

A Risk-Based Assessment of Ecobank Ghana Limited

Ransford Quarmyne Churchill

Department of Accountancy, Accra Polytechnic, P.O. Box GP 561, Accra, Ghana.

E-mail: ransfordchurchill@yahoo.co.uk.

Abstract

The global financial crises over the past three years should make everyone concerned about recent significant levels of bad debts on the books of banks in the Ghanaian financial sector. It calls for thorough assessments of the structure and components of the risk management frameworks and practices of banks by regulators, analysts and financial watchers from time to time, to ascertain the adequacy of the systems, policies and procedures for managing risks as well as their conformity to current best practices. As a contribution to this exercise, this study is focused on Ecobank Ghana Limited (EGH) with the aim of evaluating the bank's risk profile as well as assessing its risk management framework to ascertain its soundness and conformity to international best practices. Both the computational based and analytical based approaches were adopted in assessing the risk condition of EGH. By applying analytical tools such as ratios and tables to the bank's 2012 financial statements, and those of years 2010 and 2011 serving as references for comparison. Trends and relationships in the financial statements and other financial data were also established. This helped in making well-reasoned analysis of the bank's capital adequacy, balance sheet structure and composition, profitability and reliability of earnings, credit exposure size and quality, liquidity, interest rate and currency risks situations. A review of the EGH's risk management structure and policies, vis-à-vis recommendations by the Basel Committee on Banking Supervision, helped in establishing the soundness or otherwise of the bank's risk management practices. The study revealed that EGH's has a good risk profile in the face of challenging global economic and business environment.

Keywords: Risk, Ecobank Ghana Limited, Basel Committee, Volatile Liabilities, Interest Rate

1. Introduction

Developments in the global financial sector within the past decade have given stakeholders in the Ghanaian banking industry cause to not only consider the returns made in the sector but also critically examine frameworks used to manage risks in the sector and safeguard their interests. This is because the failures faced by the industry in recent times have been blamed largely on the weaknesses of the regulatory frameworks and the risk management practices of the financial institutions. The greatest impact of the crisis has been on the banking industry, where some banks which were hitherto performing well suddenly announced large losses with some of them going burst. Some reasons put forward for the failures in risk management in this regard include the limited role of risk management in the granting of loans in most banks as they are unable to influence business decisions and the fact that their considerations are subordinate to profitability interests and lack of capacity to adequately make timely and accurate forecasts. This has resulted in the flouting of basic risk management rules such as avoiding strong concentrations of assets and minimising the volatility of returns.

The impact of the global financial crisis on the banking sector in Ghana has been quite minimal such that it did not threaten the survival of banks in the sector. This is largely because the sector has little exposure to complex financial instruments and relies mainly on low-cost domestic deposits and liquidity. However, the deterioration of asset quality (impairment charge / gross loans and advances) of the banks in Ghana, from about 1.5% to 4.2%, in the past three years due to significant balances of bad and doubtful debts on their books is an indication that all is not well with the sector. Various reasons have been put forward by analysts as accounting for the deterioration in the quality of bank's loans and advances. These include increased cost of funds, inflation, depreciation of the Cedi and the delay by government in paying contractors and other service providers. Unlike the case in developed countries, questions have not been raised about weakness or otherwise of the risk management practices of the Ghanaian banks which have resulted in significant financial losses, although there have been a few reported cases of fraud, theft and other operational occurrences.

The general believe is that banks in Ghana have good risk management structures since there have not been any complaints or adverse findings against them by the regulators, that is, Bank of Ghana and Securities and Exchange Commission of Ghana (in the case of listed banks) concerning significant weaknesses in their risk management systems. The banks are believed to be generally compliant with major regulatory requirements which are basically in line with international standards set by the Basel Committee on Banking Supervision. These requirements include rigorous risk and capital management requirements designed to ensure that the banks hold capital reserves appropriate to the risk they expose themselves to through its lending and investment practices. However, in order to ascertain the resilience of the Ghanaian banking sector to withstand serious economic shocks, there would be the need for thorough assessments of the structure and components of the risk management frameworks and practices of the banks from time to time. This study was therefore a contribution to this exercise with a focus on Ecobank Ghana Limited (EGH).

2. Literature Review

2.1 Risk Management in Banking

Risk management is described as the performance of activities designed to minimize the negative impact (cost) of uncertainty (risk) regarding possible losses (Schmidt and Roth, 1990). Redja (1998) also defines risk management as a systematic process for the identification and evaluation of pure loss exposure faced by an organisation or an individual, and for the selection and implementation of the most appropriate techniques for treating such exposure. The process involves: identification, measurement, and management of the risk. Bessis (2010) also adds that in addition to it being a process, risk management also involves a set of tool and models for measuring and controlling risk.

The objectives of risk management include to: minimize foreign exchange losses, reduce the volatility of cash flows, protect earnings fluctuations, increase profitability, and ensure survival of the firm (Fatemi and Glaum, 2000). According to Pyle (1997), risk management is the process by which managers satisfy these needs by identifying key risks, obtaining consistent, understandable, operational risk measures, choosing which risks to reduce, which to increase and by what means, and establishing procedures to monitor resulting risk positions. Bessis (2010) indicates that the goal of risk management is to measure risks in order to monitor and control them, and also enable it to serve other important functions in a bank in addition to its direct financial function. These include assisting in the implementation of the bank's ultimate strategy by providing it with a better view of the future and therefore defining appropriate business policy and assisting in developing competitive advantages through the calculation of appropriate pricing and the formulation of other differentiation strategies based on customers' risk profiles.

According to Santomero (1995), the management of the banking firm relies on a sequence of steps to implement a risk management system. These normally contain four parts which are standards and reports, position limits or rules, investment guidelines or strategies, incentive contracts and compensation. These tools are generally established to measure exposure, define procedures to manage these exposures, limit individual positions to acceptable levels, and encourage decision makers to manage risk in a manner that is consistent with the firm's goals and objectives.

2.1 Rationales for Risk Management in Banking

The main aim of management of banks is to maximise expected profits taking into account its variability/volatility (risk). This calls for an active management of the volatility (risk) in order to get the desired results. Risk management is therefore an attempt to reduce the volatility of profit which has the potential of lowering the value of shareholders' wealth. Various authors including Stulz (1984), Smith et al (1990) and Froot et al (1993) have offered reasons why managers should concern themselves with the active management of risks in their organisations.

According to Oldfield and Santomero (1995), recent review of the literature presents four main rationales for risk management. These include managers' self-interest of protecting their position and wealth in the firm. It is argued that due to their limited ability to diversify their investments in their own firms, they are risk averse and prefer stability of the firm's earnings to volatility because, all things being equal, such stability improves their own utility. Beyond managerial motives, the desire to ensure the shouldering of lower tax burden is another rationale for managers to seek for reduced volatility of profits through risk management.

2.2 Categories of Risk Management

As Merton (1989) noted, a key feature of the franchise of financial institutions (including banks) is the bundling and unbundling of risks. However, not all risks inherent in their business should be borne directly by them; some can be traded or transferred while others can be eliminated altogether. It is therefore useful to defragment the risks inherent in their activities and assets into three distinctive subgroups in accordance with their nature so that the appropriate strategies can be adapted to mitigate them. Oldfield and Santomero (1995) argue therefore that risk facing financial institutions can be segmented into three separable categories from a management perspective. These are risks that can be eliminated or avoided by simple business practices, risks that can be transferred to other participants, and risk that must be actively managed at the firm level.

2.3 Key Bank Risks

The risks associated with the provision of banking services differ by the type of service rendered. Different authors have grouped these risks in various ways to develop the frameworks for their analyses but the common ones which are considered in this study are credit risk, market risks (which includes liquidity risk, interest rate risk and foreign exchange risk), operational risks which sometimes include legal risk, and more recently, strategic risk.

3. Methodology

3.1 Data Source

The study relied mainly on secondary data. This was obtained from the annual reports and other reports issued

by the bank and other organisations. Some of these external secondary data comes from the regulators, industry watchers and other financial analysts. The bank's policy documentations and guidelines concerning the management of the various risks are also a major source of information for determining whether the bank's structures and risk management tools are adequate in handling inherent risk in their business activities.

3.2 Benchmarks

The major benchmarks used for this assessment are the various documents released by the Risk Management Group of the Basel Committee on Banking Supervision regarding principles which ensure sound management of risks in banks. This helped in evaluating the adequacy of the EGH's risk management framework as the essential components of the recommended guidelines were mirrored to those in the banks policies in respect of its structures, processes, procedures and tools put in place to manage risks. According to the main regulators of the banks in Ghana (Bank of Ghana), the Basel principles for ensuring sound management of risks have been incorporated in Ghana's Banking Act, Act 673 and should therefore be adhered to by all banks operating in Ghana. To assist in assessing the performance of EGH vis-à-vis that of the Ghanaian banking industry, the Financial stability reports issued by the Bank of Ghana on periodic bases were relied upon for industry data. Also, the 2010 Ghana Banking Survey report issued by PricewaterhouseCoopers Ghana in collaboration with Ghana Association of Bankers provided some peer ratios and industry averages and served as useful benchmarks for assessing the risk profile of Ecobank Ghana.

3.3 Analytical Tools

The analysis in this report relied heavily on excel models. These consisted of a series of spreadsheet-based data input tables that allowed data to be collected and manipulated in a systematic manner. The spreadsheet allowed for the generation of relevant tables, ratios and graphs which assisted in the interpretation and analysis of the data collected to help measure the bank's performance as well as judge the effectiveness of its risk management process.

3.3.1 Ratios

The ratios covered the areas of risk management in varying degrees of detail using the balance sheet, income statement and cash flow schedules. Some of the areas of risk where ratios helped in expressing useful relationships include profitability, liquidity, debt and leverage and capital adequacy. Ratios, however, do not provide a complete picture of a bank's performance and should be considered in conjunction with other qualitative information and contextually.

3.4 Analytical Techniques

These refer to the ways in which the data is interpreted. Some of the common analytical techniques used in this report include ratio analysis, common-size analysis, and trend analysis.

3.5 Analytical Components

The analysis of the EGH's risk profile was based two types of financial risks it is exposed to, which are: Balance sheet structure and Income statement structure risks. These risks are inter related as one can give rise to another or a transaction aimed at reducing one of the risks can end up shifting the risk to another area. In this regard, the analysis took cognizance of this interrelationship and adopted a holistic approach.

4. Results and Discussion

4.1 Assets

It is important to evaluate the composition and structure of a bank's assets risk to ascertain any inherent risks in them. The table depicts an expansion in Ecobank Ghana's balance sheet by 50.94% over the year to GH¢1,388,193. This was an improvement of the previous year's growth of about 38%. This expansion was mainly due to the increase in the amount of government securities held as well as the operating accounts balances and placement with other banks. Meanwhile, the growth in the expansion of the Ghana banking industry's balance sheet was relatively slower as the 31.3% growth it experienced in 2012 fell behind the 37.2% growth it recorded in 2011. Analysts believe that this was largely underpinned by a reduction in the growth rates of total loans and fixed assets. As at December 2012, -Held-to maturity investments| constituted the largest portion of the bank's assets with about 51%. This was in contrast with the case in 2010 and 2011 where the bank adopted more aggressive strategies and grew its loans and receivables to total assets ratios to 43.2 % and 43.7% of respectively making it the biggest contributor to the bank's asset size. The general industry trend also reflected a similar situation where banks' investments in bills and securities in 2009 grew by 93% compared to the 13% growth in 2011, bringing their stake in total assets to 21% from 15% in 2011.

Consequently, the proportion of the industry's net loans and advances in total assets also declined from 52% in 2008 to 44% in 2012. The shift in the allocation of resources from credit purposes to investments was because the slowdown of the country's macro-economic condition resulted in deterioration of the bank's loan books. Meanwhile, returns on short term instruments became attractive and for that matter captured the bigger chunk of the bank's funds. This shift in growth and composition in assets resulted in the reduction in risk inherent in the

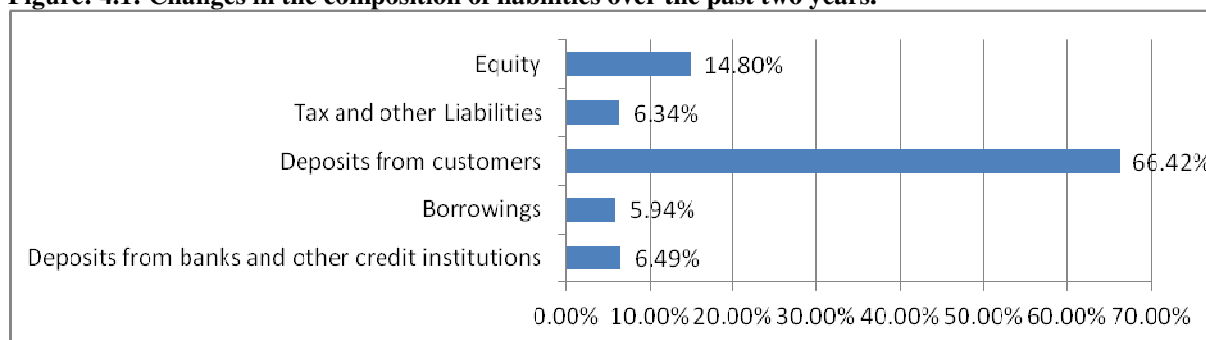
bank's assets. A decrease in the proportion of loans and receivable reduces the level of credit risks in the bank's assets. Held-to-maturity investments are safer than loans and receivables since the probability of default and variations in interest rates are lower. Therefore shifting concentration from loans and receivables to customers, to investments in more government securities and loans and advances to banks result in lower credit and market risks while maintaining adequate liquidity cover for the bank. It appears therefore that the bank was more cautious in its growth approach in 2012 and this is reflected in the asset-liability and risk management decisions.

4.2 Liabilities

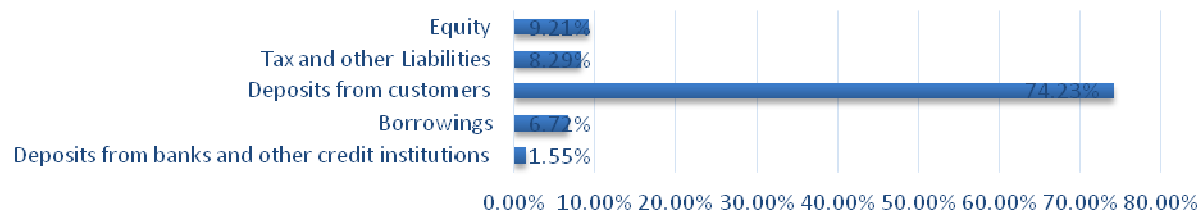
Total deposits of the bank accelerated in its growth by about 45% in 2012 compared to the 40% growth recorded in 2011. This was in contrast with the industry trend which saw an aggregate slowdown in the growth of total deposits. The total deposits of the industry grew by some 29.1% which fell short of the growth of 41.4% recorded in year 2011. It, however, maintained its position as the main source of funding constituting 73% and 63% of both EGH's and the industry's funding base respectively. Deposits from banks and other credit institutions saw the highest growth rate of about 532% by year end 2012 even though it contributed only about 6.5% to total liabilities and equity. Such funds are regarded as volatile and prone to funding risks and therefore an increase in its volume and value over the past year signified an increase in inherent funding risk but their relatively low proportion in the bank's funding base kept the risk under control. The bank's largest contribution to funding still came from deposits to customers with 66.4% even though the percentage contribution fell below the 74% recorded in the previous year. As reported in the 2012 annual report, the bank's twenty largest depositors constitute 20% of the total deposits at the year end. This is lower than the 29% figure that the twenty largest depositors contributed the previous year indicating that the bank is taking steps to reduce the reliance on large corporate deposits which are less stable and expensive to effectively manage their concentration risk. The reduction in the reliance on large corporate depositors and shifting to more retail and standard deposits reduces uncertainty and liquidity risk associated with the deposits as well as cost of deposits which involves active management and attracts higher rates of interest.

A trend analysis of the balance sheet items confirmed a 33.5% increase in the borrowings of the bank in year 2012. The banking industry in Ghana also registered a general growth of 37.6% in total borrowings at the end of year 2012 compared with 29.5% growth in 2011. The ratio of borrowings to total liabilities for EGH lagged behind that of the industry with EGH recording 6% while the industry increasing in its proportion to 13.3% from 12.7%. This general industry trend of a decline in the dominance of total deposits coupled with the share of borrowings gradually gaining prominence increases the likelihood of an increase in cost of intermediation. With respect to EGH, the foreign currency denomination of such borrowing exposes the bank to foreign currency risk even though it provides an indication of international confidence in the bank. It appears from the liquidity gap analysis as presented in the 2012 Annual Report of the bank that the bank is funding quite a substantial amount of its long term loans with short term deposits which creates maturity mismatch and liquidity concerns. There is also indication of currency mismatch due to the fact that deposits and borrowing in the various currencies traded in by the bank are not adequate to fund the lending in those currencies. The value of interest rate sensitive financial assets which matures within one to five years falls short significantly of the value of interest rate sensitive financial liabilities giving rise to significant interest rate risk.

Figure: 4.1: Changes in the composition of liabilities over the past two years.



Composition of Liabilities, 2011



Source: Own construction with data from comparative common-size analysis of balance sheet of the years 2011 and 2012

4.3 Equity and Capital Adequacy

Capital Adequacy and off-balance sheet	EGH		INDUSTRY			GROWTH			
	2010	2011	2010	2010	2011	2012	EGH		INDUSTRY
	%	%	%	%	%	%	2010	2011	2012
Core Capital Adequacy(CAR-Tier 1)	13.1	12.57	16.82	15.7	12.8	17	-4.1	33.83	32.81
CAR	18.06	16.48	22.62	13.6	13.8	18.2	-8.75	37.26	31.88
Off-balance sheet items as % of Total Assets	9.76	14.49	16.79	18.67	16.37	10.53	48.44	15.92	-35.69
Risk-Weighted assets/Total Assets	71.96	71.93	81.34	73.2	70.1	69.8	-0.04	13.08	-10.63

Source: 2011 & 2012 annual reports of EGH & February 2012 Financial Stability Report of Bank of Ghana

Shareholders' funds increased tremendously at a rate of 142% in 2012 compared to the 31% growth recorded in the previous year. This increased its share in the bank's funding base in the year under review to 14.8% from about 9% in the previous year. The bank took steps to boost its capital significantly through a rights issue in its attempt to meet the new capital requirements of GHS60 million set by the Central Bank of Ghana's for commercial banks operating in the country. Consequently, the bank has been able to maintain a good balance between regulatory capital requirements and its total assets and risk-weighted assets. EGH's regulatory capital adequacy ratio (CAR) increased by about 37% to 22.6% in year 2012. This was significantly higher than the industry average capital adequacy ratio of 18.2%. A 34% growth in the bank's core capital adequacy ratio (tier 1) in year 2012 contributed hugely to its growth in regulatory CAR.

Table 4.1 also indicates that the ratios of off-balance sheet items and risk-weighted assets to total assets of the bank increased marginally while those of the industry declined. This means that the bank needed more capital than its peers to cover for contingent liabilities and increasing levels of risk-weighted assets on its books. Though the increase in the level of contingent liabilities presented the bank with additional financial risk, the corresponding trade fees appeared to provide adequate compensation for it. Greater attention should however be given to these items and adequate risk management system should be put in place for such exposures to ensure they do not get out of hand.

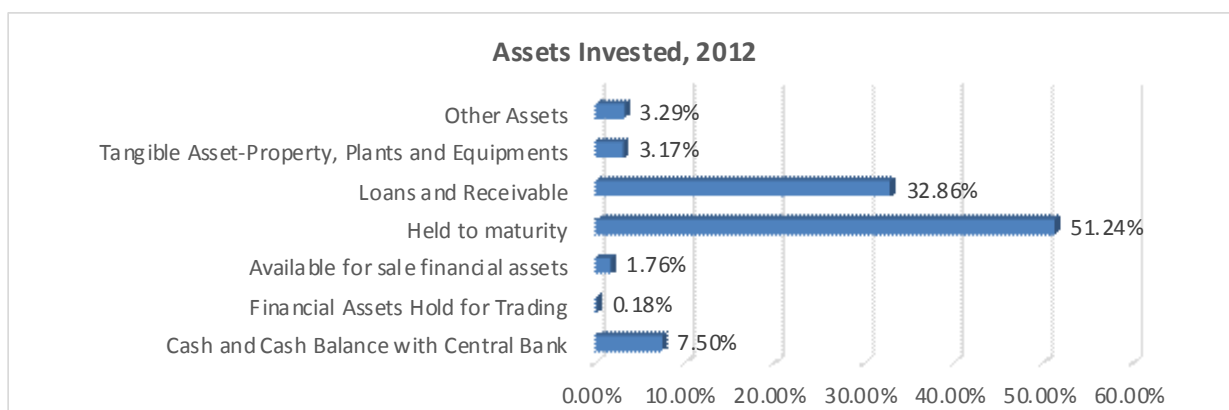
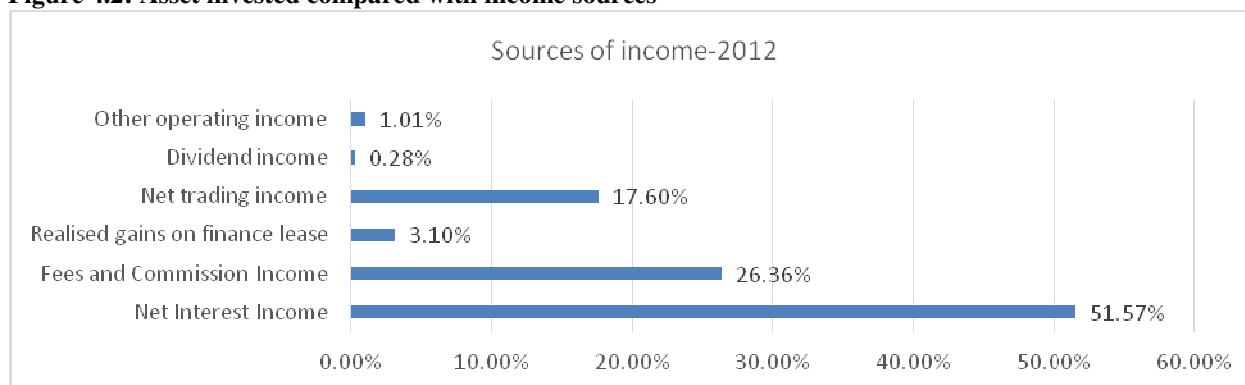
4.4 Income Statement Risks

Ecobank Ghana Limited is still enjoying high levels of profitability in 2012, recording a growth of about 44% from the previous year's profit. Even though there was a slowdown in the growth of its after tax profit in 2012, EGH still towered above its peers about 6 times in its earnings growth as average industry growth rate for the same period was about 7%. The consistency in the bank's profitability growth enabled it to maintain a stable risk profile as well as providing a cushion against short term problems. Profit margin (post tax) increased marginally from 31% in 2011 to about 34% in 2009%. This performance was still about 4.5 times above the industry average of 7.5% which experienced a significant fall from the previous year's figure of 28.5% as a result of the general decline in loan asset quality of banks in Ghana. Return on Assets (ROA) remained stable over the past three years while Return on Equity (ROE) saw a decline in the year under review from about 40% in 2008 to 26% in 2012. The marked decline in ROE was primarily as a result of the sharp increase in the bank's equity through a rights issue undertaken at the later part of the year. It is instructive to know that in the case of both after tax ROA and ROE, EGH surpassed the performance of its peers with the average industry figures about 1.7% and 13.8% respectively in 2012.

About 51% of the bank's total income was obtained from interest on loans and advances in 2012. This performance fell below the average industry contribution of 58.7%¹⁵ but was an improvement of the 2011 figure of 43%. Getting its main source of income from returns on loans and advances ensured the stability of the bank's earnings. Fees and commission incomes as well as trading income saw marginal increases in their contributions

to total earnings from about 18% to 26%. This was good for the bank given that there is no provision on non-funded income as opposed to interest on loans and advances which can be provided for if those assets are impaired in future. Stiff competition in the Ghanaian banking industry coupled with the drop in interest rates due to the reduction of the prime rate by the Central Bank of Ghana, put pressure on interest income. This situation compelled the bank to look at increasing its non-traditional businesses like international trade finance and trading operations as viable options to maintain its profitability. Emphasis on fee-generating income reduces the bank's exposure to lending risk which is inherent in increasing interest margins in a stable market environment as that of Ghana. There are however higher levels of volatility surrounding these sources of earnings because they depend on general economic conditions and trading performances. In addition to them being less stable, these non-traditional sources of earnings are subject to market risk which can be substantial if not closely monitored. It appeared the bank had made some strides in its cost reduction effort as there was a slowdown in the growth in operating expenses resulting in operating expenses as a percentage of gross operating income declining marginally to 49% in the year under review from 53% the previous year. Though a further improvement would be preferred, this performance was quite commendable as it fell below the 55% industry average. EGH has been efficient in the use of its funds as it recorded an impressive increase in its return on loans and advances from 11% in the previous year to 17% in 2012 which was also above the industry average of 14%. The bank however lagged behind the industry performance in the utilization of its capacity in generating interest income with the ratio of interest income to total assets of 5.9% compared to 6.9% for industry. It is also worth noting that while the bank is increasing its loan portfolio, the level of non-performing loans is also increasing. This indicates an increase in credit risk and the bank has responded by beefing up its remedial and collections unit to intensify the recovery of doubtful debts.

Figure 4.2: Asset invested compared with income sources



Source: Own construction with data from comparative common-size analysis of balance sheet of the years 2011 and 2012

Ecobank Ghana's total cost of doing business increased due to significant increases in operating expenses and taxation. The increase in operating expenses over the past year, though at a reducing rate, was mainly due to increases in staff cost as a result of the bank's branch expansion drive. The enactment of the National Stabilisation Levy Act, 2009, brought about the charging of an additional 5% levy on profit before tax and caused an increase in taxation and levy significantly (about 82% of previous year). Since this class of cost cannot be controlled by the bank, it will have to factor it into its expected expenditure and consequently profit target. Operating income adequately covered operating expenses and with the exception of year 2011, interest income

has been enough to meet operating expenses since 2010. This also confirmed the stability of the bank's profitability and shields the bank from funding (liquidity) risk.

5. Conclusion and Recommendation

The impressive financial performance of the Ghanaian banking industry coupled with the absence of any major complaints or adverse finding against banks in Ghana gives the impression that the banks are generally stable. The implications of this belief are that the banks have relatively good risk profiles as well as sound frameworks for managing risks inherent in their business activities. The extent to which this can be verified relies on thorough assessments of the nature and quantum of risks confronting the various banks in the country and an evaluation of their risk management structures and systems. I have no knowledge of any previous work on Ghana banks in this area of study and therefore this study provides an initial contribution to this exercise with a focus on Ecobank Ghana Limited. It provides an empirical indication of the types and levels of risks the bank is exposed to and its capacity to effectively manage them as at the end of the financial year 2012. The evidence from the study suggests that the risk profile of Ecobank Ghana Limited was good based on the following observations:

- i. Though there was a significant expansion of the size of the bank's balance sheet, the resulting structural changes lead to a healthy asset mix balancing liquidity with profitability. The consecutive approach taken by the bank in 2012 saw its investments in government securities constituting the largest portion of its asset mix so as to avoid increasing lending risk. The growth in assets was also backed by stable funding sources from customer demand deposits and adequate capital base which saw a huge increase through additional capitalization by shareholders.
- ii. Expanded credit exposure with significant concentration levels to few large corporate in the service sector of the economy creates some worry for the bank's credit risk. However, the loan quality improved as the level of non-performing loans in the loan portfolio declined with tightened lending processes and increased monitoring and recovery activities. The bank's capacity to absorb credit losses was also improved with adequate collateral cover and allowance made for impairments.
- iii. Finally, the high level of profitability ensured that the bank had enough liquid assets to meet unexpected short term mismatches. With a funding structure dominated by core customer deposits coupled with majority of its cash flow generated from operating activities, the liquidity situation of the bank was health as at the end of financial year 2009.

References

- Allen, F. & Santomero, A.M. (1997), The theory of financial intermediation, *Journal of Banking and Finance*, 21, 1461 - 1485.
- Andersen, K. & Terp, A. (2006), Risk Management, Chapter 2 in Perspectives on Strategic Risk Management, CBS Press, pp. 27-46.
- Basel Committee on Banking Supervision (1999), Principles for the Management of Credit risk, Bank for International Settlements, Basel.
- Basel Committee on Banking Supervision (2001), Principles for the Management and Supervision of Interest Rate Risk, Bank for International Settlements, Basel.
- Basel Committee on Banking Supervision (2003), Sound Practices for the Management and Supervision of Operational Risk, Bank for International Settlements, Basel.
- Basel Committee on Banking Supervision (2003), Trends in risk integration and aggregation, Bank for International Settlements, Basel.
- Basel Committee on Banking Supervision (2006), Corporate Governance for Banking Organizations (Enhancing Corporate Governance for Banking Organizations), Bank for International Settlements, Basel.
- Basel Committee on Banking Supervision (2008), Principles for Sound Liquidity Risk Management and Supervision, Bank for International Settlements, Basel.
- Beasley, M. S. & Frigo, M. (2007), Strategic Risk Management: Creating and Protecting Value, *Strategic Finance*, LXXXVII, 29. May 2007.
- Berger, A. N. & Udell, G. F. (1995), "Relationship Lending and Lines of Credit in Small Firm Finance," *Journal of Business*, University of Chicago Press, vol. 68(3), pages 351-81, July.
- Bessis, J. (2010), Risk Management in Banking, Wiley, Third edition
- DeLoach, J. W. (2000), Mastering Risk to Create Value, Chapter 1 in Enterprise- Wide Risk Management: Strategies for Linking Risk and Opportunity, *Financial Times/Prentice Hall, London*, pp. 3-19.
- Emblemsvåg, J. & Kjølstad, L. E. (2002), "Strategic risk analysis – a field version", *Management Decision*, Vol. 40 Iss: 9, pp.842 – 852
- Fatemi, A. & Glaum, M. (2000), Risk management practices in German firms, *Managerial Finance*, 26, 1–17.

- Froot, K. A., Scharfstein, D. S., & Stein, J. C. (1994), A Framework for Risk Management, *Harvard Business Review*, 76(6), pp. 91-102.
- Gates, S. (2006), Incorporating Strategic Risk into Enterprise Risk Management: A Survey of Current Corporate Practice, *Journal of Applied Corporate Finance*, Vol. 18, No. 4, pp. 81-90.
- Herman, M. L. & Head, G. L. (2003), "Strategic Risk Management: Looking at Both Sides Now", Nonprofit Risk Management Center.
- Greuning, H. V. & Bratanovic, S. B. (2003), Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management, *World Bank Publications*.
- Haupt J. V. & Embersit J. A. (1991), "A method for evaluating interest rate risk in U.S. commercial banks," *Federal Reserve Bulletin*, August Issue, pages 625-637.
- Jorion, P. (1997), Value at Risk, Richard D. Irwin Inc., Burr Ridge, IL.
- Merton, R. C. (1989), The application of the continuous-time theory of finance to financial intermediation and insurance, *Geneva Papers on Risk and Insurance Theory*, 14, 225-261.
- Miller, K. D. (1992), A Framework for Integrated Risk Management in International Business, *Journal of International Business*, pp. 311-331.
- Muelbroek, L. K. (2002), Integrated Risk Management for the Firm: A Senior Manager's Guide, *Harvard Business School*, working paper.
- Oldfield, G. & Santomero A. M. (1995), The Place of Risk Management in Financial Institutions, *Wharton Financial Institutions Center*, University of Pennsylvania, Working Paper 95-05-B.
- Pyle, D. H. (1997) "Bank Risk Management: Theory," Institute of Business and Economic Research, *University of California*, Finance Working Paper No. RPF-272, July 1997.
- Rejda, G. E. (1998), *Principles of risk management and insurance*, USA: Addison Wesley, Sixth Edition, New York, NY.
- Rosenberg, J. V. & Schuermann, T. (2006), "A general approach to integrated risk management with skewed, fat-tailed risks", *Journal of Financial Economics*, Elsevier, vol. 79(3), pages 569-614.
- Sabato, Gabriele (August, 2009), Financial Crisis: Where did Risk Management Fail? *Royal Bank of Scotland, Group Credit Risk*.
- Santomero, A. M. & Trester, J. (1997), "Structuring Deposit Insurance for a United Europe," *European Financial Management*, Blackwell Publishing Ltd, vol. 3(2), pages 135-154.
- Santomero, A.M. (1995) Financial Risk Management: The Whys and How's. *Financial Markets, Institutions and Instruments* 4(5):1-14.
- Santomero, A.M. (1997), Commercial Bank Risk Management: An Analysis of the Process, *Journal of Financial Services Research*.
- Saunders, A. (1997), *Financial Institutions Management: A Modern Perspective*, Richard D. Irwin, Inc., Second Edition, Burr Ridge, IL.
- Schmit, J. T. & Roth K. (1990), "Cost Effectiveness of Risk Management Practices," *Journal of Risk and Insurance*, Vol. 57, No.3 pp. 455-470
- Slywotzky, A. J. & Drzik, J. (2005), Countering the Biggest Risk of All, *Harvard Business Review*, 82, pp. 78-88
- Smith, C., Smithson C. & Wilford, D. (1990), Strategic Risk Management (*Institutional Investor Series in Finance*), Harper and Row, New York.
- Stulz, R. M. (1984), Optimal Hedging Policies, *The Journal of Financial and Quantitative Analysis*, Vol. 19, No. 2. pp. 127-140.
- Torben J. A. (2009), "Effective risk management outcomes: exploring effects of innovation and capital structure", *Journal of Strategy and Management*, Vol. 2 Iss: 4, pp.352 – 379
- Wright, D. M. & Haupt, J. V. (1996), An analysis of commercial bank exposure to interest rate risk, *Federal Reserve Bulletin*, February Issue, 115

This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage:

<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <http://www.iiste.org/journals/> The IISTE editorial team promises to review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Recent conferences: <http://www.iiste.org/conference/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

