# Are Ghanaian MFIs' performance associated with corporate governance?

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**Abstract**

**Purpose** – *The purpose of this paper is to determine whether in Ghana, corporate governance, outreach to clients, reduced dependence on subsidies and use of modern technology (together called corporate governance plus) are associated with the performance of rural and community banks (RCBs), which are microfinance institutions (MFI), in the context of newly adopted codes of conduct and regulations, ownership rules and quality of management.*

**Design/methodology/approach** – *A total of 30 randomly sampled RCBs were categorized into four groups based on analysis of several dimensions of financial performance. Next, RCBs were again categorized into four groups based on their corporate governance plus. A chi-squared test of independence between the two groupings was performed.*

**Findings** – *The authors found no association between RCBs' categories based on corporate governance plus and their categories based on financial performance.*

**Practical implication** – *To enhance performance, corporate governance plus must impact financial performance as documented by OECD. Laws and codes of conduct recently designed to guide the conduct of business should be allowed to work. The restriction on individual ownership of RCBs to 30 percent should be relaxed. And RCBs should pay attention to developing the competencies of their boards and senior management.*

**Originality/value** – *This is the first formal test of the association between state of corporate governance plus and financial performance of microfinance institutions in Ghana.*

**Keywords** *Corporate governance, Performance management, Financial performance, Ghana, Banks*

**Paper type** *Research paper*

## 1. Introduction

This paper attempts to explain the lackluster performance of rural and community banks (RCBs) in Ghana from the point of view of their state of corporate governance. RCBs belong to the broad class of financial institutions referred to as microfinance institutions (MFIs). They are special purpose financial institutions established to facilitate access to institutional credit and banking services by people living in rural areas. This, it is expected, will help improve the socio-economic well-being of the majority of Ghanaians, who live in rural areas and are mostly engaged in farming, fishing, trading and cottage industries with little access to commercial banks.

The concept of RCB was operationalized in Ghana in 1976. RCBs in Ghana are community-owned and community-run unit banks. That is, they operate as banks but are not allowed to operate fully fledged branches in other communities. The key functions of RCBs are (Bank of Ghana, 2006) to:

- Mobilize savings in the rural communities and channel them into the provision of credit to rural dwellers.

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- Monetize the rural communities by way of inculcating in rural dwellers the banking habit.
- Serve as instruments for the development of business in the rural communities and thereby facilitate rapid growth of the national economy.

A review of deposit mobilization, lending activities and total assets of RCBs and deposit money banks (DMBs), which include commercial banks, merchant banks, development banks and universal banks, is shown in Table I. The table indicates that in recent times, 2000-2006, the proportion of total deposits mobilized by RCBs averaged only 7 percent; 4 percent for loans; and 6 percent for total assets. Table I further suggests that RCBs' proportion is not growing. This is in spite of the fact that the number of RCBs currently far exceeds the number of DMBs, (122 versus 23). Meanwhile, RCBs are supposed to be serving as much as 70 percent of the population.

Obviously, mobilizing funds and granting loans at such low levels will not do much towards improving the socio-economic situation of the rural folk. Bashin and Akpalu (2001) have expressed concern about the low level of provision of credit facilities to micro-enterprises by MFIs in Ghana. They concluded that ''MFIs have much more to do to raise their scope.''

Further, a number of studies have suggested that there exists a large unsatisfied credit demand in Ghana, especially among locally owned firms. These include Thomi and Yankson (1985), who investigated in-depth 933 enterprises located in 36 small and medium scale towns; Steel and Webster (1992) who surveyed 31 large and 83 small-scale enterprises; and Aryeetey *et al.* (1994) also surveyed another group of small and medium scale enterprises.

Yet another issue of concern is the fact that a number of RCBs have failed overtime. Table II shows the number of RCBs that have been licensed over time, grouped in five-year intervals, and their cumulative totals. Clearly, the total has grown with time. Attention is however drawn to the fact that in spite of the steady increase in the cumulative totals, 23 RCBs have been

**Table I** Deposit mobilization, loans and total assets of rural and community banks versus deposit money banks

| | Deposits | | | Loans | | | Total assets | | |
|---|---|---|---|---|---|---|---|---|---|
| *End of year* | *DMB*[a] | *RCB*[a] | *% RCB*[b] | *DMB*[a] | *RCB*[a] | *% RCB*[b] | *DMB*[a] | *RCB*[a] | *% RCB*[b] |
| 2000 | 4,668 | 200 | 4 | 5,064 | 69 | 1 | 11,948 | 268 | 2 |
| 2001 | 7,232 | 316 | 4 | 6,234 | 122 | 2 | 15,651 | 432 | 3 |
| 2002 | 10,767 | 1201 | 11 | 6,914 | 527 | 8 | 19,236 | 1,590 | 8 |
| 2003 | 14,917 | 1,357 | 9 | 10,493 | 529 | 5 | 24,847 | 1,791 | 7 |
| 2004 | 19,481 | 1,684 | 9 | 13,319 | 716 | 5 | 31,224 | 2,259 | 7 |
| 2005 | 23,041 | 1,684 | 7 | 17,938 | 716 | 4 | 37,430 | 2,259 | 6 |
| 2006 | 32,473 | 2,245 | 7 | 25,285 | 1,072 | 4 | 51,030 | 2,967 | 6 |
| Mean | | | 7% | | | 4% | | | 6% |

**Notes:** [a] Amounts in billions of local currency units. In 2006, US$1 = 9,400 units of local currency; 2005: US$1 = 9,155 units; 2004: US$1 = 9,045 units; 2003: US$1 = 8,677units; 2002: US$1 = 7,399 units; 2001: US$=7,171 units and 2000: US$1 = 5,455 units; [b] RCB amount as percent of the sum of DMB[a] and RCB[a]
**Source:** Bank of Ghana (n.d.)

**Table II** Growth of RCBs in Ghana: 1976-2007

| *Period* | *Number added* | *Cumulative total* |
|---|---|---|
| 1976-1980 | 20 | 20 |
| 1981-1985 | 86 | 106 |
| 1986-1990 | 16 | 122 |
| 1991-1995 | 3 | 125 |
| 1996-2000 | 9 | 134 |
| 2001-2005 | 8 | 142 |
| 2006-2007[a] | 3 | 145 |

**Note:** [a]Up to mid June 2007
**Source:** Bank of Ghana (various issues)

closed down for not doing well, reducing the number in business as at June 2007 to 122 out of a total of 145 that had been licensed.

Reporting on the causes of the failure of RCBs in Ghana, an internal central bank report, Bank of Ghana (2001), identified the causes of failure as, management incompetence; fraud and embezzlement; negligent or ineffective boards of directors; improper accounting records; non-compliance with regulations in granting insiders credit; persistent operational losses; poor loan recovery and corruption, poor deposit mobilization; use of unqualified staff; non-submission of prudential returns; no earning assets and non-performing credit portfolios.

It is interesting that this list of causes of failure does not include the capital-asset ratio, which stands at 10 percent for all banks including RCBs, higher than the Basel Capital Accord recommends. Rather, it would appear failure is due to non-functioning of systems and structures that were put in place to govern the running of the RCBs. The broader literature puts the primary cause of failure of rural credit agencies during the 1960s and 1970s as ''lack of institutional viability'' (see for example, Gonzalez-Vega, 1994). Two concepts arise from this conclusion – institutional sustainability (being in position to successfully provide financial services to the poor on an on-going basis) and financial self-sufficiency (having the funds to do so). The second is a necessary condition for the first.

This study seeks to analyze rigorously the performance of Ghanaian RCBs and to determine whether the systems and structures, which govern their operations promote good performance. In particular, we are interested in establishing whether there is an association between the financial performance of Ghanaian RCBs on one hand, and their state of corporate governance, extent of outreach to target communities, dependence on subsidies and use of modern technology on the other. Indeed, the Organisation of Economic Development (2004a) has concluded that best practice economic techniques point to corporate governance as an important determinant of firm performance. We expect that our findings will help us advocate for reforms that may result in RCBs playing a more active role in the lives of the people and companies they serve and thus become even more relevant in the economic development of Ghana.

Following this introduction, we review pertinent literature, discuss our methodology, present our results, and then make recommendations to help improve the performance of RCBs.

## 2. Conceptual framework

We start by discussing the conceptual framework underpinning our investigation.

### *2.1 Corporate governance*

Economists use the term corporate governance to refer to the mechanisms by which operational managers of entities are made to act in the interests of the owners of the entities and other stakeholders. Corporate governance is concerned with the manner in which rules and regulations are applied and followed, the relationships that these rules and regulations determine or create and the nature of those relationships. Sound corporate governance encourages the efficient use of resources and provides for accountability for the stewardship of those resources by managers.

Institutions that practice good corporate governance are more likely to achieve institutional objectives and goals. Good corporate governance should thus be of prime concern to owners and other stakeholders of these institutions. In fact, good corporate governance helps promote the general welfare of the society and should be of interest to the general public and governments.

The Organisation of Economic Development (OECD) has long promoted good corporate governance because of its belief in the link between corporate governance and firm performance. OECD (2004a, 2004b) state that OECD's revised corporate governance principles are meant to strengthen corporate governance around the world. The revised principles, following a survey of member countries focus on:

- promotion of transparent and efficient financial markets;
- protection and facilitation of the exercise of shareholders' rights;
- equitable treatment of all shareholders including minority and foreign shareholders;
- recognition of the rights of other stakeholders;
- timely and accurate disclosure of all material matters; and
- strategic guidance of the firm by boards of directors, including board accountability to the firm and board effectiveness in monitoring management.

In transition economies, the link between corporate governance and firm performance is not so clear-cut in the literature. Crotty and Jobone (2004) reviewed the literature and concluded that much more needs to be learnt. That study highlighted three aspects of corporate governance in transition countries:

1. Adoption of western style corporate governance codes. They found this to be at an early stage and preliminary evidence was too little for conclusions to be drawn. In particular, data and methodological issues remain to be resolved.
2. Emerging evidence on ownership was that private ownership; non-manager ownership concentration; and foreign ownership are performance enhancing, for, these provide incentives for manager monitoring and control and help foster greater investment efficiency and better asset allocation.
3. Preliminary evidence suggested that development of institutions and property rights are potentially performance enhancing.

In Africa, the literature on corporate governance is not comprehensive. Klapper and Love (2002) studied the state of corporate governance in 14 countries in Africa and found that there is variation in firm level governance structures across countries, and that the level is lower in countries with weaker legal systems. Okeahalam and Akinboade (2003) reviewed studies on corporate governance in Africa and concluded that, ''In the main, many African countries are still currently ill-equipped to implement corporate governance to levels which might be accepted in developed market economies.'' They site ''interlocking relationships with government''; ''weak civil and judicial systems''; ''absent and undeveloped monitoring institutions''; and ''limited human resources capabilities'' as the reason.

The literature on corporate governance has also been concerned with econometric issues in investigations. Bhagat and Jefferis (2002), Börsch-Supan and Köke (2002) and Gugler (2001) report that the aspects of corporate governance most commonly investigated econometrically are degree of dependence on management, board structure, ownership structure, managerial acquisitions, engagement of chief executives, debt structure and managerial compensation.

Nevertheless, Börsch-Supan and Köke (2002) and Crotty and Jobone (2004) among others, point out a number of econometric weaknesses in studies on corporate governance and firm performance. These weaknesses include lack of clarity with respect to causality between ownership structure and firm performance; omitted variable bias; sample selectivity bias in favor of big firms; and errors in variables. Indeed, while some authors specify various measures of firm performance as functions of measures of corporate governance, others specify corporate governance measures as functions of indicators of firm performance. In addition, there are variations in the number of variables specified as explanatory variables.

For example, Gruszczynski (2006) specified a firm's corporate governance rating as a function of the firm's financial statement ratios. As a way to address the econometric issues in the literature he advocated the use of panel data. Studying firms listed on the Warsaw Stock Exchange by the logit model, Gruszczynski concluded that there was significant association between governance rating and operating profit and also between governance rating and debt ratio. On the other hand, Bhøren and Ødegaard (2001) specified the firm's performance (its Tobin's Q) as a function of corporate governance variables, while Lehmann and Weigand (2000) specified return on assets as the dependent variable.

For Africa, Sanda *et al.* (2005) in investigating corporate governance and firm performance in Nigeria specified a single equation of firm performance as a function of corporate governance indicators. They used four alternative measures of firm performance – return on assets, return on equity, price-earnings ratio and Tobin's Q.

Kyereboah-Coleman (2007) also investigated corporate governance and firm performance in Africa. He also specified firm performance as a function of corporate governance indicators. Firm performance was measured respectively as return on equity, Tobin's Q and sales growth. He found that the direction and the extent of impact of governance is dependent on the performance measure being examined.

### *2.2 Evaluating the financial performance of RCBs*

In this study, measures of financial performance are based on the functions that RCBs perform as banks. In the main, RCBs mobilize funds and make loans, which they expect to be repaid with interest and on time. To continue in business, RCBs must make enough money to cover their operational and financing costs, and retain earnings to finance future operations so that the RCB can grow. Thus, we discuss financial performance along several dimensions, namely,

- *Size of RCBs*. As the real value of total assets increases over time the more business it is doing or in position to do, all told.
- *Deposits mobilization*. Savings are a stable source of funds for financing loan portfolios and helping the economic growth of local communities and of the economy as a whole. We compute the real value of deposits, and deposits as proportions of total assets.
- *Loan portfolio*. Granting of loans is a major function of RCBs. But such loans must be paid back if the institutions are to continue to be in business. Thus, an RCB whose loan portfolio is of acceptable quality and growing must be doing good business. We compute the real value of loans, loan portfolio as a proportion of total assets, and quality of the loan portfolio using the ratio of provision for loan losses and doubtful accounts to gross loans.
- *Profitability*. RCBs are in business to make profits. All things equal, higher profitability is preferred. We measure Annual Profit/Average total asset (return on assets).
- *Expenses*. RCBs are expected to encourage savings among their clientele. It would help if they paid high interest on savings. We compute the ratio of interest paid on savings to savings mobilized (interest expense ratio). A higher value of this ratio is preferred.

  An RCB's expenses may also be analyzed by focusing on its efficiency (control over costs). We investigate the ratio of RCBs' non-interest expenses to the sum of net interest income and all other income (the operating expense ratio). For this ratio, the lower the better.
- *Risk* is uncertainty associated with the expected value of a variable. Given historical data, one computes the standard deviation of the historical means. Generally, lower volatility is preferred.

### *2.3 Factors that result in good MFI performance*

Two studies that have summarized the factors that form the basis of improved financial performance of MFIs are Zaman (2004) and Yaron *et al.* (1998). Zaman discussed the tremendous growth in intermediation by four MFIs in Bangladesh, while Yaron *et al*. studied three Asian MFIs widely considered to have been successful in providing financial services at unprecedented levels to millions of rural people. Factors cited for growth are visionary leadership; a high degree of management autonomy in formulating operational policies; proper staff recruitment and motivational systems; innovative, low-cost delivery systems; flexibility; close monitoring of loan performance; development of domestic savings accounts to reduce or eliminate the need for donor funds; control over administrative expenses; adequate management information systems that facilitate effective planning; and adequate internal control systems. Attention was also drawn to the role of improved macroeconomic and regulatory environment.

Deliberating over this set of pertinent factors for good performance, we classify them into four groups – those that relate to:

1. good corporate governance;
2. extensive and efficient outreach to clients;
3. low or no dependence on subsidies or donor funds; and
4. adoption of information and communication technology.

These factors are discussed next in our context.

### *2.4 Framework for governance of RCBs in Ghana*

The following frameworks are supposed to promote good corporate governance in RCBs in Ghana.

- *The Central Bank and RCB governance*. RCBs in Ghana, being banks, are regulated by the central bank under the Bank of Ghana Act, 2002, Banking Act, 2004, and the Banking (Amendment) Act, 2007. The essence of the regulatory framework is safety of depositors' funds, solvency of banks, ensuring good quality asset portfolio, adequacy of liquidity, profitability, adherence to statutory and regulatory requirements, fair competition among banks, and the maintenance of an efficient payment system. The Banking Act, 2004 raised the minimum capital adequacy ratio to 10 percent, from previous 6 percent under a 1989 law.
- *The Securities and Exchange Commission and RCB governance*. RCBs sell financial securities to the general public. In Ghana, sale of financial securities to the public is governed by The Securities Industry Law, 1993 (PNDCL 333) and the Securities Industry (Amendment) Act, 2000. The Acts set up the Securities & Exchange Commission (SEC) as the body that implements the provisions of the Acts. Thus, by selling securities to the public, RCBs also fall under the jurisdiction of the SEC.

The SEC (2000) is a non-binding code of best practices on corporate governance, which sets out guidelines by which the standards of governance in corporate bodies regulated by the SEC are benchmarked. Salient provisions of the SEC Code include recommendations to the effect that boards should be composed of executive and non-executive directors; in general, separation of the positions of board chairman and chief executive officer; regular review of board effectiveness; institution of board sub-committees; and institution of a code of ethics and business conduct.

The governance issues implied by RCBs' relationships with the central bank and the SEC are the basis for assessing the state of corporate governance in respect of RCBs.

### *2.5 Outreach*

In simple terms, the outreach of an MFI refers to the number of clients served. Sometimes however, outreach may be used in a multidimensional sense. Suggested measures of outreach include number of clients, the value of the loan portfolio, average loan size, depth of reach, worth of users, cost to users, breadth, length and scope among others. Others have however suggested that the best measurement of outreach is a straightforward counting of the number of clients or accounts that are active at a given point in time. The question here is, to what extent do Ghanaian RCBs reach out to their clients?

### *2.6 Self-sustainability*

Economists defined subsidies as the price society pays in hopes of increasing the welfare of the poor. Examples of subsidies include direct provision of credit to farmers by governments at below market rates. It is argued that dependence on subsidies and donor funds makes RCBs less likely to survive in the long run, once such facilities are withdrawn, or come in limited amounts. Also they may come with strings attached, thus constraining RCBs' freedom to implement their own visions. Zaman (2004) also noted that uncoordinated donor missions and disparate disbursement and reporting arrangements tax MFIs' internal capacity and endanger proper management.

### 2.7 Adoption of information and communication technology (ICT)

It is now generally accepted that when properly deployed, modern technology in the form of ICT helps banking institutions reduce costs, serve their customers better and faster, increase revenue and capture new markets. Thus, the state of ICT in a financial institution is deemed critical to good performance and long-term survival and is of interest in this study.

This study investigates the existence or not of a statistical association between corporate governance, outreach, use of subsidies and ICT by RCBs, referred to as corporate governance plus, and RCBs' financial performance. We take steps not to suffer from the econometric shortcomings noted in the literature. First, we note that RCBs are mini banks and at the same time microfinance institutions, hence evaluation of performance must necessarily investigate different dimensions. Single measures of performance will not do. Neither do we model performance as a function of corporate governance plus, nor vice-versa. Rather, we opt for a goodness of fit approach in which we investigate the extent to which financial performance and corporate governance plus are associated.

## 3. Methodology

Our approach makes minimal assumptions about the distribution of variables. The essential assumption is an application of the central limit theorem – that the distribution of the variables computed for the 30 randomly chosen RCBs approaches the normal distribution.

We proceed as follows:

- compute dimensions of financial performance for a sample of 30 RCBs;
- categorize the RCBs into four groups based on their standing according to an overall indicator of financial performance;
- classify RCBs into four categories based on their standing according to an overall measure of the state of corporate governance, outreach, use of subsidies, and use of ICT; then
- determine whether RCBs' categories based on corporate governance plus is a predictor of RCBs category when its financial performance is assessed. It is a chi-squared goodness of fit test.

### 3.1 Dimensions of financial performance

In all, nine variables indicating various dimensions of financial performance were computed for 30 RCBs, annually for the period 2000-2005 as discussed above. These are: total assets; total deposits; total deposits as a proportion of total assets; total loans; proportion of total assets that are loans; provision for bad and doubtful loans as a proportion of gross loans; return on assets; interest expense ratio; and operational expenses ratio. All monetary amounts are reported in constant 1997 prices.

Note that three of the nine variables focus on RCB loan portfolio (quantum; as per cent of total assets; and quality), and two focus on RCBs' deposit mobilization efforts (quantum; and as per cent of total assets). This is because we consider these two to be more important indicators of RCBs' financial performance.

### 3.2 Categorizing based on dimensions of financial performance

We classified the RCBs into groups based on their financial performance as follows:

1. First we computed the annual values of the nine dimensions of performance for each RCB for each year.
2. We next computed for each RCB the average score of each of these dimension of performance over the six-year period. This yields a set of 30 average scores per

dimension (one per RCB). For example, the average of total assets over the six years is computed for each of 30 RCBs. This is repeated for all nine dimensions.

3. Then, assuming that for each dimension of performance the 30 average scores were drawn from a normal distribution, we generated standard normal deviates, $Z$, from the averages, $X$, by the usual transformation $Z = (X - \mu)/s$, where, $\mu$ is the mean of the 30 sample averages and s is the standard deviation of the sample averages. This was repeated for all nine dimensions of performance. (Note average and mean are used to distinguish between values that refer to a single RCB and values relating to all RCBs, respectively).

Following this, we classified the RCBs into the four categories in Table III as follows:

1. From the standard normal table, we read off $Z$ values corresponding to 25th, 50th and 75th percentiles of the area under the standard normal curve. The respective $Z$-scores are $-0.67$, 0 and 0.67.
2. For each dimension of performance, we assigned each RCB an indicator point 1, 2, 3, or 4, depending on its standardized $Z$-score. An RCB is awarded an indicator point 1 if its $Z$-score is less than to $-0.67$. It is awarded an indicator point 2 if its $Z$-score is between $-0.67$ and 0. It is awarded an indicator point 3 if its $Z$-score is between 0 and 0.67. Else, it is awarded an indicator point 4.
3. Having repeated this for all nine dimensions, we then assigned each RCB to an overall financial performance category, Marginal, Fair, Satisfactory or Excellent based on the average of the indicator values it scored on all nine performance dimensions.

For example, if an RCB scored 2 on all nine dimensions, that works out to an average indicator point of 2, which we interpret to mean that the RCB falls in the Fair Category.

Note that for two dimensions – quality of loan portfolio and operating expense ratio – lower values of these ratios mean better performance and vice-versa. Thus, for these dimensions, RCBs with $Z$-scores less than or equal to $-0.67$ are awarded indicator point 4; those with $Z$-scores between $-0.67$ and 0 are awarded indicator point 3; those with $Z$-scores between 0 and 0.67 are awarded indicator point 2; while those with $Z$-scores in excess of 0.67 are awarded indicator point 1.

### *3.3 Corporate governance, outreach, sustainability and technology adoption*

We investigated the state of corporate governance, outreach to clients, dependence on subsidies and adoption of modern technology using a questionnaire. It also captures information on characteristics of the board, management and ownership. Each questionnaire was administered to the Manager (Chief Operating Officer) of each RCB. The questionnaire focused on the following as positive indicators:

- Board of Directors: academic qualifications; work experience; diversity of composition; frequency meetings; functioning of sub-committees; signing performance contracts with senior management; and transparency in recruiting senior management.
- Senior management: academic qualifications and experience.
- Whether the RCB Manager is also chairpersons of the board (negative if yes).

**Table III** Categorization of RCBs based on their $Z$-scores derived from financial performance

| *Z*-score | *Indicator points awarded* | *Category* |
|---|---|---|
| $Z \leq -0.67$ | 1 | Marginal |
| $-0.67 < Z \leq 0$ | 2 | Fair |
| $0 < Z \leq 0.67$ | 3 | Satisfactory |
| $Z > 0.67$ | 4 | Excellent |

- How much latitude the Manager has in taking decisions without recourse to the board (negative if too much).
- Whether the RCB has both internal and external auditors reporting directly to the board and independent of management.
- Regularity with which annual general meetings of shareholders are held.
- Regularity of filing annual reports with the central bank in a timely manner.
- Extent of adoption of ICT.
- Frequency of revamping products.
- Growth of customer base.
- Dependence on donor funds, funds from non-governmental institutions, and/or foreign funds (negative if yes).
- Proportion of majority ownership.

We refer to this questionnaire as the corporate governance plus questionnaire. We used indicator points to score each RCBs response to each question on the questionnaire. For each RCB, we obtained its total score on the questionnaire as the sum of its indicator points on all questions on the questionnaire. Thus, from the questionnaire returns we obtained 30 totals, one per RCB. We then computed the sample mean and standard deviation of the 30 corporate governance plus scores. Using this sample mean and standard deviation, we transformed the corporate governance plus score of each RCB to obtain its equivalent *Z*-score as done previously.

Finally, we categorized the RCBs into one of the four previous categories based on their *Z*-scores on the corporate governance plus questionnaire as done for financial performance.

### *3.4 Determining whether corporate governance plus is a predictor of financial performance*

Our next step was to investigate whether there was any statistical relationship between RCBs' state of corporate governance plus and their financial performance. To undertake this test we constructed two contingency tables – one of observed frequencies of RCB's financial performance given their state of corporate governance plus; and the other of expected frequencies of financial performance if the state of corporate governance plus was independent of financial performance. We then computed a goodness of fit chi-squared test statistic in the usual way and tested it for statistical significance for the appropriate degrees of freedom.

### *3.5 Scope of work and data*

The study covers six out of ten political administrative regions in southern Ghana. These regions, together, account for over 70 percent of the total population, gross domestic product and number of RCBs. From the population of RCBs in these regions, we sampled 30 randomly. We obtained their audited financial statements, annually for the period 2000-2005. Finally, we visited each RCB and administered the questionnaire on corporate governance plus.

## 4. Results

### *4.1 Financial performance*

Table IV reports the number and proportion of RCB falling into each of the four categories based on analysis of their financial statements as discussed in section 3.2. The table says that there are no Excellent performers, and there are no Marginal performers. Thus, RCBs are either Satisfactory performers (44 percent) or Fair performers (56 percent).

### *4.2 Corporate governance, outreach, self-sustainability and technology*

Table V reports the results of our analysis of the questionnaire returns on corporate governance plus. It says that for 17 percent of the RCBs the state of corporate governance

**Table IV** Number of RCBs and proportions per category based on financial performance

| *Category* | *Number* | *Proportion %* |
|---|---|---|
| Marginal | 0 | 0 |
| Fair | 17 | 56 |
| Satisfactory | 13 | 44 |
| Excellent | 0 | 0 |
| Total | 30 | 100 |

**Source:** Financial statement analysis

**Table V** Number of RCBs and proportions per category based on analysis of corporate governance plus

| *Category* | *Number* | *Proportion %* |
|---|---|---|
| Marginal | 3 | 10 |
| Fair | 11 | 36.5 |
| Satisfactory | 11 | 36.5 |
| Excellent | 5 | 17 |
| Total | 30 | 100 |

**Source:** Analysis of questionnaire returns

plus was Excellent; for another 36.5 percent it was Satisfactory; for yet another 36.5 percent it was Fair. Finally for 10 percent it was Marginal.

### *4.3. Does corporate governance plus influence financial performance?*

Theory and empirical evidence elsewhere (e.g. OECD, 2004a) suggests that the state of corporate governance plus is a predictor of financial performance. Our analysis however suggests that about 17 percent of RCBs in southern Ghana score Excellent on corporate governance plus, and another 10 percent score Marginal, yet no RCB scored Excellent or Marginal under financial performance. Thus, we hypothesize that in the face of:

- recent adoption of corporate governance codes and modern banking laws;
- the quality of boards and management can be further improved; and
- ownership incentive to monitor and control management is weak, the association between RCBs' state of corporate governance plus (Table V) and RCBs' financial performance (Table IV) is not statistically significant.

*4.3.1 Test of hypothesis*. We performed a chi-squared test of this hypothesis as follows:

- Starting with the RCBs that fell into the Marginal category of Table V (corporate governance plus), we noted how many of them fell into each of the Marginal (M), Fair (F), Satisfactory (S) and Excellent (E) categories of Table IV (financial performance). These are denoted [M,M], [M,S], [M,F] and [M,E] in Table VI. That is, [M,M] in Table VI represents the number of RCBs that fell in category [M] of Table V and also fell in category [M] of Table IV; and [M,F] represents the number that fell in category [M] of Table V and fell in category [F] of Table IV, etc.
- Next, we observed the number of RCBs that fell into the Fair category of the Table V that fell into categories [M], [F], [S] and [E], of Table IV. These are denoted [F,M], [F,F], [F,S] and [F,E] in Table VI. Again, [F,M] refers to the number that fell into category [F] of Table V and fell into category [M] of Table IV, etc.
- We did this for all four categories of Table V. The result is a 4 $\times$ 4 contingency table of observed frequencies, $f_o$. Table VI is our conceptualization of the table of observed frequencies. The actual frequencies are given in Table VII.

**Table VI** Conceptual table of observed frequencies, $f_o$

| *Corp. Gov*[b] | *Category [M]* | *Category [F]* | *Category [S]* | *Category [E]* | *Total* |
|---|---|---|---|---|---|
| | | | *Financial*[a] | | |
| Category [M] | [M,M] | [M,F] | [M,S] | [M,E] | R1_TOTAL |
| Category [F] | [F,M] | [F,F] | [F,S] | [F,E] | R2_TOTAL |
| Category [S] | [S,M] | [S,F] | [S,S] | [S,E] | R3_TOTAL |
| Category [E] | [E,M] | [E,F] | [E,S] | [E,E] | R4_TOTAL |
| Total | C1_TOTAL | C2_TOTAL | C3_TOTAL | C4_TOTAL | G_TOTAL |

Notes: [a] Financial: refers to financial performance categories, across the top; [b]Corp. Gov: refers to corporate governance plus categories, vertically down

**Table VII** Actual table of observed frequencies, $f_o$

| *Corp. Gov*[b] | *Category [M]* | *Category [F]* | *Category [S]* | *Category [E]* | *Total* |
|---|---|---|---|---|---|
| | | | *Financial*[a] | | |
| Category[M] | 0 | 2 | 2 | 0 | 4 |
| Category [F] | 0 | 5 | 4 | 0 | 9 |
| Category [S] | 0 | 5 | 5 | 0 | 10 |
| Category [E] | 0 | 2 | 5 | 0 | 7 |
| Total | 0 | 14 | 16 | 0 | 30 |

Notes: [a] Financial: refers to financial performance categories, across the top; [b] Corp. Gov: refers to corporate governance plus categories, vertically down

- Next, we used the row totals of Table VII, denoted R1_TOTAL in Table VI, for row one, R2_TOTAL for row two, R3_TOTAL for row three, and R4_TOTAL for row four, as proportions of total observations, G_TOTAL, to estimate the proportion of column totals, C1_TOTAL, C2_TOTAL, C3_TOTAL and C4_TOTAL (respectively column one, column two, column three and column four of Table VII) that would have been expected to fall into each cell of the contingency table if no relationship existed between performance on corporate governance plus and financial performance. The conceptual table of expected frequencies is depicted as Table VIII, and the actual table of expected frequencies, $f_e$, as Table IX. For example, entry [M,M]' of Table VIII, is obtained from Table VII conceptually as [M,M]'=([R1_TOTAL]/[G_TOTAL]) × [C1_TOTAL], and the actual value is given in Table IX. Similarly, entry [E,S]' of Table VIII is obtained from Table VII as [E,S]' = ([R4_TOTAL]/[G_TOTAL]) × [C3_TOTAL], and the actual value given in Table IX. This is repeated for all the cells.

*Test statistic*. The chi-squared test statistic for this test is given as:

$$X^2 = \sum[(f_0 - f_e)^2/f_e]$$

for the corresponding 16 cells of Tables VII-IX. The computed statistic is 1.2721. At 9 degrees of freedom, this is not significant at any reasonable significance level and so we accept the null hypothesis.

### 4.4 Discussion

Our finding is that in southern Ghana, there is no association between the state of corporate governance plus of RCBs and their financial performance, giving the prevailing environment. Theory and empirical evidence elsewhere suggest that there should be in the right environment. Thus, the challenge is ensuring that the financial performance of RCBs reflects their state of corporate governance plus. That is, if on average an RCB's state of corporate governance plus is Excellent one should expect that its financial performance will also be Excellent, etc. This argument also admits that if the state of corporate

**Table VIII** Conceptual table expected frequencies, $f_e$

| Corp. Gov[b] | *Financial*[a] Category [M] | Category [F] | Category [S] | Category [E] | Total |
|---|---|---|---|---|---|
| Category [M] | [M,M]' | [M,F]' | [M, S]' | [M, EF]' | R1_TOTAL' |
| Category [F] | [F,M]' | [F, F]' | [F, S]' | [F, E]' | R2_TOTAL' |
| Category [S] | [S,M]' | [S, F]' | [S, S]' | [S, E]' | R3_TOTAL' |
| Category [E] | [E,M]' | [E, F]' | [E, S]' | [E, E]' | R4_TOTAL' |
| Total | C1_TOTAL' | C2_TOTAL' | C3_TOTAL' | C4_TOTAL' | G_TOTAL |

Notes: [a] Financial: refers to financial performance categories, across the top; [b] Corp. Gov: refers to corporate governance plus categories, vertically down

**Table IX** Computed table of expected frequencies, $f_e$

| Corp. Gov[b] | *Financial*[a] Category [M] | Category [F] | Category [S] | Category [E] | Total |
|---|---|---|---|---|---|
| Category[M] | 0 | 1.87 | 2.13 | 0 | 4 |
| Category [F] | 0 | 4.20 | 4.80 | 0 | 9 |
| Category [S] | 0 | 4.67 | 5.33 | 0 | 10 |
| Category [E] | 0 | 3.27 | 3.73 | 0 | 7 |
| Total | 0 | 14 | 16 | 0 | 30 |

Notes: [a] Financial: refers to financial performance categories, across the top; [b] Corp. Gov: refers to corporate governance plus categories, vertically down

governance plus is Marginal, one should also expect that RCB's financial performance to be Marginal. Of course, the more Excellent performers, the better, and so the challenge would be to shoot for Excellent corporate governance plus.

This approach would serve as an incentive for RCB owners and managers to seek to improve financial performance by paying attention to corporate governance plus. This philosophy also admits that marginal performers may fold up if they continue to perform marginally. However, if this happens, the economy as a whole should be the better for it, as it will be RCBs with poor corporate governance plus that would fold up.

How then do we explain our finding that in southern Ghana, the association between corporate governance plus and financial performance is not significant? The literature on corporate governance in Africa and transition countries provides a clue. In the first place, the literature speaks of adoption of western style corporate governance codes being in their infancy. Indeed, the Securities and Exchange Commission's (of Ghana) code referred to was instituted only in 2000. And the banking law was only revised in 2004.

Second, in the case of Ghana, ownership of RCBs by individuals is limited by the central bank to 30 percent (50 percent for corporate ownership, but the vast majority are individually owned) and foreign ownership is not allowed. We consider a maximum of 30 percent ownership of a small RCB with restricted rural geographic coverage as not providing enough incentive for the cost of management monitoring and control.

Finally, we recall that the Bank of Ghana (2001) concluded that the quality of boards and management of failed RCBs was a contributory factor.

## 5. Conclusion and recommendations

We conclude that given the prevailing environment, there is no association between the state of corporate governance, outreach, use of subsidy and information and communication among Ghanaian rural and community banks and their financial performance.

We recommend that the laws and codes of conduct that have been recently designed to guide the conduct of business are in the right spirit and should be allowed to work. The restriction on individual ownership of RCBs to 30 percent should be relaxed and other means of regulating RCBs should be sought. Finally, owners of RCB should note the critical importance of developing the competencies of their boards and management.

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## Further reading

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