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DETERMINANTS OF NON-PERFORMING ASSETS IN INDIA - PANEL REGRESSION[†]

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Abstract

It is well known that level of banks' credit plays an important role in economic developments. Indian banking sector has played a seminal role in supporting economic growth in India. Recently, Indian banks are experiencing consistent increase in non-performing assets (NPA). In this perspective, this paper investigates the trends in NPA in Indian banks and its determinants. The panel regressions, fixed effect allows evaluating the impact of selected macroeconomic variables on the NPA. The Panel regression result indicates that the GDP growth, change in exchange rate and global volatility have major effects on the NPA level of Indian banking sector.

Keywords: Non-performing loans, Macro-financial linkages, Bank Credit, Panel Regression Model

JEL Classification: E44, E51, G21, C23

1. Introduction and Literature Review

1.1. Non-performing Asset Scenario in Different Countries

If we look at from Asian perspective, Non-performing assets have become a matter of concern since the Asian crisis in 1997-98 which hit hard the 'Asian Tigers' like Thailand, Indonesia, Malaysia and also China. India was not hit such badly by the crisis. Before the crisis commercial banks in those countries were very poorly capitalized and running high level of Non-performing assets. The main indicator, Gross NPA as percentage of total loans reached 48.6 per cent in Indonesia, 42.9 per cent in Thailand, 18.6 per cent in Malaysia during 1998. It reached to a maximum of 29.8 per cent in China in 2001. Indian banking sector performed much better during this time with Gross NPA to total loan ratio of only 14.4 per cent in 1998 (Figure 1).

But as we can see ratio of non-performing loans to total loans has fallen sharply in Asian countries, signalling the recovery of the banking sector. That happened because of the several measures taken by the respective countries. Prior to the 1997-98 financial crises, Asian banks were exposed to very large credit risks; badly managed and poorly supervised, apart from being inadequately capitalised for the risks. Several complex forces and macroeconomic factors acted together to change financial intermediation in Asia since the 1997-98 crisis. One factor is the sharp rise in aggregate savings in the Asian countries. Another is substantial accumulation of foreign exchange reserves led to a major rise in central bank or government paper held by the banks, providing them with low-risk and very liquid assets. Some of the earlier inefficiencies have disappeared and lending functions of the banks have changed considerably

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over the past decade. Substantial consolidation took place between 1999 and 2004, which has also increased competition and efficiency of the Asian banking system. Many countries closed their weaker banks or merged their banking institutions (varying between 10 to 30 percent of total banks in India, Indonesia, Korea and Malaysia) or privatised them (Mohanty and Turner, 2010).

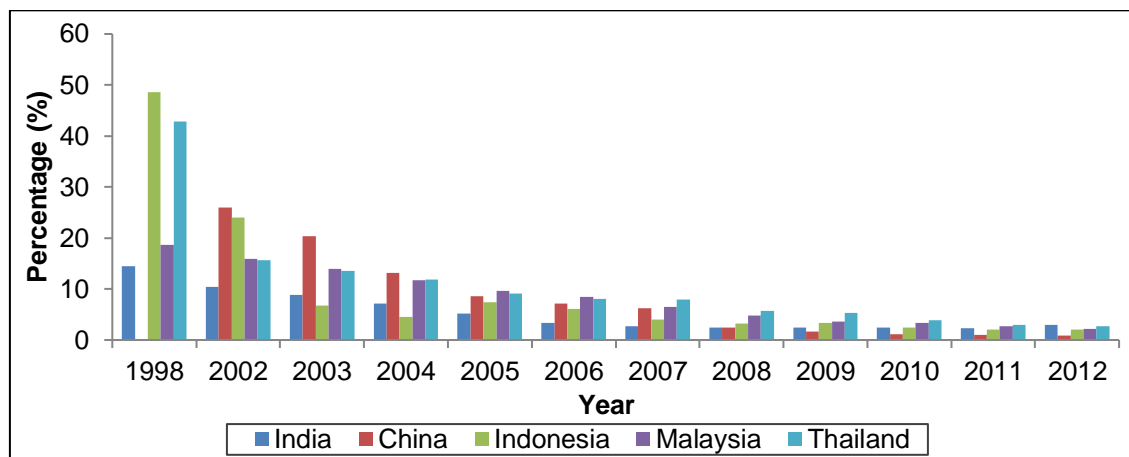


Figure 1. Gross NPA as Percentage of Total Loans

Source: World Bank <<http://data.worldbank.org/indicator/FB.AST.NPER.ZS>>

The credit deployment by the banking system in the economy has a direct impact on the non-performing loan level of the country. Credit is required for faster growth of the economy but any kind of macroeconomic shock can impact those outstanding advances badly and may turn them non-performing. Table 1 shows the pattern of credit deployment by several countries covering developed, emerging and frontier market. Among the emerging economies China, Malaysia and Thailand have very high level of credit deployment to propel the growth. In India and Brazil the amount increased gradually over the years and crossed 100% in Brazil in 2012. Russia is the most conservative among the BRIC countries having the lowest level of credit deployment. For frontier market, countries like Argentina and Pakistan have low level of credit deployment. The developed countries like USA, UK, and Japan thrive on high level of credit. The debt levels of those countries are approaching to alarming level.

Table 1. Domestic credit provided by banking sector (% of GDP)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
India	57.1	55.8	57.6	58.4	60.9	60.8	67.7	70.1	71.8	74.1	75.9
China	143.5	151.9	140.4	134.3	133.5	127.8	120.8	145.1	146.3	145.5	155.1
Brazil	74.5	74	72.6	74.5	86.6	92.2	96.9	95.8	95.2	98.3	110.5
Russia	26.9	27.9	25.7	22.1	22.5	24.4	23.9	33.7	38.4	39.5	41.5
Chile	84.7	83.5	82.6	79.5	78.9	85.4	92.8	69.6	66	71.2	108
Indonesia	52.4	49.2	49.7	46.1	41.6	40.5	36.8	36.9	36.5	38.5	42.6
Malaysia	143.6	139.8	127.5	117.7	114.6	109.4	110.8	131.1	127.4	128.7	134
Thailand	127.8	130.7	124.5	119.2	109	131.6	130.5	137	142.8	159.2	169.6
Argentina	62.4	50.6	45.4	38.3	30.8	28.5	24.4	28	29.2	31.3	37.3
Pakistan	37.2	37.9	43	46.5	45.5	48.4	53.2	48.4	46.4	43.3	45.8
USA	198.8	214.4	221.5	225.4	235.5	244.4	224.4	232.4	231.1	232.5	229.9
UK	141.7	145.3	153.6	160.8	171	186.7	212.4	227.9	222.2	212.6	206.7
Japan	302.5	312.7	307.7	317.5	309.9	300.2	303.3	329	328	341.7	346.1

Source: World Bank <<http://data.worldbank.org/indicator/FS.AST.DOMS.GD.ZS>>

Karim *et al.* (2010) investigate the relationship between non-performing loans and bank efficiency in Malaysia and Singapore through the Tobit simultaneous equation regression model. The result shows that higher non-performing loan reduces cost efficiency and also lower cost efficiency increases non-performing loans. This also supports the hypothesis proposed by Berger and DeYoung (1997) that bad management in banks elevates the level of non-performing loans. Among the macroeconomic factors interest rate has a positive significant relationship with the non-performing loans and producer price index has a negative and significant relationship with the non-performing loans in the Islamic banking sector of Malaysia (Adebola *et al.* 2011). After the Asian financial crisis the non-performing loan ratios in Malaysia and Singapore improved gradually which can be attributed to the factors like transferring of NPLs from banks to Asset Management Companies (AMC), more effort to recover NPAs, higher loan write-offs to make the balance sheet healthier (Karim *et al.* 2010).

Table 2. Gross NPA as percentage of total loans

	1998	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
India	14.4	8.8	7.2	5.2	3.3	2.7	2.4	2.2	2.4	2.7	3.4	3.8
China	NA	20.4	13.2	8.6	7.1	6.2	2.4	1.6	1.1	1	1	1
Brazil	10.2	4.1	2.9	3.5	3.5	3	3.1	4.2	3.1	3.5	3.4	2.9
Russia	NA	5	3.8	2.6	2.4	2.5	3.8	9.5	8.2	6.6	6	6
Chile	1.5	1.6	1.2	0.9	0.8	0.8	1	2.9	2.7	2.3	2.2	2.1
Indonesia	48.6	6.8	4.5	7.4	6.1	4	3.2	3.3	2.5	2.1	1.8	1.7
Malaysia	18.6	13.9	11.7	9.6	8.5	6.5	4.8	3.6	3.4	2.7	2	1.8
Thailand	42.9	13.5	11.9	9.1	8.1	7.9	5.7	5.3	3.9	2.9	2.4	2.3
Argentina	5.3	17.7	10.7	5.2	3.4	2.7	2.7	3.5	2.1	1.4	1.7	1.7
Pakistan	23.1	17	11.6	8.3	6.9	7.6	10.5	12.6	14.7	16.2	14.5	14.3
USA	1	1.1	0.8	0.7	0.8	1.4	3	5	4.4	3.8	3.3	3.2
UK	3.2	2.5	1.9	1	0.9	0.9	1.6	3.5	4	4	3.7	NA
Japan	5.4	5.2	2.9	1.8	1.5	1.5	1.4	2.5	2.5	2.4	2.4	2.3

Source: World Bank <<http://data.worldbank.org/indicator/FB.AST.NPER.ZS>>

Among the Asian countries the non-performing loan scenario of China is most talked about. The Chinese non-performing loan is result of nexus between its State Owned Enterprises (SOEs), State Owned Commercial Banks (SOCBs) and the direct intervention of the Government and political classes. SOCBs were forced by the Govt. to make loans to the SOEs with high default risk and those loans eventually became non-performing. This problem of 'Adverse selection' took place due to implicit and sometimes the explicit instruction of government and political considerations (Zhang, 2010). 'Moral hazard' came into the picture as central and local Government provided hidden guarantees to the financial institutions to make those risky loans (Zeng, 2012). The high levels of NPAs made the banks vulnerable to macroeconomic shocks. The negative feedback effect from the banking system to the real economy was clearly observed when the stress placed on the banking sector in the 1997. Southeast Asian financial crisis contributed directly to the 1998 economic slowdown (Zhang, 2010). The ratio of NPAs to total loans in SOCBs improved drastically from 35 per cent to 1.14 per cent between 1999 and 2010 as pointed out by Zeng (2012). But the accuracy of these governed data was questioned by many. Goldman Sachs estimated that more stringent and internationally accepted classification system would take the ratio of NPA to loans in the range of 30-60 per cent, highest in Asia (Zhang, 2010). Nevertheless, this improvement is mainly because of the transfer of NPAs to the Asset Management Companies (AMCs) as pointed out by many researchers (Table 2).

Investigating the economic determinants of NPLs in Pakistan Farhan *et al.* (2012) found that Interest Rate, Energy Crisis, Unemployment, Inflation, and Exchange Rate has a significant positive relationship while GDP growth has significant negative relationship with the non-performing loans of Pakistani banking sector according to the perception of Pakistani bankers. Non-performing loans are also affected by volatility on interest rates (Siddiqui *et al.* 2012). The energy crisis is a macro factor unique to Pakistan, which is still suffering from a tremendous energy crisis in the country. Since 2006 the cause of most of the bad loans is attributed to this severe energy crisis in the country (Farhan *et al.* 2012).

For the Brazilian banking system, Chu (2001) found that from 1994 to 2000 the macroeconomic factors to which the Brazilian banks' defaults are most sensitive are - GDP, the Spread, Interest Rate and Unemployment. Park (2011) performed another study to find the effects of economic growth and interest rates on the performance of Brazilian commercial bank loan portfolios for the next decade i.e. for the time period of 2000 to 2010. The empirical results showed that the economic growth (GDP) is the main driver of the performance of the credit portfolio of Brazilian commercial banks, and that the variation in the interest rate has no significant effects on it. There was a two quarter lagged effect of the economic i.e. GDP growth on the performance of the credit portfolio of the Brazilian banks (Park, 2011).

Fofack's (2005) study consisted of finding both the macroeconomic and microeconomic i.e. bank specific determinants of NPA in Sub-Saharan Africa using panel data, where the data was taken for 16 African countries. The results showed that GDP per capita and real effective exchange rates were the most important macroeconomic factors in determining the NPL, where GDP per capita had the negative relationship and REER depreciation had positive association with the NPA. That means falling per capita income increased the level of NPA. Apart from those, real interest rate and money supply measured by broad money also had impact on the level of NPAs. For the bank level variables return on asset, total deposit and net interest margin were the significant factors and all had negative association with NPA. Interestingly inflation didn't appear to be a significant factor (Fofack, 2005).

Now if we look at the much developed European countries, the determinants of NPA are more or less similar. Klein (2013) investigated the NPA scenario in Central, Eastern and South-Eastern Europe in the period of 1998–2011. The study found that the bank specific factors had low explanatory power than the macroeconomic factors. The results suggested that macroeconomic determinants like higher unemployment rate, exchange rate depreciation and higher inflation contributed to higher NPAs while higher Euro area's GDP growth resulted in lower NPAs. Bank specific factors equity-to-asset ratio and return on equity (ROE) are negatively correlated with NPAs while excessive lending leads to higher NPAs. This study also observed a strong macro-financial linkage and feedback effect from banking sector to real economy by panel vector auto-regression (VAR) analysis.

1.2. Non-performing Asset Scenario in India

During the 1997-98 Asian financial crises Indian banks were in much better position than its Asian peers in the matter of Non-performing assets. The globalization effect was less in India and Indian economy was more decoupled than countries like Thailand, Malaysia, and Indonesia which were directly controlled by the capital flows from the west. So, Indian banks were less vulnerable to global shocks. The Gross NPA as percentage of total loans was at 14.4 per cent, much lower than the Asian peers. The NPA levels then improved over the next decade and marginally deteriorated during the next global crisis of 2008. However, in 2011-12 the NPA ratios deteriorated further. This may be the impact of excess lending during the crisis period to keep the economy moving and the growth intact. Table 3 depicts the NPA ratios of scheduled commercial banks from year 1996-97 to 2011-12.

Now if we look at the NPA levels of different bank groups, historically foreign banks had the least level of NPA. The other bank groups had much higher level of NPA at the beginning of the last decade. While both old and new private sector banks were able to reduce their NPA level at a very comfortable level, public sector banks were unable to do so. In 2011-12 the NPA ratio of old private sector banks, new private sector banks and foreign banks were almost

similar but that of public sector banks were much higher. The highest NPA ratio was for the State Bank of India Group which includes country's largest lender State Bank of India (Table 4).

Table 3. NPA ratios of scheduled commercial banks

Year	Gross NPA to Gross Advances (%)	Gross NPA to Total Assets (%)	Net NPA to Net Advances (%)	Net NPA to Total Assets (%)
1996-97	15.7	7.0	8.1	3.3
1997-98	14.4	6.4	7.3	3.0
1998-99	14.7	6.2	7.6	2.9
1999-00	12.7	5.5	6.8	2.7
2000-01	11.4	4.9	6.2	2.5
2001-02	10.4	4.6	5.5	2.3
2002-03	8.8	4.1	4.0	1.8
2003-04	7.2	3.3	2.8	1.2
2004-05	5.2	2.5	2.0	0.9
2005-06	3.3	1.8	1.2	0.7
2006-07	2.5	1.5	1.0	0.6
2007-08	2.3	1.3	1.0	0.6
2008-09	2.3	1.3	1.1	0.6
2009-10	2.4	1.4	1.1	0.6
2010-11	2.4	1.4	1.1	0.6
2011-12	3.1	1.7	1.4	0.8
2012-13	3.6	2.03	1.7	1.03

Source: Reserve Bank of India (Issues of 'Report on Trend and Progress of Banking in India')

Table 4. Net NPA as percentage of net advances

Year	Nationalised Banks	State Bank Group	Old Private Sector Banks	New Private Sector Banks	Foreign Banks
2002-03	4.74	4.12	5.54	4.63	1.76
2003-04	3.13	2.71	3.84	2.41	1.49
2004-05	1.85	2.23	2.74	1.85	0.86
2005-06	1.16	1.63	1.65	0.78	0.83
2006-07	0.92	1.32	0.91	0.97	0.97
2007-08	0.77	1.43	0.66	1.21	1.21
2008-09	0.7	1.5	0.9	1.3	1.7
2009-10	0.91	1.5	0.83	1.09	1.82
2010-11	1	1.7	0.5	0.6	0.6
2011-12	1.4	1.8	0.6	0.4	0.6
2012-13	2	2	0.8	0.4	1

Source: Reserve Bank of India (Issues of 'Report on Trend and Progress of Banking in India')

There are many studies regarding NPA in India including Ranjan and Dhal (2003), Yadav (2011), Ghosh and Ghosh (2011), Roy and Bhattacharya (2011) etc. But most of them focused only on public sector banks. But now the private sector banks also have grown substantially. So, there is a need for a study to analyze the NPA taking the whole banking sector in India into account. The study by Reserve Bank of India's Ranjan and Dhal (2003) was one of the landmark studies of the NPA of Indian banks after the Asian financial crisis. They did

an empirical assessment of relation between non-performing assets and terms of credit of public sector banks using linear regression model. In favourable macroeconomic conditions the chances of defaulting decreases as the borrower wants to maintain his credit worthiness. The study also identified 'Pro-cyclical' behaviour of lending of the banks observed in other countries like China. Banks tend to lend more during economic expansion period due to amplification of asymmetric information and moral hazard. This in turn caused more defaults.

In another study Yadav (2011) tried to measure the impact of non-performing assets on public sector banks' profitability. Though the result was statistically significant with expected negative relationship, the low value of the coefficient (-0.0494) implies that level of NPA alone does not explain the banks' profitability much. The other bank specific factors that affect the profitability are credit-deposit ratio, priority sector advances as percentage of total credit, operating expenses as percentage of total asset, level of spread etc (Yadav, 2011). The lending policy of the banks is one of the causes for NPAs as pointed out by many researchers not only for India but for other countries also. Deterioration of the quality of advances in Indian public sector banks over the years can be attributed to aggressive lending policies undertaken by the banks (Ghosh and Ghosh, 2011). The same pro-cyclic lending behaviour of banks discussed by Reddy (2004), Ranjan and Dhal (2003) and several others combined with poor lending policies caused the banks to lend more in pre-recession period i.e. before FY 2008-09. That resulted in the increase in the NPA level in the subsequent years (Table 4). Inability of the banks to monitor and control the NPAs in the post-recession years proves the absence of proper pre-sanctioning appraisal and post-disbursement control within the public sector banks in India (Ghosh and Ghosh, 2011).

Now to find out the impact of macroeconomic factors on non-performing assets in Indian banks, there are very few studies. Das and Ghosh (2003) empirically examined non-performing loans of public sector banks of India in terms of macroeconomic condition along with various indicators like asset size, credit growth and operating efficiency indicators. In the macroeconomic stress testing of public sector banks factors such as output gap, Real Effective Exchange Rate appreciation above its trend value, inflation rate and monetary tightening i.e. rise in interest rate significantly affect banks' asset quality as found out empirically by Roy and Bhattacharya (2011). The study found that the coefficient for output gap and inflation rate have positive signs while the coefficient of REER deviation from trend is negative. The NPA level measured by default rate responds positively to inflationary shocks and also to the volatility of exchange rate (Roy and Bhattacharya, 2011).

Higher NPA levels of banks in the last decade prompted several actions from the Government of India and Reserve Bank of India in form of policy measures in the areas of debt recovery, securitisation and asset reconstruction, resolution of defaults and non-performing assets (Ranjan and Dhal, 2003). Narasimham committee was set up in 1991 to provide a road map for the banking sector reforms and to build a robust banking system in the country. The committee suggested that Indian banks should follow the international practice in defining a NPA (Jain, 2012). The committee also advocated for a proper system of income recognition and provisioning which is fundamental for the preservation of the strength and stability of the banking system. Another big step was The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002, which was passed on December 17, 2002. Along with this Debt Recovery Tribunals (DRTs) and Lok Adalats were also formed for recovering NPAs. A more systematic surveillance and more internal review of health of loan accounts at a quicker pace when they are still in standard category can help prevent slippage of assets to a large extent (Rao, 2012).

2. Methodology

2.1. Data

The analysis uses panel data for 5 cross sections of bank groups which are Nationalized Banks, State Bank Group, Old Private Sector Banks, New Private Sector Banks and Foreign Banks. 17 years of time series data is collected starting from FY 1995-96 to FY 2011-12. The data for NPA

and the bank level variables are obtained from various issues of 'Report on Trend and Progress of Banking in India' published by Reserve Bank of India. The data for macroeconomic variables are collected from various issues of 'Handbook of Statistics on Indian Economy' published by the central bank.

Many variables were considered while estimation. But only the significant variables are included in the baseline specification. Initially we considered total 12 variables of which four are bank specific variables eight are economic variables. But to be considered in the regression analysis the variables must be stationary in nature. So, after discarding the non-stationary variables we ultimately kept five variables for the regression analysis (Table 5). Among them one is bank level variable and rest four are macroeconomic variables. The bank level variable is the Net Interest Margin (NIM). The Macroeconomic variables are GDP growth rate (GDP), change in Real Effective Exchange Rate (REER), Inflation measured by Wholesale Price Index (WPI). Also to take in account the effect of the external sector the "Global Variable", change in CBOE Volatility Index (VIX), based on S&P 500 Index Options is included. The Panel Unit Root Test (ADF - Fisher Chi-square) result for the variables is given in Table 5. Overall the data includes 85 observations evenly distributed over five cross sections i.e. bank segments.

Table 5. Panel unit root test (ADF - Fisher Chi-square) result

	Variable	Statistics	Probability	Stationarity
1	NET_PROFIT	12.7590	0.2375	Non-stationary
2	NIM	19.8681	0.0305	Stationary
3	PROVISION	14.1047	0.1683	Non-stationary
4	OPERATING_EXP	10.0374	0.4372	Non-stationary
5	GDP	24.7000	0.0059	Stationary
6	PER_CAPITA_GNP	8.21741	0.6076	Non-stationary
7	BROAD_MONEY	11.0703	0.3521	Non-stationary
8	DEBT_GDP	5.41440	0.8618	Non-stationary
9	INTEREST_RATE	3.76614	0.9573	Non-stationary
10	REER	58.2100	0.0000	Stationary
11	WPI	27.8891	0.0019	Stationary
12	VIX	26.8455	0.0028	Stationary

2.2. Panel Regression

We run the Panel Regression Model of the form-

$$Y_t = \alpha B_t + \beta M_t + \gamma G_t + \varepsilon$$

Here the dependent variable is Net NPA to Net Advances ratio (NPA_ADVANCES). The independent variables are - bank variable NIM shown by B_t , Macroeconomic variables GDP, REER and WPI denoted by M_t and the global variable VIX denoted by G_t . One time period lag of all the independent variables NIM, GDP, REER, WPI and VIX are also included as independent variables. We have used the fixed effect model as estimation technique.

3. Results

The panel regression result is depicted in the Table 6. From the result we can see that at 95 per cent confidence level the following variables have significant (Prob.<0.05) impacts – both GDP growth rate for current period and with one period lag, Change in Real Effective Exchange Rate (REER), Change in Real Effective Exchange Rate (REER) and Change in CBOE Volatility Index (VIX).

The values of R² and Adjusted R² are 65.48 per cent and 57.68 per cent respectively, which implies that the chosen independent variables are explaining the dependent variable to a

good extent. Now to analyze and validate the result we need to focus more on the sign of the coefficient than the value. For GDP and its one period lag the signs are negative in both cases. This implies that with decrease in economic growth the NPA level increases. It is quite evident from the current economic data of India; the GDP growth rate slumped to the decade low of about 4 per cent and the NPA level increased to almost 2005 level. The second significant variable is the change in Real Effective Interest Rate. We need to look how the exchange rate the non-performing asset level of banks economically, it is not as straight forward as the relation between GDP and NPA. The coefficient in REER is having negative sign denoting inverse relationship with non-performing asset level. That means a currency appreciation leads to more NPA. One explanation for that could be the fact that strong currency makes the country's products and services less competitive and thereby decreasing the amount of export. The next variable impacting the level of NPA is the global variable CBOE Volatility Index commonly referred as VIX. This index measures the volatility in the global market. The sign of the coefficient should be positive implying a rise in volatility would also increase the NPA of the banks. But, here we get the negative sign which is quite significant. It implies that though the volatility is increasing globally Indian banks are being able to keep the non-performing asset level at a declining trajectory.

Table 6. Panel regression result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NIM	0.597294	0.909739	0.656555	0.5139
NIM(1)	0.620725	0.938126	0.661665	0.5106
GDP	-0.489214	0.162067	-3.018584	0.0037
GDP(1)	-0.639092	0.161162	-3.965533	0.0002
WPI	-0.262397	0.147713	-1.776392	0.0806
WPI(1)	0.063471	0.214663	0.295677	0.7685
VIX	-0.063884	0.013892	-4.598526	0.0000
VIX(1)	0.019459	0.012080	1.610831	0.1123
REER	-0.409663	0.111450	-3.675757	0.0005
REER(1)	-0.125592	0.073609	-1.706196	0.0930
C	8.997514	1.964238	4.580663	0.0000
R-squared			0.654805	
Adjusted R-squared			0.576858	
S.E. of regression			1.737811	
Sum squared resid			187.2391	
F-statistic			8.400610	
Prob(F-statistic)			0.000000	

Notes: Method: Panel Least Squares, Periods included: 16, Cross-sections included: 5.95% Confidence Level

4. Conclusion and Policy Implications

The Non-Performing assets or bad loans continue to impact the economies around the world adversely from time to time. That led to a banking crisis in a country and a contagion to other countries as well as the whole banking sector of the world is connected now. The central banks all over the world have taken a tough stance against the non-performing assets and other regulators, think-tanks are joining them to create a safer banking sector. The Basel Three norms and Macro-prudential stress testing framework developed by International Monetary Fund (IMF) are outcomes of that.

The results coming out of the research are in similar line with the findings of the other studies done for other regions. But the factors which determine the non-performing assets don't work in the exactly similar fashion for different regions in the world. Indian banking sector is facing the stress in their asset quality as the GDP growth declined and Indian rupee saw steep depreciation. The Reserve Bank of India is taking several measures to curb the NPA level and issuing directives to scheduled commercial banks. But the alarming thing is that all the

developed and developing countries have already managed to curb the NPA level from the high of 2008-09 at the time of global recession, where it is still rising in India. Another point of concern in managing NPA is the high growth of restructured debt through Corporate Debt Restructuring (CDR) process. The aggregate restructured debt increased by 52.2 per cent to Rs. 2290 Billion in March 2013 from Rs. 1505 Billion in March 2012. It can be said that banks are more prone to take the CDR route than going for SARFAESI Act, Debt Recovery Tribunals and Lok Adalats for the resolution of NPA. So, the RBI should be more vigilant to stop the misuse of the CDR process.

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