Summary and Policy Implications
V. SUMMARY AND POLICY IMPLICATIONS

The studies conducted in the past showed a strong relationship between agricultural growth and availability of credit. Broadly, credit in agricultural sector may be divided into short-term loans to meet the input expenses and medium and long-term loans to facilitate the development of fixed farm assets such as land. This gap arises in relation to static or dynamic production function. Under a static functioning, the level of input use per hectare of cropped area being constant, the year-to-year variation in the amount of credit reflects the changes in input prices. Under a situation of diminishing returns, however, increasing input use is required to maintain the same level of output. The supply of credit related to static production conditions will not contribute to increase in output, although the withdrawals of it might lead to a decline in output. Under dynamic functions, credit requirements would rise from year to year even if input prices remain constant. The growth in credit under such dynamic conditions would lead to increased output. In the same way the investment credit too would lead to an improvement in the production potential of the farms through the process of net capital formation.

Agricultural credit, thus, in a practical sense, is a nucleus of the system of farm operation. It provides flow to the system averting ruins, which would have occurred due to the lack of monetary capacity of farmers. Thus, adequate and timely credit to the framer is, vital and indispensable for the rehabilitation and progress of agriculturists. In low-income countries like India agriculture assumes even more importance. Farmers' inability or least limited ability to save does not allow him to finance his pursuits and raise better production from his farms. Agricultural credit through institutional channels
is the only way to break agricultural stagnation. Private functioning agencies play a limited role keeping in view the larger public interest. The efforts to build up the institutional credit system for agriculture in India were initiated with introduction of cooperative credit societies followed by the commercial banks. Since, these institutions were unable to meet the growing needs of rural credit which resulted into the initiation of another financial institution exclusively to cater the needs of the target groups in the form of Regional Rural Banks.

The establishment of the Regional Rural Banks has been the landmark in the history of rural banking. These banks were introduced in 1975 to strengthen the institutional rural credit structure of India. However, RRBs have been criticized with respect to their concept, coverage and viability, even though these rural banks have made strong impact by making banking services accessible to the rural poor and instilling banking habits in them and providing capital assistance to the target groups. In this background various committees were appointed to look into the aspect of viability of RRBs like, The Dantawala Committee (1977), The RBI study on viability headed by Sivaraman (1981), Narasimhan and Khusro Committees on Financial Sector, etc. The Government of India looked in to the recommendations of these committees and decided to revamp the Regional Rural Banks by strengthening their capital base. Hence, accordingly it was decided by the Government to restructure 49 Regional Rural Banks. The Committee was formed for this purpose and various modalities for restructuring RRBs were drawn up by this committee. As per the recommendation of this committee each Regional Rural Bank in consultation with sponsoring bank has to prepare a five-year
plan to attain viability, which was known as Development Action Plan (DAP). With these measures it is believed that the Regional Rural Banks would attain viability and continue to contribute significantly towards agricultural credit in the country.

Thus various policy measures to make RRBs viable were implemented in the light of financial sector reforms during WTO era. However, there are concerns, which are specific to the Indian situation. The ultimate objective of financial sector reform in India should be to improve the operational and allocational efficiency of the system. Even from the point of view of meeting some of the socioeconomic concerns, it is necessary that the viability of the system is maintained. It is in this context that a fresh look at the performance of Regional Rural Banks is called for. An objective and rigorous evaluation of the performance of Regional Rural Banks was felt. The Malaprabha Grameena Bank was one of the Regional Rural Banks considered for restructuring in Karnataka. Hence, Malaprabha Grameena Bank was selected in the present study with an overall objective of evaluating the bank’s performance during pre and post WTO period.

5.1 SPECIFIC OBJECTIVES

1 To classify the Regional Rural Banks in Karnataka into different categories based on the composite growth index.

2 To study the growth of Malaprabha Grameena Bank in terms of physical financial indicators during pre and post WTO periods.

3 To work out different financial ratios of the bank for assessing the performance in the selected periods.
4 To estimate spread and burden ratios of the bank during the two periods for analyzing functioning efficiency.

5 To workout the Break-even volume business of the bank.

6 To identify the important physical and financial indicators influencing the performance of the bank in the two periods.

7 To estimate the sources contributing to profitability growth during post-WTO period.

8 To examine different dimensions of the overdues and non-performing assets and to suggest appropriate policy measures.

5.2 METHODOLOGY

The main features of the study area, the nature and sources of data, the sampling technique employed and the various statistical and econometric tools and techniques used in analyzing the data and evaluating the results in order to facilitate a clear understanding of the issues with which the present study is concerned are presented under the following major heads.

5.2.1 Description of the Study Area
5.2.2 Sampling frame
5.2.3 Nature and Sources of Data
5.2.4 Various Analytical Techniques Employed
5.2.5 Definition of Concepts Used in the Study
5.2.1 Description of the Study Area

The operational area of the Malaprabha Grameena Bank (MGB) consists of the undivided revenue districts of Dharwad and Belgaum in Karnataka state. There were 132 and 107 branches, respectively in Dharwad and Belgaum districts.

5.2.2 Sampling frame

The Malaprabha Grameena (M.G.) Bank was purposively selected for an in depth study to gain insights into the performance during the pre and post WTO era and also to identify the weaknesses both in organization and operation of the Bank so as to evolve suitable policy measures for strengthening the Grameena Banks in the country.

5.2.3 Nature and Sources of Data

For evaluating the objectives of the study, the secondary data were collected from the Monthly Progress Reports, Annual Reports and other records of the Bank on both physical and financial aspects. The period covered was 23 Years from 1981 to 2003-04 for the study. But the duration of the study period has changed in case of some of the variables depending upon the availability of the time series data from the records of the Bank.

In order to analysis the performance of M. G. Bank a set of physical and financial variables were considered and the time series data from 1981 to 2003-04, were collected to identify the variables that had the major influence on the working and performance of the bank, in general. In order to workout the targets and achievements of the Malaprabha Grameena Bank in the dispensation of credit in the districts of Belgaum and Dharwad,
the data relating to the credit advanced by the M. G. Bank were collected. The necessary
data were also collected at the bank level to workout the Break-even volume of business.
The time series data relating to the overdues were also collected for the analysis.

5.2.3.1 Period of the Study

The entire study period of 23 Years was divided into two phases. (i) Period - I
(1981-82 to 1993-94) representing the Pre-WTO period; (ii) Period - II (1994-95 to
2003-04), denoting the Post-WTO period. This was for the purpose of working out the
changes in the physical and financial variables over a period of time of the bank.

The RRBs in Karnataka were considered for classification taking into
consideration the variables like, deposits, advances, profit, recovery percent, percent of
NPA and income. The composite score for each bank and each variable were worked out
for the period 1996-97 to 2003-04. The following mode of classification was adopted for
classifying the variables and RRBs into different growth categories.

1. High Growth Category:
   Composite Growth Index value > Mean + 0.425 σ

2. Medium Growth Category:
   Mean + 0.425 σ < Composite Growth Index value > Mean - 0.425 σ

3. Low Growth Category:
   Composite Growth Index value < Mean - 0.425 σ

5.2.3.2 Variables Identification

To identify the important factors that were influencing the functioning of the bank, various records of the bank were referred.
5.2.3.3 Performance Indicators

In total 29 variables were identified which have close association with the performance of the bank.

5.2.4 Analytical Techniques Used

The data collected were analyzed in multiple stages. The data were subjected to the following statistical and econometric analyses:

1. Tabular Analysis
2. Growth Rate Analysis
3. Ratio Analysis
4. Decomposition Analysis
5. Theil's Entropy
6. Break-even Analysis
7. Principal Component Analysis

5.3 MAJOR FINDINGS

The data collected from various sources were analyzed and the findings have been presented as under

5.3.1 Growth Categories of RRBs in Karnataka State

The 13 RRBs functioning in Karnataka were subjected to composite index analysis for classifying them into different growth categories based on the indicators viz., deposits, advances, profits, income, recovery percent and percent of NPA. Among the banks Malaprabha, Tungabhadra, Bijapur and Krishna Grameen Banks were found place in high growth category in which Malaprabha Grameen Bank had the highest composite score of 110 followed by 106, 86 and 86 respectively by the above mentioned banks in that order. The Kolar and Chitradurga Grameen Banks with the composite growth index
of 81 each were placed in medium growth category followed by Kaveri and Kalpatharu Grameen Banks with 79 and 77 composite growth index. The remaining banks were classified under low growth category in which composite scores ranged between 56 to 49. Under this category Chikkamagalore -Kodagu Grameen Bank topped the list and Netravati was at the least. The classification of banks into three growth categories was mainly influenced by the higher growth in the variables such as deposits, advances, profits and income.

5.3.2 Period-wise Physical and Financial Performance Indicators of the Bank

Performance of the bank was analyzed and evaluated from several angles, adopting various measures.

5.3.2.1 Physical Performance Indicators

The bank started with the main aim of upliftment of the poor through rural development. Since its inception, the bank has been extending need based services to its clientele in addition to fulfilling the social obligations and has become an instrumental in the development of the areas of operation. This has been made possible through providing banking services to rural people. So, in order to extend the banking facilities to the people in remote areas of rural India, a network of branches was necessary. It has been observed that the Malaprabha Grameena Bank had systematically implemented the branch expansion programme in its operational area. The number of branches increased from 186 during pre-WTO period to 223 during post WTO period. During the Pre-WTO period the families covered per village was 559 which increased to 1202 during the Post-WTO period. The strength of the bank staff increased from 1193 in the Pre-WTO Period
to 1466 during the Post-WTO period along with the bank's massive branch expansion programme. The number of deposit accounts per branch did not show any definite trend during Post-WTO period however number of deposit accounts per branch were slightly higher during Post-WTO Period (0.039 lakhs) than during Pre-WTO Period (0.032 lakhs). Similar trend was noticed with respect to deposit accounts per employee wherein the number was higher during Post-WTO Period (0.006 lakhs) than Pre-WTO Period (0.005 lakhs). It was not possible to observe any specific trend in case of the advance accounts per employee. These accounts fluctuated much from year to year due to the variations in the number of employees and in advance accounts.

5.3.2.2 Financial Performance Indicators

There has been an unprecedented growth of deposits during the study period which had increased from Rs.755.49 lakhs in 1981 to Rs.85,277.87 lakhs in 2003-04.

The average advance made and deposits collected during the Pre-WTO Period were Rs.7,268.43 lakhs and Rs.5,586.28 lakhs respectively. The corresponding figures during Post-WTO Period were Rs.39,620.25 lakhs and Rs.47,869.72 lakhs.

The total advances of the bank had increased from just Rs.1277.66 lakhs in 1981 to Rs.66,827.54 lakhs in the year 2003-04. The total business of the bank had increased from Rs.12854.71 lakhs during Pre-WTO Period to Rs.87,489.96 lakhs during Post-WTO Period. The year-wise total business of the Malaprabha Grameena Bank increased from Rs.2,033.15 lakhs in 1981 to Rs.1,52,105.41 lakhs in 2003-04. The business per branch increased from Rs.19.55 lakh to Rs.625.95 lakhs during the same period.
The income and expenditure of the bank showed continuously increasing trends over the years and the profitability was fluctuating. The increase in income of the bank was mainly due to increase in the interest income.

The bank achieved the recovery rate of 69.21 per cent during post-WTO period as compared to Pre-WTO period, which was 51.41 per cent. The bank had continued its tradition of excellent performance under the government sponsored programmes, like the IRDP, 20 Point Economic Programmes, Bio-gas, Antyodaya, Special Component Scheme, SGSY etc. This is evident by the amount sanctioned by this bank for this purpose was Rs. 455.78 lakhs during pre-WTO period which increased to Rs. 727.96 lakhs during post-WTO period.

The paid up share capital of the bank has increased from Rs. 38.46 lakhs during pre-WTO period to Rs. 650.58 lakhs during post-WTO period.

The Credit-Deposit Ratio has been more during Pre-WTO Period (147.30%) than during Post-WTO Period (87.83%). This Credit Deposit Ratio of more than 100 per cent indicated that the bank was advancing more than the deposits mobilized.

The borrowings and availment of refinance of the bank are planned as per lending programme under credit plan and demand for specific credit. The borrowings of the bank were Rs. 4286.61 lakhs during pre-WTO period which increased to Rs. 14450.28 lakhs during post-WTO period.

The average credit dispensation and deposit mobilization per branch were increased respectively from Rs. 36.68 lakhs and Rs. 27.87 lakhs during the Pre-WTO
Period to Rs.174.65 lakhs and Rs.210.04 lakhs during the Post-WTO Period. The average business per branch increased from Rs.64.55 lakhs during the Pre-WTO Period to Rs.384.69 during the Post-WTO Period.

A strong loans and advances portfolio is not only the main source of substantial income to the bank but also would act as an indicator as to how far the bank has been successful in meeting its structured social obligation. The advance per branch increased from Rs.36.68 lakhs during the Pre-WTO Period to Rs.174.65 lakhs during the Post-WTO Period. On the average, the advances and deposits per employee increased respectively from Rs.5.60 lakhs and Rs.4.18 lakhs during the Pre-WTO Period to Rs.27.19 lakhs and Rs.32.89 lakhs during Post-WTO Period.

5.3.3 Growth Pattern of Physical and Financial Performance Indicators of the Bank

To study the changes in the selected physical and financial variables relating to the Malaprabha Grameena Bank over a period of time the growth rate analysis was carried out using the exponential function.

5.3.3.1 Growth in Physical Indicators

All the variables showed a positive growth except the villages covered and advance accounts per employee during the Pre-WTO Period. While during the Post WTO Period villages covered, manpower, manpower per branch and advance accounts per branch showed decreasing tendency over the years. Growth in the number of branches was found to be more in the Pre-WTO Period (4.71%) compared to the Post WTO Period (1.86%). The growth rates were highly significant at one per cent in both the periods.
Thus the growth rate of branches in the post WTO period was not that much intensive as that of Pre-WTO Period.

Villages covered during both the Pre-WTO Period (-0.95%) and Post-WTO Period (-0.87%) showed declining trend, however growth rates were found to be non-significant in case of pre-WTO period. This was mainly due to the fact that Malaprabha Grameena Bank had to relinquish some villages to other financial institutions in its area of operation, as result of the introduction of service area approach in which, certain numbers of villages were allotted to a particular financial institution.

The family coverage per village was found to be significant only in the Pre-WTO Period (17.12%) and was non-significant during Post-WTO Period (0.15%). The families covered per village did not keep pace with increase in the number of branches during the Post-WTO period.

The growth in manpower of the bank was found to be positive and significant during the Pre-WTO Period (8.68%). However, during the post WTO period the growth rate was negative (-0.49%). A higher growth rate in the earlier period was mainly due to more recruitment to man the increased number of branches. The negative growth rate in the employees per branch was observed during the Post-WTO Period (-2.31%) which was significant at one per cent level. This negative growth in employees per branch could be due to expansion of branches without substantial increase in the manpower and retirement and quit of job by senior officials for better opportunities elsewhere. This figure found to be positive in the Pre-WTO Period (3.80%) and also significant at one per cent probability level.
The deposit accounts growth was found to be highly significant during both the periods. Growth rate was the highest during the Pre-WTO Period (9.73%) and 3.48 per cent during the post WTO period.

The advance accounts grew significantly at a faster rate in the Pre WTO period (6.85%) and advance accounts growth rate was very meager and non-significant during the Post WTO period (0.43%).

Higher rate of growth in the deposit accounts per branch was observed (4.80%) during the Pre WTO period than during the Post WTO period (1.59%) and were found to be significant at one per cent and five per cent probability level, respectively. While the advance accounts per branch grown at 2.05 per cent during the Pre WTO period and was significant at one per cent level of probability and the growth rate was decreasing during the Post WTO period, however it was non-significant. It was clear from the above discussion that the branches and the staff had performed the functions efficiently in mobilizing deposits and advances both in the Pre WTO period and Post WTO periods.

In the case of deposit accounts per employee, the growth rate in the Pre WTO period (0.97%) was significant at five percent. On the other hand growth rate was found to be significant at one per cent in Post WTO period (3.99%). The significant growth in the Post WTO period was due to a significant higher rate of growth in the deposit accounts (3.48%) as compared to the negative growth in manpower (-0.49%).
The advance accounts per employee were found negative and significant during Pre WTO period (-1.68%). This was mainly due to the higher rate of growth in manpower (8.68%) compared to advance accounts (6.85%) during the period.

5.3.3.2 Growth in Financial Indicators

Out of 18 variables, only C:D ratio variable was found to be associated with negative growth in both the study periods. While the recovery percent and Profit or loss had negative growth rate only during the Pre WTO period. In the Pre WTO period all the variables were highly significant at one per cent except recovery, partner in government programmes and profit or loss variables. In the post WTO period, twelve variables were significant at one per cent; however, growth rates of borrowings and share capital were non-significant. Recovery, overdue and profit or loss growth rates were significant at five per cent probability level.

The growth in advances was found to be slightly higher in the Pre-WTO Period (19.75%) compared to the Post-WTO Period (14.34%) and both were significant. The higher growth during the Pre-WTO Period was due mainly to launching of the massive credit programmes to cover more area and larger section of the target groups. During the Post WTO period, a majority of the potential area and borrowers had been covered earlier, thus there was comparatively a lower rate of growth.

The Malaprabha Grameena Bank by providing banking facilities to unbank and under banked rural areas gave a good account of itself in mobilizing deposit funds, which were otherwise locked idly with the rural populace. The growth in deposits was found to
be significant in both periods. The rate of growth has been again the highest in the Pre-WTO Period (25.30%) than the Post WTO period (19.44%).

The total business showed a significant growth which was found to be higher in the Pre-WTO Period (22.07%) than Post WTO period (16.97%) and the growth rates in both the periods were significant at one per cent. The higher rates in deposits as well as advances of the bank were mainly responsible for this growth.

The income and expenditure growth rates of the bank were found to be significant in both the periods. The growth in these two indicators was observed to be higher in the Pre-WTO Period than the Post WTO period. The growth rate in expenditure was generally higher than that of income during the Pre-WTO Period, while the reverse trend was observed during the Post WTO period and as a result of which the bank had registered significant growth in the profits in Post-WTO Period. However, the loss indicator observed in the Pre-WTO Period was found to be non-significant. Hence, this variable alone might not clearly reveal the performance of the Malaprabha Grameena Bank because; the other financial indicators had registered a favorable growth.

In the Pre-WTO period a significant positive growth rate in borrowings was observed (17.57 per cent) to keep pace with credit deployment. However, growth rate in bank borrowings during the Post WTO period (0.49%) was positive but not-significant. Reason was that the bank did not borrow funds from the RBI during some part of the latter Pre-WTO Period and Post WTO periods.
It was found that though the growth rate in the amount spent on Government programmes had registered a positive growth in both the periods. Growth in the Pre-WTO Period was positive but was non-significant. But in the Post WTO period (10.05%) the growth rate found to be highly significant at one per cent probability level. The bank had continued the tradition of major participation in the Government sponsored programmes.

In respect of the share capital of the bank in the Post WTO Period (11.30%) no significant growth was observed because, no fresh contribution of share capital had been collected from any of the agencies. The upward revision in the share capital was made twice in the Pre-WTO Period, which had resulted into a significant higher growth rate of 10.59 per cent. The share capital of the bank was increased with the main objective of providing a wider capital base to the bank.

The credit-deposit ratio is an important indicator for evaluating the performance of the financial institution. This ratio indicates the deployment of advances out of the mobilized resources. The growth rate in credit-deposit ratio during the Pre-WTO Period (-4.43%) and Post WTO period (-4.27%) showed a declining trend due to higher rate of growth in deposits over the advances and were significant.

The growth in overdues was found to be significant at five per cent level during the Post WTO period (8.03%). On the other hand growth rate was significant at one per cent during the Pre-WTO Period. The growth rate in recovery per cent of the bank was picking up and found to be significant at five per cent for Post WTO period, when
compared to declining trend observed during the Pre-WTO Period (-2.99%). This was possible because of various recovery strategies adopted by the bank. A significant increase in overdues and decline in recovery were partly due to the implementation of the loan waiver scheme and drought conditions that prevailed in the Pre-WTO Period.

Within the directive policy guidelines of RBI/NABARD, the bank adopted a credit policy to increase high quality and high yielding advances, amongst others. The growth rates in respect of advances per branch were found to be highly significant at one per cent in both the study periods. This reflects that bank has been successful in meeting its structured social obligations.

Per branch growth rate in deposits was the highest in the Pre-WTO Period (19.67%) than the Post WTO period (17.26%) and growth rates in both the periods were found to be significant at one per cent probability level. This progress could be possible due to the intensive efforts of the bank staff. Due to the favorable effects of both deposit and advance growth, the growth in business per branch was also found to be significant.

The growth rates in the advances per employee were significant at one per cent level of probability. This was mainly due to the massive credit deployment by the bank staff. Due to the concerted efforts of the bank staff in mobilizing the deposits, the growth rate in deposit per employee was found to be significant at one per cent in both the periods, but it was comparatively higher during Post -WTO Period (20.03%) than during Pre-WTO Period (15.29%).
5.3.4 Financial Ratio Analysis

Ratio analysis is the powerful tool of financial analysis. The financial ratios relevant to the Malaprabha Grameena Bank were grouped under five different categories namely, liquidity ratios, solvency ratios, tests of strength, profitability ratios and efficiency ratios.

Liquidity ratios computed to measure the ability of the bank to meet its liability obligations in the short-run showed that the average Current ratio was lower during the Post WTO period (4.634) than during Pre-WTO Period (5.113). However, the overall ratio in both the periods was more than two, thus it could be concluded that the bank had maintained sufficient current assets to meet current obligations and had a sound liquidity position.

Acid-test ratio for Pre-WTO Period and Post WTO periods was observed to be respectively 3.182 and 1.349. The Credit Deposit ratio of the bank was more than 100 per cent during Pre-WTO Period and was 89.728 per cent during Post-WTO Period. The average Liquid Assets to Total Assets ratio during the periods of Pre-WTO Period and Post WTO periods were 0.443 and 0.240, respectively.

Two types of Tests of Solvency were computed to ascertain the solvency position of the bank. The Debt-equity ratio found to be higher during Pre -WTO period (45.968) compared to Post-WTO period (26.531). This indicated that during Post-WTO period the bank was operating on a thin equity in which borrowed capital played a dominant role.
The Indebtedness Ratio during the Pre-WTO Period (58.779) was higher than during the Post WTO period (40.538).

Tests of Strength analysis indicated that the Networth in the Pre-WTO Period and Post -WTO Periods were 49.918 and 156.336, respectively. In both the periods ratio found to be positive but higher during Pre WTO period. The net capital ratio was little more than unity throughout Pre-WTO Period and the average net capital ratio for Pre-WTO Period and the Post WTO periods were found to be 1.005 and 2.095, respectively.

The ratio of net profits to total assets was found to be very less (0.001) during Pre-WTO Period and it was 0.212 during the Post-WTO Period. During the Pre-WTO Period, the bank was able to earn some profit, but the magnitude was very low and this has resulted into a lower positive ratio. Net Profit to Fixed Assets ratio was negative during Pre-WTO Period (-0.091) and was 3.911 during the Post W TO period. The possible reasons that could be attributed for lower ratio during the Pre-WTO period were, firstly the profit earned by the bank was meager in relation to the fixed assets and secondly, the depreciation on fixed assets was not written off which inflated the value of fixed assets. The Net Profit to NetWorth ratio was positive in the Pre-WTO Period (0.231) and the ratio in the Post WTO period was negative (-1.281).

Among the Efficiency Ratios, Gross ratio during the Pre-WTO Period (99.258) was found to be higher than during the Post WTO period (82.027). But this ratio found to be less than 100 percent during both the periods. This indicates that lower proportion of expenses in the gross income of the bank. This would mean higher margin of profit. The Operating Ratio in the Pre-WTO Period (41.647) was higher compared to the Post
WTO period (29.013). This implies that the operating efficiency of the bank has improved during the Post WTO period as compared to Pre WTO period.

5.3.5 Spread, Burden and Profitability Analysis

The bank had incurred losses during Pre-WTO Period. The extent of losses was Rs.8.70 Lakhs in the Pre-WTO Period compared to the high profits during the Post WTO period (Rs.1389.09 Lakhs). This was attributed to the higher rate of growth in burden compared to the spread of the bank during Pre-WTO period. For arriving at profitability, the burden and spread were taken into consideration. The spread of the bank was high in the Post WTO period (Rs.3600.84 Lakhs) than in the Pre-WTO Period (Rs.380.71 lakhs). Results corresponding to the burden analysis revealed that the burden in the Post WTO period was also higher (Rs.2211.75 Lakhs) than in Pre-WTO Period (Rs.389.41 lakhs). The corresponding values for the three parameters, manpower expenses, other expenses and non-interest expenses were found to be higher in the Post WTO period than those in the Pre-WTO Period.

The profitability ratio was found to be positive during both Pre and Post WTO periods (0.11 and 1.59 respectively). But the profitability ratio was lower during the Pre-WTO period. This was mainly due to the fact that, earning of profit had been considered to be not so important objective for the bank. But in the Post WTO period, in order to sustain its growth and development, it was imperative for the bank to earn profits in addition to fulfilling its social objectives. A provision was made to relax some of the restrictions of targeted lending and the bank was permitted to lend a minimum of 40 per cent of its advances to the target groups and remaining 60 per cent may be provided to
the non-target groups. This has helped the bank to earn a higher level of profits besides serving the rural people during the Post WTO period. Further, during the Post WTO period bank had earned a profit of Rs.1.59 for every 100 rupee volume of business as compared to Rs. 0.11 during Pre WTO period.

5.3.6 **Decomposition Analysis of Profitability Growth of the Bank**

The decomposition was carried out to understand the various sources contributing to the increased profits of the bank under the Post-WTO Period over the Pre-WTO Period.

Taking the profit as the dependent variable and five variables influencing profit as independent variables, the regression analysis was carried out and the estimates of the functions for both situations of Pre-WTO Period and Post-WTO period. Interest income, interest expenditure, manpower expenditure, other expenses and non-interest income were the independent variables included in the model to know their influence on profits of the bank. The co-efficient of multiple determination for the regression functions of profit against the independent variables under the Pre-WTO Period and the Post-WTO Periods were significant. The Adjusted R² value was 0.9396 in the case of Pre-WTO Period and 0.9656 in the case of Post-WTO Period. Thus, more than 93 per cent of variation in the profit of the bank was explained by the independent variables included in the model. The computed ‘F’ values for both the functions indicated highly significant adjusted R² at one per cent probability level implying a good fit of the model.
As expected income variables had positive influence and expenditure items exerted negative influence on the profits of the bank. Under the Pre-WTO Period, the regression estimates of interest income (59.1388) and non-interest income (6.9381) were positive and significant at one per cent probability level. On the other hand, all the expenditure variables were negative; among these coefficients in absolute terms, manpower expenditure (-43.3628) was the highest and significant at one per cent probability level, followed by interest expenditure (-18.6128), which was significant at ten per cent level of probability. Even though the coefficient of other expenses (-0.5340) was negative but failed to exert any significant influence on the profit of the bank during the Pre-WTO Period.

Similarly in the case of Post-WTO Period, the regression estimates of interest income (5.5349) was significant at one per cent probability level, while the coefficient of non-interest income (0.3438) was positive and significant at ten per cent probability level. As expected all the expenditure variables imparted negative influence on the profitability of the bank. The coefficient of interest expenditure (-2.7524) was significant at one per cent probability level, while the coefficients of manpower expenses (-1.8932) and other expenses (-0.5340) were negative but statistically non-significant.

The structural break in the profitability of the bank between the Pre-WTO Period and Post-WTO Period due to shift in the intercept or/and due to change in the slope was tested using the dummy variable technique. The results on dummy variable revealed that the dummy coefficient (6.4404) as well as the calculated F statistic (14.2596) for pooled function was significant. This implied that regression functions that defined the profit
under Pre-WTO Period and Post-WTO Period were differed. These differences were due to changes in the slope as well as intercept parameters. This result offered the required justification for estimating the sources of profit growth into its constituent sources.

For the Decomposition analysis, values on Regression estimates and geometric mean levels of independent variables and profit were used. The total estimated growth in profit under Post-WTO Period was 625.66 per cent. In other words profits of the bank were 625.66 per cent higher during Post-WTO Period compared to the Pre-WTO Period. Among the different sources contributing to the increased profit, management or difference in various banking operating system including the changes in policies of the bank with respect to the credit, deposits and other aspects contributed for 374.30 per cent. The remaining 251.36 per cent of the increased profits were attributed to the differences in the other parameters influencing the bank’s profitability. Among the various independent variables included in the model interest income accounted for 1205.27 per cent followed by 98.34 per cent from the non-interest component. Other variables like interest expenditure (-572.72%), manpower expenditure (-383.41) and other expenses (-96.12%) together responsible for more than thousand percent reduction in the profit of the bank. In other words, profitability of the bank could have been increased to a considerable extent (1052.25%) by reducing the expenditure of the bank. However, these expenses were inevitable, so the only option is to curtail the unnecessary expenses and expect higher profit of the bank. Thus the management practices followed during the Post-WTO Period was superior over Pre-WTO Period and contributed for the increased profitability of the bank. The superior management practices referred to better and timely
credit and deposit management, staff management, maintaining optimum C: D ratio, reserve maintenance etc.

5.3.7 Composition of Deposits - Theils Entrophy Index

One of the important criterions to determine the efficiency of any credit agency has been the extent to which it is able to mobilise savings of the community and strengthen its capital base by increasing the volume of business over a period of time. The major components of deposits are fixed deposits, savings bank deposits and current deposits.

Average deposits for the Post-WTO Period were Rs.47869.72 lakhs as against only Rs.7393.89 during Pre-WTO Period. Results revealed that the proportion of fixed deposits (63.90%) and current deposits (3.41%) slightly increased during the Post WTO Period compared to their respective shares of 61.83 per cent and 1.41 per cent during the Pre WTO Period. The annual compound growth rates were worked out for different types of deposits. Growth rate analysis revealed that the growth rates of fixed deposits and savings were higher during the Pre WTO Period (21.09% and 16.59% respectively) compared to the Post WTO Period (20.95% and 15.74% respectively). The growth rates of current deposits and total deposits of the banks increased at relatively faster rate (32.16% and 19.44%) during the Post WTO Period than Pre WTO Period (26.32 % and 19.27%). All the growth rates were found to be highly significant at one per cent level of probability.
A proper mix of deposits of especially the low cost deposit i.e., current deposits has helped the bank to earn profit. The improper mix of deposits is also exhibited by the Theils Entropy Value of 0.34 in the Pre WTO period and 0.30 in the Post WTO period. This needs to be reduced by the bank to have a proper mix of deposits without affecting the profitability of the bank. The bank has been found mobilizing more of fixed deposits and the Theils Entropy Index has exhibited lower level of other types of deposits during the Post WTO period.

5.3.8 Composition of Advances - Theils Entropy Index

Notwithstanding the place of prominence gained by the investment portfolio, the bank continued to accord prime importance to expanding the Loans and Advances portfolio because of its multi-dimensional utilitarian aspects.

Average advances of the bank worked out to be Rs.9907.80 lakhs during the Pre-WTO Period and Rs.40955.67 lakhs during the Post-WTO Period, thus indicating tremendous progress in the area of advances by the bank. The proportion of different categories of advances indicated that the share of agriculture sector (64.89%), small scale industry (3.22%) and other purposes (15.90%) was comparatively higher during the Pre-WTO Period in relation to respective figures of 55.48 per cent, 3.18 per cent and 15.64 per cent during the Post-WTO Period. However, as revealed by the results the proportion of the tertiary sector advances in the total advances increased during the Post-WTO Period (25.70%) compared to Pre-WTO Period (15.92%). This diversion was mainly from the agriculture sector, as the share of this sector in the total advances decreased over the years.
Theils Entropy indices were used to know whether the bank had concentrated on a single purpose over the years rather than on equitable distribution of credit. The results revealed that the Theils Entropy value was 0.22 for the Post-WTO Period and 0.30 for the Pre-WTO Period, which indicated the extent of concentration was bit higher in both the periods as indicated by the proportion of advances mainly diverted towards the agriculture both during Pre-WTO Period (64.89%) and Post-WTO Period (55.48%).

This indicated that there was some degree of inequality in the disbursement of loans for various purposes, which suggested that the bank had to pay more attention in attaining equality in their loan distribution. Thus proportion of advances to the total cumulative advances showed that the bank had advanced more credit to Agriculture followed by Tertiary sector and others sector. The least proportion of the advances went to small-scale industries sector, during both the periods. The lower development of industries in this region might have adversely affected the flow of credit besides defunct of many industries due to many reasons. But off late the bank has increased the advances on this sector as evidenced by a higher growth rate of advances of 20.09 per cent and 17.24 per cent to this sector during Pre-WTO Period and Post-WTO Period, respectively.

The growth rate analysis indicated that during the Pre-WTO Period, except advances for the agriculture sector (6.16%) all other kinds of advances were grown significantly and growth rates were significant at one per cent probability level. The magnitude of growth was the highest for other category of advance (29.02%) followed by small scale industry (20.09%), tertiary sector (11.89%) and total advances (10.19%). During the Post-WTO Period also similar trend was observed, as again the other category
of advance (20.54%) registered the highest growth rate followed by tertiary sector (19.54%), small scale industry (17.24%), total advances (14.79%) and agriculture sector (11.71%), all these growth rates were significant at one per cent level of probability. The prevalence of drought and availability of liberal credit from other financial institutions coupled with saturation of credit in this sector might be the possible reasons for this slow growth in advances for agriculture sector.

5.3.9 Overdues Analysis of the Bank

For any financial institution recovery of loans lent to the borrowers is an important factor in deciding the viability and sustainability of the institution.

The results of the analysis of the demand, balance and recovery position of the Malaprabha Grameena Bank during the study periods have shown that during the Pre WTO period the demand for and the collection of advanced funds showed increasing trends with some fluctuations. No clear trend was observable in case of overdues/balance of funds. The level of overdues increased consistently from 1984 to 1990 but declined in 1990-91 and started increasing once again. The overdues percentage did not show any particular phenomenon, but a declining trend was noticed since 1990. When the per cent change in overdues was worked out it was seen that except 1990-91 in all the years the overdues were found to be increasing over their previous years, but its magnitude was comparatively less during the period from 1991 to 1994.

During the post WTO period, the analysis revealed that demand position of the bank decreased during 1994-95, 1998-99 and 2003-04 compared to their previous years.
Similar was the case with respect to collection except that the change in collection during 1994-95 was nil compared to their previous year. Overdues over the years showed decreasing trend except for 1995-96, 2001-02 and 2002-03 compared to their previous years. In rest of the years during post WTO period the bank improved the recovery position by reducing the overdues.

5.3.10 Asset Classification of Malaprabha Grameena Bank

As per the stipulated norms of the Reserve Bank of India, the financial institutions are expected to classify their assets into different types considering the extent of risk associated with each category of assets. Assets of MGB have been classified into four categories viz., standard assets, sub-standard assets, doubtful assets and loss assets. The sub-standard assets, doubtful assets and loss assets put together are total non-performing assets (NPA) of the bank. It is clear from the results that the quantum of standard assets has been increasing continuously from Rs.18805.10 lakhs in the year 1995-96 to Rs.62346.80 lakhs in 2003-04. This indicates that the bank is performing better. The percentage of NPA to total assets shows a declining trend during the period 1995-96 to 2001 and reached lowest level (9.65%) in the year 2000-01. This is due to bank’s effective recovery strategies. But NPA was at lower level (9.88 %) in the year 2003-04.

When we look at the composition of NPA, the proportion of doubtful assets is more than fifty per cent of the total NPA. Doubtful assets have shown an increasing trend from 54.96 per cent in 1995-96 to 74.66 percent in 2003-04. But, sub-standard assets showed a declining trend. On the contrary no clear trend was observed in the case of loss assets.
5.3.11 Break-Even Analysis

As per the guidelines of the Reserve Bank of India, the Grameen Banks are required to work out the break-even volume of business so as to get an idea of the trends in their working and to evolve future course of action relating to the business. The break-even volume of business of Malaprabha Grameena Bank for the past decade (1994-95 to 2003-04) has been estimated. Further, future projections were also made for the years 2004-05 and 2005-06 based on the growth of the components of break-even volume of business. The components such as transaction cost, risk cost, miscellaneous income and financial margin were considered for working out the break-even volume of the business of the bank. The results revealed that the transaction costs were found to be increasing over the years while the risk costs did not show any clear trend but started increasing towards the end of 2003-04. Even the same trend was continued for the projected period. Similar phenomenon was observed in respect of miscellaneous income, financial margin as well as the break-even volume of business. In the case of average working funds, a clear cut increasing trend was observed during the study period including the projection period. On the contrary, no specific trend was seen in respect of the break-even volume of business as a proportion of the working funds, which was interestingly found to be tapering off towards the end of 2003-04. This tapering off phenomenon continued even in the projected period wherein the proportion of break-even volume of business to working funds declined from 0.49 to 0.47. The financial margin had declined from 5.15 in 1994-95 to 4.20 in 1995-96 due to lesser spread compared to burden. But, once again the financial margin increased to 5.93 in the year 1996-97 due to increase in spread and was
more than Rs.6 for the next two years and again started declining continuously and reached a low level of 4.86 during 2001-02. Then again it started increasing during 2002-03 and 2003-04, respectively. The bank was found to be in the break even volume of business irrespective the increase or decrease in the financial margin due to the higher volume of average current working funds.

5.3.12 Factors Influencing the Performance of the Bank – Principal Component Analysis

In order to identify the most important physical and financial factors influencing the working of the MG bank, the technique of Principal Component Analysis was adopted both the Pre WTO and Post WTO periods, to have a comparison and critical evaluation.

During Pre-WTO period nine physical indicators were used for the principal component analysis to identify the relative importance of these variables on the performance of the bank. It was observed from the results that, six variables had higher factor loadings in the first dimension, one variable in the second dimension and two variables in third dimension. The variables such as family coverage per village, advance accounts, number of branches, number of villages covered, deposit accounts and number of employees are grouped under first component. These variables put together accounted for 51.40 per cent variation in the performance of the bank. As this component threw light on the extent of coverage, it was designated as "Expansion" component. About 12.80 per cent of the variation in the performance of the bank has been explained the second principal component. The efficiency of the employees in making bank advances was captured by the second principal component. Hence, this was considered as the next
best variable in influencing the performance of the bank. This component has been termed as "Productivity" component, since it reflected the efficiency of the employees in making advances to the ruralites. Other two variables deposit accounts per branch and advance accounts per branch were found place in the third component. The third principal component was able to explain 10.30 per cent of the variation. This emphasized the fact that, the overall bank’s performance would be influenced by the performance of the large number of individual branches in terms of their business handling efficiency. Hence, this component has been termed as “branch productivity” component. The three dimensions together have explained 74.50 percent of the variation in the performance of the bank.

During the Pre-WTO period selected financial indicators were subjected to the analysis. The first component had identified nine variables like, business per branch, advance accounts per employee, deposit amount per branch, etc, which explained 55.20 per cent of the total variation in the performance of the bank. This component signified the business structure of the bank. The second component identified the five variables advances, total business, deposit, income and expenses as the important variables influencing the 25.30 per cent of the variation. This component signified the operating efficiency of the in terms of the profitability dimension of the variables. The third component could explain only 9.20 per cent of the variation capturing two variables credit-deposit ratio and borrowings. This component signified the monetary management of the bank in terms of utilization of funds. The first component has been termed as "Resource Mobilization and Credit Deployment" component. The second component
termed as "Profitability" component. The third component termed as "Liability and bad debt" component.

During the Post-WTO period the selected ten physical variables were subjected to the analysis. Results revealed that out of these ten variables, nine variables had higher factor loadings in the first dimension, one variable in the second dimension. In the first principal component the variables captured were family coverage per village, advance accounts, number of branches, deposit accounts and number of employees. This component was able to explain 75.20 per cent variation in the performance of the bank. Since, this component concentrated on the extent of coverage, it was designated as "Coverage" component. The variable grouped under the second principal component was able to explain 16.10 per cent of the variation in the performance of the bank. This component captured one variable namely, employee per branch. This variable, which is closely related to human resource development, was considered as the next best variable, influencing the performance of the bank. This component was termed as "Human Resource" component. Both the components put together were able to explain 91.3 per cent of the variation in the performance of the bank, which is a sizable proportion.

Results revealed that twelve financial variables had higher factor loading on the first component. This component was able to explain about 76.50 per cent of the total variation that could be attributed to the business structure of the bank. The first dimension captured the variables that related to resources and advances. This component was termed as "Business" component. The second component explained 9.40 per cent of the total variation capturing two financial variables namely participation in government
programmes and CD ratio. This component termed as "welfare" component. The third component captured one financial variable and was able to explain only 7.20 per cent of the variation that placed importance on the profitability. Hence, this component might be termed as "Sustainability" component.

5.4 POLICY IMPLICATIONS

The findings of the study paved the way for the following policy implications

1. The high growth category RRBs need to sustain their existing level of growth and the medium as well as low growth category RRBs need to improve their efficiency so as to move to the higher growth ladder. Another option would be to merge the low growth category RRBs with the High or Medium growth category RRBs in order to achieve a viable scale of operation.

2. The balanced growth in both physical and financial indicators of the bank is a crucial factor for the sustainability of the bank. Thus the bank may analyze the causes for favourable or un-favourable growth in variables and make necessary corrections to have desired benefits to the bank.

3. The bank may be permitted to accept deposits from Non Resident Indians and allowed to make investments of surplus funds in least risky ventures without affecting the due share of the target groups.

4. An effective linkage between credit and marketing with other technical services would facilitate better recovery. And also a close co-operation and co-ordination between the Malaprabha Grameena Bank and the other organisations working in
the area would help in diffusing the technical know-how to the borrowers along with the credit and facilitate an effective follow-up action and feed back as well.

5. Periodic and proper revision of the scale of finance would not only minimize the credit diversion but also enhance the recovery. The purpose-wise and beneficiary-wise rationalization of credit structure and scale is a pre-requisite for enhancing the effectiveness of the credit system.

6. The insurance coverage may be encouraged and effectively implemented in place of loan waiver during aberrant weather conditions. Incentives may be provided to encourage prompt repayment of loans.

7. The non-performing assets of the bank may be kept at a minimum level especially the doubtful assets and the non-viable lending schemes may either be merged with other schemes or closed.

8. Proper management of the spread ratio and burden ratio is the need of the hour. Appropriate ways and means for reducing the interest expenditure; other expenses, transaction cost and increasing non-interest income may be evolved. Long run strategies with a view to earning more profit and making the rural credit system more effective, efficient and purposeful has to be the prime concern of the bank.

9. The decomposition analysis indicated the dominance of management factor in influencing the profitability and hence, more emphasis is to be laid for improving the managerial ability of the staff as well as the office bearers and administrators of the bank. The existing human resource development programme with more emphasis
on the recruitment of professional graduates may be continued to the advantage of
the bank.

10. The bank has to strike a balance between advances for agricultural and non-agricultural
purposes, since, safeguarding the interest of the target groups is important on one hand
and sustainability of the bank on the other. A diversified lending programme especially
for small scale agro based industries may be drawn up based on the past experience and
changing role of the bank to keep pace with the regime of WTO implications.

11. Adequate infrastructure facilities are a pre-requisite for the all-round socio-
economic development of rural areas. State and Central Governments along with
the bank may prepare a prioritized but comprehensive plan for the infrastructural
development in the rural areas.

12. The bank has to introduce the system of ATM banking on a pilot basis besides
extending the facility of credit card to all borrowers to provide them ease in
banking operations and also to reduce the procedural delays.

13. The non-viable branches, which have been not earning profits in spite of all,
round encouragement and support may be merged with stronger branches in a
contiguous area for making them strong as well as sustainable institutions for
rural development. Non-viable branches due to inadequate business may be
provided with 'movable-van' branches to enhance the business.

14. The performance of the Malaprabha Grameena Bank may be evaluated by an
autonomous research organisation to know the strength and weaknesses of the
bank.