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# Performance Measurement of Banks : An Application of Balanced Scorecard

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***Abstract:*** *Performance of financial institutions is generally measured by applying quantitative techniques of financial measurement. It is a post-mortem examination technique of achievement of a bank. Nevertheless, to know about the existence of performance drivers in an institution, both quantitative and qualitative aspects of performance measurement are to be considered. CAMEL rating system, basically a quantitative technique, is widely used for measuring performance of banks in Bangladesh. Concepts of Balanced Scorecard (BSC), which covers both quantitative and qualitative aspects of performance measurement, may be used to measure the long-term prospect of performance.*

**Keywords:** Performance Measurement, Quantitative and Qualitative Measures, Balanced Scorecard (BSC).

## Introduction

Performance measurement is a regular and traditional accounting and financial activity. To measure the output of any economic activity, different techniques of performance measurement are used. Different economic decisions are taken on the basis of performance of an organization. So a continuous effort is going on to devise a flawless and dependable system of performance measurement. The need for a sound system of performance measurement for financial institutions cannot be over-emphasized. As these organizations are run by public money, their accountability is more than that of a general trading concern. So special attention is required to be given to this aspect of financial institutions. In this context, an attempt is made here to measure the performance of a bank in a wider perspective.

In Bangladesh, there are mainly four types of banks based on their ownership and they are scheduled commercial banks, joint-venture banks, foreign banks and private banks. The Government and private owners - domestic and foreign entrepreneurs, own them respectively. These banks are either incorporated under the special statute or under Bank Companies Act of Bangladesh, 1991. The foreign banks are generally incorporated abroad and have their branches in Bangladesh. Therefore, a large number of banks are now operating in Bangladesh in a healthy competitive environment. Bangladesh Bank as a guardian of all scheduled banks has been evaluating their performance by applying CAMEL rating technique each year based on

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only financial activities performed by the banks during that year where qualitative aspects of performance are being completely ignored. Bal anced Scorecard, a new technique of performance measurement, includes both quantitative and qualitative factors of performances. As a matter of fact the authors attempted to highlight the Balanced Scorecard (BSC) as performance measurement technique so as to achieve the long-term benefit by the banking sector. But it would not be quite easy to implement and it would not be very simple one either.

## Objective of the Study

The ultimate objective of the paper is to highlight a comprehensive measure of performance of banks from both quantitative and qualitative point of view rather than the traditional measure of performance by ROI, ROE, EPS etc. To achieve this goal the following specific areas were identified for elaborate analysis:

a) To elaborate the traditional financial measures and Balanced Score Card technique of performance measurement.

b) To highlight the necessary improvements require to be made to the existing system of performance measurement for financial institutions under BSC approach.

## Methodology of the Study

This study has been undertaken basically on theoretical ground and the market experience. Different books and journals were consulted and some relevant information have been collected from the Annual Reports of some commercial banks in Bangladesh as well as from the financial statements of those banks published in the daily newspapers on several times in 2004 and 2005. The collected information were arranged and analyzed systematically under sections A, B, C and D to achieve the objectives of the study. In section-A, traditional / existing system of performance measurement is presented. In section-B, an analytical presentation of Balanced Score Card technique is given. In section-C, a comparison of traditional measures of performance including CAMEL and BSC is presented and in section-D, consequence of BSC approach is highlighted by giving importance to the qualitative aspects of performance measurement of some commercial banks in Bangladesh.

## Findings of the Study

### Section-A : Traditional Measures of Performance

Traditionally, some ratios are used to evaluate the performance. Among those ratios, the important ones are ROI, ROE, EPS, EVA, etc., which have been highlighted in this section.

***ROI (Return on Investment):*** It is a very common and relatively very good measure of performance which is calculated by dividing net income by total assets invested in the business.

***ROE (Return on Equity):*** Another widely used measure of business performance is the return on equity ratio which is calculated by dividing net income by book value of shareholders equity. This measure of performance is sensitive to leverage.

***EPS (Earning Per Share):*** It is another measure of performance. Here earnings of the company are divided by the number of shares in order to calculate EPS. The measures of performance can be magnified by issuing more debt for additional capital if the rate of return of the invested capital is just above the cost of debt. Further EPS will automatically rise if the company issues common stock at a very hefty premium, because EPS is based on the number of shares issued and does not include share premium. So, it is worse compared to ROI and ROE (Saxena and Saini, 2001:80).

***EVA (Economic Value Added):*** EVA simply is residual income after charging the company for cost of capital in full. So it is the excess of net operating profit minus capital charge (NOI - WACC X invested capital) (Gupta and Bhargava, 2001:38). It measures corporate performance in terms of changes in value. This concept advocates that only common profit is not sufficient - a business should generate sufficient profits to cover its cost of capital and surplus left over for growth (Reddy and Satish, 2001:62).

The first two measures suffer from the limitations of accounting measure of performance and the third one is vulnerable to capital structure impact on earning. Although EVA considers the cost of capital to measure the real performance of the concern in absolute term, it also suffers from the criticism of partial measure of performance as a part of financial measure of performance.

Recently a well-judged technique named CAMEL rating is widely used for evaluating performance of financial institutions, especially to banks. In Bangladesh, Bangladesh Bank as a regulatory body has been calculating this rating till now. The CAMEL covers five areas of performance measurement viz., 'C' for Capital Adequacy; 'A' for Asset Quality; 'M' for Management Capacity; 'E' for Earning Available and 'L' for Liquidity (Purohit and Mazumder, 2003:8). This performance measurement technique is more equitable than the previous techniques measuring the management capacity in addition to the financial measurement of performance. Now the ratios covered by this system for different areas of performance measurement are given in the chart below:

**Chart-1: Chart Showing the Different Ratios Covered by CAMEL Rating**

| Capital Adequacy | Asset Quality | Management Capacity | Earnings | Liquidity |
|---|---|---|---|---|
| i) Capital Adequacy ratio<br>ii) Leverage ratio<br>iii) Return on Equity<br>iv) Net Worth Protection | i) Non-performing Loan to Total Loan (% of Classified Loan) | i) Cost per Employee<br>ii) Earnings per Employee | i) Return on Asset<br>ii) Net Investment Margin<br>iii) Diversification ratio | i) Investment Deposit ratio<br>ii) Liquid Asset to Total Deposits |

**Source:** Quoted from M.S. Hossain (2002), "Performance Evaluation of Commercial Bank through CAMEL Rating," *Share Research* , (December): 27-29.

However, this CAMEL rating has not proved to be a comprehensive measure of performance from the viewpoint of corporate strategy. Therefore, in the business field, a constant effort is on to develop a model to make a comprehensive measure of performance of an organization in the light of corporate strategy. To satisfy this need, a holistic performance measurement system has been developed for use in the corporate sector, the important one of which is discussed in the following section.

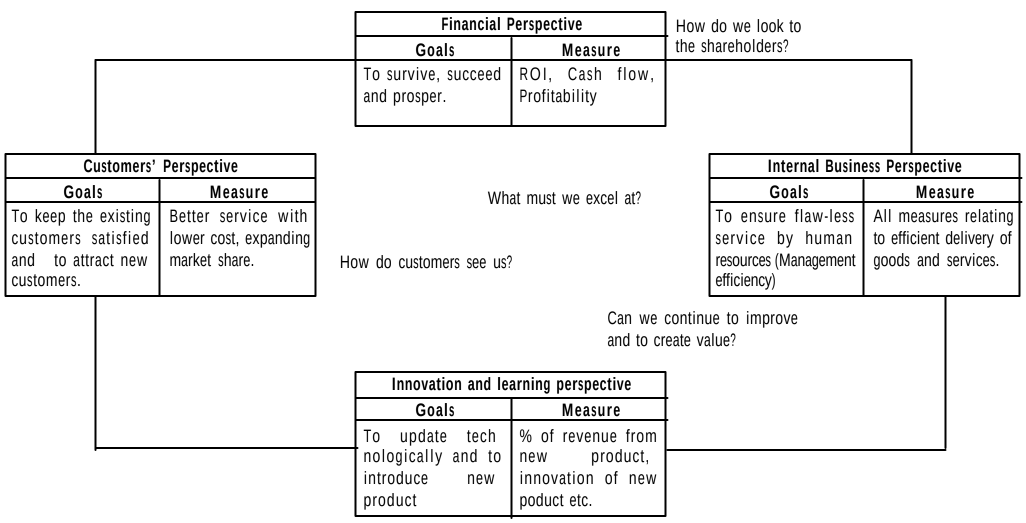
## Section-B: Balanced Scorecard (BSC)

Currently many business executives believe that the traditional measurement criteria of performance are misleading in situations that require continuous improvement and innovation in a competitive environment. In such a situation, achievement of short-term financial soundness is not enough; rather emphasis should be given on the achievement of long-term strategy. It requires a set of measures that give top managers a vast but comprehensive view of the business. It includes financial measures that tell the results of actions taken and operational measure on customers' satisfaction, the internal force and the organizational innovations and improvement activities, that is, the operational measures that are the drivers of future financial performance. Because BSC shows the cause and effect relationship (Garrison and Noreen, 2000:465) between:

***learning and growth* ——— *internal business process* ——— *customer* ——— *financial performance***

It is, therefore, clear that if an organization is able to improve on learning and growth then its internal business processes will be benefited and if the internal business processes are improved then it would be possible to serve the customer better. Better customer service would lead to satisfied customers, which again would have a positive impact on the performance of the organization (Morium, 2002:107). So it is important for executives to track not only financial measures that indicate the results of the past decisions, but also non-financial measures, which are leading indicators of future performance. In this situation Balanced Scorecard (BSC) may be an example of a performance measurement system. BSC is a tool for focusing the organization, improving communication, setting organizational objectives and providing feedback on strategy (Ahmed, 1993:8-9). It was developed originally for measuring performance of manufacturing enterprises, so its application for performance measurement in its original form to a bank will be inappropriate. But the concept of this technique can be used in banking business to ascertain long-term performance giving importance to the related areas as shown in the following exhibit.

**Exhibit-1 : Balanced Score Card**




**Source:** R. S. Kaplan and D. P. Nortion (1993), "Putting the Balanced Scorecard to Work," *Harvard Business Review, (September-October): 136. Necessary changes were made to make it applicable for financial institutions.*

The exhibited four questions can be answered if the goals of each area of performance measurement are elaborated. Now a brief description of each area is given as follows :

### *Financial Perspective*

The performance measures from financial perspective are directed towards measurement of profitability and growth which in turn create value to shareholders. In BSC, the spelled out financial goals are not only to survive but it gives emphasis on success and prosperity. So quantitative aspects relating to these areas are included in the measurement. As financial measures are the carriers of the benefits of other measures like measures of customers' satisfactions, internal business performance and innovations and improvements, measures of performance in these areas are very much essential to have an idea about the long-term growth and performance.

### *Customer Perspective*

It is now accepted by all the successful companies that customers are the king. Satisfaction of their needs should be the main objective of a successful company. So to be number one in delivering value to the customers is a typical mission statement. The BSC demands that management should translate the above general mission statement on customer service into specific measures which reflect the factors that really matter to the customers. Customers concern tends to fall into four categories - time, quality, performance, services and cost.

### *Internal Business Perspective*

This perspective of performance measurement is the logical extension of the customers' perspective. Here measurement should be made of what the company must do internally to meet its customers' expectation. Excellent customer performance derives from process, decisions and actions occuring throughout an organization. Managers need to focus on those critical internal operations that enable them to satisfy customer need. In this area of performance measurement, a company should identify and measure the company's core competencies and the critical technologies needed to ensure continued market leadership. Companies should decide what process and competencies they must excel at and specify measures for each.

### *Innovation and Learning Perspective*

The targets for success do not remain static but they keep changing. Intensive global competition requires that companies make continual improvements to their existing products and process and have the ability to introduce entirely new products with expanded capabilities. A company's ability to improve and learn ties indirectly to its value. Value for customers can be created by launching new product. It can also be done by a company by improving operating efficiency. By that, a company can penetrate new markets and increase revenues and margins.

From the above literature survey of 'BSC' technique of performance measurement, it is clear that this system is broad based and covers areas beyond the financial and management aspects of performance. Now a comparative picture of performance measurement between CAMEL rating system and BSC is shown below in Section-C.

## Section-C: Comparison of Camel And Balanced Scorecard (BSC)

Quantitative factors (financial ratios) under CAMEL and both quantitative (financial ratios) and qualitative (customer, internal business and innovation and learning perspective) factors under BSC can be compared in the following way in order to comprehensive measure of performance of financial institutions like banks.

## Table-1 : Table Showing the Comparative Ratios under CAMEL and BSC

| Perspective of Performance Measurement | Traditional Measures including CAMEL rating | Measures under BSC |
|---|---|---|
| **Financial Perspective:** | | |
| (a) Capital adequacy | Yes | Yes |
| (b) Leverage ratio | Yes | Yes |
| (c) Return on Equity | Yes | Yes |
| (d) Net worth protection | Yes | Yes |
| (e) Non-performing loan to total loan (percentage of classified loan) | Yes | Yes |
| (f) Cost per employee | Yes | Yes |
| (g) Earning per employee | Yes | Yes |
| (h) Deposit per employee | Yes | Yes |
| (i) Advance per employee | Yes | Yes |
| (j) After tax return on average asset | Yes | Yes |
| (k) Net profit margin | Yes | Yes |
| (l) Return on capital employed | Yes | Yes |
| (m) Net investment margin | Yes | Yes |
| (n) Earning per share | Yes | Yes |
| (o) Diversification ratio | Yes | Yes |
| (p) Loan to deposit | Yes | Yes |
| (q) Earning asset to deposit | Yes | Yes |
| (r) Liquid asset to deposit | Yes | Yes |
| (s) Interest margin coverage ratio | Yes | Yes |
| **Customers' Perspctive:** | | |
| (t) Service time required | No | Yes |
| (u) Rate of successful cases to total enquiries | No | Yes |
| **Internal Business Perspective:** | | |
| (v) Implementation of credit policy | No | Yes |
| (w) Cost of fund | No | Yes |
| (x) Human resource development | No | Yes |
| (y) Technological capacity | No | Yes |
| **Innovation and Learning Perspective:** | | |
| (z) Products that provide above 50% of revenue | No | Yes |
| (aa) Introduction of new product | No | Yes |
| (bb) Contribution of new products to total revenue | No | Yes |
| (cc) Introduction of new technology | No | Yes |

**Source:** *This table has been designed by the authors after consulting different ratios under CAMEL rating and BSC technique.*

So the additional financial ratios over traditional measures of CAMEL and qualitative areas shown in the above table, which are covered by BSC and relevant for finacial institutons, can be included in the performance measurement of a bank. Here the additional aspects covered by BSC are mainly the 'Customers' perspective', 'Internal Business perspective' and 'Innovation and Learning perspective'.

## Section-D : Consequence of Balanced Scorecard (BSC) Approach

As described in the earlier section of the study, Balanced Scorecard intensifies the qualitative aspect of a financial institution as an important and unavoidable part of performance measurement. But the CAMEL rating system ignores this aspect of performance measurement. Banks have been being rated based on only their quantitative acheivement under CAMEL rating, but it is not unlikely that their ratings might be changed if the qualitative perspectives like customers satisfaction, interal business policy, technological advancement capacity, new product design etc. would have been considered. Thus realizing the importance of the qualitative aspects of performance measurement in the long run, we have suggested to consider this aspect that intensified in the concept of BSC in addition to the traditional measures under CAMEL. The qualitative aspect of performance measurement covers three most relevant but sensative issues like Customers perspective, Internal Business perspective and Innovation and Learning perspective. In fact, no direct tools of performance measurement is applied in these areas yet. Thus some surrogate measures, as prescribed below, of performance in quality can be applied for rating the performance of a bank.

### *Customers' Perspective*

'Customers are always right' is the basic and linear formula in the banking business. In fact, the main job of a bank is to provide service to the customers. So customers' satisfaction is the prerequisite to the success of a bank. To achieve this goal an opinion survey of the customers on the related variables can be made by a 5-point scale as explained below (Purohit and Mazumder, 2003:14 with some modification).

| Variables | Score | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Time taken for encashing a cheque | Excess | More than required | Expected | Less than expected | Very muchprompt |
| Co-operation given by the bank in opening account, receiving and transferring remittance, depositing the money etc. | Frustrating | Less than required | Expected | More than expected | Excellent |
| Evaluation time of loan application | Excess | More than expected | Expected | Less than expected | Very timely |
| Hidden cost in loan granting | Excess | Moderate | Negligible | Sometimes | Absent |
| Time taken for issuance of bank guarantee, L/C etc. | Excess | More than required | Expected | Less than expected | Very much prompt |
| Attitudes towards phone banking etc. | Frustrating | Less than expected | Expected | More than expected | Very muchpositive |
| Willingness for confirming the A/Cs balance regularly | Frustrating | Less than expected | Expected | More than expected | Very much keen |
| Issuance of bank solvency certificate | Pestering | Neglecting | Expected | More than expected | On demand |

Customer's reaction on bank's activities can easily be evaluated by the above 5-point scale. Customer's satisfaction can also be judged by asking whether the bank offers full range of banking services to its customers and clients. So while ranking a bank based on its performance, it would be equitable to consider customer's judgement on bank's service as a qualitative performance which will lead the bank to achieve long term benefit.

### *Internal Business Perspective*

Implemention of credit policy, management of fund, development of human resources and state of technology can be considered as some important aspects of qualitative performance of a bank under internal business perspective. Obviously these factors will have an important impact on overall performance of a bank. Thus a short view on these factors is drawn as below.

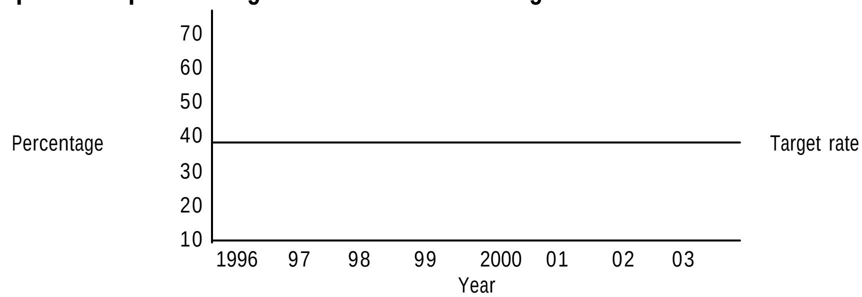
**Implementation of Credit Policy:** In quantitative measure of performance of a bank there is no option for taking the credit policy as a factor of measurement, rather total volume of credit/ loan is considered. Except few specialized banks, all are commonly used to utilize their loanable fund into trading business and consequently they have been suffering the pressure of huge non-performing loan. But the picture of BASIC Bank is completely different from all other banks. BASIC Bank Ltd. has commenced its functioning with a view to invest at least 50% of its loanable fund in small scale industries. Although it failed to achieve this target initially, but the latest data show that it has acheived the target gradually. A chart alongwith a graph showing the percentage of loan provided to SSIs and Micro credit in terms of total loan and their growth over the period from 1996 to 2003 is given below.

**Chart-02 : Chart Showing the Percentage of SSIs Loan and Micro-credit to Total Loan**

| Percentage of SSIs loan and Micro-credit to Total Loan | | | |
|---|---|---|---|
| Year | Rate | Year | Rate |
| 2003 | 59.16 | 1999 | 40.66 |
| 2002 | 63.00 | 1998 | 42.21 |
| 2001 | 53.19 | 1997 | 35.85 |
| 2000 | 46.75 | 1996 | 40.99 |

**Source:** BASIC Bank Limited's Annual Report 2003

**Graph-1 : Graph Showing the Growth in Percentage of SSIs Loan and Microcredit to Total loan**




From the above chart and graph it is seen that the percentage of SSIs Loan and Microcredit to Total Loan was rising towards the target of 50% until 2001. From 2001 t0 2003 it was well above the target level. So it can be said that it was an indication of their tremendous marketing effort for the last one decade to acheive the goal in this area. Due to the multidimension in credit policy BASIC Bank also was able to maintain the percentage of non-performing loan to total loan below 5% over the period from 2000 to 2003 (BASIC Bank Limited's Annual Report 1996-2003) compared to 22.16% of non-performing loans of all commercial banks yet after writing off Taka 54.30 billion bad loans up to December 2003 following the central bank's guidelines (*The Daily Star*, 19 June 2004). So successful implementation of credit policy should not be ignored while measuring the performance of a bank.

**Fund Management:** Managing fund with minimum cost facilitates an institution to ensure the higher profitability. Strong management effort is required to obtain this internal strength. A comparative picture about cost of fund of some commercial banks (taken as sample) for the years 2002 and 2003 is shown by the chart below.

**Chart-3 : Chart Showing the Cost of Fund of Sample Banks**

| Name of the bank | Cost of fund (in percentage) | |
|---|---|---|
| | 2003 | 2002 |
| BASIC Bank Ltd. | 7.75% | 8.34% |
| EBL | 7.25% | 7.29% |
| PBL | 7.58% | 7.81% |
| UCBL | 9.19% | 9.33% |
| AB Bank Ltd. | 9.28% | 10.10% |
| NCCBL | 10.73% | 10.31% |
| Agrani Bank | 8.41% | 8.55% |

**Source:** BASIC Bank Limited's Annual Report 2003 and the Financial Statements 2003 of the other sample banks published several times in the daily newspapers in June-July 2004.

Above chart reveals that EBL maintained a low cost of fund during the above two consecutive years compared to the other commercial banks. Eventually this strength of internal business would have greater positive impact on EBL's performance if considered in measuring the performance.

**Human Resource:** Well-diversified pool of human resources is the prerequisite for achieving the high performance of a bank. People with high academic background and professional training are essential to meet the challenges in the banking industry and to adapt the changes in new working conditions. But this inevitable factor is also set aside in measuring the performance of a bank.

**Technology**: Banks have no other alternative but to adopt state-of-the-art technology for survival, improving working condition and to increase the performance as a whole. All multinational banks and most of the local commercial banks are miles ahead of the nationalized commercial banks in terms of technology. As a result, rapid growth in operating result is being experienced by those banks which have adopted technology in their banking system. But in the traditional system of performance measurement banks having technological attachment are not given specific credit.

### *Innovation and Learning Perspective*

Disciplinery factors like well organized staff, good credit record, good banker-client relationship etc.; introduction of new technology like development of different computer software such as Personal Information Management System (PIMS), International Trade Finance System, Payroll System, Loan Classification System, CIB (Credit Information Bureau) System, Car Maintenance System and Reconciliation System, on-line banking system, internet banking system, tele-banking system etc.; micro credit financing; introduction of new products etc. may be considered as the barometres of innovative and learning perspective of qualitative measurement and be included in rating the performance of a bank as well. It is pertinent to mention here that in the modern technological advancement, commencement of on-line banking is very much in need to improve the performance of the bank in the years ahead. So it should be valued as an essential criteria for performance measurement. New product design also make change in rating the performance of a bank. Banks are introducing new products to make the customers fully satisfied and to earn more income through product diversification. Different savings schemes have already been introduced by different commercial banks in Bangladesh. Deposit Pension Scheme (DPS) is one of the popular savings schemes for low income people. However, some of others are mentioned below.

**Chart-4 : Chart Showing the Different Savings Products of Commercial Banks**

| Name of the scheme | Introduced by |
|---|---|
| Double Growth in Deposit Scheme, Super Savings Scheme, Monthly Interest Giving Deposit Scheme | Mercantile Bank Ltd. |
| Marriage Savings Scheme, Education Savings Scheme | City Bank Ltd. |
| School Banking Scheme | AB Bank Ltd. |
| Monthly Income Scheme, Pension Savings Scheme | IFIC Bank Ltd. |
| Education Savings Scheme, Monthly Income Scheme | Premier Bank Ltd. |
| Marri-save Scheme, One to three Scheme, Edu-save Scheme, Pen-save Scheme | ONE Bank Ltd. |
| Monthly Income Scheme, High Performance Plan, Insurance Plan | Eastern Bank Ltd. |

**Source:** The *Daily Jugantor* and the *Daily Prothom Alo* (several issues in 2004 and 2005).

In addition to the above savings schemes different banks have also introduced different loan schemes for providing benefit to their customers at reasonable cost. Some of those are mentioned below.

**Chart-5 : Chart Showing the Different Loan Products of Commercial Banks**

| Name of the Scheme | Introduced by |
|---|---|
| Festival Business Loan, Festival Personal Loan | NCC Bank Lid. |
| Vacation Loan, Car Loan, Personal Loan | Dhaka Bank Ltd. |
| City Card (Visa Credit Card), Cosumer Credit Scheme, Education Credit Scheme, Multi-purpose Loan, Lease Financing | City Bank Ltd. |
| Education Credit, Executive Loan, Auto Loan, Q-Cash (24-hour banking) | AB Bank Ltd. |
| Consumer Credit Scheme, Q-Cash, Lease Financing | IFIC Bank Ltd. |
| Students Credit Programme, Doctors Loan Scheme, Rural Credit Scheme, Cosumer Credit Scheme, Executive Loan, Auto Loan, Q-Cash | Premier Bank Ltd. |
| Instacash | BRAC Bank Ltd. |
| Auto Loan, Executive Loan, First Cash, First Loan | Eastern Bank Ltd. |

**Source:** The *Daily Prothom Alo* (several issues in 2004 and 2005).

But in traditional quantitative measures of performance there is no chance to count the above qualitative factors which will certainly contribute to the long term benefit of a bank.

## Conclusion

In the preceeding analysis, it has been seen that the performance measurement of a bank under traditional measures including CAMEL rating technique covers only the financial ratios (quantitative factors) but under BSC technique it covers both quantitative (financial ratios) and qualitative (customer, internal business and innovation and leraning aspects) factors. Customers' satisfaction, implementation of credit policy, fund management, human resource development, technological involvement, product diversification etc. are equally important with the financial activities to measure the performance of a bank. So the concept of CAMEL rating for performance evaluation of a bank can be widened by incorporating the long-term perspective of performance evaluation of Balanced Scorecard. This will provide a broader view of performance of a financial institution like bank. ❐

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