CHAPTER 5
CONCLUSION AND IMPLICATIONS OF THE STUDY

5.1 Conclusion

The study presented evidence on the procyclical behaviour of public sector banks and private sector banks in India. In this study the procyclicality of bank credit is studied with a focus on supply and demand factors. The study found that there is a significant impact of gross domestic product on credit extended by banks in public sector banks-group. There is a positive association observed in between gross domestic product and bank credit in public sector banks group. This confirms the presence of procyclical behaviour of bank credit in public sector banks. In private sector banks group GDP is found to have insignificant impact on bank credit. In all banks-group gross domestic product which is an indicator of current state of economy is found to have positive and significant impact on bank credit, supporting the statement that during boom phase when economy moves upward, bank credit increases and when economy is in recession that is in downward phase, bank credit decreases. This confirms the presence of procyclical behaviour of bank credit in schedule commercial banks during the economic cycle.

The study also analysed the lead-lag relationship between Credit Cycle and Output Cycle (Growth Cycle). In case of public sector banks, at lag 1 Credit Cycle Granger Cause Output Cycle (Growth Cycle) which means that at lag 1 there is one way causality from Credit Cycle to Output Cycle (Growth Cycle) at 5 % level of significance. There is no causality from Output Cycle (Growth Cycle) to Credit Cycle. Further, the granger causality analysis result suggest the two way causality at 5 % level of significance between Credit Cycle and Output Cycle (Growth Cycle) at lag 6 and lag 7 supporting the fact that there is a presence of procyclicality and higher degree of risk associated with it. The causality from output to credit confirms the presence of procyclicality while the
causality of credit to output indicates higher degree of risk associated with it. While in private sector banks, there is presence of causality from Output Cycle (Growth Cycle) to Credit Cycle at 5% level of significance. This confirms the presence of procyclicality. The result does not confirm the presence of two way causality between Credit Cycle and Output Cycle (Growth Cycle).

The study also elucidated the procyclical behaviour of gross nonperforming assets. This study analysed gross NPA of public sector bank and private sector banks in India in terms of its response to bank specific and macroeconomic factors. Pearson correlation coefficient results indicate that negative correlation exist between current state of economy (current year’s GDP) and gross NPA in both public sector banks and private sector banks. Further, linear regression analysis results show that all bank specific variables had significant effect on gross NPA in public sector banks while macroeconomic variables are found to be insignificant in presence of bank specific variables. Whereas in case of private sector banks, current year’s GDP is found to be significant in presence of bank specific variables. This implies that gross NPA of private sector bank is sensitive to economic activity. In a regression analysis of gross NPA and macroeconomic variables it is found that current year’s GDP, economy wide fluctuations and inflation adjusted with GDP deflator are found to be significant in both public sector banks and private sector banks in India. The results support sensitivity of gross nonperforming assets to economic cycle. In case of all banks-group, GDP which is an indicator of current state of economy, is having negative but significant impact on Gross NPA implying that improved economic activity leads to lower financial distress of borrowers and thus, lower NPAs for banks.

The study also explained the procyclical behaviour of public sector banks and private sector banks in India with a focus on capital adequacy ratio. In case of public sector banks, GDP which is an indicator of economic or business cycle is found to be insignificant but with positive sign. This indicates that public
sector banks increase their capital buffer during upward trend in economic cycle so as to fulfill the need of loans during downward phase of economic cycle. This is considered to be proactive step of banks to foresee the need of extra capital buffer during downward phase of economic cycle. In case of private sector banks, GDP is found to have negative and insignificant impact of capital buffer. In all banks group also GDP is found to have negative and insignificant impact on capital buffer. The negative association between gross domestic product and capital buffer indicates that when economy grows the capital buffer of private banks and all banks decreases and when economy declines then capital buffer increases but not significantly.

The study also demonstrated the relationship between profitability parameters- Return on Assets and Return on Equity with Gross Domestic Product, Economy Wide Fluctuations, Inflation, Capital Buffer, Bank Credit, Bank Deposit and Non Performing Assets using Pearson correlation coefficient. The results found that in case of public sector banks, the variables such as Inflation, Bank Credit and Bank deposit have positive and significant relationship with Return on Assets. Bank Deposit and Bank Credit are having positive and significant correlation with Return on Equity. Non Performing Assets is found to have negative and significant relationship with Return on Assets and Return on Equity. GDP is said to have insignificant relationship with Profitability parameters. In case of Private Sector Banks, Gross Domestic Product, Bank Credit, Bank Deposit and Inflation have positive and significant relationship with Return on Assets. In case of Private Sector Banks, during upward phase in economic cycle, Return on Assets increases while in downward phase it decreases. Non Performing Assets is having significant but negative relationship with Return on Assets. Bank Deposit is also having positive and significant relationship with Return on Equity.

In this highly competitive world, banks are determined to increase their respective market share in credit segment. Loans and Advances are considered
to be the most profitable segments for banks. The results indicate that economic goals are compromised by the banks for profits. During upward phase of economic cycle, banks increase lending to borrowers in economy with an objective to increase their market share and profits. In downward phase of economic cycle, banks reduce lending to borrowers in economy. During this phase, when downward moving economy requires banks to support it and help it to come out of the recession, banks reduce lending making economy more vulnerable to move more into downward direction. The result showed the presence of procyclical behaviour of banks behind the amplification of economic cycle.

5.2 Implications of the Study

Commercial Banks in India are the back bone of Indian economy where credit to economy by banks plays a vital role in growth. In present scenario when India is battling the inflation and growth, credit could be the focal point which can become controlling element for Reserve Bank of India in facilitating growth in economy while controlling the inflation. It is important to take credit extended by banks as one of the essential requirement for formulation of monetary and macroeconomic policy.

The research shows that the perception of banks changes during the different phases of economic cycle. During upward phase banks perceive low risk due to business optimism, grants more and more credit and in downward phase, reverse is the situation. Credit flow closely follows the growth cycle. The research supports the presence of procyclicality in bank credit. It is imperative that central banks should take measures to control the associated risk linked to such behaviour.

It has been observed that in downward phase of economic cycle the banks overestimate the risk associated with lending and even do not lend to projects with positive NPV. Therefore it is vital that banks should have proper credit
appraisal system and credit policy to ensure in place so that in downward phase projects with positive NPV should get the funding.

Banks should create adequate buffer in good times that help banks to release this buffer in downward phase of economic cycle for viable projects with positive NPV. It is the duty of banks to help economy to come out of recession by ensuring adequate flow of credit to good projects.

Banks should have good credit appraisal system to ensure the quality of assets and to reduce the non performing assets during upward phase of economic cycle. It is observed that banks underestimate the risk and extend more and more credit in upward phase of economic cycle. This asset gets converted into non performing assets when economic cycle changes its direction to downward. Hence the banks should ensure that there should be proper check and control this conversion of standard assets to non performing assets when cycle moves into recession.

The research confirms the presence of bidirectional causality between output and credit cycle. The presence of causality from output to credit confirms the presence of procyclicality in banking system and the presence of causality from credit to output indicates the higher risk associated with procyclicality. The biggest risk associated with procyclicality is magnification in swings of economic cycle especially during downward phase of economic cycle. The banks should have adequate capital buffer as it not only provides a cushion against unexpected losses/ increase in risks but also extra buffer can be released in recession when there is dire need of funds to lift the economy out of recession.

In coming years the efficiency of a bank is judged by how the bank management handles the pressure of downward phase of economic cycle. Banks should be able to foresee the course of economic cycle. Banks should
design its credit and other policies for different phase of economic cycle in such a way that it not only ensures their own profitability but also make sure that they play an important role in social and economic development of India.

Financial stability is central for sustained economic growth and can be achieved only with strong and sound banking system. A sound banking system can be created when system effectively and efficiently works in both upswing and downswing economic cycle.

5.3 Limitations of the Study
The study is based on secondary data. The data has been collected from the sources of RBI and World Bank from their website. Hence the limitations of secondary data are unavoidable.

The present study is a causal research and considers banks groups (SBI Banks-Group, Nationalized Banks-Group, Foreign Banks-Group, Indian Private Banks-Group, Public Sector Banks-Group, Private Sector Banks-Group and All Banks-Group operating in India). The study has used Panel Data which is pooling of time series (yearly data) and cross-section (bank-groups) observations. The data was available for each bank group annually from the year 1999-00 to 2012-13 for 14 years resulting in a total number of 56 observations (14 observations X four bank-groups) for All Banks –Group. For Public Sector Bank-Group and Private Sector Bank Group the data was available for each bank group annually from the year 1999-00 to 2012-13 for 14 years resulting in a total number of 28 observations (14 observations X two bank-groups). For SBI banks-Group, Nationalised Banks-Group, Indian Private Banks-Group and Foreign Banks-Group the data was available for each bank group annually from the year 1999-00 to 2012-13 for 14 years resulting in a total number of 14 observations (14 observations X one bank-groups). In a causal research, this data is insufficient for doing analyses through time-series observations for each individual bank-group if numbers of explanatory (independent) variables are more and results may not be appropriate and may
be biased. However, in a panel data also the results can be biased because it may be possible, the same explanatory variable may give different results when considered for individual bank group and when considered together in a panel data.

The data of loan loss provisioning was not available for the period considered for the study. Hence gross nonperforming assets are used as proxy for loan loss provisioning.

5.4 Scope for further Research in Banking Sector- Future Dimensions

The present study analysed the procyclical behaviour of public sector banks and private sector banks. In this study the procyclicality of credit is analysed from both the supply factors and the demand factors. Further, the lead-lag relationship is analysed to understand whether credit leads output or output leads credit in the entire banks group. The research is extended to understand the procyclical behaviour of public sector banks and private sector banks with a focus on gross nonperforming assets and capital buffer. The study is conducted using bank group data taken from Reserve Bank of India. The scope of this research can be extended to bank specific data or bank level data. This would result in more number of observations which could provide more specific results. The scope of research could be extended to longer period of study which covers different phases of economic cycle. This would help to understand the behaviour of different variables over the bigger economic cycle of India.

Further research could also be extended in understanding the procyclical behaviour of other bank specific variables such as deposits, return on equity, expenses, return on assets, net interest margin and others. The analysis of all these variables could be done to understand the impact of economic cycle on them and to understand their movement along with economic cycle.
The scope of this research could be further extended to analyze the role of procyclicality of bank variables in magnification of economic cycle. The stress test could be conducted to see the impact of change in variable on the magnification of economic cycle.

The scope of research in India is further extended in studying the procyclical behaviour of Cooperative Banks, Regional Rural Banks and Non Banking Financial Corporation. The study could be conducted in understanding their procyclical behaviour and its notable contribution in magnification of economic cycle.

The scope of this research could be further extended in understanding the role of all the BASEL norms in procyclical behaviour of banks. The research could be extended in understanding whether change in BASEL norms has contributed in the procyclicality in India or not. Also this study could be extended in understanding how new BASEL norms mitigate the effect of procyclicality in India.

The research could also be extended in comparing the procyclical behaviour of India with other Asian countries like Pakistan, Srilanka, China, and Bangladesh. Further, understanding the importance of BRIC economy in today’s world this study could be extended in understanding the procyclical behaviour of BRIC economies together or comparing with each other.