An Evaluation of the Non Performing Assets of Public and Private Sector Banks Under the SHG Bank Linkage Programme

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Abstract

Banking institutions play a significant role in the economic development of a country. There are certain issues of concern that affect their performance and efficiency. One of the major issues is the credit risk involved in the banking sector. According to the Narasimhan Committee, non performing assets (NPAs) are considered as one of the important indicators of profitability and efficiency of any bank. Lesser NPAs indicate a better position of a bank in terms of solvency. More NPAs lead to less profit because of non repayment of interest and principal amount of loan by the creditors, thereby effecting the overall profitability of a bank. Under the Self Help Group (SHG) Bank Linkage Programme (SBLP), the self help groups are linked to a bank where these groups are provided financial services for the benefits of their members. Credit disbursed to a SHG under this scheme is without collaterals. The credit disbursed under this scheme increases the risk for the banks. The main purpose of this study was to compare the public and private sector commercial banks on the basis of NPAs under the SHG Bank Linkage Programme. This paper also tried to study the region wise differences in the amount of NPAs of the public sector banks.

Keywords: banking industry, non performing assets (NPAs), self help groups, bank linkage, financial inclusion

JEL Classification: G00, G21, G210

Paper Submission Date: September 16, 2014: Paper sent back for Revision: February 7, 2015: Paper Acceptance Date:

March 16, 2015

icrofinance is a technique introduced to meet the demands of the poor for financial services. Microfinance has brought tremendous changes in the lives of the poor who were left aside by the Learning sector. Microfinance is considered as one of the tools which helps in the overall development of rural India as it leads to an increase in income, reduction in unemployment, and poverty (Garikipati, 2008). The system of microfinance helps in maintaining sustainable economic growth. Banking institutions have been providing services like savings, credit, insurance, and other services, and are vital institutions for economic development. They also play an influential role in the financial system of the country through mobilization of savings and disbursement of credit. The financial sector plays a vital and crucial role in the growth and development of the economy by providing credit facility to the clients (Sutton & Jenkins, 2007). Finance is necessary for carrying out different activities which boost the economic and social growth of a country. For balanced regional growth, it is necessary that each and every sector of the society gets proper financial facilities.

Earlier, the banking sector was not able to reach out to the unprivileged needy people due to various issues (Basu & Srivastava, 2005; Karduck & Seibel, 2004). The poor were not able to contribute towards the collaterals in order to get loans. Thus, it became difficult for these people to obtain credit from the banks. Thus, NABARD

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introduced a programme named as the Self Help Group Bank Linkage Programme. This programme was launched to provide financial services to poor households of the society who were not covered under the services of the banks. It was introduced as a pilot project in 1992, which proved to be a great success. The SHG Bank Linkage Programme is considered to be a viable programme for providing financial services to the poor. This model was accepted as the new model of microfinance having qualities of both the formal and informal financial systems (Nair, 2005). Informal voluntary groups were linked to the formal banking system and considered as clients of banks. Most of the members in these self-help groups are women from rural areas (Ghate, 2007; Puhazhendi & Badatya, 2002; Swain & Wallentin, 2009).

The introduction of the Self-Help Group Bank Linkage Programme (SBLP) proved to be a great boon for the underprivileged people. Under this programme, the banking institutions joined hands with microfinance providers for meeting the financial needs of the poor people. Various microfinance services like savings, credit, and insurance are provided to the clients under this programme. The SHG Bank Linkage Programme was considered as one of the successful programmes as far as the repayment rates were considered (Bansal, 2003; Kropp & Suran, 2002; Varman, 2005). However, in the current scenario, NABARD reports have stated that mounting NPAs are increasing at a faster rate. Therefore, it is necessary that banks should be vigilant and watchful while disbursing credit to different clients under this programme as there is no requirement of collateral to get a loan under SBLP. Repayment is made on mutual trust, and peer pressure plays a role in this. Peer pressure means that if a member has taken a loan from a SHG, then every other member of the group will be responsible for the repayment. Therefore, the other group members can pressurize any of the members for the repayment of the loan.

Pole, Asawa, and Shah (2014) observed that providing credit to the poor is a risky project and default on the part of the borrowers due to their over indebtedness was one of the main reasons for the failure of the projects financed through micro credit. NPAs have remained one of the important causes of the crises, and the rate is higher in priority sector lending, where the beneficiaries are poor (Rajeev & Mahesh, 2010). Credit risk includes the non repayment/ default of interest and instalments of the principal amount on the part of the clients. There are many clients who default on repayment of interest and principal amount, thus contributing towards increasing amount of non performing assets (NPAs). The more are these NPAs, the less will be the profitability of the banks and vice-versa. Thus, the issue of non performing assets (NPA) is of high concern in providing micro credit. The banks should disburse credit only after proper screening and supervision for checking the credit worthiness of the clients.

Analyzing the credit worthiness of the clients and later monitoring them is necessary for the timely and complete repayment of the loan amount. Two types of risks, that is, adverse selection and moral hazards are faced by the banks (Armendáriz & Morduch, 2005). Despite so much supervision, delinquent clients are increasing, thereby contributing towards mounting NPAs. The reports of NABARD clearly show a rise in these NPAs at an alarming scale. Under the SBLP, SHGs are linked to the banking sector to get access to the financial services. It is necessary for the banks to have timely repayment of the amount lent to the SHG members to avoid losses. NPAs are one of the factors / indicators for knowing the profitability position of the banks. If the NPAs are decreasing, it shows that the performance of a bank is good, and if these NPAs are growing at an increasing rate, then it is a major issue of concern for the banks. So, in order to survive and grow in the banking industry, it is necessary for the banking institutions to improve their profits. Thus, reduction in NPAs will surely contribute towards the improvement in the profitability status of the banks.

Banking sector reforms initiated in 1992 were one of the steps to regularize, strengthen, and ensure protection for the banking industry. They were also necessary for the growth, efficiency, and profitability of this sector. According to the Reserve Bank of India (2014), non performing assets (NPAs) are defined as the credit for which interest or the installment of principal has remained 'past due' for some specified period of time. Here 'past due' means when the loan amount remains outstanding for 30 days exceeding the due date. With effect from March 31, 2004, the 30 days 'past due' concept was converted into a 90-day concept. RBI (2014) in its master circular on income recognition, asset classification, provisioning, and other related matters has explained the concept of NPAs and their classification:

Substandard Assets: The assets which remain nonperforming for a period not exceeding 12 months with effect from March 31, 2005.

🔖 **Doubtful Assets:** An asset would be treated as doubtful if is not repaid, or if it remains as a non performing asset for a period exceeding 12 months. Doubtful assets include all the features of substandard assets with some add on features.

\$\text{\$\subsets:} A loss asset is an asset where the banks, internal and external auditors, or RBI inspection become aware of the loss, but the amount of loss is not wholly written off. It means that there no chance of collection of such an amount from the client(s).

Literature Review

Plenty of studies have been conducted to ascertain the status of the NPAs in the banking industry by making comparisons between different groups of banks.

Rajaraman, Bhaumik, and Bhatia (1999) explained the interbank variation in their total NPAs for the year 1996-1997. They found that specific features of the banks - like ownership or adherence to prudential norms were not sufficient to explain the interbank variability in NPAs. According to the authors, the region of operation was a dominant factor in determining the same. They observed that the Indian commercial banks were characterized by a high degree of NPAs, and even the foreign banks were not doing so well.

Khemraj and Pasha (2009) concentrated on the new dimensions or aspects of NPAs. The authors discussed that the non performing loans were affected by exchange rates. Local currency had an impact on the non performing loan portfolio. The authors revealed that when the local currency appreciated, it led to an increase in the NPL portfolio. The authors also observed from their study that high interest rates and credit lending in overabundance lead to the mounting of non performing loans. According to the researchers, the status of non performing loans contributed towards the success or failure of the banks. Microeconomics and bank specific variables were used for studying the impact of the loan portfolios. The results showed a positive relationship between the real effective exchange rate and NPL. The study also showed no significant relationship between the size of the banks and the amount of NPLs.

Unnamalai (2010) carried out a study on the Tiruchipalli District Central Cooperative Bank on the basis of NPAs. Cooperative banks play a prominent role in the development of the rural banking sector. Any change in a cooperative bank may adversely affect the rural banking sector. The author analyzed the position of NPAs, and studied the cause and effect of the NPAs.

Goyal (2010) only examined the public sector banks for the period from 2002-2009. The author tried to examine the trend of NPAs as well as the strength and soundness of loan assets by taking into consideration sector wise NPAs. Statistical tools like ANOVA and regression were used for the analysis of secondary data, and he found that there was an increase in the NPAs in the public sector banks during the study period.

Singh (2013) analyzed the problem of NPAs in the Indian banking sector. The author studied the impact of these NPAs on the efficiency and performance of the banks. The author also provided recommendations on how to make the banking sector more profitable by reducing NPAs. The main aim of the study was to throw some light on the factors leading to the growth of NPAs and their causes and effects. The performance of the NPAs in the public sector banks was found to be disappointing.

Acharya (2012) discussed the alarming increase in SHG lending. The SHGs were linked to banks in order to benefit the people who were not included under the banking services earlier. At the same time, initially, it benefitted the banks through an increase in outreach of clients and increase in profits thereof. The report confirmed that the number of SHGs accessing loans had decreased, showing the defects and deficiencies in the SHG Bank Linkage Programme. The author conveyed that the continuous increase in the non performing assets under the SBLP was creating problems for the banking sector. According to the author, this was the reason as to why the banks had started showing a disinterest in lending to the SHGs.

The literature review on NPAs in the banking sector has revealed that many studies have been conducted that have compared the total NPAs of public and private sector banks on an overall basis. However, there is a dearth of studies that have been conducted taking into consideration the NPAs under the Self - Help Group Bank Linkage Programme, focusing primarily on the microfinancing activities. Financial liberalization reforms have always focused on controlling the non performing assets on an overall basis, but no profound impact has been seen in controlling the NPAs under microcredit transactions. Repayment strategies need to be redefined and revitalised in the ever changing regulatory environment under the new prudential norms. Here, we have attempted to examine the performance of the NPAs with specific reference to the SBLP. As the SHG Bank Linkage Programme was successful only because of the good repayment performance of the clients, hence, it was imperative to study the growth of the NPAs under this programme in order to find out the true picture of the success of the programme.

Objectives of the Study

- (1) To examine the extent of NPAs in the public and private sector banks under the SHG Bank Linkage Programme.
- (2) To study whether there is a significant difference in NPAs of public sector banks across various regions of India.

Methodology

All the public and private commercial banks of India were selected as the sample for the purpose of the study. Data was compiled from secondary sources, that is, "Status of Microfinance in India" reports of NABARD. Data for 6 years was taken into consideration. Statistical tools like ANOVA and t - test were used for the analysis.

Analysis and Results

NPAs have always remained an important issue in the development of the banking sector. The self help groups were linked to the banking sector so that financial services could be provided to the poor, who were earlier not included under the banking services. It reduced the transaction costs like monitoring, supervising, and checking the credit worthiness of the clients. This SHG Bank Linkage Programme was profitable to banks (earlier), having repayment rates above 90% (Karduck & Seibel, 2004). However, now, the reports of NABARD have confirmed that there has been an increase in the rate of NPAs. The financial sector reforms were introduced in India, and recommendations were made by the Narasimham Committee - II in 1998 for strengthening the banking sector, and rules related to NPAs were strictly set up (Bhide, Prasad, & Ghosh, 2002).

The position of the NPAs is explained with the help of two Tables presented in the paper. The Table 1 displays the position of the total loan outstanding and the amount of NPAs for the period of 6 years, that is, from 2007 to 2013. The Table 2 depicts the percentage of NPAs to loan outstanding for 6 years, that is, from 2007-2013 under the categories of public and private sector banks.

The Table 1 shows the position of the NPAs of bank loans taken under the SHG Bank Linkage Programme. The banks started reporting the gross NPAs under this programme from 2007 onwards. The data includes the position of NPAs of different banks who submitted the data through the MIS system. The Table 1 shows the year wise growth of outstanding loans against SHGs and the amount of NPAs against those loans. In 2007-2008, the outstanding loan amount was INR 9647.53 crores, out of which the total amount of NPAs were INR 206.99 crores in the public sector banks. A positive growth rate is witnessed in both amounts - loan outstanding and amount of NPAs out of that outstanding amount. In the year 2011-2012, the amount of loan outstanding stood at INR

Table 1. Non Performing Assets of Bank Loans to Self Help Groups under the SHG Bank Linkage Programme

(Amount in ₹ crores)

Public Sector Commercial Banks	Outstanding Loans Against SHGs	Amount of NPAs 206.99	
2007-2008	9,647.53		
2008-2009	15086.65	363.27	
2009-2010	19724.42	513.53	
2010-2011	21412.75	1019.90	
2011-2012	24406.57	1581.05	
2012-2013	25371.18	2129.23	
Private Sector Commercial Banks			
2007-2008	544.61	6.72	
2008-2009	1376.93	23.83	
2009-2010	440.29	23.93	
2010-2011	470.51	47.09	
2011-2012	1403.72	74.37	
2012-2013	1268.26	46.75	

Source: NABARD (2007 - 2013). Status of microfinance in India (2007 - 2013). NABARD: Mumbai

24406.57 crores, against which the amount of NPAs were INR 1581.05 crore. The NPAs in 2011-2012 increased to approx. 55 % as compared to the 2010-2011 figures (in case of public sector banks). The total outstanding loans against SHGs in the year 2012-2013 rose to INR 25371.18 crores, and the amount of NPAs increased to INR 2129.23 crores. This continuous upward trend in outstanding loan amount and NPAs in the public sector banks has become a matter of grave concern for NABARD.

The second half of the Table 1 explains the outstanding loan amount and the amount of NPAs reported by the private sector banks under the SHG Bank Linkage Programme. In the year 2007-2008, the outstanding amount was INR 544.61 crores, and the NPAs stood at INR 6.72 crores. In the year 2009-2010, the amount of loan outstanding reduced from INR 1376.93 crores in 2008-2009 to INR 440.29 crores in 2009 -2010. However, the amount of NPAs remained approximately the same, that is, INR 23.83 crores in 2008-2009 and INR 23.93 crores in 2009-2010. Outstanding loan amount and NPA finally increased to INR 1403.72 crores and INR 74.37 crores in the year 2011-2012, respectively. In 2012-2013, outstanding loan and NPAs further rose to INR 1268.26 crores and INR 46.75 crores, respectively.

The Table 2 shows the percentage of NPAs to outstanding bank loans in case of both public sector and private sector banks for 6 years. This data were available for 6 years only because the banks starting reporting NPAs to NABARD under the SHG Bank Linkage Programme from 2007 onwards. The Table reveals that in the year 2007-2008, the NPAs were 2.10 % of the outstanding bank loans in case of the public sector banks and 1.20% in case of the private sector banks. In the year 2009-2010, this figure grew to 2.60% and 5.44% in case of public and private sector banks, respectively. The growth rate of percentage of NPAs increased positively in case of the public sector banks. It finally increased to attain a figure of 8.39 \% in 2012-2013. However, in case of the private sector banks, the percentage of NPAs to outstanding bank loans was the highest in the year 2010-2011, that is, 10.10%. However, this figure decreased to 5.30% in the year 2011-2012. It further reduced to 3.69 % in the year 2012-2013.

In the Table 3, the Levene's test for equality of variances shows a significant value of 0.753. As the p - value is greater than 0.05, the null hypothesis is accepted that there is no difference between the variances of the population. The significance value for t - test is calculated as 0.951, which is greater than the p - value, which shows that there is no significant difference between the means of the two different groups.

Comparing the NPAs of public and private sector banks was not enough, so a region wise comparison is also

Table 2. Total % of NPAs to Outstanding Bank Loans in Public and Private Commercial Banks

% of NPAs to Outstanding Bank Loans						
Year	Private Sector Commercial Banks					
2007-2008	2.10	1.20				
2008-2009	2.40	1.70				
2009-2010	2.60	5.44				
2010-2011	4.76	10.10				
2011-2012	6.48	5.30				
2012-2013	8.39	3.69				

Source: NABARD (2007 - 2013). Status of microfinance in India (2007 - 2013). NABARD: Mumbai

Table 3. Independent Sample t - Test

		Levene's Test for Equality of Variances				t- test for Equality of Means				
		F Sig.		t d	df	df Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
NPA	Equal Variances Assumed	.105	.753	063	10	.951	10667	1.68233	-3.85514	3.64180
	Equal Variances not Assumed			063	9.496	.951	10667	1.68233	-3.88231	3.66897

made to have more clarity about the status of the NPAs under this programme. As public commercial banks are the greatest contributor towards the SHG Bank Linkage Programme, so only these banks were taken into consideration for the purpose of studying the region wise status of the NPAs.

The Table 4 shows the position of the NPAs in the public sector banks by taking all the regions into consideration so as to know the status of NPAs in public sector banks in different regions of India. For testing the assumption of homogeneity of variances, Levene's test of variance was conducted; where the p - value is 0.108, which is above 0.05, which leads to the acceptance of the null hypothesis that there is no difference between the population variance.

The Table 5 shows that the p - value is equal to the significance value, that is, 0.05. Thus, the null hypothesis is rejected, and it can be concluded that there is a significant difference between the six different regions in India with respect to the NPAs associated with the SBLP at the 0.05 significance level.

Implications

- (1) The percentage of NPAs to the outstanding loan showed a sharp increasing trend in case of the public sector banks; whereas, in case of the private sector banks, it increased to the level of 10 % (approx), and then there was a drastic fall to 3.69 %. This indicates that the private sector banks have been taking strong steps to control the increasing trend of the NPAs. The public sector banks should also take necessary and strict actions to assess the credit worthiness of the SHG members before granting credit so that the default risk is minimized.
- (2) The Self Help Group Bank Linkage Programme is beneficial for the members in the rural areas as 'No collateral' policy is followed for granting credit. However, at the same time, this policy is risky for the banks as in the case of default, there is no asset which can recover the loss of default. If managed properly, there is chance of no

Table 4. Non Performing Assets under the Self Help Group (SHG) Bank Linkage Programme: Region **Wise Figures of Public Sector Banks**

(Values in percentage)

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Years / Region	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
North region	2.60	3.52	4.10	6.10	6.55	12.65
North eastern Region	10.00	10.59	6.33	8.67	6.88	11.94
Eastern Region	2.00	3.00	3.17	4.30	9.21	13.14
Central Region	3.60	8.32	5.56	11.60	14.35	18.39
Western Region	3.20	3.00	3.35	7.00	8.42	13.28
Southern Region	1.60	1.10	1.95	3.9	5.11	6.35

Source: NABARD (2007 - 2013). Status of microfinance in India (2007 - 2013). NABARD: Mumbai

Table 5. Results of ANOVA

NPA	Sum of Squares	Df	Mean Square	F	Sig.	
Between Groups	188.083	5	37.617	2.532	.050	
Within Groups	445.700	30	14.857			
Total	633.783	35				

default. In various countries like Bangladesh and Ghana, it is being successfully executed. In India also, it is one of the successful and important credit programmes for meeting the objectives of national development. Therefore, the government should pay special emphasis on such programmes, which not only make the SHG members selfsufficient, but they also help to create more employment opportunities.

- (3) The Government needs to start special schemes that focus attention on promoting entrepreneurial abilities leading to more employment. Women entrepreneurs are proving to be a great success in the field of micro finance. So, special training programmes, workshops, and so forth can enhance the skill levels of women/entrepreneurs residing in the rural areas, which can give a boost to manage the enterprises professionally. Also, eventually, this will lead to the risk of default on credit go down.
- (4) The study recommends that banks should also supervise the activities of the SHGs to whom the credit has been allocated so as to assist the groups in supervising, monitoring, and controlling the flow of credit and its repayment. This can help to reduce the level of non performing assets to a great extent.
- (5) The risk appetite as well as the ability to handle risks is present in the members of the self help groups. So, the study advises that before giving credit, the banks should council the SHG members regarding the mode of payment, interest rates, terms of default, risks associated, and related support activities, etc. so that there are no doubts left in the minds of the group members regarding the terms of agreement, which can always help both the parties to achieve a win-win situation.
- (6) This programme has helped in the promotion of financial inclusion, making it easier for the poor, unprivileged population to get access to the financial services provided by the banking sector. Therefore, there is a strong need to take wise steps in the public sector to control the extent and the level of non performing assets, thereby ensuring beneficial aspects of financial inclusion at the national level.

- (7) The SHG Bank Linkage Programme has proven to be one of the beneficial programmes for the members and the banks. So, the sustainability of the programme is very necessary, which is possible only when the services and benefits are properly utilized by the members.
- (8) According to the guidelines of RBI, the banks should avoid 'evergreening'. It means that a client should not be provided fresh loans until and unless they repay their earlier loans. The study suggests that to avoid the problem of evergreening, the public sector banks should take necessary and adequate steps to control and monitor the level of NPAs.

Conclusion

The growth and development of the banking sector is very important for the improvement and advancement of the nation. Microfinance has proven to be a good strategy for alleviating poverty, unemployment, and empowering women through various schemes, and the banking institutions play a vital role in meeting the financial needs of the poor. Banks are one of the most important pillars of any financial system of a country. So, the solvency of these institutions is quite necessary for the overall development of the country. Growth in NPAs hampers the overall profitability as well as the solvency position of the banks. The SHG Bank Linkage Programme has helped the poor in raising their standard of living. Microcredit facilities provided to these people under the SBLP have helped both the parties involved in reduction of transaction costs. However, it is necessary that there should be full repayment of the loans taken by the SHG members at regular intervals, otherwise it may create an imbalance in the demand and supply of money. The present study shows that there has been a continuous increase in the non performing assets in both public and private commercial banks associated with the Self-Help Group Bank Linkage Programme. Thus, the banks should pay attention to reduce the NPAs under this scheme as the sustainability of the SBLP is important for the poor to get rid of the debt traps.

Limitations of the Study and Suggestions for Future Research

In the present study, secondary data were used for obtaining the results, and no primary data were collected and used in the study. The data related to the past 6 years for the NPAs in the SHG Bank Linkage Programme was available. However, this data may not have given conclusive results. Furthermore, the study mainly focused on the NPAs related to a specific programme only, that is, the SHG Bank Linkage Programme. No other schemes run by different microfinance programmes were considered.

The limitations also show the way for future research in this area. Researchers can obtain primary data to verify whether the NPAs have really risen in the SHG Bank Linkage Programme. If yes, then what are the reasons for the non-repayment of the loans by the SHG members? If the time span of the data is increased, more efficient results can be drawn. After analyzing the reasons for the increase in NPAs, a checklist of preventive measures can be prepared from such results as suggestive measures for the banks.

References

Acharya, N. (2012, November, 27). NABARD raises concern over rising NPAs in SHG lending. *Business Standard*. Retrieved from http://www.business-standard.com/article/finance/nabard-raises-concern-over-rising-npas-in-shg-lending-112112700679 1.html

Armendáriz, B., & Morduch, J. (2005). *Rethinking banking. The economics of microfinance* (2nd ed.). London: MIT Press.

- Bansal, H. (2003). SGH-bank linkage program in India: An overview. Journal of Microfinance, 5 (1), 21-49.
- Basu, P., & Srivastava, P. (2005, April 23 29). Exploring possibilities: Microfinance and rural credit access for the poor in India. Economic and Political Weekly, 40 (17), 1747+1749-1756.
- Bhide, M. G., Prasad, A., & Ghosh, S. (2002, February 2-8). Banking sector reforms: A critical overview. *Economic* and Political Weekly, 37(5), 399-401+403-408.
- Garikipati, S. (2008). The impact of lending to women on household vulnerability and women's empowerment: Evidence from India. World Development, 36 (12), 2620 - 2642. DOI:10.1016/j.worlddev.2007.11.008
- Ghate, P. (2007). Overveiw and summary of main recommendations: Indian microfinance (pp.17-38). New Delhi: Sage.
- Goyal, K. (2010). Empirical study of non-performing assets management of Indian public sector banks. Asia Pacific *Journal of Research in Business Management, 1* (1), 114-131.
- Karduck, S., & Seibel, H. D. (2004). Transaction costs of self-help groups: A study of NABARD's SHG banking programme in India. Retrieved from http://www.microfinancegateway.org/sites/default/files/mfg-encase-study-transaction-costs-of-self-help-groups-a-study-of-nabards-shg-banking-programme-inindia-2004.pdf
- Khemraj, T., & Pasha, S. (2009). The determinants of non-performing loans: An econometric case study of Guyana (MPRA No. 53128). Retrieved from http://mpra.ub.unimuenchen.de/53128/1/MPRA paper 53128.pdf
- Kropp, E. W., & Suran, B. S. (2002, November). Linking banks and (financial) self help groups in India: An assessment. Paper presented at the Seminar on SHG-bank Linkage Programme at New Delhi, NABARD, 25-26, November, 2002. Retrieved from https://www.nabard.org/pdf/erhardkropp.pdf
- Nair, T. S. (2005, April 25). The transforming world of Indian microfinance. Economic and Political Weekly, 40 (17), 1695 - 1698.
- National Bank for Agriculture and Rural Development (NABARD). (2007). Status of microfinance in India (2006-2007). NABARD: Mumbai.
- National Bank for Agriculture and Rural Development (NABARD). (2008). Status of microfinance in India (2007-2008). NABARD: Mumbai.
- National Bank for Agriculture and Rural Development (NABARD). (2009). Status of microfinance in India (2008-2009). NABARD: Mumbai.
- National Bank for Agriculture and Rural Development (NABARD). (2010). Status of microfinance in India (2009-2010). NABARD: Mumbai.
- National Bank for Agriculture and Rural Development (NABARD). (2011). Status of microfinance in India (2010-2011). NABARD: Mumbai.
- National Bank for Agriculture and Rural Development (NABARD). (2012). Status of microfinance in India (2011-2012). NABARD: Mumbai.
- National Bank for Agriculture and Rural Development (NABARD). (2013). Status of microfinance in India (2012-2013). NABARD: Mumbai.
- Pole, P., Asawa, A., & Shah, D. (2014). A critical evaluation of the SKS microfinance fiasco. *Indian Journal of Finance*, 8(6), 7-21.

- Puhazhendi, V., & Badatya, K. C. (2002, November). SHG-Bank linkage programme for rural poor: An impact assessment. Paper presented at the Seminar on SHG-bank Linkage Programme at New Delhi, 25-26, November, 2002. Mumbai: Micro Credit Innovations Department, Nabard.
- Rajaraman, I., Bhaumik, S., & Bhatia, N. (1999, January 16 -29). NPA variations across Indian commercial banks: Some findings. *Economic and Political Weekly*, 34 (3/4), 161-163+165-168.
- Rajeev, M., & Mahesh, H. P. (2010). Banking sector reforms and NPA: A study of Indian commercial banks (Paper No. 252). Bangalore: Institute for Social and Economic Change.
- Reserve Bank of India. (2014, July 1). Master Circular Prudential norms on income recognition, asset classification and provisioning pertaining to advances. Retrieved from http://rbidocs.rbi.org.in/rdocs/notification/PDFs/74MIR010714FL.pdf
- Singh, J. (2013). Recovery of NPAs in Indian commercial banks. International Journal of Transformations in Business Management, 2(3), 77-95.
- Sutton, C. N., & Jenkins, B. (2007). The role of the financial services sector in expanding economic opportunity (Corporate Social Responsibility Initiative Report, 19). Cambridge, MA: Kennedy School of Government, Harvard University.
- Swain, R. B., & Wallentin, F. Y. (2009). Does microfinance empower women? Evidence from self-help groups in India. International Review of Applied Economics, 23 (5), 541-556. DOI:10.1080/02692170903007540
- Unnamalai, T. (2010). Management of non performing assets in Tiruchirapalli District Central Co-Operative Bank Ltd. Cauvery Research Journal, 3 (1&2), 42-47.
- Varman, M. P. (2005, April 23). Impact of self-help groups on formal banking habits. *Economic and Political Weekly*, 40 (17), 1705 - 1713.