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A CRITICAL ANALYSIS OF FINANCIAL PERFORMANCE OF AGRICULTURAL DEVELOPMENT BANK (ADB, GHANA)

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ABSTRACT: *Until recently, many of the banks in developing countries were state owned or locally established with varied mandates to focus on different sectors of the economy. Some of these state banks are bedevilled with peculiar set of challenges making some of them inefficient and unprofitable and in some instances insolvent. Financial performance analysis is aimed at keeping the banks in checks by highlighting low and high performance areas with the understanding that it will bring about improvement in performance. The PELARI (Profitability, Efficiency, Liquidity, Asset Quality, Risk Measures and Investor analyses) model was developed for analysis by the researchers which is similar to the CAMELS' rating. Financial ratio analysis is employed in the analysis. Troubled signals models such as the Altman z-score for non-manufacturing companies and risk index were also used to measure risk. The Altman z-score generated for 2011 and 2012 showed a figure of less than 1.1 which put the bank in the distress zone category. It was evident from the analysis that ADB's focus on agricultural financing is diminishing since a sector analysis of loans and advances indicates that the agriculture sector lost its first position to the services sector which recorded 38% compared with agriculture 29% in 2012. The bank's liquidity showed a downward trend and slipped further down in 2010 confirming the Ghana Banking Survey (2011) assessment that the bank is illiquid.*

KEYWORDS: Analysis, Financial Performance, Liquidity, Development, Bank

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INTRODUCTION

Background of Study

The most striking characteristics of state-owned banks, whether agricultural, industrial or hybrid are their dependence on Government and external donors for resources at concessional interest rates, availability of larger subsidy than non-public banks, offer of narrow range of financial services and political pressure to lend to risky or non-creditworthy borrowers with consequent default rates running high (Selvavinayagam, 1995). Their primary responsibility is to government instead of the public (savers and borrowers). This might explain why in Ghana few of these financial institutions are listed on the stock exchange. According to Harvey (1993), the motive for the establishment of government banks and development finance institutions is primarily to extend access to credit to local businesses. However, many of these were often poorly managed and in many instances the informal sector was neglected when little impact was made on local businesses. Better banking management be it agricultural or commercial, involves the development of diversified portfolios of risk assets (loans and investments) by avoiding skewing these assets for example in either sector or geographical location and with adequate liquidity so as to protect depositors and investors (Selvavinayagam, 1995). The

public-sector banks have faced a different set of problems as asserted by Harvey (1993) in his work on "the role of commercial banking in recovery from economic disaster in Ghana, Tanzania, Uganda and Zambia", these ranges from political interference in the allocation of credit and the pursuit of non-commercial objectives. Many of the bad loans portfolios in ADB could be attributed to this assertion. The established foreign banks are less bedevilled with incentive and selection problems than the locally established banks (Harvey, 1993). A continuous monitoring in terms of review of financial performance would ensure improved performance and protect bank going concern status (Nimalathasan, 2008).

Research Problem

The health of the financial position of ADB is crucial to achieving its corporate mission and vision. The Ghana Banking Survey (2011) indicated that ADB is among the most illiquid banks. Meanwhile, the bank has received several awards in 2010, 2011 and 2012 which presupposes that ADB is performing. This research seeks to critically examine the financial records available to confirm whether the bank is performing despite it being cited as illiquid.

Research Objective

The research was set to achieve the following objectives:

1. Present a brief overview of the Agricultural Development Bank and its operations from independent analyst viewpoint
2. To analyse the financial performance of ADB with the help of various analytical models.
3. To provide an on-going means to evaluate bank's performance financially.
4. To explain whether the current awards and recognition is based on the financial performance of the bank.

Research Questions

The research sought to address the following research questions:

1. Whether profitability necessarily determines liquidity.
2. Do the financial statements show a proof of imminent insolvency?
3. Is it is profitable to invest in ADB?
4. Has the change in administration transformed the bank's operations and processes and responsible for the much touted impressive performance?
5. Has the bank achieved its vision set in 2009 to be among the top three performing banks in 2012?

Justification and Significance of the Study

The study would provide management with the true state of financial performance of the bank and also make projections into the future with the view to ensure improved performance (Nimalathasan, 2008). This piece of work would help management evaluate their vision set in 2009 to be among the top 3 performing banks in Ghana by 2012 and help realign strategy with vision set for the next 3 years to be among the top performing banks by 2016. As the bank plans to list on the Stock Exchange in 2014, the Securities and Exchange Commission would find this work useful in the initial assessment for listing ADB.

The PELARI (Profitability, Efficiency, Liquidity, Asset Quality, Risk Measures and Investor analyses) model provides good assessment of financial performance based on financial statements alone since in the view of Hyytinen and Takalo, (2002 and 2003) banks are unwilling to release relevant information apart from what they publish. The paper provides an on-going means of analysing financial performance of ADB while the model used could be employed on both banks and non-banks financial institutions in terms of financial analysis. The paper also contributes to the debate on the efficiency of state-owned banks as asserted by Harvey (1993) that many of these banks are often poorly managed and not efficient. This paper will stimulate discussions on the way forward for Agricultural Development Bank as far its management and mandate is concerned.

LITERATURE REVIEW

Bad loans portfolio

Credit facilities that have not been retrieved by banks have had a toll on the financial performance of banks in Ghana and elsewhere. Bank of Ghana classifications of loans indicate that loans that are current are those for which the borrower is up to date in respect of payments of both principal and interest. The term ‘’bad loans’’ as described by Basu (1998), is used interchangeably with nonperforming and impaired loans as identified in Fofack (2005). Kaminsky and Reinhart (1999, p. 476) made a point that *indicators of business failures and nonperforming loans are also usually available only at low frequencies, if at all; the latter are also made less informative by banks desire to hide their problems for as long as possible.* This means complex and fully available financial information is required in order to be able to analyse financial performance of banks.

Liquidity versus profitability

There is always a trade-off between liquidity and profitability. An attempt to gain more in any of them means giving up some of the other. For a company to ameliorate its performance, it must pursue both liquidity and profitability. This is in line with Charles Whittlesey’s assertion cited at (National Bureau of Statistics, 2011) that the determination of a bank's portfolio policy requires a balancing act between its cash and income. Michalski (2008) shares the same believe that liquidity management requires that sufficient cash balance and other working capital assets are maintained in a balance. He further argued that liquidity could contribute to the firm’s fundamental aim of creation of value. According to Barfield and Venkat (2011) the collapses of Northern Rock and Bear Stearns showed that profitability and adequate capital are no defence against liquidity risk. In the quarter before their disappearances, both made profits and were well-capitalised businesses. However, their inability to deal with liquidity risk issues caused them to be swept away. Goodhart (2007) believed that liquidity and insolvency are intertwined and often indistinguishable. He maintained that an illiquid bank can rapidly become insolvent and an insolvent bank illiquid.

Measuring financial performance of banks

Nimalathasan (2008) stated that the common reason which supports much of the financial performance research and discussions is that, increasing financial performance analysis will bring about improvement in functions and processes of the organisation. The concept of financial performance and research into its measurement is well advanced within

finance and management fields. An array of performance indicators is necessary to expose the different aspects of the performance of a bank as in Gibson and Cassar (2005). The concept of prudent banking is normally built around these indicators. Financial analysis is crucial in estimating the effect of any sector reforms or institutional restructuring. Aarma et al (2003) indicated that banks performance analysis is an important issue in the conditions of transition economies due to the key role played by the financial sector in a successful transition. Different aspect of the DuPont financial ratios appears to be applicable to the banks and other financial institutions as in Dietrich (1996) and Avkiran (1995). Financial Markets Department (2000) affirmed that ratio analysis is a reflection of the true state of affairs of the performance of any business. Notwithstanding the usefulness of financial ratio analysis in providing useful insight to an entities performance it does have some important limitations as an analytical tool in bank performance analysis.

Banking fraud

According to Olufidipe (1994) fraud refers to "Deceit or trickery deliberately practiced in other to gain some advantage dishonestly". Orjih (1998) also defined bank fraud as a conscious or deliberate attempt to obtaining unlawful financial advantage at the detriment of an owner of funds or holder of accounts.

Banking fraud is an old phenomenon that is manifested in different forms including money transfers fraud, fraudulent lending, cheque kitting, transaction fraud, letter of credit fraud, borrowing from the till, Anti-money laundering, credit and debit card fraud, first party fraud, internet fraud etc. Sadia (2010) also supports the view that bank fraud has far reaching consequences on the performance of banks and the banking sector as a whole. According to Dr Paul Acquah, former Governor of Bank of Ghana, the effects of fraud on financial institutions and their stakeholders not excluding the national economy can be devastating and the vulnerability of banks to such fraud has been raised due to technological advancements (Bank for International Settlement, 2006).

RESEARCH METHODOLOGY

Secondary data is used in the study since all the information needed are historical in nature and available. The help of other important sources such as the journals, magazines, newspapers and websites have been chosen when found relevant. This is purely quantitative research and the data used was audited financial statements. The target population for the study was audited financial statements of ADB since its inception in 1965. There are Forty-Seven (47) of these financial statements which have been audited up to the financial year 2012. The sample methodology used was therefore judgemental sampling to reflect the objective of the researchers.

Seven years (2006-2012) audited financial statements were therefore selected from the entire population and it formed the basis of the financial analysis performed. The seven years financial statement selected was to allow vertical and horizontal analysis of the financial statements. The Du Pont financial ratio analysis as in Vensel (2001) is also employed to look at specific components contributing less to return on equity. Descriptive statistics would be employed in analysing the available financial information. Mean would be computed for key financial figures. Bar charts, line charts, frequency polygons, pie chart and line of best fit would be employed in the data presentation and analysis. Trouble-signalled models such as modified Altman's Z-score inflection point and

bankruptcy analysis, gross margin slope analysis. Microsoft Excel was employed in the analysis of the financial data gathered.

Limitations of the Study

The study cannot be conclusive on the performance of ADB since the financial performance analysis was based on historical financial data which has some element of inflation. The research is limited by the model(s) used as there are varied models to evaluate the financial performance of a bank such as the Data Envelope Analysis (DEA), CAMELS rating, Robust Estimation Approach, Parametric and non-Parametric Statistical Techniques. This study excludes customer satisfaction survey which could measure efficiency and long-term profitability from the view point of customers. The scope also does not include branch performance analysis and is limited to a seven year period from 2006-2012.

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

Financial highlights

Interest sales turnover correlates positively to profit, it is important to look at the growth of interest income which is circa 82% of the operating income (sales turnover) of the bank in 2012. Interest income has witnessed continues growth over the past five years until in 2011 when it experienced a reduction of 17% purely attributable to lowering in interest rates. Operating income which represents sales turnover has recorded increases in nominal values since 2006 as shown in Table 4.1 below. In 2010, the bank posted a strong growth in its operating income due to considerable improvement in interest income and lower interest expenses paid on deposits.

Table 4.1: A table showing operating income growth rate

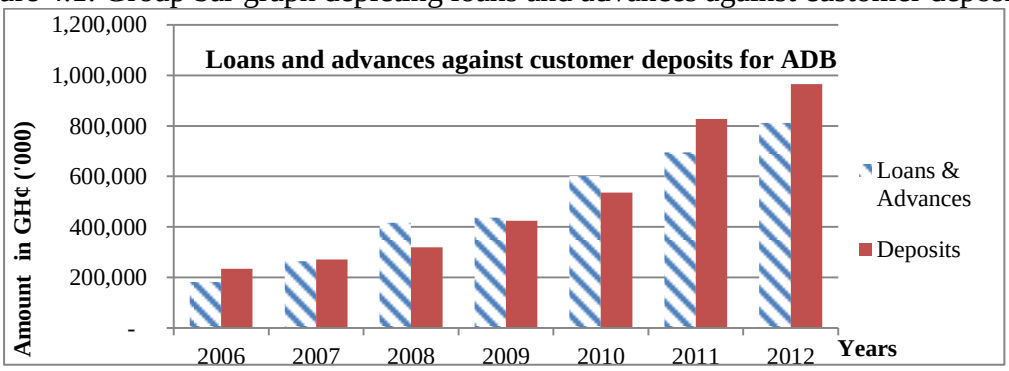
	Year						
	2006	2007	2008	2009	2010	2011	2012
Operating Income (GH¢'000)	51,658	53,430	75,432	76,988	143,154	163,592	241,565
Growth Percentage (%)	-	3.43	41	2	86	14	48

Source: ADB Annual Reports 2006-2012

Total Deposits and advances

During the period under review ADB recorded positive growth in both deposits and advances. Loans grew at an average rate of 29.57% while deposits grew at an average of 27.28% during the past seven years. Customer deposits have grown at a lower rate than loans and advances. Deposits recorded the lowest growth in 2007 at 15.62 while the highest of 33% was registered in 2009. Loans and advances on the other hand recorded the lowest in 2009 whilst the highest of 57% was recorded in 2008.

Figure 4.1: Group bar graph depicting loans and advances against customer deposits.



Source: ADB Annual Reports 2006-2012

Income statement composition analysis

Composition analysis presents important viewpoint into the bank's efficiency and profitability by looking at relative.

Table 4.2 showing income composition of ADB percentage distribution of operating income

	Year						
Item	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Net Interest Income	60%	58%	52%	54%	74%	49%	66%
Fees and Commission Income	28%	33%	35%	37%	21%	23%	17%
Other Operating Income	12%	9%	13%	9%	6%	28%	17%
Total Operating Income	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: ADB Annual Reports 2006-2012

From the above table, it is evidently clear that net interest income is a major contributor of operating income. Fees and commissions have experienced a downward movement over the period and will continue further in that direction because of the keen competition in the industries resulting in price cuts. Staff cost continues to form the major component of operating expenses as evident from Table 4.3 but has witnessed a continuous decline since 2010 from 63% to 50% in 2012. Occupancy cost, depreciation expense, and auditors' remuneration all witnessed a decline in 2010 in terms of percentage composition.

Table 4.3: Percentage distribution of operating expenses.

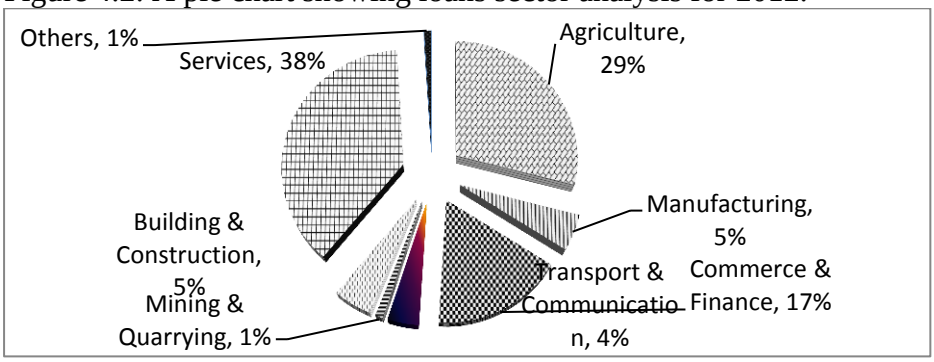
Item	Year						
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Staff costs	67%	68%	67%	54%	63%	57%	50%
Directors' fees	0.07%	0.09%	0.06%	0.14%	0.15%	0.55%	0.53%
Depreciation	5%	6%	6%	6%	3%	4%	6%
Occupancy Cost	11%	9%	14%	15%	6%	7%	6%
Auditors Remuneration	0.14%	0.12%	0.10%	0.11%	0.07%	0.12%	0.11%
Donations and Social Responsibility	2%	1%	1%	1%	1%	1%	0%
Motor Vehicle Running Expenses	3%	3%	2%	2%	4%	7%	5%
General & Administrative Expenses	12%	12%	10%	22%	25%	15%	12%
Others	0.02%	0.05%	0.05%	0.02%	0.04%	8.62%	20.03%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: ADB Annual Reports 2006-2012

Despite the outsourcing of the transport department in 2010, motor vehicle running expenses increased from 2% to 4% in 2010. This could be explained by fuel price increases or the expensive nature of the outsourcing. Corporate social responsibility declined from 2% in 2006 to 1% thereafter. ADB was recognised as the most socially responsible bank in the Ghana Banking Awards in 2006 and has lost the first slot ever since.

Sector analysis of loans and advances

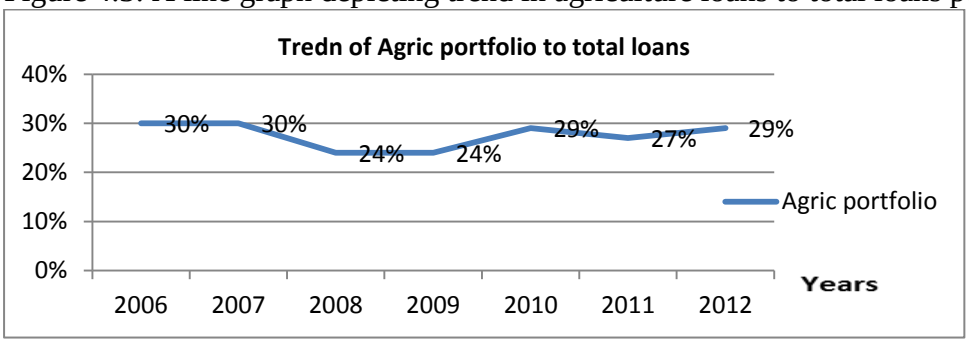
Figure 4.2: A pie chart showing loans sector analysis for 2012.



Source: ADB Annual Reports 2006-2012

Agriculture has lost the topmost position in terms of the composition of the bank's portfolio in 2012 to the services sector as evidenced in the pie chart of Figure 4.2. The focus on agriculture is diminishing over time because of the inherent risk in agricultural financing in Ghana.

Figure 4.3: A line graph depicting trend in agriculture loans to total loans portfolio.



Source: ADB Annual Reports 2006-2012

Loans to the agriculture sector have witnessed some fluctuations as exhibited by Figure 4.3. The fluctuations reflect the riskiness of the sector and therefore management exercise caution due to environmental and economic conditions prevailing.

Profitability Analysis

Profitability is the net results of a number of strategies, decisions and policies. The ratios and analysis provide useful clues to the effectiveness of the bank's operations. The profitability ratios depict the combined effect of liquidity, asset management and debt on operating results.

Profit margins

The bank's profitability recovered from the dip it experienced in 2009. Profit after tax (National Stabilization Levy) margin increased from 16.45% in 2009 to 23.20%. The improved profitability in 2010 is attributed to a growth in net interest income and an improvement in cost to income ratios. However, the figure declined sharply in 2012 by 55% record the lowest margin in seven years at 13.36%. The net profit margin during the last seven years experienced some level of fluctuations. It thus recorded an average of 20.10% for the past seven years. The bank is able to earn 20.10Gp for every Ghana Cedi (GH¢1) invested in the form of interest and fees generated.

Net interest margin

According to Kamal (2009) a bank's net interest margin is a key measure that drives ROA. Juan-Ramon et al (2001), Peters et al (2004), Ghana Banking survey (2011) and many others used this to measure bank's profitability. The higher the ratio, the cheaper the funding or the higher the margin the bank receives.

The net spread between the policy rate and the industry base rate remained relatively unchanged at about 11% since many of the banks including ADB did not considerably reduce interest rates on loans and advances. The net interest margin which is a performance metric that examines how successful the bank's investment decisions are compared to its debt situations witnessed significant improvement in 2010 and saw the bank being ranked third from a position of seventeenth according to the banking survey (2011). The ratio was on the decline from 2006 to 2009 (8.92% to 6.71%) although some were marginal. The figure of 12.72% recorded in 2012 is 25% higher than the industry average of 10.2%.

Return on assets

Return on assets (ROA), often described as the primary ratio, relates the income earned by the bank to the assets it used in the business operation. It is commonly defined as net income (or pre-tax profit) / total assets. It provides information about management's performance in using the assets of the business to generate income. Profit before tax is generally ideal because calculations using net income after tax figures may show trends due simply to changes in the rates of taxation.

Return on assets has fluctuated during the last seven years from 2006-2012. The lowest return on assets was recorded in 2009 (1.72%) while the highest was recorded in 2011 (4.0%). The significant increase in the ratio in 2011 is due to considerable decrease in assets growth from 38% in 2010 to 16% in 2011. Within the industry, return on assets has witnessed consistent improvement from 1.6% in 2009 to 3.5% in 2012 which was primarily driven by interest income earned on investment securities and loan portfolio (Banking survey 2013). The figure 2.22% generated by ADB in 2012 is 37% below the industry average implying the bank is generating less on its assets.

Table 4.4: Net profit against total assets

	Year						
	2006	2007	2008	2009	2010	2011	2012
Net Profit (GH¢'000)	10,765	9,278	14,934	12,667	33,215	48,557	32,273
Growth (%)	-	(13.81)	61	(15)	162	46	(34)
Total Assets (GH¢'000)	410,319	465,190	624,270	734,565	1,020,333	1,213,671	1,455,146
Growth (%)	-	13.37	34	18	39	19	20

Source: ADB Annual Reports 2006-2012

R*eturn of equity*

Return on equity (ROE) relates profit earned after tax by the bank to resources contributed by its owners (shareholders' fund). The firms ROE depends on its return on assets and the use of leverage (equity multiplier) and is expressed by the DuPont ratios as stated below;

(Profit margin) x (Total assets turnover) x (Equity multiplier)

The bank recorded a return on equity of 23.19% in 2010 and 26.72% in 2011. This means ADB equity holders earned more during these periods. The significant increase in the ROE during these periods was due to increase in financial leverage and also improvement in asset turnover. 2012 however witnessed a declined in percentages terms of 41% due to a decline in net profit margin. The banking industry as a whole witnessed improvement in ROE due also to improvement in net interest spread.

Return on loans

Loans are the main earning assets for the bank. The ratio of interest and fees earned on loans to total loans is a significant measure of management's ability to price its loan and to attain an optimum loan mix. Since 2008, the bank has consistently recorded increases

in this ratio. The bank registered and all- time high in 2010 from a figure of 15.51% in 2009 to 19.64%. This ratio is key in terms of measuring profitability as loan income contributes over 65% of total operating income to the bank.

Return on investments

This ratio connects interest earned on securities to total book value of securities held by the bank. Government securities are basically held for liquidity reasons. The bank's yield on security depends on the general level of interest rates and the maturity distribution of the portfolio. ADB's return on investments did witness some level of fluctuation due to the nature of operating and economic environment. It thus recorded 15.73%, 10.93%, 12.58%, 16.83%, 11.05% and 11.41% in 2007, 2008, 2009, 2010, 2011 and 2012 respectively.

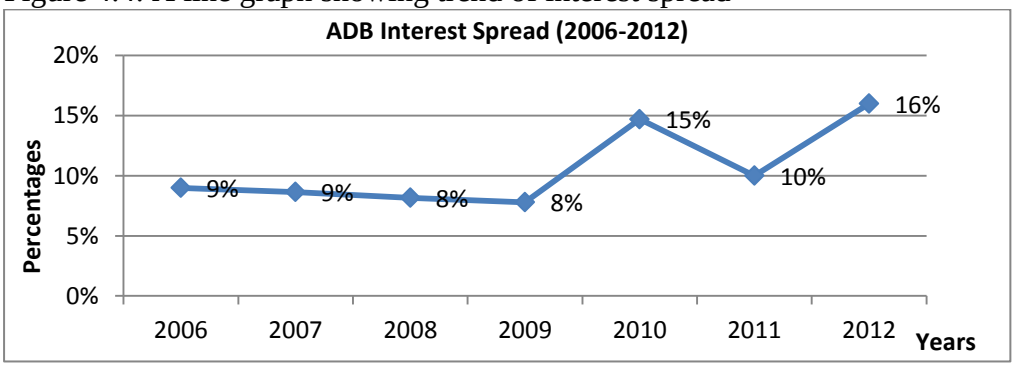
Interest spread

This is the difference between the borrowing rate and the lending rate. The higher the ratio the better it is for the bank. The spread is thus the difference between the rates earned on income-producing assets and the rate on the interest-bearing liabilities. It is calculated as;

$$\frac{[\text{Interest + fees on loans and advances}] \times 100}{\text{Total loans and advances}} - \frac{[\text{Interest expense}] \times 100}{\text{Interest bearing liabilities}}$$

This ratio includes only those assets and liabilities that carry an interest rate (Banking Survey 2013).

Figure 4.4: A line graph showing trend of interest spread



Source: ADB Annual Reports 2006-2010

Interest spread as depicted in Figure 4.4 shows decreasing trend from 2006 to 2009 and fluctuated thereafter. However, in 2012 the bank reversed this trend and achieved the highest of 15.87% during the period under review. The higher spread was as a result of reduction in cost of interest bearing liabilities and an increase in return on loans and advances.

Intermediation Margin

The intermediation margin can be defined as the differential between the cost of funds and the yield on earning assets plus related fee income. The differential shows the cost of the bank for intermediating between the lenders and users of funds. Selvavinayagam (1995) used this ratio in his paper on financial analysis of banking institutions in the assessment of profitability. It is calculated as;

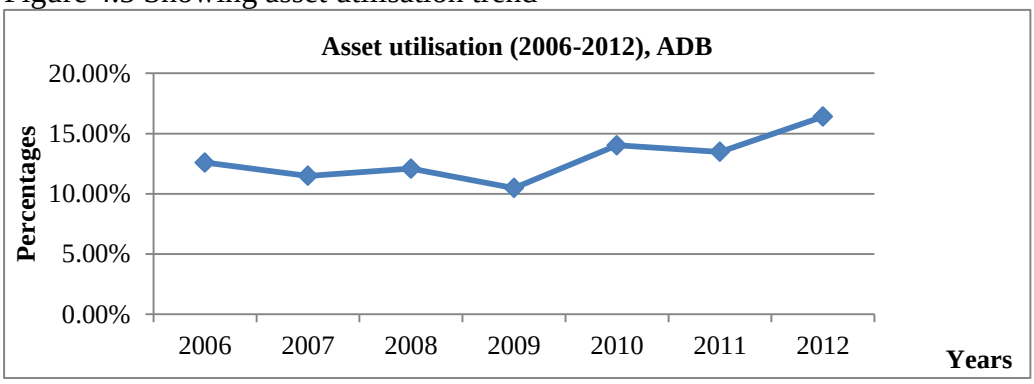
$$\frac{[\text{Interest income}] \times 100}{\text{Total Assets}} - \frac{[\text{Interest expense}] \times 100}{\text{Total liabilities}}$$

This ratio also shows some decreasing trend from 2006 to 2009 which implies the intermediation role was costing the bank more. But in 2010, the figure rose from 4.62% in 2009 to 9.73% in 2010 but fluctuated thereafter with highest being recorded in 2012 of 10.41% due to high interest rate.

Asset utilisation ratio

The ratio depicts the proportion of total operating income to total assets. The asset utilisation ratio (AUR) calculates the total income earned for every GH¢1 of assets the bank owns.

Figure 4.5 Showing asset utilisation trend



Source: ADB Annual Reports 2006-2012.

Tarawneh (2006) and Kamal (2009) used the asset utilisation ratio in the measurement of banks profitability. A higher the ratio indicates profitability and efficiency while a lower ratio indicates otherwise. Available data indicates that the asset utilisation ratio fluctuated during the period under review from 2006 to 2012 as depicted in figure 4.5. The lowest of 10.48% was recorded in 2009 while 2012 registered the highest of 16.60%. According to CAMELS rating by Chowdhury (2007), an asset utilisation ratio of 13% and above is classified or indicated as strong. The ADB current figure of 16.60% falls into this classification which indicates that the bank's assets are earning above average.

Return on deposits

Tarawneh (2006) and Kamal (2009) as well as many other financial analysts used this performance indicator in measuring profitability. The higher the ratio, the better it is for profitability.

Table 4.5: A table depicting return on deposits

Indicator	2006	2007	2008	2009	2010	2011	2012
Return on Deposits (%)	4.59%	3.42%	4.67%	2.98%	6.20%	2.87%	2.68%

Source: ADB Annual Reports 2006-2012

Return on deposits (ROD) as shown in Table 4.5 above was lowest in 2012 as it recorded a figure of 2.68% mainly attributable to the decline in profit and the highest of 6.20% was registered in 2010 due to an increase in profit by 162% while an average of 3.92% was achieved for during this 7-year period. For every GH¢1 received in 2012, a profit of 2.7Gp was earned as profit.

Efficiency Analysis

Efficiency measures look at how well the assets or resources are utilize to achieve profitability.

Net income to staff expense

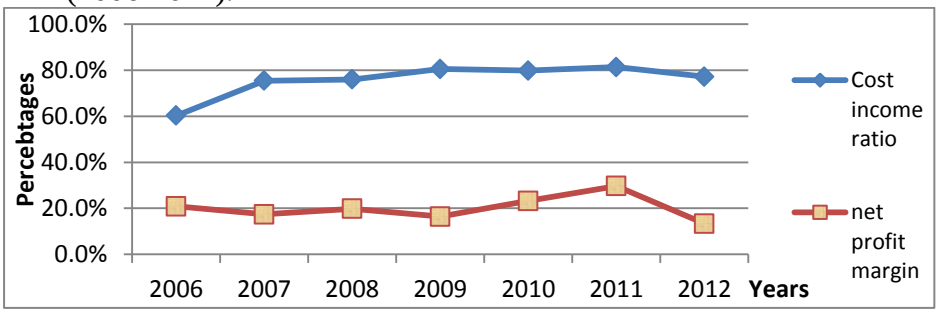
This ratio looks at return on investment in staff costs. It is calculated as net profit divided by staff expense (cost). Staff costs generally form a major proportion of a bank's non-interest costs. Staff productivity, as measured against staff expense or number of staff, can provide insight into a bank's efficiency. The highest ratio of 63.83% was recorded in 2011 while the lowest of 31% was realised in 2007. The ratio experienced some fluctuations during the period under review with an average ratio of 43.53%. The ratio significantly dipped by 46% in 2012 by recording staggering 34.54. Therefore for every GH¢1 invested in staff, a return of 35Gp is realised as profit in 2012. The reduction was attributable to a decrease in net profit due to a reduction in loan portfolio quality.

Cost to income ratio

Cost-to-income ratio relates a company's operating costs to its operating income. The lower the cost income ratio, the more efficient the business is running. Hess and Francis (2004) made the observation that there is an inverse relationship between the cost income ratio and the bank's profitability.

ADB's cost income ratio has remained fairly high compared to the industry average of around 60% during the last four years. The bank achieved the best of this ratio in 2006 when it recorded 60.26% while the worst was recorded in 2009 with a figure of 80.46% while an average of 75.76% was realised for the past seven years (appendix table 5 refers). The high ratio is due to growing high operating cost partly to due large increases in administrative cost and staff emoluments.

Figure 4.6: A line graph showing relation between cost income ratio and net profit margin of ADB (2006-2012).



Source: ADB Annual Reports 2006-2012

Asset turnover

Asset turnovers have experience fluctuations over the past five years. The lowest of 0.10 times was recorded in 2009 while the highest of 0.17 times was generated in 2012 (see appendix table 5). The improvement in 2012 was as a result of high percentage increase in operating income due to concentration on core activities of lending.

Liquidity Analysis

Liquidity is crucial in bank management and long-run profitability. Maintaining adequate liquidity is a key constraint on the bank's profit making capacity. If claims by depositors and other lenders are not met, their confidence will be diminished and many refuse to deposit funds and lend to the bank. However customer deposits and other funds are necessary condition for the expansion of loans and investments beyond the amount allowable by the use of equity only. Liquidity ratios give the primary means of reviewing a bank's liquidity position.

Cash ratio

This ratio relates the sum of cash in hand and at banks including the Central Bank to total deposits. It is calculated as;

Cash and cash balances of central bank x100

Total customer deposits

The ratio looks at how much cash is held against customer deposits. Normally how much must be held depends on the maturity of the deposits. This ratio has witnessed some fluctuations over the last seven years. An average of 15.35% is registered for the past seven years. The minimum ratio 9.87 was recorded in 2011 while the maximum of 18.84% was recorded in 2007 (as shown in appendix table 5). The ratio however inched up in 2012 from 9.87 to 13.26%.

Loans to deposit ratio

This ratio is generally used to determine the lending practices of banks. It is also used to measure liquidity by dividing the banks total loans by its total deposits. A too high ratio indicates liquidity problem that the bank might not have adequate funds to cover. Where the ratio is too high, it means that banks might not have enough liquidity to cover any unanticipated demands by depositors.

The lowest ratio of 77.85% was realised in 2006 while the highest of 130.43% was recorded in 2008**.** The ratio increased from 102.82% in 2009 to 112.19% in 2010. What it means is that, in 2010 all the deposits received, 112.19% of was given out as loans and advances but figure improved 2011 and 2012

Loans to assets ratio

This relates loans to total assets and finds the proportion of total assets held as loans. Too high a ratio indicates lower liquidity but too low a ratio indicates low profitability. The lowest ratio of 44% was recorded in 2006 whilst the highest of 67% was registered in 2008. The ratio dipped from 60% in 2009 to 59% in 2010. An average of 57.12% was achieved during the last seven years. A high proportion of the bank’s assets are held in loans and advances.

Liquid funds to deposit ratio

This is a key liquidity ratio that looks at protection for customer deposits. The higher the ratio the better it is for the liquidity position. The bank registered the highest of 84% in 2006 and the lowest of 46% in 2011 (appendix table 5 refers). The bank however achieved an overall average of 57.56% during the period under review. The ratio declined from 59% in 2009 to 55% in 2010 which fell below the industry average of 74%. This could be attributed to positive macro-economic environment of lower inflation and a stable local currency. This stimulated ADB’s lending activities since placing funds in

liquid assets was less attractive due to government's reduced borrowing which consequently caused interest on government securities to fall.

Liquid funds to total assets ratio

The proportion of ADB's liquid funds to total assets has not remained stable during the period under review. The bank in 2008 held 24% of its assets in liquid funds which was the lowest since 2006. The highest of liquid funds to total assets ratio 48% was recorded in 2006.

Liquid funds to interest bearing liabilities

With respect to liquidity as proportion of interest bearing liabilities, the picture is not too different from that of liquid funds to total assets ratio. ADB continued to trail behind industrial of 67% with a ratio of 39% in 2010 (appendix table 5 refers). The bank ranked 24th among 26 banks according to the Ghana Banking Survey (2011) was improved in this ranking in 2012 to the 18th position. An average 46.55% has been recorded for the past seven years. Although the interest bearing liabilities has some time spans attached to them, a ratio far below the industry average indicates some liquidity issues.

Assets quality

Asset quality remains one of the very key performance indicators of bank assessment. Loans and advances provide a high percentage of bank's earnings and therefore it quality is important to the profitability and survival of the bank. The quality of assets is measured by the provision ratio, non-performing loans ratio (NPL) and the charge for bad and doubtful debts to net loans and advances.

Loan loss provisions to total loans ratio

Loan loss provision affects profitability. The lower the ratio the better the quality of assets held by the bank. The highest provision for loans and advances of 19.2% was recorded in 2006 whilst he lowest of 2.42% was recorded in 2011. The drastic reduction from 14.7% in 2009 to 4.07% in 2010 could be attributed to the total loans and advances of GH¢64,482,546 written off and prudent management of loan portfolio. The total write off as a proportion of the loan portfolio was 10.7%.

Impairment charge to total loans ratio

Impairment expense is always charged to the profit and loans account. Impairment expense is an estimated total loans that have low probability of recoverability. Impairment charge improved from 3.64% in 2009 to 1.11% (see appendix table 5) due to action taken by management to strengthening credit administration. The figure 3.21% recorded in 2012, however it's above the industry average of 2.3%. The bank's assets deteriorated again in 2012.

Non-performing loans ratio

This ratio looks at the proportion of net loans and advances that are not performing. The bank recorded a non-performing asset ratio of 5.3% (appendix table 5 refers) in 2010 and 11.3% in 2012. The figure recorded in 2012 is higher than the Bank of Ghana acceptable standard of 10%. The financial statements from 2006 to 2009 failed to report non-performing loans. A high non-performing asset reduces asset quality and consequently affects profitability.

Risk measurement

Risk index and probability of book insolvency

The risk index measures equity capital and average level of return available to shore-up loss relative to volatility of returns. The risk index has the advantage of combining in a single measure of profitability, leverage, and return volatility. The higher the risk index the lower the probability of failure. It is mathematically calculated as;

Risk Index (RI) = $\frac{(\overline{RoA}+EM^{-1})}{\sigma_{RoA}}$ as used in Stan (2009),

Where; $\overline{RoA}$ is the average return on assets

EM^{-1} is the equity multiplier

σ_{RoA} is the standard deviation of return on assets.

Probability of book insolvency = $1/[2(RI)^2]$

The risk index has been used by Kamal (2009), Stan (2009), Beck and Laeven (2006). ADB generated a risk index of 28 in 2012 down from a figure of 32. The average risk index recorded over the seven year period stood at 32. Although its probability of book value insolvency declined in 2012, it registered a figure of 0.064%. This means the bank's probability of book insolvency is low.

Capital Adequacy

Capital adequacy measures of the amount of a bank's capital expressed as a percentage of its risk weighted credit exposures. The capital adequacy ratio (CAR) determines the robustness of a bank to withstand shocks to its balance sheet. It is a standard measure used by banks and central banks to ensure that banks absorb reasonable level of losses before becoming insolvent.

The CAR has witnessed some fluctuations over the past five years. The ratio in 2010 fell from 22.43% to 19.56% but compares with the industry average of 19.10%. The bank recorded an average of 13.67% during the period under review which is above internationally accepted limit of 10%.

Altman z-score

According to Bemmann (2005), the Altman Z-Score is the most widely known financial model for predicting financial distress. This score which combined a set of 5 financial ratios uses statistical techniques to predict a company's probability of failure. Altman's prediction of bankruptcy equation for non-manufacturing firms is expressed as;

$$Z = 16.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$$

Where:

X_1 = working capital divided by total assets

X_2 = retained earnings divided by total assets

X_3 = EBIT divided by total assets

X_4 = market values of total equity divided by total liabilities.

The following discrimination zones are also given;

Z > 2.6 -"Safe" Zone

1.1 < Z < 2. 6 -"Grey" Zone

Z < 1.1 -"Distress" Zone

The z-scores generated for the bank from 2006-2010 depicted a decreasing trend where it moved from 1.83 in 2007 to 1.23 in 2010. In 2011 and 2012, the bank recorded 1.03 negative and 0.69 negative respectively which indicated that the bank was distressed.

Investor ratios

There are certain ratios which are of particular interest to those who would want to commit resources into the business. The bank is therefore assessed in the light of these ratios.

Dividend cover

Since dividends are paid out of profit, this ratio relates profit to dividends to determine the ability of the bank to pay the proposed dividends. The bank has an average of 5.95 times dividend cover for the past five year which is quite good. The highest dividend cove of 9 times was recorded in 2007 while lowest of 3 times was realised in 2006 and 2010 (appendix table 6 refers). The fall of dividend cover from 6 times in 2009 to 3 times in 2010 was due to dramatic increase in the total dividend paid. However in 2011 and 2012 no dividend was declared primarily due to the distressed nature of its financial position.

Earnings per share (EPS)

It is the amount of profit in cents attributable to ordinary shareholders. It is a widely used measure of corporate performance. It is calculated as;

Profit after tax

Number of ordinary shares in issue.

The earnings per share witnessed a consistent decline since 2006 until 2010 where it rebounded but declined in 2012. In 2012 for every GH¢1 invested, GH¢1.29 (appendix table 6 refers) returns on investment. The minimum earnings per share 50Gp was realised in 2006 while an average of GH¢1.53 was registered for the period covering 2006 to 2012. Shareholders are getting a return on their investment at least over 50% returns on investment.

Price earnings ratio

It is a basic measure which expresses the amount that shareholders are prepared to pay for the share as a multiple of current earnings. A high price earnings ratio is an indicator that investors perceive the business's earnings to be of high quality. It is expressed as share price divided by EPS.

The price earnings ratio dipped from 3.95 times in 2009 to 1.51 times in 2010 representing 61%. The decline is attributable to increase in earnings per share which did not correspond with share price growth. An average of 3.08 times was recorded for the period being reviewed.

CONCLUSION AND RECOMMENDATION

Conclusion

The analysis so far have been related to the financial performance of the bank without looking other non-financial indicators such as loan coverage, productivity, service quality and management quality. The bank's performance has been evaluated based on profitability, efficiency, liquidity, asset quality, risk measures and investor assessment. These are areas that the analysis focused on since it is of particular interest to shareholders and prospective shareholders, employees, management and the Central Bank.

Interest income has grown consistently but the growth in 2010 of 75% was highly significant. This was so since the macro economic conditions made it less favourable to invest in government securities. Government reduced its demand for credit in 2010 which

forced interest on government securities to fall sharply. The focus on core activities of lending resulted also in a 143% percent growth in operating income of the bank since interest comprises over 65% of operating income, a significant increase in interest income will reflect in operating income of the bank.

Loans and advances grew at an average rate of 25% while deposits grew at an average of 23% during the past seven years. Advances have outpaced deposits in terms of growth which has accounted for the lower liquidity. The bank's liquidity position deteriorated between 2008 and 2010 when loans to deposit ratio exceeded 100% which led to serious liquidity problems limiting the bank's ability to lend in 2011 causing interest income to fall by 17%.

Equity and total assets have also experienced growth throughout the period under review growing at an average of 17% and 20% respectively. Loans and advances accounted for the largest of the growth in assets. Credit risk reserve and statutory reserves accounted for a larger percentage in terms of growth in equity.

Staff cost continues to occupy important position on the banks expenses sheet. It formed 63% of the total operating expenses of the bank 2010 but has witnessed a decline to the current 50% in 2012 due to stabilisation of the salaries and emoluments after the restructuring. Other important items on the expenses sheet include administrative and general expenses, occupancy cost and motor vehicle expenses. All other costs accounted for 20% of the cost structure in 2012 which hitherto had only formed less than 1%. Despite the outsourcing of the transport unit in 2009, motor and vehicles doubled in 2010.

A sectorial analysis of loans and advances depicts that the agricultural sector continues to occupy important position on the bank's balance sheet. The bank is delivering on its mandate while trying to balance profitability with risk which is spread across other sectors of the economy. However, services took the topmost position in terms of this compositional analysis in 2012 with 38%. The riskiness of agriculture financing continuous to pose challenge to the bank and the declining position of agriculture in the bank's portfolio is a real worry to the sector.

The bank fared well in almost all the profitability metrics applied in the analysis. This is consistent with Flamini et al (2009) who asserted that banks' profitability is high in sub-Saharan Africa. The bank's liquidity position however has been tight since 2009 but eased a bit in 2012. The cash ratio declined in 2010 by 2.5% with a figure of 17.40% while dipping further in 2011 by 43%. The loans to deposit ratio worsened between 2008 and 2010 when the bank loan out over 100% of all deposits received which destabilizes is liquidity position given credence to the Ghana Banking Survey (2011) for citing it as one of the most illiquid banks in the country. The bank was aggressive in terms of lending and appeared to have higher risk appetite compared to peers in the industry. The research also confirms the inverse relationship that exists between profitability and liquidity and the assertion that a balancing act is needed seems to be far-fetched as in Michalski (2008).

The quality of the bank's asset witnessed dramatic improvement in 2010 since the bank's position with regards to the specific ratios was positive. The loss provision to total loans ratio witnessed a dramatic 261% decline in 2010 from a figure of 14.7% in 2009 to 4.07% as a result of the write off of 10% of total loans portfolio in 2010 due to impairment

(loss). No write off of loans have been since 2006 and therefore a whopping GH¢64,000,000.00 was write off in 2010, a figure which is equal to the minimum capital requirements for commercial bank license. The loss provision to total loans increased by 97% in 2012 resulting from poor asset quality.

The results of models on riskiness were missed. Although the probability of book insolvency was insignificant, the deterioration is a warning signal. The risk index for 2012 declined by 12.5% while the probability of book insolvency also declined 6.25%. This shows that the bank is resilience in terms of variability and volatility in earnings is declining. The bank's capital adequacy ratio for 2012 is 10.98 which is only 9.8% above the acceptable limit but the ratio has fluctuated during the last seven years. Altman z-score has deteriorated since 2009 and further showing a downward trend pointing a position of distress in its financial position. The Altman z-score was less than the 1.1 minimum threshold for grey zone classification and therefore have been in the distressed zone since 2011. The distressed is attributable to aggressive lending in 2009 and 2010 which led to the deterioration of the bank's liquidity position in 2010.

The investor ratios were all positive and show some level of improvement in 2010. The dividend cover had an average of 5.95 times although it reduced from 6 times to 3 times in 2010. The figure sharply decline is as a result of the fluctuations in the pay-out ratio. The bank distributed 30% of its profits as dividends for the year 2010 which is one of the highest since 2006. The bank has not adopted a fixed pay-out ratio and seems to follow Miller and Modigliani's dividend irrelevant theory which postulates that equity holders are indifferent to dividend pay-out. However in practice investors do have concerns with the dividend pay-out. A decline in pay-out could bring about what is termed as signalling effect where shareholders begin to sense financial difficulties facing the bank. An increase in the pay-out ratio sends signals to shareholders that the bank is generating enough and therefore is profitable. No dividend was declared in 2011 and 2012 which could be attributed to the difficult position in terms of cash flow resulting from poor liquidity position.

The bank's earnings per share have been positive although it did experience some fluctuations between 2006 and 2010. EPS improved in 2010 with a return of 132% by declined by 33% in 2012. Shareholders are getting better returns for their investment.

The bank did not report on fraud since it might not be a requirement in terms of reportage. This is vital information to assess risk since according to Abiola (2009) fraud leads to significant loss of money to both the bank and the customer. Banks refusal to publish or disclose fraud cases in the financial statements or annual reports gives credence to Hyytinen and Takalo, (2002 and 2003) assertion that the banks have become like 'black boxes'.

The bank ranked 6th in terms of its share of industry operating assets with 5.3% in 2012 (Ghana Banking Survey, 2013) this lagged behind its 2009 ranking of 5th position. The bank however improved from a position of 9th to in 2009 to 7th in 2012 in terms of share of industry's deposits by recording 4.7% of this share. The bank lost its position of 2nd in 2010 and 2011 in terms of share of industry's advances to 6th position in 2012 with 6.4% of this total industry deposits. Client has not fared well in terms of the topmost indicators and therefore failed to achieve its vision of being among the top 3 banks in Ghana by

2012. The bank lagged behind its peers in other key indicators in terms of liquidity, efficiency and capital adequacy which supports the assertion of Harvey (1993) that many of state-owned banks in Africa are often poorly managed and not efficient.

However, the bank's performance in 2010 was quite good and coupled with the rebranding of exercise might have led to the CIMG Bank of the year award in 2011 and for its citing in The Africa Report magazine's ranking of Africa's Top-200 Banks in 2010 despite it being cited as among the most illiquid banks according to the Ghana Banking Survey (2011)

Although an attempt have been made to assess the bank's financial performance from different angles, this paper cannot be conclusive on the performance of Agricultural Development Bank. This paper gives a simple picture of the bank's financial performance and leaves allowance for further study in different aspects of the functions of the bank such as productivity analysis, branch performance analysis, service quality and human resources performance analysis. Other models such as Data Envelope Analysis (DEA) as in Gregorian and Manole (2002), robust estimation approach as in Katib (2005), Parametric and non-Parametric as in Pastor et al (2003) could be employed to further analyse the bank's performance.

RECOMMENDATIONS

From the above analysis it is recommended that the bank continues to focus on its core lending activities without sacrificing liquidity. The liquidity position slipped in 2010 due to aggressive lending although there seem to be some easing in 2012. The bank should continue to adopt best practice in terms of its approach to credit risk management. The situation where is financial statement was qualified in 2012 was unacceptable for having exceeded its single obligor limit. The deterioration in asset quality could be due to clear disregard for best credit practices.

Total deposits should be improved by adopting pragmatic steps to revitalise the deposit mobilisation drive. Since the interest rate spread is above the industry average, the bank could increase its interest on deposits for instance and pay a little more on fixed deposits between six months and one year so as to attract deposits to improve its liquidity. Service charges should reviewed to attract deposits since the current situation where the more an account is active in terms of turnovers, the more it pays on service charges is disincentive to deposit mobilisation drive when others in the industry are adopting a fixed commission on turnover charges or zero charges in some cases. The bank could leverage on the deposits by lending it out and get returns in the form of fees and interests.

Better information technology platform could give the bank operational leverage and thus improve its operational efficiency which will have a trickledown effect on profitability. A better information technology platform could boost its competitive strategies by providing better and timely services.

The credit risk department should continue to receive empowerment to prudently manage credit administration to further improve asset quality. The bank's recovery drive must be given the needed impetus to reduce impairment charges so as to increase profits. A considerable improvement in recoveries would add to both liquidity and profitability.

Speedy credit delivery is also key in recoveries since many facilities are time bound and therefore not conforming to these timelines defined by client's could lead to under-recoveries. Management should take a second look at its dividend policy since it is very important as it intends to list on the stock exchange in 2013. A fluctuation in the dividend pay-out ratio could send different signals to investors at different times. Therefore a policy where the dividend pay-out ratio is maintained at a constant percentage is recommended.

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