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SOME CAUSES OF BANK FAILURE

A Case Study of Ghana Co-operative Bank Ltd.

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Abstract

This thesis explains why banks fail in general, and why Ghana Co-operative Bank Ltd (Co-op) in particular, failed. Many nations have experienced bank failures with very high costs which can lead to systemic risks. The causes of bank failure are numerous, in theory, and include regulation of banking activities such as forbearance; asymmetric information leading to a moral hazard problem and connected lending. Continued study of the various causes of banking instability is needed. The thesis extends that area of study with a case study of an African bank which failed.

Co-op, a Ghanaian bank, is used to test the theories on some causes of bank failure. Before the liquidation, the appropriateness of preparing Co-op's financial statements as a going concern was questioned by its external auditors. The framework used to assess the failure of Co-op is the findings of earlier empirical studies on this topic. Empirical evidence, using Co-op's financial statements is tested against theory. Competitive theories on causes of bank failure are also used in the analysis. Most of the causes of Co-op's failure are found to have been the subject of previous research.

Key-words: systemic risk, regulation, forbearance, asymmetric information, moral hazard, connected lending, going concern.

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LIST OF ABREVIATIONS

B.O.G.: Bank of Ghana
P/(L)BTax: Profit or Loss Before Tax
P/(L)ATax: Profit or Loss After Tax
S/T F.: Short-Term Funds
Tot. C. A.: Total Current Assets
Tot. F.A.: Total Fixed Assets
Inv. in Sub.: Investment in Subsidiaries
Liab. & E.: Liabilities & Equity
O. Cr.: Other Creditors
L/T.: Long-Term
Tot. Liab.: Total Liabilities
Cap.: Capital
Inc. : Income
Tot. Liab. E.: Total Liabilities & Equity
P. Cap.: Primary Capital
Fin. Inst.: Financial Institutions
F. A. (incl. rev. res.): Fixed Assets (including revaluation reserves)
Adj. P.: Adjusted Primary
H. (D/E) Cap. Ins.: Hybrid (Dept/Equity) Capital Instruments
Cn. l.: Connected lending
Bs.: Base
Bal. Sh.: Balance Sheet
Excl.: Excluding
Tr. Bl.: Treasury Bills
M. D. House: Money at Discount House
Inv. Un. Sub. Ass.: Investment in unconsolidated subsidiaries & associates
Inv. in Cap. of O. Banks Fin. Inst.: Investment in the capital of other banks & financial institutions
G. I. Outst.: Guarantees, Indemnities & Outstandings
Exps.: Expenses
Loans: Loans & Overdrafts
Nonint.: Noninterest

PART ONE
PROLOGUE

1. INTRODUCTION

This first chapter provides the background of "Some Causes of Bank Failure: A Case Study of Ghana Co-operative Bank Ltd (Co-op)". The chapter presents the problem, purpose, scope and delimitations of the thesis. An outline of the rest of the thesis then follows in order to facilitate the reading.

1.1 Background

Bank failures are usually followed by unfavorable consequences on stakeholders outside the failed banks themselves. Sometimes the consequences are felt by the non-banking system as a whole. A failure can result in much harm to employment, earnings, financial development and other associated public interests. Smith & Walter (1997: 158). According to Hooks (1994) and Benston & Kaufman (1996, cited by Kaufman, 1996), the failure of a bank has great adverse effect on the economy and so is considered very important.

The number of failing banks has been on the increase as reported around the world. Many important industrial nations have experienced upsetting bank failures such as the following: Herstatt Bank in Germany (Smith & Walter, 1997: 157; Heffernan, 1996: 271), Banco Ambrosiano in Italy (Smith & Walter, 1997: 157; Heffernan, 1996: 272-273)**,** Barings Bank in the United Kingdom (Gray et al., 2001: 23-24; Heffernan, 1996: 282-288)**,** BCCI (Smith & Walter, 1997: 157; Heffernan, 1996: 280-282)**,** Rumasa in Spain (Caprio & Honohan, 1999), Crédit Lyonnais in France (Smith & Walter, 1997: 157; Heffernan, 1996: 387-406; Fitchett, 1996) and Daiwa Bank in Japan (www.lectlaw.com).

The failure of banks and the related costs have also been emphasized by many writers. Kaufman (1996) explains that banking crisis generates losses to stakeholders by disturbing the settlement system, and even has a systemic effect on the entire economy. Caprio & Klingebiel (1999) also present information on 114 episodes of banking crises in 46 countries. Given the focus on a Ghanaian bank, we think that the costs of failures of some African banks (table 1) might be of particular interest. The costs of the failures shown in the table differ from country to country. Different costs are included in total cost

differently by each country. Examples of such costs are those related to corporate restructuring and restructuring/recapitalization of the banking system. The estimated total losses/costs shown in this table exclude the portion incurred by depositors and borrowers from non-performing loans. Additionally, some of the figures exclude costs related to indirect methods used to bail out banks.

Table 1: Representative Cases of Some African Bank Failures
A Study by Caprio & Klingebiel

Country	Scope of crisis	Estimate of total losses/costs
Benin 1988-1990	All three commercial banks collapsed; 80% of banks' loan portfolio was non-performing.	CFA 95 billion, equivalent to 17% of GDP.
Côte d'Ivoire 1988-1991	Four large banks affected, which accounted for 90% of banking system loans; three definitely and one perhaps insolvent. Six Government banks were closed.	Government costs estimated at CFA 677 billion equivalent to 25% of GDP.
Ghana 1982-1989	Seven audited banks (out of 11) insolvent; rural banking sector affected.	Restructuring costs estimated at 6% of GNP.
Guinea 1985	Six banks accounting for 99% of total system deposits deemed insolvent.	Repayment of deposits amounted to 3% of 1986 GDP.
Senegal 1988–1991	In 1988, 50% of banking system loans was non-performing. Six commercial banks and one development bank closed accounting for roughly 20-30% of financial system assets.	U.S.$ 830 million, which is equivalent to 17% of GDP.
Zambia 1995	Meridian Bank became insolvent which accounted for 13% of commercial bank assets.	Rough estimate of U.S.$ 50 million (1,4% of GDP).

As regards Co-op, according to the official liquidator (September 2000), the Ghanaian Government established a special method to ease the distress of depositors and affected employees of Co-op. It cost the Government ø[1] 28 billion and ø 9 billion to respond to the interests of depositors and employees respectively.

[1] ¢: Ghanaian monetary unit, the cedi.

The concern about financial stability has been newsworthy for a long time. (Hooks, 1994). It is obvious that financial instability is an important topic to both developed and emerging market economies (Clement, 2001). The cost burden associated with bank failures is so disturbing that the need for continued study of the causes of banking financial instability, on both the practical and theoretical levels, cannot be over-emphasized.

There are many competing theories explaining the causes of bank failure. One theory attributes the failure to government intervention while another says it is due to some endogenous[2] instability. A study by Kindleberger (1989, cited by Hooks 1994: 37) showed that a bank failure results from rapid expansion of bank credit. Some other causes of bank crisis include legislation, deposit insurance, lack of skills, mismanagement and lack of regulation (Palubinskas & Stough, 1999). Hempel & Simonson (1999) also believe that mismanagement, regulatory and legislative interference cause a bank failure. Chu (1996) adds free banking to the reasons why banks fail.

In this paper we test predictions of some causes of bank failure using information uniquely available in respect of Ghana Co-operative Bank Ltd. (Co-op) that was liquidated in 2000. Co-op was established in 1974 and became a limited liability company in 1992, under the Ghana Companies Code, 1963 (Act 179). Its head office was at Kwame Nkrumah Avenue, Accra, Ghana, West Africa. At the time of its failure and eventual liquidation in January 2000, it had 415 employees and 21 branches. It had a negative net worth of ø 43,7 billion. The mission of Co-op was to provide full commercial banking services and to play a savings mobilization role. Its corporate plan was to attract more institutions to do business with, to ensure maximum customer satisfaction and to become more competitive. The business objectives of Co-op were export financing, business advisory services, support services to co-operative societies and employment for adequate skilled staff (An anonymous source). Co-op persistently encountered difficulties meeting the regulatory requirements of the central bank (www.ghanaweb.com).

[2] Endogenous: Originating or produced from within.

1.2 Problem

Recognizing and describing the research topic is vital in writing a thesis, so enough time should be devoted to it. The research topic should be meaningful and structural and solve questions of what, who, where, why and how. This approach will indicate the correct strategy to apply. For instance, what the research is about gives meaning to the topic. A "who," "what," "where," "why," or "how" question shows a firm structural starting point of the research (Yin, 1994).

As mentioned in the background, people of today, especially bankers, economists, and regulators, to an increasing extent, are much concerned with financial stability. They generally accept that banks are special and that bank runs or failures are costly to the whole economy, and therefore, banking stability is very important (Chu, 1996). Banks are institutions that accept deposits (money people leave in an institution with the understanding that they can get it back at any time or at an agreed-upon future time), and make loans (money lent out to a borrower to be paid back with interest). This action of taking deposits and making loans is called financial intermediation. In addition to these functions, most people and businesses pay their bills with bank checking accounts, placing banks at the center of the payments system. Banks are therefore special because of these functions and also because of the major role banks play as instruments of the government's monetary policy. The research question is *Why do banks fail in general and in particular why did Co-op fail?*

1. 3 Purpose of the Study

As a graduate research work, the case study adds a distinctive knowledge of facts on a body - be it individual, organizational, social, or political. The purpose of this study is to determine whether the causes of the failure of Co-op have already been a subject of well-formulated theories (Yin, 1994).

1.4 Scope and Delimitations

The sample about which the findings and conclusion are to be made from is one of the recent liquidated banks in the banking history in Ghana, West Africa, called Co-op. Co-op was chosen because its failure represents a significant case in assessing the theories on some causes of bank failure. One important contribution of this thesis is the novel data set on Co-op we analyze.

We realize that the data on one case are not enough to test the theories on some causes of bank failure. However, there are reasons for the choice of only one bank for the study. The time frame for the research work is too short to enable us to obtain bank-level data on more than one bank. Also, in many cases, such a multi-bank study would have required our traveling to as many countries as possible for the data, which would have been too expensive to bear, because we did not have any financial sponsorship for the research. Hence, even though many countries have suffered bank failures at some point in time, inadequate resources and time have compelled us to restrict our study to Co-op alone. Another delimiting factor is that some detailed comprehensive and reliable data on Co-op itself are also not available. Examples of such data are the Banking Supervision Department (BSD) examination reports on Co-op. We recognize that access to such classified data could have provided further insight for the study.

In the case of Co-op we only have data from 1994 to 1999/2000 but the validity is difficult to establish, because we do not have resources to ascertain the market values of the data. Likewise it is not clear when a bank crisis ends and as such, as of 2002, the liquidator of Co-op is still handling issues related to its failure. Despite certain limitations to data, we believe that Co-op is an interesting case study because it offers the possibility for an original contribution to the knowledge on some causes of bank failure, given the acknowledged limited scope of our study.

1.5 Outline of the Thesis

The thesis is divided into five main parts with one or more chapters for each part. The main parts are Prologue; Theoretical Framework; Empirical Study;

Analysis and Review; Conclusion and Recommendations. A List of References and Appendices follow. The Prologue provides the readers with an introduction to the subject and the thesis writing process. The second part, consisting of the Theoretical Framework, gives a description of the theories we found suitable to the research. The third part is the Empirical Study. This part provides an overview of the Ghanaian economy. Here, we present the Ghanaian financial sector, and then describe the banking regulations in Ghana. The case study of Co-op is done in this part. The fourth part is the Analysis and Review, where the preceding chapters are utilized to analyze and review the theoretical and empirical findings in an effort to give answers to the problem. The fifth part comprises Conclusion, Recommendations and Suggestions for Further Research.

The following is a description of the organization of the chapters. Chapter one, which is the Introduction, deals with the background, problem discussion, purpose, scope and delimitations of the thesis. Chapter two describes the methodology. In chapter three the theories on some of the factors behind banking crisis are analyzed and reviewed. Chapter four gives the overview of the Ghanaian economy. A case study of Ghana Co-operative Bank Ltd. (Co-op) is developed in chapter five, as empirical implications of some causes of bank failure. An analysis and review of the theoretical and empirical findings is made in chapter six. Additionally, some rival (competing) theories are looked at in this chapter as advised by Yin (1994:108-109). Chapter seven concludes the thesis by giving some recommendations for the Ghanaian banking sector to help prevent or eliminate recurrence of bank failures. Chapter eight offers some suggestions for further research.

In summary, chapter one gives the background of "Some Causes of Bank Failure". It presents the problem, purpose, scope and delimitations of the study, concluding with an outline of the thesis. Bank failures can result in much harm to the economy and so are considered very important and many writers have emphasized costs related to banking crisis. For instance, in the case of Co-op, it cost the Ghanaian Government cedi (Ghanaian monetary unit) ø 28 billion and ø 9 billion to respond to the interests of depositors and employees, respectively. The costs and effects of banking instability necessitate a study of the causes of banking crisis. Many different hypotheses give explanations of the causes of

the failures. This thesis tests the hypotheses, using the failure of Co-op as an empirical study.

2. METHODOLOGY

This chapter gives the basis for choosing the methodology of the thesis. Data collection methods, kinds of measuring instruments and the system for managing the measure are all important factors. An in-depth explanation of the process of analysis used to test each of the stated assertions is presented. How the problem was resolved is also described.

2.1 Research Method

The preference of a methodology influences the results of the research (Zeijersborger & Wiklund, 2000). In answering the question that we set for ourselves in the problem statement, we studied the causes of the failure of Co-op in the light of some different existing literatures on some causes of bank failure. We approached our research through *theoretical and empirical analysis* from *secondary sources*. In the *theoretical* approach, the study covered the theories on some causes of bank failure. In the *empirical* approach, we used the single case study method because it gave us a holistic view and a deeper understanding of the studied research problem. Another reason for choosing a single-case study is that it shows the critical proof of a vital theory (Yin, 1994: 40). The case study covered the Overview of the Ghanaian Economy, the Financial Sector of Ghana and Banking Regulations in Ghana. We also investigated the causes of the failure of Co-op. Then we related the existing theories to the actual causes of the failure of Co-op. As part of the conclusion, recommendations were made for the Ghanaian banking sector to help prevent or eliminate recurrence of a bank failure.

2.2 Conceptual Framework

The research used a *positivist framework*. We therefore collected, analyzed, reviewed and interpreted existing theories based on empirical studies on the subject matter. Next, we compared the predictions with the case study, in order to reach clear, interpretative results. This approach enabled us to evaluate the research issue objectively (Javefors, 2002).

2.3 Research Approach

Yin (1994) distinguishes between five research approaches: experimental, survey, archival analysis, history and case study. The variables that guide investigators to choose a strategy depend on the types of research questions posed, the extent of control over behavioral events and the relative focus on contemporary versus historical events. Our research approach is a case study. Yin also distinguishes between explanatory, descriptive or exploratory case studies. The differences between them are driven by the following research questions: *who, what, how and why*. Our case study is explanatory because it "deals with operational links needing to be traced over time rather than mere frequencies or incidence" (Yin, 1994:6). In other words, this case study intends to provide an understanding of why Co-op failed. In order to explain the phenomenon, we have included some descriptive elements in the form of tables 1 to 4, appendices 1 to 3 and standard financial measures (ratios – table 5) as well.

2.4 Data Collection

To facilitate the study of a particular case, one has to identify its members and content within the sampling frame. One must explain how to identify the theoretical framework, state the problem and purpose and select a sample in the study. These tasks must be completed before the collection of the study data. A selection of samples is first done at the case level, followed by a sample selection within the case. Additionally, criteria must be established to guide this process on both levels of sampling (Yin, 1994). We used various means of data collection, which we have described here. A compelling and a good quality case study, as our research, can be done by using the facilities of a well-equipped library and the telephone (Yin, 1994:11). Accordingly we used many resources from different libraries in Sweden in addition to Gothenburg University Library. We used documentary evidence in the form of published reports, government publications, and other documents and information in the public domain. We also made contacts with persons who are knowledgeable resources. Throughout, we applied both *qualitative and quantitative methods* in collecting and processing data for the research.

Our selected sample is Co-op. We began with the gathering of relevant information about Co-op. To gain a pre-understanding of the situation of Co-op, we collected a substantial body of internal materials, such as documentary materials and archival records on Co-op. To deepen our understanding, we collected data from different books and made telephone enquiries; e-mail contacts and complemented these with other relevant resources. More importantly, we used Yin's (1994) approach on how to do a case study.

2.4.1 Literature Review

The following are some of the **Causes of Bank Failure** as given in the existing literature. We also list references for further descriptions of these causes.

Deteriorating Economic Factors: Eisenbeis (1986, cited by Hooks, 1994), Goodhart et al. (1998) and Hooks (1994).

Regulation of Banks: Hempel & Simonson (1999), Goodhart et al. (1998), Spollen (1997), Llewellyn (1996, cited by Goodhart et al., 1998) and White (1984, cited by Hooks, 1994).

Government Deposit Insurance Scheme: Goodhart et al. (1998), Hooks (1994), Kareken (1981, 1983, cited by Hooks, 1994), Kareken & Wallace (1978, cited by Hooks, 1994), White (1993) and Palubinskas & Stough (1999).

Regulation as Regards Putting a Ceiling on Deposit Interest Rates: Selgin (1996) and Dothan & Williams (1980, cited by Hooks, 1994).

Prohibition of Banks from Establishing Branches and Limiting Bank Investments: Hempel & Simonson (1999), Hooks (1994), Goodhart et al. (1998), White (1986, cited by Elgin, 1996), O'Driscoll (1988, cited by Hooks, 1994) and Selgin (1996).

Capital Requirements: Polizatto (year not given) and Goodhart et al. (1998).

Inadequate Reserve Requirements: Ghanaweb site (year not given), White (1999) and Friedman (1960, cited by Hooks, 1994).

Forbearance: Hempel & Simonson (1999) and White (1993).

Lender of Last Resort: Selgin (1996) and White (1999).

Mismanagement: Goodhart et al. (1998), Heffernan (1996), Pantalone & Platt (1987, cited by Hooks, 1994), Spollen (1997), White (1993), Palubinskas & Stough (1999) and Spiegel, et al. (1996).

Fraud and Corruption: Heffernan (1996), Fitchett (1996), Smith & Walter (1997) and White (1993).

Poor Risk Management Procedures such as Lending Practices of Banks: Hempel & Simonson (1999), Palubinskas & Stough (1999), Goodhart et al. (1998), Chimerine (1998), Polizatto (year not given), White (1993), Spollen (1997) and Kindleberger (1989, cited by Hooks, 1994).

Deregulation of Banks: Hooks (1994), Chu (1996) and Kareken (1981, 1983, cited by Hooks, 1994).

Political Interference: Goodhart et al. (1998) and Caprio & Honohan (1999).

Yin (1994: 108-109) recommends rival explanations as one of the patterns for analyzing case studies. This strategy has been used in the study.

Competing (Rival) Theories on Some Causes of Bank Failure are presented below. Again, we list references for further descriptions.

Regulation of Banks: Goodhart et al. (1998), Chu (1996), Kareken (1981, 1983, cited by Hooks, 1994), Howells (2000), Kindleberger (1989, cited by Hooks, 1994), Hooks (1994), O'Driscoll (1988, cited by Hooks 1994), Eisenbeis (1986, cited by Hooks, 1994) and Dothan & Williams (1980, cited by Hooks, 1994).

Deposit Insurance Scheme: Eisenbeis (1986, cited by Hooks, 1994), Kareken & Wallace (1978, cited by Hooks, 1994) and Helfer (1999).

Government Deposit Insurance Scheme: Friedman (1960, cited by Hooks, 1994) and Kaufman (1996).

Deposit Insurance Scheme by Banks: Palubinskas & Stough (1999).

Direct Supervision of Banks: Hempel & Simonson (1999), Hooks (1994), Goodhart et al. (1998), Polizatto (year not given) and Spiegel, et al. (1996).

Capital Requirements: Palubinskas & Stough (1999), Goodhart et al. (1998) and Polizatto (year not given).

Capital Adequacy Rules: Kaufman (1996), Dothan & Williams (1980, cited by Hooks, 1994), Eatwell (2000), Howells & Bain (2000), Kareken & Wallace (1978, cited by Hooks, 1994).

Forbearance: Eisenbeis & Horvitz (1994, cited by Goodhart et al., 1998).

Establishing Branches and Limiting Bank Investments: Benston & Kaufman (1996 cited by Kaufman, 1996), Hooks (1994) and Howells & Bain (2000).

Ceiling on Deposit Interest Rates: Kareken & Wallace (1978, cited by Hooks, 1994) and Dothan & Williams (1980, cited by Hooks, 1994).

Lender of Last Resort: Hooks (1994), Smith & Walter (1997) and Kindleberger (1989, cited by Hooks, 1994).

Management: Spollen (1997) and Goodhart et al. (1998).

Credit Risk Management: Goodhart et al. (1998).

Credit Philosophy and Culture: Hempel & Simonson (1999) and Spiegel et al. (1996).

Data System: Kinsey (1998), Spiegel et al. (1996**)** and Essinger (1999).

Deregulation of Banks: Eisenbeis (1986, cited by Hooks, 1994) and O'Driscoll (1988, cited by Hooks, 1994).

2.4.2 Time Frame

For the purpose of the case study of Co-op, we limited ourselves to the period from 1994 to 1999/2000 because we could not get the data for earlier periods. Notwithstanding this, we were able to critically analyze and review the data and information, as well as draw a conclusion and make recommendations on Co-op's failure.

2.5 Research Evaluation

A research design shows a rational set of statements that helps with the evaluation of the worth of any given research. Validity tests are usually used to judge the quality of any empirical research work. Since a case study is one of the forms of such empirical studies, validity tests are relevant to a case study research. Such tests are construct validity, internal validity, external validity and reliability (Yin, 1994: 32-38). We applied the four tests in our study by analyzing and reviewing enough information on some causes of bank failure using Co-op as a case study to arrive at the empirical results. Then we compared the results of the case study with the existing theories. Additionally, competing (rival) explanations strategy was used in the analysis.

2.5.1 Validity

Validity is the extent to which a research correctly reveals or measures the particular theory that the researcher is trying to determine. It aims at the study's achievement at assessing what the researcher determined to assess (writing.colostate.edu). It concerns whether there is a correct relationship

between theories and empirical findings (construct validity), whether the results of the research are in accordance with the reality (internal validity), and whether the findings can be generalized and can provide conclusions regarding other situations than the specific case studied (external validity) (Yin, 1994: 32-38).

2.5.2 Construct Validity

To appreciate if a study has construct validity, the theoretical connections must be made; the empirical connection to the theory must be examined; the empirical proof must be interpreted as to how it agrees with the theoretical concept in terms of the particular procedures followed in the study. Construct validity addresses convergent and discriminate validity. The former is the common agreement among concepts collected independently of one another, which should theoretically agree with each other. The latter shows no relationship among concepts, which should not theoretically agree with each other (writing.colostate.edu).

In the study of the existing theories on some causes of bank failure, we showed *construct validity* by proving that concepts that are theoretically supposed to be highly interconnected are, in practice, highly interconnected and those that are theoretically supposed to be unrelated are, in practice, unrelated. We compared our findings on why Co-op failed with the existing theories on some causes of bank failure. We used many evidential sources, showed a series of proofs and had a reliable person reassess the draft of the case study report (Yin, 1994 and Trochim, 2002).

2.5.3 Internal Validity

A study is *internally valid* to the extent that its results can be well linked to the cause, instead of irrelevant reasons (Cobb, 2002). It is an issue of which way the results match reality. A researcher will deduce that an incident originated from a previous occasion based on written data gathered as a component of the case study. To deal with this, the research design should attempt to answer the following questions: Is the data corroborative, and does it appear to be conclusive? Is the deduction right? Have all the opposing accounts and

viewpoints been regarded? (Yin, 1994: 35). Internal validity shows the thoroughness with which the research was done (e.g., the research design, the concern attached to measurements and approaches about what was and was not covered) and the degree the researcher takes into considering various descriptions and explanations for any contributory connections he explores.

The research aimed at studying some causes of bank failure by means of a case study of Co-op. Internal validity addresses face and content validity. *Face validity* is about how a concept or process appears. Relevant questions to ask are: Is the research design appropriate and reliable? Are the methods for collecting data reasonable? To meet face validity, realistic data collection methods were chosen considering their cost-benefits implications. The research was also designed as advised by Yin (1994: 32-38). *Content validity* depends on the degree to which a study is related to a particular theory (writing.colostate.edu). A wide range of the content of the theories on some causes of bank failure was analyzed and the causes of Co-op failure were compared with many different literature sources. Conclusions were drawn from them to gain content validity.

2.5.4 External Validity

External validity has to do with the possibility for generalizing the results of the empirical study. The purpose of many researchers is to generalize their results to a number of issues and circumstances that are not part of the research. To the degree that the empirical findings can be generalized to various subjects, locations and researchers, the study has *external validity*. In particular, in what ways are the results able to be generalized, or measurable to other surroundings or to other individuals? To the extent that the results of the study would cause the same effect in another setting, the research is judged *externally valid* (Cobb, 2002 and writing.colostate.edu).

To achieve external validity, any researcher could apply the results of this research to any other bank in the developing countries, especially many state and quasi-state banks in Africa. This is because given the same factors that caused Co-op to fail, any bank that operates under similar conditions could fail.

2.5.5 Reliability

Reliability aims at the truthfulness of the real measuring mechanism or process (writing.colostate.edu). Reliability is the consistency at which a test measures something. For instance, if one undertook the same research over and over (theoretically), would the study yield the same result at each trial? (Cobb, 2002). In other words, reliability deals with the issue of the degree to which the investigation would give the same results if repeated. Also, if a different researcher made the same case study all over again, he should have the same results (Yin, 1994). Reliability is the degree to which a test gives the same results when the test is repeated several times. Independent researchers must be able to get consistent results given the same study procedures. This enhances the drawing of a conclusion to studies and the formulation of theories. Reliability of a research is important for its generalizability (writing.colostate.edu). To ensure reliability, the procedures followed in the case study were documented. This approach will enable any investigator applying the same procedures in performing the same case study to obtain similar findings and conclusions.

2.5.6 Relevance

The importance of the research question stems from the fact that bank failures adversely affect economies worldwide. In addition, the problem of why Co-op failed has not been previously researched. If the findings of this research enhance the prevention or elimination of bank failures, economies will be healthier for all stakeholders.

In conclusion, chapter two provides the research design of the thesis. It shows the methods used to resolve the problem which include the study of different literatures on some causes of bank failure, an empirical study on Co-op, and an analysis of the theories against the actual causes of the failure of Co-op. Qualitative and quantitative methods are used in collecting and processing data for the research. A literature review of some of the Causes of Bank Failure together with Competing (Rival) theories is given. We applied the four validity

tests (construct validity, internal validity, external validity and reliability) to help with the evaluation of the worth of the research.

PART TWO
THEORETICAL FRAMEWORK

3. THEORIES ON CAUSES OF BANK FAILURE

This chapter analyzes and reviews the theories on some of the factors behind banking crisis. It is useful for all stakeholders (e.g. managers, depositors, borrowers and regulators) in the financial sector to know what causes a bank failure in order to help prevent the failure. The issue especially concerns managers and external regulators. This is because most managers are dismissed and regulators are blamed when banks fail. It is also very important for other stakeholders to understand the causes of bank failure, in order for them to help to avoid it. This is because the cost of a banking crisis to all stakeholders, especially to depositors, can be very high.

The social costs of the failure of a bank can be higher than the costs incurred by the failed institution. Also, the consumer can lose when an institution fails, even if there is no systemic impact. This section, therefore, attempts to analyze and review some of the various theories on some of the factors behind banking crisis.

3.1 Deteriorating Economic Factors

Hooks (1994: 5) points out that deteriorating local economic conditions (e.g. inflation, interest rates, and exchange rates) cause bank failure. Eisenbeis (1986, cited by Hooks, 1994: 10) adds that macroeconomic factors (e.g. sudden adverse movements in a country's terms of trade and sharp fluctuations in world interest rates**,** real exchange rates and inflation rates) worsened by regulations that are imposed on banks result in a bank failure. Like Hooks and Eisenbeis, Goodhart et al. (1998: 47) emphasize that interest rate fluctuations contribute to banking crisis.

3.2 Regulation of Banks

O'Driscoll (1988, cited by Hooks 1994: 9), Eisenbeis (1986, cited by Hooks, 1994: 10), Dothan & Williams (1980, cited by Hooks, 1994: 36) share the opinion that government intervention causes bank distress.

Hempel & Simonson (1999: 17) state that when governments intervene in saving banks from failing, creditors and customers tend to rely on the government to protect their interests. The intervention, however, is a disincentive for other institutions, creditors and customers to effectively monitor their interests in banks in an independent way. Llewellyn (1996, cited by Goodhart et al., 1998: 2-3) notes the following situations, which could cause a bank failure: (i) Too many stringent rules could cause banks to disregard the measures as they may be seen by the banking sector as superfluous. (ii) Some dangers that banks are exposed to may be too difficult to be addressed by general laws. (iii) A rigid system of rules could inhibit banks from selecting the most efficient means of achieving regulatory goals set for them and may serve as a disincentive for improvement.

While Spollen (1997: 28) concludes that ineffective regulatory system causes bank failure, White (1984, cited by Hooks, 1994:3, 36) also notes that government regulation is neither needed nor advantageous.

3.2.1 Government Deposit Insurance Scheme

Goodhart et al. (1998: 45) observe that in the absence of any measure to rescue distressed banks, they could be exposed to depositors' runs. However, when complete deposit insurance schemes and other rescue measures are in place, stakeholders other than banks are discouraged from controlling the activities of intermediaries. This is why regulators protect the interest of the public by encouraging the reduction of risk-seeking behaviors. Kareken (1981, 1983, cited by Hooks, 1994: 3) and Kareken & Wallace (1978, cited by Hooks, 1994) state that a fixed-rate deposit insurance motivates banks to engage in risky investment activities.

Hooks (1994: 39) agrees with the above by stating that a flat-rate fee deposit insurance is an incentive for banks to make risky investments. Palubinskas & Stough (1999) stress that the scheme results in unpaid loans, since banks and customers have nothing at stake when deposits are badly managed or lost through fraudulent actions. White (1993: 108-109) concludes that a

government deposit insurance scheme encourages unskilled management and fraudsters, irrespective of the regulation.

3.2.2 Regulation as Regards Putting a Ceiling on Deposit Interest Rates

Selgin (1996: 211) states that the purpose of putting a ceiling on deposit interest rates is to prevent banks from mobilizing deposits by giving borrowers big amounts of funds with high interest income to the bank. Dothan & Williams (1980, cited by Hooks, 1994: 36) state that a limit on deposit interest rates motivates banks to make risky investments. Additionally, banks often try to overrule the ceiling by rendering more services to depositors, which results in higher transaction costs and lower income. Selgin (1996: 211) concludes that instead of decreasing the prospects of bank failures, the ceiling reduces a bank's capability to mobilize funds when it becomes illiquid. A ceiling on deposit and loan interest rates, therefore, it is argued, can cause bank failure.

3.2.3 Prohibition of Banks from Establishing Branches and Limiting Bank Investments

Selgin (1996: 200) states that geographical limitations pose significant threats to banks. Additionally, such limitations result in the following situations, which may cause bank failure: a bank's vulnerability to different threats is raised; systemic risk is encouraged and private market forces are hindered from preventing failures. Hooks (1994: 8, 49-50) observes that branching restrictions could constrain banks from spreading their investment activities in different locations. These geographic restrictions, coupled with prohibition from investments, result in unsuccessful diversification by banks. Hooks also notes that limiting a bank's investment chances could lower its diversification operations. Goodhart et al. (1998: 38) add that lack of appropriate diversification causes bank failure. Hempel & Simonson (1999: 18) argue that without branches, banks cannot mobilize substantial amounts of stable retail deposits. Such a position compels banks to rely extensively on unstable funding bases attracted from money market creditors. O'Driscoll (1988, cited by Hooks, 1994: 9) observes that banks may use flexible investment freedom to focus on limited higher-risk categories.

Selgin (1996: 210) adds that even though the justification of geographical limitation is to stop banks from excessive clustering and avoid competition, this perception misinterprets the impact of bank branching and the importance of competition. White (1986, cited by Selgin, 1996: 209) states that branching limitation raises a bank's vulnerability to risks for its liabilities as well as its assets. In the same way that branching restrictions rules have motivated banks to high risk-taking investments, some regulations have also constrained banks from engaging in many different banking operations.

Selgin (1996: 208) concludes that regulation in respect of branching limitation contributes to the possibility of banks failing, by constraining their chances to prevent risk and by supporting bank risky operations. To him, the worst regulation is branching restriction.

3.2.4 Capital Requirements

The lower a bank's capital, the higher the probability of its failure (Polizatto, year not given). Goodhart et al. (1998: xvii, 49, 57) agree with this statement and add that as a bank's capital decreases, the higher its motivation for actions towards survival. This leads to more dangerous risk-taking operations. Therefore, the risk of failure rises with the decline of equity. Palubinskas & Stough (1999) also observe that one of the measures used to stop the increase of bank crisis is to increase the ceiling as regards capital held by banks. This requirement compels banks to hold much capital, or combine their businesses with other banks, or forfeit their licenses. According to Polizatto (year not given) capital is essential to cushion losses incurred by banks. When banks have inadequate capital, they usually conceal the situation for fear of exposing the illiquidity. If stakeholders such as bank management and regulators do not effectively address a capital erosion situation early, it could result in bankruptcy. A similar view as the above has been expressed by Goodhart et al. (1998: 57) who state that adequate funds reduce risk-taking while insufficient capital motivates banks to engage in actions towards survival at all costs.

3.2.5 Inadequate Reserve Requirements

A reserve requirement is a portion of cash to total deposits which banks are obliged to maintain. This ensures prudential and fiscal control of the activities of banks (www.bog.gov.gh). White (1999) adds that a government obliges banks to reserve the funds in order to improve the actual need for base money. Friedman (1960, cited by Hooks, 1994: 37) states that bank failures arise because banks do not keep all their deposits in statutory reserve funds.

3.2.6 Forbearance

Hempel & Simonson (1999: 18) note that some regulatory bodies exercise forbearance. This contributes to bank crisis by permitting distressed banks to continue their operations instead of liquidating them. This action aims at assisting banks to make profits. Its effect is rather disadvantageous to banks because usually when banks lack adequate funds, and remain in operation, their capital situation deteriorates (Hempel & Simonson, 1999: 18).

3.2.7 Lender of Last Resort

Selgin (1996: 214) and White (1999: 74-77) state that governments use the lender of last resort mechanism to help some stakeholders of banks which are failing. When bank failures rise, any money reserved to deal with the situation decreases. The only option then is to either replenish the reserves or combine the operations of distressed banks. However, if prospective beneficiaries of this approach perceive that the central bank may intervene when every bank fails, the measure could rather encourage banks to engage in more risky activities.

3.3 Mismanagement

Management is a key to a successful business. Mismanagement caused many banks to fail in the 1980s and early 1990s. Banking crisis mostly comes from the absence of good managerial ideas in management decision-making. Therefore, competence and focus play a major role in banking (Spiegel, et al.

1996: 51). According to Pantalone & Platt (1987, cited by Hooks, 1994: 41-42), mismanagement, especially excessive risk-taking, is the main cause of bank failure. On the other hand, White (1993: 110) notes that even though bankers are accused of misconduct, it is difficult to prove that the negligence of management is the only cause of bank failure.

Spollen (1997: 25-26, 32, 51) has, however, listed the following as underlying the failure of businesses which, to us, are also relevant to the purpose of this study:

- Inability of management to appreciate and control a business.
- Inability of management to ensure compliance with laid down procedures. In many situations where there is a loss of a business, the failure is attributed to either lack of policies, and if policies existed at all, they are inadequate or existing policies are not observed.
- Insufficient number of staff, particularly middle management, which can subject a small number of employees to over-time work, which could eventually result in the failure of a bank. The issue is whether an organization has adequate staff complement and whether it appreciates their interests and addresses them (Spollen 1997: 86, 94).
- The situation when fundamental control procedures are ignored.
- The situation when internal audit does not play its role in the formulation of a board of directors' policy and its procedures.
- The situation when the board of directors does not effectively address audit queries.
- Over-reliance on one member of staff. Most of the time organizations are defrauded by some of their own workers, mostly those who have been with organizations for long periods of time and whose work is not supervised. Excessive authority is given to an employee because he seems to be very effective on his schedule. Individuals in this category are trusted, devoted to duty and work extra hours under the guise of showing much commitment Spollen (1997: 20, 34-36, 90-91). Like Spollen, Heffernan (1996: 282-288) states a practical case of such a situation that contributed to the failure of Barings Bank.

Goodhart et al. (1998: 49) add that if worker compensation is tied to performance and output is below expectation, the managers could manipulate the output for fear of being dismissed. This risk behavior could eventually cause a bank to fail (e.g., Barings Bank failure).

Palubinskas & Stough (1999) state that a shortage of competent bankers as regards loans' risk appraisal, scrutiny of financial information of customers, appraisal of cash flow, or calculation of fundamental profitability, contributes to many of the loan defaults. They continue saying that lack of skills leads to a situation where there is no credit evaluation - where bankers only enforce and supervise the credit manual, which is not updated to reflect varying periods. Goodhart et al. (1998: 38) agree with this perception. White (1993: 110) notes that currently it is not easy for banks to attract skilled managers.

3.3.1 Fraud and Corruption

Smith & Walter (1997: 157) and Fitchett (1996) state that fraud causes banks to fail as happened in the case of Banco Ambrosiano, BCCI, Crédit Lyonnais and Herstatt. Heffernan (1996: 293) adds that corruption and fraud have been the general causes of many failed banks.

White (1993: 108-109) argues that bank failures are seen by many to be caused by mismanagement, fraud and deregulation. However, fraud is not the primary cause of banking crisis, since according to White, bank failures were rampant in the 1930s when there was no fraud.

3.3.2 Poor Risk Management Procedures Such as Lending Practices of Banks

Hempel & Simonson (1999: 388) state that the main activity of bank management is not deposit mobilization and giving credit. Effective credit administration reduces the risk of customer default. The competitive advantage of a bank is dependent on its capability to handle credit risk valuably. Bad loans cause bank failure. Palubinskas & Stough (1999) note that the failure of a bank is mainly seen as a result of mismanagement because of bad lending

decisions made with respect to wrong appraisal of credit status, or the repayment of non-performing credits and excessive focus on giving loans to certain customers. Goodhart et al. (1998: xvii, 38) also state that poor credit control, which results in undue credit risk, causes bank failure. Chimerine (1998) adds that a bad lending tradition leads to a large portfolio of unpaid loans. This results in insolvency of banks and reduces funds available for fresh advances, which eventually causes a financial crisis. Goodhart et al. (1998: xvii, 38) add connected lending to the causes of bank failure.

Again, Palubinskas & Stough (1999) note that lack of dependable financial information on borrowers to help in assessing creditworthiness causes a bank failure. Yet mismanagement is not a result of immaturity all the time. Most of the time, principals and agents know that major faults in the banking regulation in respect of internal changes permit them to exploit a bank's funds. Sometimes these two groups of stakeholders attempt to accomplish their short term earnings objectives by acquiring high risks in the bank. Polizatto (year not given) points out that financial information disclosed by banks is often false. He explains that the absence of existing and adequate financial data underlies the keeping of security based credit because bankers are unable to assess creditworthiness. Goodhart et al. (1998: 49) state that re-stating financial earnings from previous years to current years could lead to the falsity of financial information of banks.

Polizatto again observes that in many cases asymmetric information exists between banks and investors. Goodhart et al. (1998: 13-14, 46) also add that the common problem of prudential rules is the asymmetric information issue between the customer and the bank. Heffernan (1996: 2, 22) adds that bank structures generate asymmetric information leading to moral hazard and adverse selection. These writers further state that organizations give extended agreements whose worth to the customer is based on the organization's attitudes and performance subsequent to the date of the agreement. The problem and rigidity of rules are because every stakeholder (e.g. government, bank, depositor and borrower) has dissimilar information, incentives and positions. For instance, how can savers or the government discern the risk actions of banks? If the authorities could monitor the total risks of an

intermediary inadequately, is it feasible to initiate laws that minimize runs on banks?

Spollen (1997: 9, 30, 58-60) states that irregular meetings of loans committees, false loans, large treasury losses, high sums of unrecorded deposits and money laundering in large amounts, contribute to bank failure. He adds that some lending decisions involving high amounts of money are made by an individual worker because of the status of the recipients of the loans.

Kindleberger (1989, cited by Hooks, 1994: 37-38) observes that over-investment is directly related to high risk-taking and this causes bank failure. Additionally, some employees disregard laid down procedures and rather work according to instructions from certain areas. In some cases a worker of a Credit Department of a bank obtains signatures from every member of the loan committee in irregular ways sanctioning a loan. Hempel & Simonson (1999: 16-17) mention loans to the "energy producers and commercial real estate developers" as examples of risky investments, especially when the economy is good and the lending decision is based on improper projection. White (1993: 12) adds that the failure of banks is mainly due to risky credits they give. Hempel & Simonson (1999: 390) conclude that all banks incur certain loan losses when some borrowers default in repaying their loans. Irrespective of the extent of the risk involved, good credit management can reduce the default.

3.4 Deregulation of Banks

Hooks (1994: 3-4) states that deregulation results in higher risk-taking by banks and could lead to bank failure. Chu (1996) emphasizes that free banking encourages banks to engage in deceptive operations and over-expansion, which makes banks fail. With respect to deposit insurance schemes, Kareken (1981, 1983, cited by Hooks, 1994) notes that deregulation is unsafe for banks. He explains that when banks have freedom of investment and diversification, the situation leads to higher risk-taking. Like Kareken, Hooks (1994: 49) adds that if regulatory authorities eliminate the application of strict maximum deposit interest rates imposed on banks, resulting in the increase of deposit interest rates, banks will engage in high risk investments. He therefore concludes that deregulation results in more risky investments.

3.5 Political Interference

Goodhart et al. (1998: 38) point out that politically directed lending leads to banking crisis. To buttress this assertion, Caprio & Honohan (1999) observe that governments can cause banks to fail in many ways. Some dishonest leaders exploit the funds of banks as happened in the Philippines in the 1980s. In most cases, governments influenced banks to give loans to certain borrowers that discouraged banks from properly assessing the creditworthiness of borrowers and eventually destabilized banks' financial standing. The implication of this is that such loans are not paid off. Occasionally, the credits are given to government suppliers leading to the failure of the banks involved.

In conclusion, chapter three has analyzed and reviewed the theories on some of the factors behind banking crisis. In agreement with Yin (1994: 38), it has indicated understandable theories and the conditions within which the theories are considered to cause bank failure. Many different authors have given different variables that contribute to banking crisis.

PART THREE
EMPIRICAL STUDIES

4. OVERVIEW OF THE GHANAIAN ECONOMY

In order to understand the thesis, it is useful to have an understanding of the Ghanaian economy as well as the Ghanaian financial system and difficulties. The figures in this chapter are shown in U.S. dollars in some places, Ghanaian monetary unit (the cedi, ø) as well as in pound sterling in other places. It was not possible to know why these different monetary units were used.

4. 1 Economy in Brief

Economic policy is very successful in ensuring price solidity together with effective banking sector and other economic groups (Acquah, 2002).

In 1983 the International Monetary Fund (IMF) established the Economic Recovery Programme (ERP) in Ghana. A Structural Adjustment Programme (SAP) was also set up towards economic order. Financial Sector Adjustment Programme (FINSAP) was established in 1987 to boost the success of the structural adjustment programme. This was necessary because mismagement and political interference in the operations of banks had caused many banks to fail (www.bog.gov.gh). The FINSAP project was funded by the World Bank with the aim to improve banking regulation and reinforce banking supervision; reorganize banks which were failing by giving them funds and skilled management; enhance resource acquisition and raise the competence of loans management by the banking sector (www.winne.com).

Changes made in the exchange rate policy resulted in much depreciation of the cedi. This rendered many of the foreign currency credits of commercial banks bad. With a World Bank assisted loan, the banking system was reorganized and delinquent loans were taken over by government. A Non-performing Asset Recovery Trust (NPART) was given the task of recovering these loans. Management of the affected banks was restructured and some of the banks were computerized. The government divested its shares in some banks. The entry requirements into the banking sector were made more flexible. The Government borrowed funds from the banks to cover its deficit because there were no government securities (www.bog.gov.gh).

The Ghana Government launched an Economic Recovery Programme (ERP) in April 1983. The aim of the programme was to resolve the numerous economic problems Ghana was encountering. Free economic rules were launched. The direct monetary control was changed into a free monetary system in stages which started with the establishment of a market-based scheme of monetary control by 1992 (www.winne.com).

In 1998 the worldwide financial problem that started from East Asia negatively affected several developing economies. The impact of the crisis resulted in the deterioration of some of these economies and this increased the avoidance of risk-taking by the international financial markets. Proposals to forestall the dangers that big private funds which flow worldwide were exposed to included the necessity for wide-ranging policies with changeable macroeconomic rules, stricter economic laws, proper limitations on funds movements, and the application of strong rescue mechanisms. Globally, Ghana kept a non-interventionist trade and payments regime. Domestically, the El Nino situation activated a shortage of energy crisis, as the reduced global economic transactions unfavorably impacted on international prices of Ghana's two main export commodities – gold and timber (Peprah, 1999).

Benoni & Osei (2001) add that the exogenous[3] impact from the Asian crisis, the depression in Japan, declining global prices of gold and cocoa and the sharp increase in petroleum prices, the high level of domestic crime such as corruption and fraud coupled with the breakdown of systems, macroeconomic factors (inflation, exchange rate depreciation, fiscal deficit and rising monetary growth) as well as international trade and payment problems have adversely affected the real Gross Domestic Product (GDP) of Ghana.

According to Investek Consultancy Services Limited (year not given), from the 1970s to the beginning of the 1980s the economy of Ghana weakened. This was due to wrong policies and unfavorable conditions such as high oil prices and drought. This led to a constant fall in real GDP at a yearly average rate of 0,3% from 1970 to 1980. As of 1982 the economy faced increased inflation, huge budget deficits and downward growth rates. In 1983 inflation was 12,3%,

[3] Exogenous: Originating from outside; derived externally.

increased to 25% in 1986 and reduced to 18% in 1991. GDP growth rate declined to 3,9% and growth in money supply rose from 20% in 1991 to about 53% in 1992. The country has experienced consistent financial indiscipline. In 1995, there was a budget deficit of 0,3%. As of end of 1995 inflation was 71%. As of 1996 the budget deficit was 10,4% of GDP.

Ghana's main economic occupation is agriculture, which provides about 36% of GDP, offering employment to approximately 60% of Ghanaians. It has arable land, forests, diamonds, gold, manganese and bauxite. In 2000 Ghana's GDP was U.S.$ 5,2 billion. Around 25%, 6% and 30% of GDP was earned from industry, mining and services, respectively; agriculture increased by 2,1% (www.fao.org). The real GDP growth of 5,1% in 1997 resulted from a significant increase in the following sectors – service: 6,2%; industry: 5,7%; and agriculture: 3,3%. The year-end inflation rate was 20,8% as against a target of 15%. The cedi weakened by 22,7% in 1997 while money supply increased by 39,5% in the year compared with 39,4% increase in 1996 (www.ghanaweb.com).

In September 1998 the discount rate for the first time since September 1995, was reduced from 45% to 42%. Inflation fell from 71% in 1995 to 33% in 1996, fell to 27% in November 1997 and reduced to 16,2% in November 1998. The three-month Treasury bill rate moved from 43 % to 26,8% by the end of the year. The currency depreciated against the dollar by 27% in 1995, 17% in 1996, and 23% in 1997. At the beginning of 1998 the cedi was about 2,260 to the U.S.dollar and 2,325 as of September, 1998 (www.ghanaweb.com).

In 2000 exports amounted to U.S.$ 1,861 million, while imports were U.S.$ 2,833 million, resulting in a trade deficit of about U.S.$ 1,0 billion. The terms of trade weakened by about 30%, exposing Ghana to balance of payments problems. As of the end of 2000, the current account had a deficit of U.S.$ 457 million, corresponding to 8,8% of GDP. This deteriorated Ghana's global reserves, which were U.S.$ 174 million in mid 2001, which was lower than a month's worth of imports. Additionally, foreign direct investments and private capital flows gradually declined, keeping the nation reliant on global loans to meet its financial obligations. The country's foreign liability grew from U.S.$ 1,4 billion in 1980 to U.S.$ 6,9 billion in 1999. In 1999 and 2000 financial

policies led to a budget deficit of about 8,8% of GDP. The nominal financial difference improved to a shortfall of U.S.$ 216 million from April to June 2001 after a shortfall of U.S.$ 1,030 million from October to December of 2000. Inflation rose from almost 15% as of January 2000 to about 40% as of December 2000 (www.fao.org). The cedi gradually devalued and lost 86% of its worth from 1993 to 2000. The absence of an adequate efficient financial industry made the application of high interest rates unproductive in controlling inflation due to a strong currency speculation (Buren, 2001). In 2000 inflation continued to rise from around 35% to 40% bracket throughout January to June 2001. The cedi weakened by over 50% in 2000 but was comparatively stable in 2001 (www.fao.org).

4.1.1 Monetary and Fiscal Policies

Before 1987 the major tool for monetary management used by Bank of Ghana were *direct controls*. The Bank exercised direct management over the monetary system of Ghana. This involved using direct instruments such as loans management, controlled interest rates and reserve obligations to manage the money supply. The controls included limitations on commercial bank loans to the private industry and rules on interest rates. Different limitations were set for individual banks and the banking industry as a whole. The limitations consisted of floors and ceilings for savings and borrowing interest rates. Government securities and securities markets were non-existent. The Government borrowed funds from banks and the central bank to cover its deficit.

A securities market was formed. In 1986 a weekly public sale of treasury bills was instituted. In 1988 Bank of Ghana bills were launched to mop up surplus liquidity in the economy. Before then there had been measures to permit the Government to stop borrowing from banks. The Bank of Ghana bills enhanced the money market for banks by creating investment opportunities for them. The instruments included a 30-day-bill, 182-day-bill and 2-year-bill. A 3-5-year-bond was introduced. Discount houses were also established. The aim was to ease the conveyance of monetary policies from Bank of Ghana to the banks. The discount houses were channels through which banks could lend and

borrow funds among themselves. Bank of Ghana focused on the market excesses and shortages. The direct credit control was unsuccessful

Difficulties in the direct controls included huge credits from the banking sector to fund government budget deficits. Bank of Ghana's strict credit control and high reserve requirements on banks rendered banks unable to give loans and also the policy constrained investment opportunities of banks. The banks, therefore, circumvented the rules by using unconventional ways to recover their losses. Among others, they set high fees for their non-traditional financial services, which usually increased their operational expenses. These and many other disadvantages of the *direct monetary control* mechanism called for key changes in the monetary control function.

Changes were made in the economic rules to create a complete *indirect fiscal management system*. From 1983 to 1988 a foundation was laid for the establishment of a market-based structure of monetary rules. Monetary rules were made stronger. For example, interest rates and reserve requirements were increased. Bank of Ghana used *indirect monetary control* to manage money supply. Instruments the Central Bank used included Open Market Operations (OMO) which entails trading securities, Repurchase Agreements (Repos) and SWAPS.

From 1988 to 1992 limitations on bank credits were eliminated. Since then banks have been free to set the amount and choose the type of borrowers to lend money to. Additionally, in 1987/88 ceilings on interest rates were removed, allowing banks to set their preferred interest rates on deposits and credits. Bank of Ghana however, establishes its lead rate, the Bank Rate which it uses for overdrafts to banks and for rediscounting financial instruments (www.winne.com)

The central bank uses the primary auction of treasury and Bank of Ghana bills to execute monetary rules. In March 1996 it launched the wholesale auction system. Tenders were limited to primary dealers such as commercial banks, discount houses and brokerage firms with the aim of beginning a secondary market. The measure has not been effective because subscription of the

auctions is some times below expectation. Additionally the primary dealers do not encourage secondary market operation (www.bog.gov.gh).

Reserve Requirements: Effective April 1997, Ghana's reserve requirements included foreign currency deposits with the aim to discourage banks from selling only foreign currency deposits and refusing to sell local currency deposits. Starting from July 2000 a primary reserve requirement of 9% was on both domestic and foreign currency deposits; the secondary reserve requirement was 35% **(**www.winne.com). The ratio changed from 27% in 1990 to 10% in 1996 and 8% from 1997 to 1999 (www.bog.gov.gh)

According to the Investek Consultancy Services Limited (year not given), the financial crises Ghana faced in 1992 resulted in the growth of the money supply which increased by about 53% that year from 20% in 1991. In 1993 the growth in money supply slowed down to 27% and increased in 1995 resulting from much foreign exchange inflow to Ghana. The Central Bank increased the bank rate to 45%. The growth in money supply declined to 40% and local credit grew by a yearly average of 22,9% during 1992 and 1995.

4.2 Overview of the Ghanaian Financial Sector

4.2.1 Structure of the Financial Industry

The Investek Consultancy Services Limited states that Ghana has formal and informal financial sectors. The informal sector comprises money lenders, numerous credit and "susu"[4] organizations. There is a close relationship between the formal and informal financial sectors with respect to borrowing and lending activities. Many Ghanaian traders use the informal financial sector services in their transactions. Ghana's formal financial system is composed of banking and non-banking divisions.

The financial sector comprises the central bank (Bank of Ghana), eleven commercial banks, five merchant banks, over one hundred rural banks and non-

[4] Susu: Informal lending and borrowing transactions organized by groups of people.

bank financial institutions. The non-banking system includes the Ghana Stock Exchange, twenty-one insurance companies, the Social Security and National Insurance Trust (SSNIT), two discount.houses, the Home Finance Company, numerous building societies, a venture capital company, a unit trust and five leasing companies (strategis.ic.gc.ca).

4.2.2 Bank of Ghana

Ghana became independent from Great Britain in 1957. After its independence, it set up its central bank (Bank of Ghana) which replaced the West African Currency Board (WACB). The WACB issued money for Gold Coast and for other British colonies in West Africa - Gambia, Nigeria and Sierra Leone. The Bank of Ghana decree (1957) authorizes the central bank with the following responsibilities: printing of currency, the Government's banker and monetary representative, regulator of the financial sector and establishment of the structure for autonomous fiscal management (www.winne.com).

Bank of Ghana supervises banks in Ghana. It has eliminated the grading of banks in Ghana into primary and secondary and categorized all of them as commercial banks. It is a lender of last resort for banks in Ghana. Bank of Ghana is responsible for the functioning and management of financial policy. It therefore ensures the effective running of the banking sector and the financial system in general. Additionally, it makes sure that banks address the interest of the public. The Bank of Ghana decree makes a distinction between domestic banking operations and foreign banking operations. A domestic banking operation is registered in Ghana with a minimum of 55% of its shares owned by Ghanaians (Investek Consultancy Services Limited, year not given).

Bank of Ghana has a Banking Supervision Department and a Financial Institution (Non-Banking) Department. The departments inspect the operations of banks and other financial organizations to guarantee that they observe statutory rules. The most important goal of the central bank is to promote effective economic policies to ensure price solidity, in order to generate an attractive macroeconomic atmosphere, which supports the maintenance of economic stability. Fiscal control is a very vital traditional role of the central

bank. For this purpose, it uses many different mechanisms, positions and goals. It handles its most important function of monetary regulation together with the Ministry of Finance.

In addition to regulating the activities of banks, Bank of Ghana concerns itself with the general economic growth process. It offers capital for setting up specialized and other financial organizations such as development and rural banks; guarantees loans to banks to protect credits to small-scale borrowers in agricultural and industrial industries; gives guarantees for agricultural produce, "markets bills discounted by commercial banks"; and takes part in the setting up of certain industrial and agricultural projects in the private system (www.winne.com).

According to Ghana Investment Promotion Centre Report (2000), the required minimum paid-up capital for establishing a bank in Ghana is as listed below:

- Domestic banking operations - a minimum of ø 5 billion.
- Foreign banking operations - a minimum of ø 8 billion, with a minimum of 60%, which should be transferred to Ghana as convertible currency.
- Development bank for medium or long-term finance of agriculture, trade or industry - a minimum of ø 10 billion.

The least required paid-up capital for entering the financial sector is as follows:

- Deposit taking institutions such as savings and loans - a minimum of ø 1 billion.
- Non-deposit taking institutions including Leasing Companies - a minimum of ø 500 million.

4.3 Banking Regulations in Ghana

4.3.1 Banking Law 1989 – Provisional National Defence Council (P.N.D.C.L. 225)

The Banking Law was revised in 1989 to give effective prudential and regulatory foundation for the banking sector (www.winne.com). According to the Government of Ghana Gazette (1989) the Banking Law comprises the following main sections:

PART 1 - Licensing of Banks.
PART II - Statutory Obligations of Banks.
PART III - Special Functions of the Bank of Ghana.
PART IV - Appointments, Duties and Powers of the Head of Banking Supervision Department.
PART V - Accounts and Audit.
PART VI - Miscellaneous and Supplemental Provisions.
First Schedule (Section 8) - Capital Adequacy.
Second Schedule (Section 39) - Matters to be Included in the Long Form Audit Report.

The law regulates the setting up of banks and their activities in Ghana (Investek Consultancy Services Limited, year not given). The banking law was revised in 1989 to ensure effective prudential and regulatory supervision.

4.3.2 The Bank of Ghana Law 1992 P.N.D.C. Law 291

The Bank of Ghana Law was revised in 1992 to reinforce the regulatory and supervisory function of Bank of Ghana. (www.winne.com).

4.3.3 The Financial Institutions (Non-Banking) Law of 1993

In 1993 Financial Institutions (non-Banking Law) was passed to control operations of non-banking financial institutions (www.winne.com).

In summary, chapter four has given an overview of the Ghanaian economy. It has also looked at the financial and banking systems in Ghana. The financial sector is divided into formal and informal systems. Ghana's formal financial system composes of the banking and the non-banking divisions. The banking system which is relatively recent, was inherited from the British system and was created by a country which had been held under colonial rule for a number of years.

Ghana's central bank (Bank of Ghana) replaced the West African Currency Board (WACB) after Ghana's independence in 1957. The Bank of Ghana decree (1957) authorizes the central bank with the responsibility to print currency, be the Government's banker and monetary representative, regulate the financial sector and supervise banks in Ghana, among others. The central bank is a lender of last resort for banks in Ghana. The banking law 1989 P.N.D.C.L 225 gives effective prudential and regulatory foundation for the banking sector. The general purpose of the various banking laws is intended to safeguard assets and disclose relevant financial information.

5. GHANA CO-OPERATIVE BANK LTD. (CO-OP)

This chapter develops the case study of Co-op as empirical implications of some causes of bank failure. In an attempt to answer the main research question stated in the introductory chapter - Why do banks fail in general and in particular why did Co-op fail?, a single-case (holistic) design was used. The advantage of the holistic methodology is that the case study itself is holistic. Yin (1994: 38, 42). Co-op was chosen for the case study because it symbolizes an important case in assessing well-prepared theories on causes of bank failure.

Caprio & Klingebiel (1999) observe that banking distress in which a bank has a negative net worth can happen over many years and could continue for a long time before the bank eventually collapses. Co-op's failure may have occurred over a long period. The study is, however, limited to the period from 1994 to 1999/2000 due to unavailability of data for earlier periods. Co-op's financial statements - profit and loss accounts and balance sheets (tables 2 & 3) were used. The profit and loss statement for the year ended 1999/2000 was not available. Other evidential materials including books, newspapers and articles from the internet were used. No information was available to confirm Co-op as being a listed company. To ease the computation of some vital standard financial measures (ratios – table 5), the figures for 1993 were included.

5.1 History of Co-op

Co-op was founded in Ghana in 1974 by the Registrar of Co-operatives instituted by the Co-operative Societies Decree 1968 NLCD 252. It gained a limited liability company status in 1992. The owners of Co-op were the Ghana Government, the Social Security and National Insurance Trust (SSNIT), the State Insurance Company (SIC), Co-operative organizations and some individuals. It went into official liquidation on January 17, 2000. As of that date, it had 21 branches across Ghana and its staff complement was 415 (Ghanaian Times, January 2000; an anonymous source, 2002). PricewaterhouseCoopers (2000) confirmed the liquidation of Co-op in its report for the First Creditors' Meeting. It stated that on January 17, 2000, the

shareholders, in observation of Section 2 of the Bodies Corporate (Official Liquidations) Act enacted a special resolution for the liquidation. Accordingly, the Registrar published the resolution. In satisfaction of the Bodies Corporate (Official Liquidations) Act, the Registrar of Companies was given the mandate as Official Liquidator of Co-op. The Official Liquidator then gave power of attorney to PricewaterhouseCoopers to act on his behalf, regarding the responsibilities of the liquidation with the help of the Central Bank.

The mission of Co-op was to offer complete commercial banking services and mobilize savings deposits. Its strategic plan was to transact business with institutions, satisfy customers and be competitive. Its objectives were "export financing, business advisory services, support services to co-operative societies and maintain adequate skilled staff" (an anonymous source, 2002).

The following were the causes of Co-op's failure:

- Persistent losses: Co-op incurred persistent losses because of bad loans (www.newsinghana.com, www.ghanaweb.com and an anonymous source).
- Liabilities were more than assets (www.ghanaweb.com).
- Ineffective credit management: Co-op mismanaged its credit operations. Its management failed to perfect many securities attached to loans (PricewaterhouseCoopers, 2000, an anonymous source, 2002; www.ghanaweb.com and www.newsinghana.com).
- Bad loans: Co-op had huge loans with bad quality (www.ghanaweb.com and an anonymous source, 2002).
- Bad loans of about ø43 billion to a single borrower (A-Life Company): Co-op was defrauded by A-Life Company, thereby affecting its operations negatively (www.newsinghana.com, www.ghanaweb.com and Deloitte & Touche, 1996). The Ghanaian Times (January 20, 2000) observes that the liquidation was justified in view of the A-Life Company issue. According to the official liquidator (2000), the Serious Fraud Office is handling the large criminal unpaid loan owed by A-Life Company.
- Declining deposit growth because of loss of confidence: The A-Life Company's scandal led to a loss of depositor confidence in Co-op

evidenced by the steady reduction in deposits (www.newsinghana.com and an anonymous source).

- Failure to satisfy the capital adequacy rule: Co-op failed to meet the capital adequacy ratio of 6% required by Bank of Ghana (www.ghanaweb.com and an anonymous source).
- Incomplete financial information: Financial data on borrowers was inadequate or did not exist (PricewaterhouseCoopers, 2000).
- Failure to satisfy the Central Bank's reserve obligations: Co-op was unable to meet the statutory reserve requirements (an anonymous source).
- Capital requirements: Co-op failed to meet the minimum funds obliged by Ghana banking law. (www.ghanaweb.com).

5.2 Financial Status of Co-op

Notes:

1. * Figures are consolidated.
2. ** Figures are unconsolidated.
3. *** Figures are from 1/01/1999 to 17/01/2000.
4. The ratios composed of a negative numerator and a negative denominator give positive products. Care should therefore be taken to take the composition into consideration in interpreting the meanings of the ratios. An example is the return on equity for 1996 of 131% made up of a net loss of ¢27,913 billion divided by a negative average equity of ¢5,330 billion.
5. Formulae for the calculation of the ratios are in appendix 1.
6. All figures that are shown in the capital adequacy return (table 4) but which are not found in the financial statements (tables 2 & 3) are in appendix 2.

Table 2: Consolidated Profit and Loss Accounts

For The Year Ended 31 December

(¢'Million)

	1993*	1994*	1995*	1996*	1997**	1998**
Interest Income	2,286	2,586	4,596	7,969	6,679	9,172
Interest Expenses	-1,915	-1,305	-2,376	-4,339	-4,308	-4,525
Net Interest Income	**3 71**	**1,281**	**220**	**3,631**	**2,371**	**-4,646**
Commissions & Fees	457	599	849	1,489	883	1,258
Other Operating Income	74	187	222	192	587	66
Other Income	5,931	644	595			
Total Income	**6,834**	**2,711**	**3,888**	**5,312**	**3,841**	**5,971**
Charge for Bad Debts	-490	-674	-311	-22,731	-2,544	-5,595
Operating Expenses	-1,171	-1,715	-2,586	-3,904	-5,033	-6,098
Other Expenses			-500	-6,590		
P/(L)BTax	**5,172**	**323**	**491**	**-27,913**	**-3,735**	**-5,723**
Taxation	-1,981	1,830	-300			
P/(L)ATax transferred to Income Surplus Account	**3,192**	**2,153**	**191**	**-27,913**	**-3,735**	**-5,723**

Source: Co-op's audited financial statements

Table 3: Consolidated Balance Sheets

As at 31 December

(¢'Million)

	1993*	1994*	1995*	1996*	1997**	1998**	1999/2000***
ASSETS							
Cash & S/T F	2,238	5,388	6,835	23,238	-16,128	7,294	5,787
Investments	5,249	6,519	9,040	12,472	11,175	14,053	8,804
Net Loans	3,308	6,115	7,926	32,105	7,194	5,167	2,858
Other Assets	992	1,535	6,760	2,562	2,903	3,028	1,402
Tot. C. A.	**11,687**	**19,558**	**30,561**	**70,377**	**5,143**	**29,542**	**18,851**
Goodwill	7,590	7,090	6,590				
Fixed Assets	297	646	999	1,169	1,200	965	3,944
Taxation				171	524	524	
Tot. F. A.	**7,887**	**7,736**	**7,589**	**1,340**	**1,724**	**1,488**	**3,944**
Inv. In. Sub.					5		
Total Assets	**19,574**	**27,293**	**38,150**	**71,717**	**6,872**	**31,031**	**22,795**
Liab. & E.							
Deposits	9,338	16,055	24,081	34,300	25,384	29,474	28,173
O. Cr	1,673	2,728	3,981	55,491	3,292	5,485	12,750
Borrowings	1,633	1,633	1,200	1,200	1,200	1,200	25,599
L/T Loans						23,599	
Taxation	1,977	86	273				
Tot. Liab.	**14,621**	**20,503**	**29,535**	**90,991**	**29,876**	**59,757**	**66,522**
Stated Capital	2,914	2,914	4,547	4,572	4,572	4,572	4,572
Cap. Surplus		184	184	184	184	184	
Inc. Surplus	2,039	3,693	3,883	-24,030	-27,760	-33,483	-48,299
Equity	4,953	6,790	8,614	-19,274	-23,004	-28,726	-43,727
Tot. Liab. E.	**19,574**	**27,293**	**38,150**	**71,717**	**6,872**	**31,031**	**22,795**

Source: Co-op's audited financial statements

Table 4: Capital Adequacy Return

December 31
(¢'Million)

	1994*	1995*	1996*	1997**	1998**
1. Ordinary Capital	2,914	2,914	2,914	2,914	2,914
2.Disclosed Reserves	3,877	4,067	-23,846	-27,576	-33,299
3.P. Cap. (1+2)	6,790	6,981	-20,932	-24,662	-30,385
4. Intangible Assets	7,090	6,590			
5. F. A. (incl. rev. res.)	646	999	1,169	1,200	965
6. Adj. P. Cap. (3-4-5)	-945	-608	-22,102	-25,862	-31,349
7. H. (D/E) Cap. Ins.		1,633	1,633	1,633	1,633
8. Cn. l. capital nature					
9. Adj. Cap. Bs (6-7-8)	-945	-2,241	-23,735	-27,496	-32,983
10. Tot. A. Bal. Sh. (Excl. contra items)	27,293	38,157	71,717	6 ,872	31,031
11. Cash	1,139	2,036	1,988	2,029	2,169
12. Tr. Bl/B.O.G. Bl			7,711	6,414	7,849
13. Government stocks			85	85	6,205
14. M. D. House			5,000	5,442	400
15. Bal. with B.O.G.	1,233	589	1,339	-23,599	2,827
16. Inv. Un. Sub. Ass.					
17. Inv. in Cap. of O. Banks Fin. Inst.					
18. F. A. (incl. rev. res.)	646	999	1,169	1,200	965
19. Adj. Tot. A.	3,018	3,623	17,293	-8,429	20,414
20. G. I. & Outst.	1,214	2,450	4,516	1,657	1,058
21. Adj. A. Bs.	4,232	6,074	21,810	-6,772	21,472
22. Adj. Cap. Bs-to-Adj. A. Bs.	**-22%**	**-37%**	**-109%**	**-406%**	**-154%**
Required Ratio	**6%**	**6%**	**6%**	**6%**	**6%**

Source: Researchers made calculations based on Co-op's financial statements.

Table 5: Financial Ratios

	1994*	1995*	1996*	1997**	1998**
Profitability:					
Interest Margin (Total Assets)	1%	2%	2%	2%	-6%
Net Margin (After Tax)	57%	3%	-289%	-46%	-55%
Liquidity Risk	9%	12%	55%	-76%	13%
Asset Utilization	4%	5%	4%	5%	2%
Return on Assets	2%	0%	-13%	-2%	-8%
Leverage Multiplier	402%	443%	-372%	-30%	-108%
Return on Equity	9%	1%	131%	4%	6%
Earnings Power	92%	97%	119%	1 024%	146%
Noninterest Expenses-to-Tot. A.	2%	2%	5%	3%	8%
Net Nonint. Exps.-to-Tot. A.	0%	1%	4%	2%	6%
Efficiency	-63%	-67%	-73%	-131%	201%
Yield on Earning Assets	10%	12%	9%	9%	0%
Cost Rate on Total Funds	-1%	-2%	-2%	-2%	-6%
Risk:					
Core Deposits-to-Assets	15%	16%	12%	132%	38%
Liquid A.-to-Earning A.	7%	6%	15%	4%	3%
Net Loans-to-Deposits	38%	33%	94%	28%	18%
Net Loans-to-Core Deposits	149%	132%	362%	80%	43%
Net Loans-to-Assets	22%	21%	45%	105%	17%
Credit Quality:					
Credit Risk (this period)	22%	12%	47%	-94%	-40%
Credit Risk (accumulated)	19%	21%	45%	87%	87%
Interest Rate Sensitivity:					
Gap-to-Assets	-1%	-8%	42%	-23%	-26%
Gap-to-Equity	190%	200%	-47%	-89%	-56%
Sensitivity	958%	1 765%	5 374%	1 984%	1 793%
Capital Adequacy:					
Capital Risk	11%	12%	6%	67%	15%
Equity Capital Risk	11%	4%	2%	24%	5%
Adj. Cap. Bs-to-Adj. A. Bs.	**-22%**	**-37%**	**-109%**	**-406%**	**-154%**

Source: Ratios were calculated by researchers based on Co-op's audited financial statements.

Our findings could not be exhaustive because we were unable to get all the relevant account figures to confirm some of the alleged causes of Co-op's failure, such as the reserve requirements. Also, the A-Life Company issue is very important but we did not have any figures to explain its contribution to Co-op's failure. However, our best guess is that it might have contributed to the huge loans portfolio of ø 47,9 billion in 1996 alone compared to other periods. Notwithstanding the constraints, we were able to find the following factors that contributed to the failure of Co-op.

Co-op's performance deteriorated from a net profit of ø 2,2 billion in 1994 to constant losses of ø 27,9 billion in 1996, ø 3,7 billion in 1997 and ø 5,7 billion in 1998. Co-op's operating expenses contributed most to its low net profit of ø 2.2 billion in 1994 because if operating expenses alone were eliminated, it could have made a net profit of ø 3.9 billion. If, however, the charge for bad and doubtful debts alone were eliminated, it could have made a net profit of ø 2.8 billion. Therefore, the charge for bad and doubtful debts was the next contributory factor for the low profit in 1994. Without operating expenses Co-op could have made a net profit of ø 2.8 billion in 1995. Meanwhile, eliminating other expenses that year, Co-op could have made a net profit of ø 0,7 billion instead of the ø 0,2 billion that it generated in 1995. However in 1996, the charge for bad and doubtful debts contributed most to the loss of ø 27,9 billion. If this charge were eliminated the loss could have reduced to ø 5,2 billion. In 1997, without operating expenses Co-op could have made a net profit of ø 1,3 billion instead of the net loss of ø 3,7 billion. For 1998 the net loss of ø 5,7 billion could have reduced to ø 0,128 billion if there was no charge for bad debts. Meanwhile, it could have made a net profit of ø 0,376 billion if the operating expenses were eliminated. Therefore, operating expenses contributed the most to the loss in 1998.

Over the reference period, assets of Co-op exceeded liabilities by ø 6,8 billion in 1994 and ø8,6 billion in 1995. The subsequent two years showed a downward trend in equity (liabilities exceeded assets): -ø 19,3 billion in 1996, -ø 23 billion in 1997 and –ø 28,7 billion in 1998.

The following ratios show the accumulated credit risk, which prove that Co-op had bad loans quality: 19% for 1994, 21% for 1995, 45% for 1996, 87% for

1997 and 87% for 1998. The credit risk for individual periods was 22% in 1994; 12% in 1995 and worsened to 47% in 1996. However, in 1997 and 1998 the risk improved to 94% and 40% respectively. Gross loans and overdrafts for the individual periods were ø 3,0 billion in 1994, ø 2,5 billion in 1995 and ø 47,9 billion in 1996. In 1997 Co-op did not add to the loans portfolio but recovered a meager ø 2,7 billion from past due loans, while in 1998 its recoveries amounted to ø 13,9 billion. The charge for bad & doubtful debts for each of the years under consideration proves that Co-op's credit management was inefficient. The charge was ø 0,674 billion in 1994, ø 0,311 billion in 1995, ø 22,731 billion in 1996, ø 2,544 billion in 1997 and ø 5,595 billion in 1998. This means that the charge increased by 37% from 1993 to 1994, improved by 54% from 1994 to 1995, worsened by 7,209% from 1995 to 1996, improved by 89% from 1996 to 1997 and deteriorated by 120% from 1997 to 1998. This was a result of Co-op giving out loans and overdrafts to the tune of ø 3,029 billion in 1994, ø 2,499 billion in 1995 and ø 47,9 billion in 1996 alone. With the high charge for bad & doubtful debts especially in 1996 and subsequent low charge in 1997 and a worsening situation in 1998, it is evident that Co-op mismanaged its credit portfolio. Additionally, management's failure to perfect the security must have served as a disincentive for borrowers to repay their loans. This might have necessarily led to the huge bad loans, which contributed largely to the failure of Co-op.

The auditors of Co-op (Deloitte & Touche), made comments about the going concern ability of Co-op in their audit reports issued for the years 1996, 1997 and 1998.

In the 1996 report, Deloitte & Touche stated that:

> The financial statements have been prepared on a going concern basis. This basis may not be appropriate because the bank incurred a loss of ø 27,901,681,000 during the year ended December 31, 1996 and at that date its current liabilities exceeded its current assets by ø 20,437,795,000. An amount of ø 43 billion was owed by a single customer and substantial portion has to be recovered. These factors indicate that the Bank may be unable to continue trading.

In the 1997 report, Deloitte & Touche stated that:

> The financial statements have been prepared on a going concern basis. This basis may not be appropriate because the bank incurred a loss of ø 3,753,097,000 during the year ended December 31, 1997 and at that date its current liabilities exceeded its current liabilities by ø 24,208,941,000. The total assets of the Bank has reduced from ø 71,695,727,000 to ø 6,872,064,000. Account with Bank of Ghana was overdrawn by ø 23,598,815,000. These factors indicate that the Bank may be unable to continue trading.

In the 1998 report, Deloitte & Touche stated that:

> The financial statements have been prepared on a going concern basis. This basis may not be appropriate because the bank incurred a loss of ø 5,722,804,000 during the year ended December 31, 1998 and at that date its current liabilities exceeded its current liabilities by ø 6,092,147,000. Should the Bank be unable to continue trading, adjustments would have to be made to reduce the value of the assets to the recoverable amount to provide for any further liabilities which might arise and to reclassify fixed assets and long-term liabilities as current assets and liabilities.

Co-op failed to meet the capital adequacy requirement of 6% as stipulated in Ghana's Banking Law of 1989, section 8. For the period under review, Co-op's capital adequacy ratios were -22% in 1994, -37% in 1995, -109% in 1996, -406% in 1997 and -154% in 1999.

In conclusion, chapter five investigated why Co-op failed. Co-op was a Ghanaian bank, which was liquidated in 2000. Books, newspapers, articles from the internet and Co-op's financial statements - profit and loss accounts and balance sheets (1994 to 1999/2000) were used in the investigation. To gain a broad understanding of the causes of the failure of Co-op, standard financial measures such as profitability ratios (table 5) were computed based on figures from Co-op's financial statements (tables 2 & 3 and appendix 2). Many reasons for Co-op's failure, such as constant losses, inefficient credit management, failure to satisfy the capital adequacy rule, incomplete financial information and failure to satisfy the Central Bank's reserve obligations were found.

PART FOUR
ANALYSIS AND REVIEW

6. ANALYSIS

Does Co-op's failure confirm, challenge or extend the theories on some causes of bank failure? In order to answer this question, this chapter analyzes and reviewes the theoretical and empirical findings. Time series data covering 1994 to 1999/2000 for performance indicators of Co-op were gathered as the basis for the case study. The data included financial statements, the official liquidator's first and second creditors' meeting reports, newspaper articles and internet resources. This was to establish the major causes of Co-op's failure, which might have occurred over time before its eventual liquidation. In line with Yin (1994: 106), the analysis was also based on the existing literature as well as applying a descriptive approach by showing the operational performance of Co-op quantitatively to explain why it failed. The predictions were then matched with the actual events shown in the time series to confirm the theoretical propositions. The chapter also shows competing explanations to the various theoretical arguments as recommended by Yin (1994: 108-109). The following is the analysis and review of the findings of the case study versus the existing theories on some causes of bank failure.

6.1 Deteriorating Economic Factors

According to Hooks (1994), Eisenbeis (1986, cited by Hooks, 1994) and Goodhart et al. (1998), deteriorating local economic conditions (e.g. inflation, interest rates, and exchange rates) and macroeconomic factors (e.g., sudden adverse movements in a country's terms of trade and sharp fluctuations in world interest rates, real exchange rates and inflation rates) worsened by regulations that are imposed on banks cause a bank failure.

Benoni & Osei (2001) state that in 1998 the El Nino situation triggered drought and energy crisis, as the declining international economic activities adversely impacted on global prices of Ghana's two main export commodities – gold and timber. In 1999 and 2000 Ghana's economic system resulted in a budget deficit of about 8,8% of GDP. The failure of Co-op is consistent with the theoretical prediction.

6.2 Regulation of Banks

6.2.1 Government Deposit Insurance Scheme

According to various writers on banking - Goodhart et al. (1998), Kareken (1981, 1983, cited by Hooks, 1994), Kareken & Wallace (1978, cited by Hooks, 1994), Hooks (1994), Palubinskas & Stough (1999) and White (1993), a government deposit insurance scheme motivates banks to engage in risky investment activities. They explain that the scheme results in unpaid loans, because banks and customers have nothing at stake when deposits are badly managed or lost through fraudulent actions. They conclude that the system encourages unskilled management and fraudsters, irrespective of the regulation. The test of this proposition revealed that there was no government deposit insurance scheme instituted by Ghana government to protect Co-op from failure. Therefore, its demise is negatively related to the theoretical claim.

On the other hand a competing claim by Kareken & Wallace (1978, cited by Hooks, 1994: 36) note that a deposit insurance scheme could reduce bank crises, because they may encourage banks to minimize their volume of risky investments. Eisenbeis (1986, cited by Hooks, 1994: 10) adds that regulation through a deposit insurance scheme should be based on the risk of an individual bank and a ceiling on the insurance scheme. Such a system can enhance the financial strength if it is sufficiently patronized, and controls like an effective banking supervision plan exist. (Helfer, 1999).

Also Friedman (1960, cited by Hooks, 1994: 37) adds that a government deposit insurance system is valuable, because it eliminates the motive for depositors to start running away from one bank to the other. According to Kaufman (1996), a deposit insurance system, which gives a complete coverage may have a ceiling for each account and no coverage may be given above the ceiling. The system may give the depositors security and also motivate them to observe and control their banks via market forces and so complement prudential control. However, in theory, the exact sum of money for the ceiling is hard to set.

6.2.2 Prohibition of Banks from Establishing Branches and Limiting Bank Investments

In the opinion of Selgin (1996), Hooks (1994), Goodhart et al.(1998), Hempel & Simonson (1999), O'Driscoll (1988, cited by Hooks, 1994) and White (1986 cited by Selgin, 1996), geographical limitations pose significant threats to banks; branching restrictions could constrain banks from spreading their investment activities in different locations and banks may use flexible investment freedom to focus on limited higher-risk categories. They further observe that a branching limitation raises a bank's vulnerability to risks for its liabilities as well as its assets. In this light Benston & Kaufman (1996 cited by Kaufman, 1996) states that limiting banking activities and branching rules that banks are subjected to for prudential purposes, may be eliminated. Co-op had 21 branches across Ghana and so there is a negative relationship between its failure and the theoretical prediction.

6.2.3 Capital Requirements

Goodhart et al. (1998), Palubinskas & Stough (1999) and Polizatto state that as a bank's capital decreases, the higher its motivation for actions towards survival, leading to more dangerous risk-taking activities. They add that capital is essential to cushion losses incurred by banks and that adequate funds reduce risk-taking, emphasizing that the more funds a bank has, the lower the probability of bankruptcy for any estimated risk. The test revealed that the equity of Co-op was ø 6,790 billion in 1994 and ø 8,614 billion in 1995. It declined to –ø 19,274 billion in 1996, -ø 23,004 billion in 1997, -ø 28,726 billion in 1998 and –ø 43,727 billion in 1999/2000. The failure of Co-op suggests a positive relationship between inadequate capital requirements and a bank failure in conformity with the literature.

6.2.4 Inadequate Reserve Requirements

Friedman (1960, cited by Hooks, 1994) and White (1999) state that bank failures arise because banks do not keep all their deposits in statutory reserve

funds. The findings failed to test this theoretical hypothesis because the relevant data to confirm it were not available.

6.2.5 Forbearance

Hempel & Simonson (1999) and White (1993) state that forbearance contributes to bank crisis by permitting distressed banks to continue their operations. It is disadvantageous to banks, because usually when banks lack adequate funds and remain in operation, their capital situation deteriorates. Co-op's earnings of ø 2,153 billion in 1994, ø 0,191 billion in 1995, -ø 27,913 billion in 1996, -ø 3,735 billion in 1997 and –ø 5,723 billion in 1998 showed a declining trend. This shows that it enjoyed forbearance for some years prior to the liquidation in 2000. Co-op's failure is compatible with the literature.

Opposing literatures by Eisenbeis & Horvitz (1994, cited by Goodhart et al., 1996: 52-54) justify the importance of forbearance with the following arguments: (i) Dramatic liquidation of a bank could result in depositor run, which could be more expensive than rescuing the intermediary for some time and having it to survive profitably. (ii) Occasionally the closure, or fire sale [5]of an intermediary (in some cases, its assets alone) could yield lower than its real intrinsic value. (iii) Some assets of a bank could have a higher value even in its distressed status than when the assets are placed under different management or under regulators. (iv) Empirical studies have proved that the ratio of liquidation expenditure to the assets of a liquidated bank is high. They conclude that if any or all the above points hold in any given situation, then the advantages of forbearance are higher than the disadvantages. Therefore, according to Eisenbeis and Horvitz, forbearance is good.

[5] Fire sale: A condition where prices of assets are considered to be very low.

6.2.6 Lender of Last Resort

Selgin (1996) and White (1999) observe that governments use the lender of last resort mechanism to help some stakeholders of banks which are failing. This is done by either replenishing the reserves or combining the operations of distressed banks. The measure could rather encourage banks to engage in more risky activities. According to Bank of Ghanaweb site and Investek Consultancy Services Limited, Bank of Ghana is a lender of last resort for banks in Ghana. It is stated in the notes to the 1994 financial statements of Co-op that there was a take-over of the bank on July 15, 1992. Data in respect of the take over from which to ascertain if there was a lender of last resort implication in Co-op's failure were unobtainable. Therefore, a direct relationship between Co-op's failure and this theoretical argument could not be established.

A competing theoretical argument about the lender of last resort is noted by Smith & Walter (1997: 158) who say that some nations have established mechanisms to give distressed banks solvency by repaying credits owed by borrowers. This is done to allay the fears of depositors. Hooks (1994: 38) notes that through the lender of last resort measure, a central bank identifies "illiquid from the insolvent" banks better than the banks themselves do. Kindleberger (1989, cited by Hooks, 1994: 38) is in favor of the lender of last resort measure and adds that the eagerness of banks to expand their activities is difficult to control.

6.3 Deregulation of Banks

Hooks (1994), Chu (1996) and Kareken (1981, 1983, cited by Hooks, 1994) state that deregulation encourages banks to engage in deceptive operations and over-expansion. If regulators eliminate the application of strict maximum deposit interest rates imposed on banks, resulting in the increase of deposit interest rates, banks will choose riskier investments.

Ghana eliminated limitations on bank credits from 1988 to 1992. Since then Ghanaian banks are free to set the amount and choose the type of borrowers to

lend money to. Additionally, in 1987/88 ceilings on interest rates were removed, allowing banks to set their preferred interest rates on deposits and credits (www.winne.com).

A single customer owed Co-op an amount of ø 43 billion and substantial portion had to be recovered (Deloitte & Touche, 1996). An anonymous source (2002) added that Co-op had given bad loans of about ø 36 billion to a single borrower (A-Life Company) thereby affecting its operations negatively. The failure of Co-op confirms the theoretical argument.

Competing theoretical arguments by Hempel & Simonson (1999), Spollen (1997) and White (1984, cited by Hooks, 1994) note that banking regulation is a disincentive for other institutions, creditors and customers to effectively monitor their interests in banks in an independent way. They conclude that deregulation enhances banking stability.

Selgin (1996) and Dothan & Williams (1980, cited by Hooks, 1994) state that the purpose of a ceiling on deposit interest rates (i.e. regulation) is to prevent banks from mobilizing deposits by giving borrowers big amounts of funds, with high interest income to the banks. They argue that the ceiling reduces a bank's capability to mobilize funds when it becomes illiquid, concluding that this can cause bank failures.

Co-op operated in a deregulated regime and so its capability to mobilize funds might not have been restricted. Hence it should not have failed if deregulation ensures banking stability. Its failure confirms that deregulation contributes to a bank failure.

6.4 Mismanagement

Spiegel et al. (1996) and Pantalone & Platt (1987, cited by Hooks, 1994) state that banking crises mostly come from the absence of good managerial ideas in decision-making, adding that excessive risk-taking is the main cause of bank failures. Palubinskas & Stough (1999) and White (1993) observe that a shortage of competent bankers in respect of loans' risk appraisal contributes to

many of the loan defaults, lack of managerial skills leads to a situation where there is no credit evaluation. Co-op's management's failure to perfect many securities attached to loans and its eventual liquidation shows a direct relationship of its failure to the theoretical prediction.

Spollen (1997), Goodhart et al. (1998) and Heffernan (1996) also add the following factors to the causes of the failure of an organization: insufficient number of staff, over-reliance on one member of staff, compensation tied to performance, inability of management to ensure compliance with laid down procedures, such as the board of directors not effectively addressing audit queries. The impact of these independent theoretical hypotheses on the failure of Co-op could not be tested because the relevant data were not obtainable. However, the empirical study revealed that Co-op incurred persistent losses and was unable to meet the required capital adequacy ratio of 6%. Throughout the time period under consideration, the external auditors pointed out this weakness, but it seems Co-op's management ignored the warning. The failure to sustain earnings and meet capital adequacy ratio suggests that there existed a positive relationship between the theoretical hypotheses and Co-op's failure.

6.4.1 Fraud and Corruption

Smith & Walter (1997), Fitchett (1996) and Heffernan (1996) state that fraud and corruption cause banks to fail. The empirical study could not test this theoretical supposition. The only clue on fraud and corruption hinges on the A-Life Company issue, which is being handled by the courts.

6.4.2 Poor Risk Management Procedures

Hempel & Simonson (1999), Goodhart et al. (1998), Spollen (1997), Chimerine (1998), Palubinskas & Stough (1999) and Polizatto state that a bad lending tradition, such as lack of dependable financial information on borrowers for assessing creditworthiness, leads to a high portfolio of unpaid loans. They emphasize that bad loans and connected lending cause a bank failure. Kindleberger (1989, cited by Hooks, 1994) and White (1993) add that over investment is directly related to high risk-taking and this causes a bank failure.

Co-op had poor credit control, huge loans with bad quality and inadequate financial data on borrowers and its management failed to perfect many securities attached to loans (PricewaterhouseCoopers, 2000, an anonymous source, 2002 and ghanaweb.com). The empirical work revealed for example, that Co-op's gross loans in 1996 of ø 47,9 billion were the riskiest investment during the time period under consideration. Co-op's failure is therefore compatible with the theory.

According to Goodhart et al. (1998), Heffernan (1996) and Polizatto another important variable, which leads to bank failure is asymmetric information between a bank and other stakeholders, such as investors and customers. This creates a moral hazard problem. The failure of Co-op implies that there might have been asymmetric information between Co-op and other stakeholders. This factor is difficult to quantify and therefore the direct relationship of Co-op's failure and the theory could not be confirmed.

6.5 Political Interference

Goodhart et al. (1998) and Caprio & Honohan (1999) point out that politically directed lending leads to banking crisis. Occasionally, the credits are given to government suppliers leading to the failure of the banks involved. The implication of this is that such loans are not paid off. The empirical test could not investigate this theoretical argument because of its qualitative nature. Therefore, Co-op's failure and its direct relationship to this theoretical argument could not be established.

In summary, chapter six attempted to investigate the relationship between the failure of Co-op and the hypotheses on some causes of bank failure. The purpose was to test the theories using the failure of Co-op as empirical work. Financial measures were given to ascertain the degree of fragility of Co-op that caused its demise. Many different claims by different authors explaining why banks fail have been matched with some causes of Co-op's failure. Competing explanations to the various arguments have also been shown. It was not, however, possible to confirm the relationship between Co-op's failure and some of the propositions because of lack of relevant data. The approach

revealed several different kinds of theoretical predictions and their direct relationship with Co-op's failure.

PART FIVE
CONCLUSION AND RECOMMENDATIONS

7. CONCLUSION AND RECOMMENDATIONS

This chapter concludes the thesis. It also gives some recommendations for the Ghanaian banking sector to help prevent or eliminate recurrence of bank failures.

7.1 Conclusion

The thesis has given theoretical and empirical answers to the question, why do banks fail in general and in particular, why did Co-op fail? This problem stated in chapter one has been solved as shown in chapters three to six.

Chapter one gave the background of "Some Causes of Bank Failure". It presented the problem, purpose, scope and delimitations of the study, concluding with an outline of the thesis.

Bank failures can be harmful to the economy and so are considered very important and many writers have emphasized their costs implications. The costs and effects of banking instability necessitate a study of the causes of banking crisis. Many different hypotheses give explanations of the causes of the failures. This thesis tested the hypotheses, using the failure of Co-op as an empirical study.

Chapter two provided the research design of the thesis. It showed the methods used to collect data (qualitative and quantitative) and resolve the problem, which included the study of different literatures on some causes of bank failure, an empirical study on Co-op and an analysis of the theories against the actual causes of the failure of Co-op. Competing (Rival) theories on some of the Causes of Bank Failure were given. To help with the evaluation of the worth of the research, the four validity tests - construct validity, internal validity, external validity and reliability were used.

Chapter three analyzed and reviewed the theories on some of the factors behind banking crisis. It showed understandable theories and the conditions within which the theories are confirmed to result in bank failure. Several different authors have given different conditions that contribute to banking crisis.

Chapter four gave an overview of the Ghanaian economy. It also looked at the financial and banking systems in Ghana. The financial sector is divided into formal and informal sectors. There is a close relationship between the formal and informal financial sectors with respect to borrowing and lending activities. Ghana's formal financial system is composed of banking and non-banking divisions. The banking system, which is relatively recent, was inherited from the British system. The general purpose of the various banking laws in Ghana is to safeguard assets and disclose relevant financial information. Ghana's central bank (Bank of Ghana) replaced the West African Currency Board (WACB) after Ghana's independence in 1957. The Bank of Ghana decree (1957) authorizes the central bank with the responsibility to print currency, be the Government's banker and monetary representative, regulate the financial sector and supervise banks in Ghana, among others. The central bank is a lender of last resort for banks in Ghana. The banking law 1989 P.N.D.C.L 225 gives effective prudential and regulatory foundation for the banking sector.

Chapter five examined why Co-op failed using books, newspapers and articles from the internet and Co-op's financial statements - profit and loss accounts and balance sheets (1994 to 1999/2000). To obtain good understanding of the causes of the failure, financial ratios based on figures from Co-op's financial statements were computed.

Chapter six attempted to investigate the relationship between the failure of Co-op and the theoretical literatures on some causes of bank failure. The purpose was to test the theories on some causes of bank failure using the failure of Co-op as empirical work. Financial measures were given to ascertain the degree of fragility of Co-op that caused its demise. Many different claims by different authors explaining why banks fail have been matched with some causes of Co-op's failure. Competing explanations to the various arguments have also been shown. It was not, however, possible to confirm the relationship between Co-op's failure and some of the theoretical propositions because of lack of relevant data. The approach revealed a direct relationship between several different kinds of theoretical propositions on causes of bank failure and Co-op's failure.

Some of the causes of Co-op's failure have been found to confirm the theoretical predictions on some causes of bank failure. The purpose of this

study was to determine whether the causes of the failure of Co-op have already been a subject of well-formulated theories (Yin, 1994). The research has proved that the causes of the failure of Co-op have already been a subject of well-formulated theories on causes of bank failure.

7.2 Recommendations

The study has revealed some problems in Ghana's banking sector as particularly related to Co-op. It has also shown some measures that could be used to avoid future bank failures in Ghana. These are discussed below. Howells & Bain (2000: 369) state that a general method to stabilize the banking sector is by stopping banks from engaging in high risk-taking. This could be achieved by constraining them to sell deposits and purchase credits. Goodhart et al. (1998: 38) add that the normal method for addressing loans risks is to assess intermediaries, check their credit policy and verify that they have sufficient funds as a buffer against delinquent loans. Hempel & Simonson (1999: 20) state that regulatory authorities should ensure that banks operate within secure and reliable rules, maintain a high level of observance of internal control in respect of loans, employee remuneration, other management activities and top executive competence. Hooks (1994: 49-50) advises regulators to constrain bank investment prospects to specific creditworthy groups or constrain the amount of funds committed to any one group.

Hempel & Simonson (1999: 392) state that the loan philosophy and rules of banks should be observed with the right attitude. A successful loans approach is shown by employees' adherence to management's objectives in the loans department. It is also shown in the loans department's methods and processes, which apply management's objectives and reduce errors and bad credit practices. Spiegel et al. (1996) share this view by stating that the capability to prevent non-performing credits – to uphold a tradition of valuable loans by strong banking activities is a core feature of a better bank.

In addressing *strong administration and controls,* Spollen (1997: 42, 61) advises that companies should be aware of the necessity of maintaining good management and controls such as sound, understandable, regular, periodic financial statements where the finance director gives details to the board of

directors about earnings generated. Internal audit reports should authenticate the existence and compliance levels of controls. Spollen (1997: 78, 94) touches on the creation of a *control-conscious environment* by stating that organizations should have documented rules and methods that are regularly revised, and effectively transmitted to all employees in order to ensure their successful application. This will protect a bank from failure arising from ignorance, negligence or deception.

On the issue of *effective internal audit function*, Spollen (1997: 4, 42-43) notes that companies should have a strong internal audit to safeguard their investment portfolios, status and the interests of their stakeholders from failure. This will necessitate constant description of internal audit as a constructive risk-concentrated tool, to discover, examine and guard the company from the main aspects of risks in the company. Spollen (1997: 57-58) continues by focusing on *reporting lines and independence*. He states that the internal auditor must be directly accountable to the top level management in an organization – the chief executive and the chairman of the audit committee. The proper communicating channels – specifically a direct route to the chairman of the audit committee enhances the independence of the internal auditor's role. Disapproval and comments from internal audit enables timely remedial actions to be effected, thereby preventing failure. Spollen (1997: 54-56) further advises companies to *set up efficient audit committees* that should hold regular meetings. The meetings could be held with the head of internal audit, the finance director and the senior partner on the external audit team. Goodhart et al. (1998: 51) add that the status and integrity of an intermediary in managing risk could be enhanced by the existence of internal or external supervision of its operations. A bank could, therefore, institute an internal audit committee. The purpose is to have the internal audit system be accountable to an independent body, which can ensure that the chief executive officer addresses concerns that are within his authority.

According to Hooks (1994) regulation - deposit insurance and the designation of a lender of last resort could reduce banking crisis. Studies by Friedman (1960, cited by Hooks, 1994: 37) and Kaufman (1996) support this view partially. Kareken (1981, 1983, cited by Hooks, 1994: 9) argues that government regulation is important because of the misrepresentations in banks'

risk preferences, which result from deposit insurance. Hooks (1994: 39) believes that prudential regulation of banks can counteract misrepresentations resulting from government deposit insurance at a flat-rate fee.

According to Hooks (1994), government control of banks by checking and examining their operations should be on a regular basis and comprehensive enough for it to be successful. Hempel & Simonson (1999: 20) add that apart from inspecting and examining the activities of banks, regulatory authorities should also pay attention to risks associated with the financial industry as a whole. Goodhart et al. (1998: xvii, 42) also advise that regulatory authorities may assist in reinforcing internal controls by basing the regularity and degree of their inspection on the quality of the management control system. In view of the differences involving the expenses incurred by intermediaries and other stakeholders, supervision should entail reliable rules that may not jeopardize the successful banks, but assist in preventing risk-prone banks.

Palubinskas & Stough (1999) advise that a deposit insurance scheme by banks rather than by governments makes sure that each bank handles the scheme effectively, because banks fund the scheme themselves. Banks will be compelled to have the requisite working capital to address a crisis early.

Polizatto (year not given) notes that those who oversee the operations of banks should check the organization and "strategic plans" of each bank and also consider the competence of managers to achieve the plans. They should ensure that existing management structures are adequate to guarantee conformity with laid down rules. They should also motivate banks to set up and reinforce their management structures in order to prevent banks from failing. Bank managers should have in place a documented financial plan, managerial communication systems, internal credit updates, operational manuals, internal and external audit operations, and internal management. Goodhart et al. (1998: 40-41) also add that many methods, practices and structures may assist to strengthen a bank's risk-management systems. Internal auditors and audit committees, together with reporting lines to different levels of management, must be established. Like Polizatto and Goodhart et al., Spiegel et al. (1996: 51) emphasize that organizations should possess competent managers to guide them and make them concentrate on what gives them a competitive advantage.

Polizatto further advises that all banks should have in place strong accounting and internal control systems. Banking supervision guarantees effectiveness of the financial sector rather than the effectiveness of each bank and also safeguards the interests of depositors. Their operations should concentrate on high risk aspects of the banking system, especially banks whose failure could result in systemic risk. The high risk aspects include asset worth, interest rate hazard and foreign exchange operations. Banking supervisors should not check and inspect the operations of every segment of banks, but rather they should concentrate on segments that have important effects on a bank's total situation. The rest of the segments should be assessed on a sample basis.

Goodhart et al. (1998: xviii, 41) point out that even though regulators have a supervisory responsibility to banks, bank failures could be prevented when managers themselves address risks effectively. They add that irrespective of the skills of supervisors, the regulators may not be able to prevent human errors.

According to Kaufman (1996) countries with high macroeconomic volatility should be subjected to higher capital adequacy rules with the aim of having immediate remedies for their problems. Dothan & Williams (1980, cited by Hooks, 1994: 36) add that monitoring a bank's investments, especially their composition and level, may counteract its risky activities. It is important to require a bank to keep sufficient risk-free securities (bonds) to continue being solvent.

Palubinskas & Stough (1999) and Kaufman (1996) name capital requirements as a possible mitigating factor against bank failures. Goodhart et al. (1998: 57) advise that the more funds a bank has, the lower the probability of bankruptcy for any estimated risk. Therefore, supervisors should apply different measures in line with the position of capital at every point in time. Howells & Bain (2000) state that the law for maintaining solidity of banks focuses on capital adequacy requirements. They also share the same opinion with Eatwell (2000: 40, 42) who notes that capital adequacy rules oblige banks to keep a specified percentage of the total assets in liquid funds. Kareken & Wallace (1978, cited by Hooks, 1994: 36) agree with capital adequacy rules but add that the rules do not help when used in isolation.

Hempel & Simonson (1999) and White (1993) advise that banks must be encouraged to cease their operations as their earnings sustainability reduces, because forbearance could result in the public bearing the burden of their failure in the long run.

Kinsey (1998: 19) states that issues of data control and expenditure on assets have compelled banks to handle their records in a better manner. Hence, regulators require banks to keep their data in good way. Spiegel et al. (1996) add that banking is now a knowledge-based discipline. Acknowledgment of this know-how is a key point in the sustainability of earnings of banks. Enhanced expertise permits banks to reduce their operational expenses, maintain improved communication channels and client data to boost performance. Essinger (1999: 26) also notes that virtual banking has two advantages: it minimizes irregularities involving cheques, which is the main reason given for losses incurred by banks; it also assists banks to maintain complete records of every operation. This is because all the transactions are computer-based and this enhances audit trail, which is seen to be the most appropriate method of internal control. These recommendations could be a useful guide for preventing the recurrence of bank crises in Ghana and perhaps elsewhere.

8. SUGGESTIONS FOR FURTHER RESEARCH

This chapter gives suggestions for further research. Future research may focus on the following sub-units of Co-op which were outside the scope of this thesis:

Credit Management of Co-op

The research revealed that the major cause of Co-op's failure was its inefficient credit management. This resulted in a huge portfolio of bad loans that impacted negatively on its performance. Areas such as the availability of financial information on borrowers to help in assessing creditworthiness, appraisal of credit status, excessive focus on giving loans to certain customers and credit control may be of interest.

Deposit Growth of Co-op

The assertion that the A-Life Company's scandal led to a loss of depositor confidence in Co-op evidenced by the steady reduction in deposits, as obtained in the study could not be investigated. Deposits were ¢ 16,055 million in 1994, ¢ 24,081 million in 1995, ¢ 34,300 million in 1996, ¢ 25,384 million in 1997, ¢ 29,474 million in 1998 and ¢ 28,173 million in 1999/2000. Even though at a glance one could conclude that there was a declining trend, it will be better to conduct a comprehensive study of the various types of deposits and their decline over the time period under consideration.

Inadequate Reserve Requirements

The failure of Co-op to satisfy the Central Bank's reserve obligations could not be confirmed by this research due to lack of information on relevant data of Co-op. An investigation of this assertion may reveal whether there was mismanagement of funds such as financial slack or whether Co-op simply did not have enough funds.

Lender of Last Resort

Bank of Ghana is a lender of last resort to banks in Ghana. Co-op might have perceived that the central bank was going to intervene when it failed. In this light the measure served as an incentive for Co-op to engage in more risky activities.

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Appendix 1

Financial Ratios Formulae

Profitability

$$\text{Interest Margin (Total Assets)} = \frac{\text{Net Interest Income}}{\text{Average Total Assets}}$$

$$\text{Net Margin (After Tax)} = \frac{\text{Net Income}}{\text{Revenues}}$$

$$\text{Liquidity Risk} = \frac{\text{Liquid Aseets - Short Term Borrowing}}{\text{Total Deposits}}$$

$$\text{Asset Utilization} = \frac{\text{Revenues}}{\text{Average Assets}}$$

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Average Assets}}$$

$$\text{Leverage Multiplier} = \frac{\text{Assets}}{\text{Equity}}$$

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Average Equity}}$$

$$\text{Earnings Power} = \frac{\text{Earning Assets}}{\text{Total Assets}}$$

$$\text{Non - interest Expenses to Total Assets} = \frac{\text{Non - interest Expenses}}{\text{Average Total Assets}}$$

$$\text{Net Noninterest Expenses to Total Assets} = \frac{\text{Noninterest Expenses - Noninterest Income}}{\text{Average Total Assets}}$$

$$\text{Efficiency} = \frac{\text{Noninterest Expenses}}{\text{Net Interst Income} + \text{Noninterst Income}}$$

$$\text{Yield on Earning Assets} = \frac{\text{Interest Income}}{\text{Average Earning Assets}}$$

$$\text{Cost Rate on Total Funds} = \frac{\text{Interest Expenses}}{\text{Average Total Liabilities} + \text{Average Equity}}$$

Risk

$$\text{Core Deposits to Assets} = \frac{\text{Core Deposits}}{\text{Total Assets}}$$

$$\text{Liquid Assets - to - Earning Assets} = \frac{\text{Short - term Investments (< 1 year)}}{\text{Earning Assets - Short - term Investments}}$$

$$\text{Net Loans - to - Deposits} = \frac{\text{Net Loans}}{\text{Total Deposits}}$$

$$\text{Net Loans - to - Core Deposits} = \frac{\text{Net Loans}}{\text{Core Deposits}}$$

$$\text{Net Loans - to - Assets} = \frac{\text{Net Loans}}{\text{Total Assets}}$$

Credit Quality

$$\text{Credit Risk (This period)} = \frac{\text{Provision for Loan Loss Expenses (This period)}}{\text{Gross Loans (This period)}}$$

$$\text{Credit Risk (Accumulated)} = \frac{\text{Accumulated Provision for Loan Losses}}{\text{Accumulated Gross Loans}}$$

Interest Rate Sensitivity

$$\text{Gap - to - Assets} = \frac{\text{Interest Rate Sensitive Assets - Interest Rate Sensitive Liabilities}}{\text{Total Assets}}$$

$$\text{Gap - to - Equity} = \frac{\text{Interest Rate Sensitive Assets - Interest Rate Sensitive Liabilities}}{\text{Equity}}$$

$$\text{Sensitivity} = \frac{\text{Interest Rate Sensitive Assets}}{\text{Interest Rate Sensitive Liabilities}}$$

Capital Adequacy

$$\text{Capital Risk} = \frac{\text{Total Capital}}{\text{Total Assets}}$$

$$\text{Equity Capital Risk} = \frac{\text{Common Equity}}{\text{Total Assets}}$$

$$\text{Adj. Cap. Base - to Adj. Asset Base} = \frac{\text{Adj. Cap. Base}}{\text{Adj. Asset Base}}$$

Appendix 2

Figures included in the calculations of financial ratios but which are not shown separately in the profit/(loss) statements and the balance sheets

(¢'Million)

	1993	1994	1995	1996	1997	1998
Short-term funds		3,015	4,210	19,910	5,442	2,299
Earning Assets (Interest Rate Sensitive Assets):						
Balances with Banks + Money at call		3,015	4,210	19,910	5,442	2,299
Government Securities		6,519	9,040	12,472	11,175	14,053
Net Loans and Overdrafts		6,115	7,926	32 ,05	7,194	5,167
Total		**15,650**	**21,176**	**64,487**	**23,810**	**21,519**
Noninterest expenses:						
Operating Expenses		1,715	2,586	3,904	5,033	6,098
Other Expenses			500	6,590		
Total		**1,715**	**3,086**	**10,494**	**5,033**	**6,098**
Noninterest Income:						
Commissions and Fees		599	849	1,489	883	1,258
Other Operating Income		187	222	192	587	66
Other Income		644	595			
Total		**1,430**	**1,667**	**1,681**	**1,471**	**1,324**
Core Deposits - Savings Deposits (most stable funds)		4,105	6,002	8,873	9,042	11,885
Accumulated Gross Loans	4,540	7,569	10,068	58,000	55,285	41,292
Accumulated Provision for Loan Losses	1,232	1,454	2,142	25,895	48,092	36,125
Deposits (Interest Rate Sensitive Liabilities)		16,055	24,081	34,300	25,384	29,474
Gross Loans (this period)		3,029	2,499	47,932	-2,715	-13,994
Cash in Hand		1,139	2,036	1,988	2,029	2,169
Treasury Bills				7,711	6,414	7,849
Government Stocks				85	85	6,205
Money at Discount House				5,000	5,442	400
Balances with B.O.G.		1,233	589	1,339	-23,599	2,827

Appendix 3

Definitions

Asymmetric information: A situation where one party to a financial transaction has better information than the other about factors relevant to the transaction.

Bail out: For example, the government may give a subsidy to a borrower by granting the borrower monopoly privilege or other means to improve its profits and thereby repay loans or by directly injecting funds into banks.

Connected lending: Loans extended to banks' owners or managers and to their related businesses.

Forbearance: Abstaining from the enforcement of a right to close a bank which is making losses.

Going concern concept: That an enterprise will continue in operational existence for the foreseeable future.

Moral hazard: Actions by economic agents in maximizing their own utility to the detriment of others in situations where they do not bear the full consequences of their actions.

Regulation: Changing the behavior of financial intermediaries through the creation of the appropriate incentive structure.

Systemic risk: Risk for the whole of the financial system, probably arising through contagion from problems in individual banks, sectors of the market or countries.