDP have been plotted and it is easily explained that in every financial crisis since 1880 where down fall of capital flows in the world economy is verified during 1880-1994.

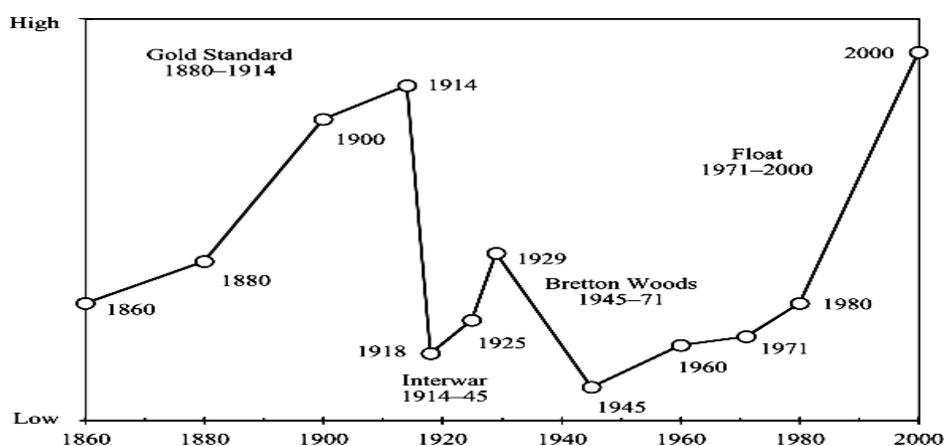
Fig.-9 ,Trend of Foreign investment flows during 1880-1994



Source- Tarden ,1903

More or less similar pattern of foreign investment had been observed in different international monetary system during 1860-2000 where the gold standard had enjoyed the maximum benefit from the foreign investment as was evident in 1900s but there was a sharp fall of the foreign investment in all the financial crises as observed in the monetary systems (Fig-10). In the gold standard during 1860-1914, Britain's supremacy of FDI flows in the world was noticed and the Gold Standard broke down in 1931. The War and the depression in the interwar period there was the great fall of world FDI flows although US FDI outflows began to increase. After the Bretton Woods, the FDI flows started to increase speedily where US dominance could not be ignored but Japan's hegemony in 80s and 90s is the important phenomenon when floating exchange rate in the international monetary system was activated after the break down of Bretton Woods and US dominance in foreign capital started to decline due to emergence of capital flows from Euro Area under European Monetary System.

Fig.-10 :Trend of Foreign investment in different monetary system during 1860-2000



Source-Tarden, 1903

FDI inflows declined only in Developing and SAARC countries and outflows of FDI declined only in NAFTA and no other countries or blocs had no major adverse impact as a result of Financial crisis in 1970. The oil shock of 1979

along with Mexican crisis had a great impact of declining donor countries FDI flows but the developed countries shortfall of inflows was seen only in 1980 but no adverse impact of FDI inflows was observed.

Table- 4: FDI flows during the crises of 1970 and 1979

	FDI inflows(million Dollar)							
	1970	1971	1972	1973	1979	1980	1981	1982
Developing C	3854	3631	3423	5175	8505	7469	24003	26353
SAARC	68	49	35	36	148	203	255	203
ASEAN	459	559	596	1245	1698	2636	3596	3624
USA	1260	870	1350	2120	8700	16918	25195	13810
UK	1488	1771	1207	2722	6469	10122	5879	5413
NAFTA	3395	3449	3641	5761	14539	24824	28932	15834
Japan	94	210	169	-42	239	278	189	439
EuroArea	3457	3881	5020	6487	10443	10791	9915	8291
	FDI Outflows(million Dollar)							
Dev.C	14100	14395	15656	25808	62453	48397	49931	24803
NAFTA	8521	8075	7027	12518	30320	23331	18806	3575
EuroArea	3144	3591	4543	5687	15438	13180	14705	10347
USA	7590	7618	7747	11353	26493	19230	13227	1078
UK	1678	1988	2017	4981	12539	7881	9386	3707
Japan	355	360	723	1904	5965	6440	14402	20101

Source-www.unctad.org

FDI inflows in South America including Brazil declined steadily and could not reach its peak level of 1970. There was a marginal adverse effects in developing countries and Argentina in 1983 only. No donor countries' FDI outflows fell down abruptly except in LAIA ,Japan and Brazil in 1983 as a result of International debt crisis in 1982 and oil shock.

Table-5: International debt crisis and oil shock in 1982

	FDI Inflows(million dollars)				
	1982	1983	1984	1985	1986
Argentina	227	185	268	919	574

Brazil	3115	1326	1501	1418	317
Mexico	1900	2191	1540	1983	2400
Caribbeans	132	89	895	294	259
Developing C	2074	1322	1884	2442	1770
S.American C	4498	2659	1561	3699	1765
FDI Outflows(million dollars)					
USA	1078	9525	13045	13388	19641
UK	3707	5302	7733	11068	17294
Japan	4540	3612	5965	6440	14402
Brazil	376	188	42	81	144
Argentina	-30	2	44	11	48
Euro Area	10347	10759	12252	13255	24964
FTAA	4566	12555	16867	17881	24377
LAIA	1164	425	112	580	1088

Source-www.unctad.org

Asian financial crisis and Japanese banking crisis broke out in mid 1990s where depreciation of currencies, decline of growth rate and employment, shuttered financial integration and disrupted capital flows. But the impact of this crisis in EU, USA, Africa was nil in case of FDI inflows but there is little impact of FDI inflows in China, India, Asia and South East Asia where inflows declined from 1998 in China and India, and declined only in 1998 in South Asia ,East Asia and South East Asia. On the contrary, Japanese FDI outflows fell down sharply since 1997 and Chinese FDI outflows fell down only in 1999 but India's outflows declined from 1997 .Other regional outflows were undisturbed.(Table-6)

Table – 6: Capital Flows in Asian financial crises

	FDI Inflows (million Dollar)								
	EU	USA	China	India	Japan	Africa	SA,EA,SEA	W.Asia	LAC
1995	113480	58772	35849	2144	39	4694	73639	-2	12765
1996	109642	84455	40180	2591	200	5622	89406	2892	20585
1997	127626	103398	44237	3613	3200	7153	98507	5488	25889
1998	261141	174434	43751	2614	3268	7713	86004	6580	29898
1999	467154	294976	40319	2154	12741	8971	96224	936	34422
2000	617321	281115	40772	2315	8149	8198	137348	3427	31090

	FDI Outflows (million Dollar)								
1995	159036	92074	2000	119	22508	509	41824	-991	7306
1996	183180	84424	2114	244	23442	28	49683	2273	5549
1997	220416	95769	2563	113	26059	1708	49482	-281	14391
1998	454266	131004	2634	48	24152	897	29985	-1698	8048
1999	720052	142551	1775	79	22743	632	34447	656	21753
2000	772949	139259	2324	336	32886	744	83641	1284	13442

Source-World Investment Report-2001

The first indications of a global financial crisis emerged in the middle of 2007 with rising defaults on subprime mortgages in the U.S. Not only private financial institutions (such as Lehman Brothers and Morgan Stanley), but even nations (such as Iceland) found themselves on the verge of bankruptcy. As financial institutions have been increasingly forced to raise capital and tackle the liquidity problem, decreasing international bank lending, falling stock exchanges, declining portfolio investment, and initial public offerings (IPOs) put the international financial market on hold.

Subsequently, Euro debt crisis began and spill over globally which had tremendous impact on current account balance, output and financial market too in EU and abroad. International liquidity on Euro fell down and FDI flows declined abruptly.

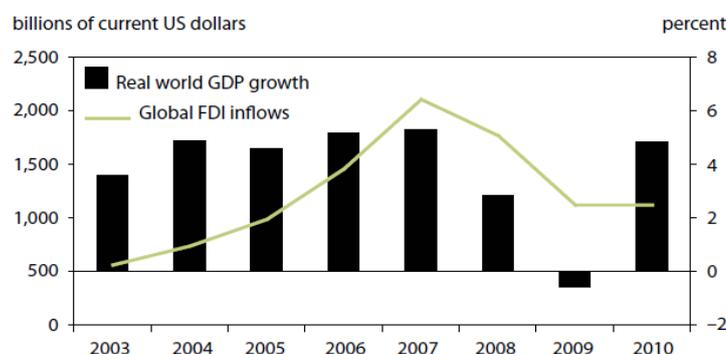
Global FDI hit a record peak in 2007 (2 trillion US\$ or 16% of world gross fixed capital formation) but dropped sharply in 2008 for both inward and outward FDI flows (34% for outflows and 52% for inflows).While incoming FDI flows recovered slightly in 2009 and EU FDI outflows continued to decline by 24% and total world flows in 2010 reduced to 1 trillion US\$.In Table-7, FDI inflows of USA , EU, Africa, West Asia, India, Japan and developing countries declined from 2008 or 2009 but FDI inflows in China, South East Asia , East Asia and Latin America and Caribbean dwindled only in 2009 and then revived. On the other hand, FDI outflows of EU , USA and Japan who are dominant donor of FDI fell down sharply from 2008 but there was little impact of FDI outflows of developing countries, south east Asia, East Asia and China although India's FDI outflows declined from the beginning of the financial crisis.It was also well known that the growth rates of developed countries and the EU declined during the crisis. The revival of EU has started in last year after collapse of Euro crisis. Conversely the extent of decrease in GDP growth rates was smaller in some Asian countries than Europe and America. In Fig-11, the global FDI flows and growth moved towards the similar direction downward since the crisis but there was no recovery of FDI although the growth started to recover.

Table-7: Capital flows in recent financial crises

FDI Inflows (million Dollar)											
	EU	USA	China	India	Japan	Dev.C.	Africa	SEA	W.Asia	LAC	EA
2007	906531	215952	83521	25350	22550	589430	51274	85640	79609	171929	165104
2008	571797	306366	108312	47139	24426	668439	58894	50543	93546	210679	195454
2009	404791	143604	95000	35657	11939	530289	52964	47810	71919	150150	162523
2010	429230	197905	114734	21125	1251	637063	43582	97898	59459	189855	214604
2011	472852	226937	123985	36190	1755	735212	47598	109044	49058	249432	233818
2012	275580	167620	121080	25542	1731	702826	11502	111336	47119	243861	214804
FDI Outflows (million Dollar)											
2007	1257890	393518	26510	17234	73548	330033	11081	59640	34063	80257	127132
2008	982036	308296	55910	21147	128019	344034	10080	32255	37680	97773	143509
2009	381955	266955	56530	16031	74699	273401	6281	39345	17890	55512	137783
2010	497801	304399	68811	15933	56263	413220	9311	47414	13398	119236	206777
2011	536499	396656	74654	12456	107601	422067	5376	58957	26184	105154	212519
2012	329131	328869	84220	8583	122551	426082	14296	60592	23941	103045	214409

Source- World Investment Report-2013

Fig-11: Global FDI and Growth since crisis



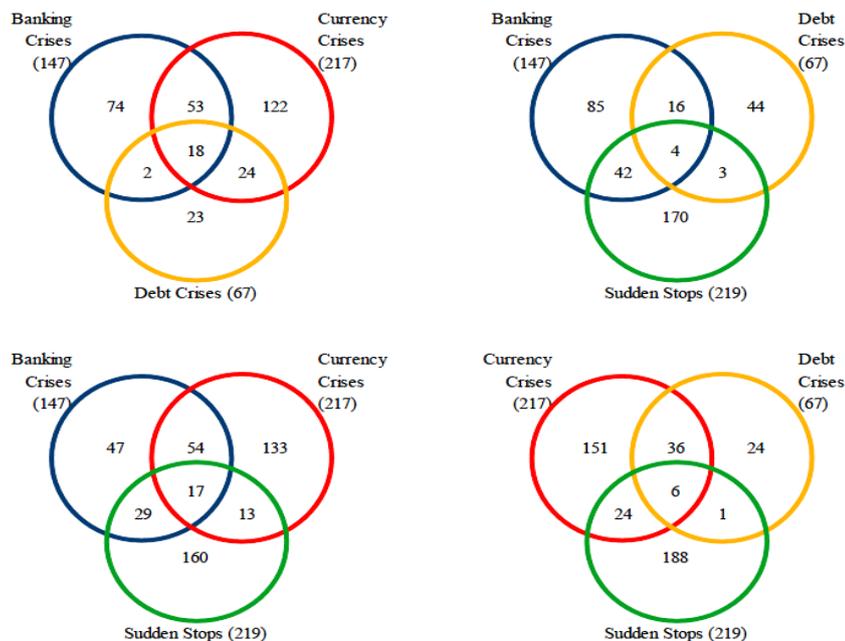
Sources: United Nations Conference on Trade and Development; International Monetary Fund.

Financial crises were often preceded by asset and credit booms that eventually turn into busts. Some historical asset price bubbles and crashes are well known: Dutch Tulip Mania from 1634-1637, the French Mississippi Bubble in 1719-20 and the South Sea Bubble in UK in 1720. European financial crisis of 1763, which involved highly levered and interlocked financial ties between Amsterdam, Hamburg, and Prussia and resulted insignificant asset resales affected by market participants. The major banking crises occurred in the U.S. in 1837 and in 1857. After the creation of a national U.S. banking system, banking panics occurred again (in varied forms) in 1873, 1884, 1893, 1907, and 1914. The Great Depression ultimately caused a full-blown international banking crisis. The South

American debt crises led to the Brady Plan in 1989. A painful bust occurred in Scandinavia in the early 1990s by banking crises in Finland, Norway, and Sweden. The burst of the bubble led to large drops in output in all three countries. Japan also suffered a major financial crisis in the early 1990s. In 1997 and 1998, the focus fell on East Asian countries and Russia. After large equity and real estate booms in East Asia, a run on Thailand's currency (the baht) led to a reversal of international capital flows to the entire region, triggering a financial crisis that quickly spread to other East Asian countries, such as Indonesia and Korea. In 2001, Argentina was unable to sustain the level of public sector debt it had accumulated over the 1990s. In January 2002, Argentina suspended the peso's peg to the dollar. Within a few days, the peso lost much of its value. The crisis led to a severe decrease in GDP and a spike in inflation. Ultimately, Argentina defaulted on its debts. In 2007-08, the US financial crisis began and spread over the world. The great financial crisis of 2008 in EU led to debt crises in Greece, Ireland, Italy, Portugal, and Spain. These crises known as Euro crisis also highlight the intimate connection between banking crises and sovereign debt crises.

Laeven and Valencia (2013) reported that there are 147 banking crises, 217 currency crises, and 67 sovereign debt crises over the period 1970 to 2011. Currency crises frequently tend to overlap with banking crises – so called twin crises (*Kaminsky and Reinhart, 1999*). In addition, sudden stop crises, not surprisingly, can overlap with currency and balance-of-payments crises, and sometimes sovereign crises. Of the 431, banking (147), currency (217) and sovereign (67) crises Laeven and Valencia (2013) reported that they consider 68 as twin crises, and 8 can be classified as triple crises. (Fig-12) A systemic banking crisis, for example, often involves a currency crisis and a sovereign crisis sometimes overlaps with other crises, 20 out of 67 sovereign crises are also a banking and 42 also a currency crisis. Laeven and Valencia (2013), estimate that fiscal costs, net of recoveries, associated with crisis are on average about 6.8 percent of GDP. They can, however, be as high as 57 percent of GDP and in several cases are over 40 percent of GDP (for example Chile and Argentina in the early 1980s, Indonesia in the later 1990s, and Iceland and Ireland in 2008). Debt crises are more costly than banking and currency crises and are typically associated with output declines of 3-5 percent after one year and 6-12 percent after 8 years. Using a larger sample, Laeven and Valencia (2013) report the median increase in public debt to be about 12 percent for their sample of 147 systemic banking crises. Sudden stops are especially costly. Using a panel data set over 1975–1997 and covering 24 emerging markets, Glick and Hutchison (2011) finds that while a currency crisis typically reduces output by 2–3%, a sudden stop reduces output by an additional 6–8 percent in the year of the crisis. The cumulative output loss of a sudden stop is even larger, about 13–15 percent over a 3-year period.

Fig-12: Coincidence of Financial Crises



Source-Laeven and Valencia (2008,2011)

IV. Conclusion

This paper concludes that the growth-FDI nexus is not generally established in either direction. The co-integration and VECM model suggests that in India during 1990-2014, growth rate of GDP and FDI inflows are co-integrated in the order of (1,1). India's FDI inflows has been increasing at the rate of 21.76% per year which is verified through semi log linear model although this trend has unit root and is non-stationary shown in ARIMA (1,1,1) model having strong volatility which was found in GARCH(1,1) model. VEC model is unstable although the errors have been correcting speedily per year.

The paper also concludes that FDI does not cause Granger financial crises but financial crises do cause Granger FDI. In every financial crisis since 1890, FDI changes downward but in Euro crises and US subprime crises, FDI did not decline in most of the East Asian countries. The declining growth and FDI in all financial crises were the general phenomenon. Also in India, financial crises had negative impact on FDI and growth.

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The Impact of Trade Liberalisation on Services Trade: An Empirical Study on some Selected ASEAN Countries

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1. Introduction

Trade in services play a key role in all economies. Trade in services creates employment for most of the economies and a catalyst for economic growth. Increased services trade may increase GDP growth and hence employment by providing important intermediate inputs to the all kind of industries.

The aim of the paper is to examine the role of trade liberalisation on the trade in services for the ASEAN region.

The organisation of the paper is as follows;

I'll present the analytical background in section 2. In section 3 represents methodology and data sources. In section 4 is about the results and finally section 5 concludes.

2. Analytical Background

The importance of assessing the impacts of liberalising trade in trade in services is growing. Deardorff (2001) using partial equilibrium trade model have examined the role of services trade liberalisation on trade in services and trade in goods. In this model, he argues that a reduction in the transportation cost has similar impact on the goods trade as a reduction in a tariff.

However, there are very few studies which deal explicitly the impact of liberalising trade on the trade in services for the selected countries in ASEAN region. The present paper seeks to fill this lacuna and it aims to investigate the impact of trade liberalisation on the trade in services on a for the ASEAN region. In this paper we have considered four economies from the ASEAN region. The countries are; Singapore, Malaysia, Philippines and Thailand.

Though our primary objective is to find out the impact of trade liberalisation on trade in services for the ASEAN region, we would also like to investigate the role of the per capita real GDP and also the role of exchange rate on trade in services.

3. Empirical Method and Data

We are interested in estimating the effect of the trade liberalisation on trade in services. We estimate the following models:

$$\log(S)_{it} = \beta_1 + \beta_2 \log(GDPC)_{it} + \beta_3 \log(Openness)_{it} + \beta_4 \log(REER)_{it} + u_{ij} \quad (3.1)$$

And

$$\log(S)_{it} = \beta_1 + \beta_2 \log(GDPC)_{it-1} + \beta_3 \log(Openness)_{it-1} + \beta_4 \log(REER)_{it-1} + u_{ij} \quad (3.2)$$

Where i and j denotes countries and t denotes time and the variables are defined as follows:

T_i : Value of total trade in goods of country i

S_i : Value of per capita trade in services of country i

$PGDP$: Inflation adjusted GDP per capita at Constant Price

$REER$: Real Effective Exchange Rate

We have employed OLS to estimate our model 3.1 and 3.2. The study period is 2000 – 2013.

The data on services trade, per capita GDP and trade openness are taken from WDI of World Bank database and finally data on REER is from IMF database.

4. Results and Discussions

Table 4.1 and 4.2 show the OLS estimates of our model. In Table 4.1 we find that in OLS the model fits the data well and it explains more than 99% of the total variation in per capita trade in services. It is expected that the goods trade liberalisation process will have a positive impact on the trade in services and we find that it is positive and significant. We also find that the coefficient of per capita GDP is also significantly positive. Table 4.2 represents the estimates of our lag model (i.e. equation 3.2). We find that the results are similar. From our empirical analysis we infer that trade liberalisation has significant and positive impact on the trade in services. Moreover, we find that per capita GDP has significant and positive impact on services trade.

Table 4.1: OLS Estimates of Model 3.1

Variable	Coefficients	P value	F - Statistics	R ²	N
Intercept	-6.47	0.000	3473.83	0.995	56
			Prob (F –Statistics) – 0.00	Adj R² 0.995	
Log(PGDP)	1.34	0.000			
Log(Openness)	0.53	0.0003			
Log(REER)	0.91	0.0019			

Dependent Variable: Log (Per capita trade in services (S_i))

Table 4.2: OLS Estimates of Model 3.2

Variable	Coefficients	P value	F - Statistics	R ²	N
Intercept	-6.38	0.000	3471.099	0.995	56
			Prob (F –Statistics) – 0.00	Adj R² 0.995	
Log(PGDP) ₋₁	1.34	0.000			
Log(Openness) ₋₁	0.52	0.0003			
Log(REER) ₋₁	0.90	0.002			

Dependent Variable: Log (Per capita trade in services (S_i))

A. Concluding Remarks

In this study we have empirically investigated the impact of liberalising trade on the trade in services for the ASEAN region. The findings of the paper have important policy implications. We find that the trade liberalisation has positive impact on trade in services for all the estimates. This is quite rare in the existing literature. The findings are also quite interesting. It shows that for the trade restrictions are the serious impediments of the services trade. ASEAN is considered to be among one of the most restricted trade blocs and ASEAN can increase its total services trade through trade liberalisation.

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