AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN QUALITY IMPROVEMENT AND FINANCIAL PERFORMANCE FOR COMMERCIAL BANKS IN KENYA

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DECLARATION

I hereby declare that this project work is my original work and has not been submitted for a degree examination in any other University.

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Date..6th NOVEMBER 2003.

This project work has been submitted for examination with my approval as the University Supervisor.

Signed.....

MOSES N. ANYANGU

Date .....7/11/03.....

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CODES

FINANCIAL VARIABLES

ROA	-	Return on Asset
LIQUIDITY	-	Liquidity Ratio
LEVERAGE	-	Leverage Ratio
EFFPRRAT	-	Efficient Productivity Ratio

QUALITY IMPROVEMENT VARIABLES

TURNOVER	-	Staff Labour turnover
CUSCOMP	-	Customer Complaint
OVERTIME	-	Staff Overtime
ABSENT	-	Staff Absenteeism
COST OF QUALITY	-	Cost of Quality

BANKS

BN	-	Bank code number

ABSTRACT

The methods and techniques of quality management are spreading at an ever-increasing rate throughout all aspects of business banking sector. This spread is fuelled by many factors: Legislative, Competitive, Marketing, Aesthetic, Reliability and Financial.

The factors listed above are of varying degrees of measurability, and will have different degrees of importance depending on the nature of the commercial banks. It is the last of these factors - financial that is investigated in this project.

The project compared quality improvement with financial performance in an attempt to establish the link if any between quality and bank profitability. Information gathered by interviewing bank personnel inferred that establishment of a quality service department/customer services can be regarded as a point on a scale of progression towards improved quality. Initial establishment of quality services department/customer service dates were therefore used as a proxy indicator of the quality of banks. The relationships between financial performance of banks and quality improvement was computed and compared for all commercial banks, over a period of five years: 1998 - 2002. The sample, which consisted of 46 commercial banks, was drawn from private and public banks filing independent (i.e. non- consolidated) accounts. This method was used to ensure that the financial records being examined were as closely associated to the scope of the quality management systems as possible.

The performance of the banks was monitored using a set of indicators including liquidity, leverage, profitability and efficient on productivity. The data collected gives fairly weak evidence that quality improvement variables enhance financial performance for commercial banks. There was evidence that establishment of quality service department/customer service is taking place by commercial bank sector cohort, with the result that an initial period of success may be quickly blunted as competitors also gain through quality improvement establishment. Thus any financial benefit gained through quality improvement may be quickly lost as competitors follow suit.

This project reached the following overall conclusion:

- Quality initiatives result in fairly weak improved financial performance, the evidence of the research indicate that a clear but weak link exists.
- Quality improvement does appear to have short term or direct effect on financial performance There are undoubtedly other benefits to be gained from improved quality, but they may be very difficult to measure.

In addition to expanding the analysis undertaken in this research project, other areas for future investigation include detailed study by size of the bank, detailed study of industries i.e. financial industries sector to include micro-finance, building societies, insurance companies, use of alternative quality indicators and extending the time period.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

The use of quality management techniques is spreading steadily throughout most sectors of business. Quality system standards such as BS5750 and the IS09000 series are now accepted world-wide as models for the implementation of basic quality management techniques (Jackson & Ashton 1993). Many organizations regard the standards as essential for providing a basic structure, which will give a foundation for further development of their own quality management systems. Whilst the origin of these quality system standards can be traced directly to defence industry standards and traditional manufacturing systems, quality systems are being (and have been) developed for almost every conceivable application, from healthcare provision to software development to the provision of education services.
Quality system standards are now in widespread use throughout all types of business and commerce.
However, the question remains; "What are the benefits of quality management, and can these benefits be measured?"

1.1.1 Tangible benefits of quality improvement

There have been many valiant efforts to Justify "quality" but many of these have concentrated on the aesthetic and often intangible benefits of quality management. For example, quality gurus such as Deming,(1983) advise attention to various aspects of the organisational structure which should, in theory, result in tangible benefits to the organisation:
Drive Out Fear, Break Down the Barriers, Create Constancy of Purpose (Deming 1983)
However, it is very difficult to make any direct associations between efforts in these areas and any measurable financial benefits. The value and benefits of quality improvement have been further emphasized by various authors, resulting in slogans and exhortations such as:

- Quality-is Free (Crosby 1979)
- Poor Quality is Theft (Taguchi 1986)
- If every nation plays its part in promoting quality control, the world will find peace, and its people will be able to live together harmoniously and happily (Ishikawa 1989)
- TQM Can Save Nearly $300 Billion for Nation (Hamson 1990).

While the dramatic imagery of these statements may be tempting, they carry an element of missionary zeal and could be misleading. Subsequent research carried out within the scope of this project supports the view that the implementation of quality management is very expensive and can be highly disruptive. Many writers argue that it makes economic sense to use quality management, and higher levels of quality are often equated with higher levels of efficiency without giving any supporting hard evidence. Taguchi's declaration that poor quality is theft (Taguchi 1986) is based on the notion of an economic cost to society which, if lost through poor quality, cannot be retrieved. Poor quality means a waste of effort, resources and time, none of which can be retrieved. However there seems to be a substantial gap between the theory and the practical considerations. In practice, it may not be possible to measure accurately the benefits of quality management.

In addition, there are many possible secondary reasons for implementing quality techniques, such as competitive pressures, legislative demands, market entry requirements, and customer/vendor requirements. However, perhaps the most potent reason would be the prospect of financial benefit from the implementation of these techniques.

Many authors have made extravagant claims as to the possible savings which can be made by improving quality. An often used slogan in the quality world is that "Quality is Free" (Crosby 1979). While this may well

be true, again there is little hard evidence of this. The large investment required in terms of time, money and resources, in order to start up new systems, may cast some doubts on the truth of that kind of statement. Another problematic area is the measurement of quality costs. It has been tempting to imagine that reduced quality costs will result in savings, which transfer directly to the bottom line, but it would appear that this is rarely the case.

1.1.2 Financial performance defined

Performance is the ability to sustain income, stability and growth. It is a measurement of relative investment results, it can be relative to one of the following: assets capital, number of employees, and other size measures.
Waiter p. Stern (1968) has identified five factors (i) to (v) below, which have made measurement of financial performance complex
(i) The concern with tax structure which penalizes income and makes investment firms to put emphasis on capital gains rather than their normal operations.
(ii) Continued erosion of purchasing power which forces one to invest in capital appreciation rather than traditional income objectives.
(iii) Most companies are tied to their business cycle and cannot grow faster than the industry that they are in or their economies.
(iv) Detailed financial information is not available to the general public and reliance on annual reports and accounts, and market price performance may not be sufficient.
(v) Most markets in less developed countries including Kenya are not efficient rendering market based measures misleading.

1.1.3 Bench marking or industrial norms defined

Adopting from (Pryor 1989), benchmarking can be defined as measuring your performance against that of best-in-class companies, determining how the best in class achieved those performance levels, and using the information as the basis for your own company's targets, strategies and implementation. It is the act of searching for industry's best practices that lead to superior performance. A benchmark is therefore a standard by which an industry or group or class uses to judge the best. Benchmarks are used to understand what level of performance is really possible, and understand why the gap exists between a firm's current performance and the optimum performance.

"Benchmarking is the key to becoming the best of the best" (Bemowski 1991). This means through benchmarking banking sector executives may be able to improve their performance, hence add value to their firms. It is through benchmarking that one is able to compare services and costs of different institutions within the banking sector.

1.1.4 The link between quality improvement and financial performance

Although the need to develop appropriate performance measures is well founded, many difficulties confront those tasked with developing information system which provides such information. In order to develop reliable and effective information system, the quality of the operations in terms of controls, rules and regulations must be properly defined and well refined. In many cases quality factors are so vaguely drafted that they prevent useful performance measures being developed. Also there is the difficulty of measuring quality, where the danger is that quantity rather than quality will be emphasized, because it is almost always the case that quantity is easier to measure. The measurable may well therefore displace the unmeasurable (or the difficult to measure), resulting in a distorted picture of performance being provided. While recognizing the importance of measuring performance, the difficulties faced by those tasked with developing quality performance information system should not be over looked. An awareness of the difficulties and an understanding of the potential impact can lead to the development of more effective and better balanced systems, both financial and quality performance measures.

1.1.5 The importance of commercial banks performance measurements

By having targets for performance and by measuring achievements against targets, a basis for better management within the banking sector is provided. This can help with respect to, amongst other things: clarifying the banks objectives; evaluating the benefits of the service provision; Highlighting potential costs savings; and providing a trigger for diagnostic intervention an remedial action. Performance information, coupled with sound management judgments, can lead to improved decisions.

Performance measures can also form the basis for the discharge of accountability by commercial banks. Commercial banks are accountable to the government and to the public (shareholders) for the resources entrusted to them. This resources are provided with the expectations as to actions to be undertaken or result to be achieved. Accountability can be viewed as the requirement to explain or justify what has been done, what is being done and what has been planned. (corporate governance, performance and accountability). While there may be other bases of accountability, for example for probity in the handling of shareholders funds, geared towards shareholders wealth maximization

1.1.6 The kenyan banking sector

The growth of the Kenyan economy since independence has been accompanied by expansion and diversification of the financial system. This growth has been seen in changes in number as well as range of financial institutions and also the depth of financial intermediation. Financial development has proceeded further in Kenya than in most other countries in sub-Saharan Africa (Brownbrigde 1998). By early 1990's the financial sector composed of commercial banks, non-bank financial institutions, development finance institutions, insurance companies and a stock exchange were already in place but still in developing stage. The banking institutions that are the focus in this research, include banks that have government in the ownership structure e.g. Kenya Commercial Bank and National bank of Kenya, Foreign owned and privately owned.

Since the mid 1980's the local financial sector has experienced a series of bank failures including also the so-called political banks. Around one- third of the local banks and non- bank financial institutions in Kenya have either been closed down or have been placed under statutory management by the Central Bank of Kenya (CBK), usually after running into acute liquidity problems and repeated violations of banking regulations (Central Bank Supervision reports). Many of the railed financial institutions were technically insolvent when closed down. The extent of fragility within the financial system has exposed deficiencies in the banking sector more so in the regulatory and supervisory framework in Kenya.

The first cycle of bank failures occurred during the period 1984-1986 with the collapse of Rural Urban Credit Finance, Continental and Union Bank groups. These financial institutions were liquidated after they were unable to repay deposits obtained from Government parastatals (Brownbridge 1998). In 1989-1990 several small NBFIs and building societies collapsed and were taken over by the CBK; six of these Financial Institutions (FI's), together with the Union Bank group were then merged to form the government-owned Consolidated Bank which was given the task of restructuring their operations and recovering their bad debts. The scale of bank failure has since escalated with a total of 39 bank failures two of which were placed under statutory management, restructured and reopened and one currently under the Central Bank of Kenya statutory management (Central Bank reports). The major causes (Brownbridge 1998) of bank failure identified in Kenya have been the accumulation of bad debts (and attendant liquidity crises) because of fraudulent or imprudent lending including lending to companies connected to politicians. Adverse selection problems with regard to prospective borrowers, the poor quality of management and inadequate capitalization have also contributed to the financial fragility afflicting the financial institutions (Andrew Sheng 1996). Insider lending has been a prominent feature of several cases of bank failure in Kenya e.g. the Pan African Bank (PAB) which in 1992 was the fifth largest bank in Kenya in terms of growth assets had lent over 50% of its loan portfolios to companies controlled by the chairman, mainly to finance a five star hotel (Brownbridge

1998). Trade Bank had also expanded rapidly to become the ninth largest bank in Kenya before being placed under liquidation in 1993. A large share of its non-performing loans resulted from companies associated with its shareholders. Some of the banks closed down in 1993 were also used to facilitate other forms of large-scale fraud (The goldenberg). These bank failures have imposed substantial costs on the economy, and in particular to taxpayers, who have borne the burden of the CBK's losses of reimbursing insured deposits. They have also effected the local FI's that are managed in an honest and efficient manner.

Bank failure damages the credibility of financial institutions throughout the sector, raising the costs of deposits and forcing financial institutions to maintain high levels of liquidity as a precaution against bank runs that could lead to solvency. The need for efficiency in day-to-day operations of the financial institutions is thus evident as this will reduce chances of a bank failing and efficiency translates into good performance in the whole economy.

An efficient and smoothly operating payment system is a necessary precondition for business development, both in the country and internationally. This can be enhanced by an efficient banking system, which in turn can affect the level and rate of economic growth and the efficiency of financial markets because they will permit specialization to occur in production and help determine how efficiently transactions are made and settled (Humphrey D. World Bank paper number 260).

The Kenya banking sector performance during the years 2000 and 2001 improved slightly compared to the year 1999, despite the depressed economy (Market Intelligence, Banking Survey 2002), though earlier cases of insolvency in the industry in the late 1980s' to 1990s' including recent closure of Delphis bank has raised issues of whether the Kenyan banks are efficiently managed. However, the bank has been re-opned effective December 2002. Most Kenyan banks continue to operate under high level of non-performing loans, which portray poor risk management strategies. Currently the Kenyan banking sector is recovering despite the ailing economy. The profits in the sector rose because of the cleaning up process that many banks have undertaken on their bad debts books, stringent lending processes have currently been put in place, and as a result, the sector managed to cut its losses on loans and advances by an impressive 45 percent to Ksh 8.3 billion in the year 2001 according to the MI banking survey of the year 2002. Rather than lend out more money the sector has opted to invest in the money markets increasing the total investment in this market by 25 percent from Ksh 72.4 billion to Ksh 91 billion, Standard Chartered bank was the main player. This is prudent as further lending with an ailing economy could result in an accumulation of bad debts.

1.2 STATEMENT OF THE PROBLEM

There are many well documented cases of companies attempting to introduce Total Quality Management (TQM), only to abandon it for a variety of reasons such as poor short term results, lack of management commitment and limited tangible benefits, (Howe 1993). However, on the positive side there should be many consequential benefits [improvements in quality are rarely measurable instantaneously) in terms of marketability, reputation, reliability, repeatability, goodwill and customer loyalty. Another possible result of good quality is increased profitability through more efficient and streamlined organizations. One theory which underpins quality is that there is a cost of quality which can be reduced through use of quality management techniques, (Juran 1993). This theory therefore supports the notion that the reduction in quality costs is transferred, at least in part, into profits.

There are many successful companies, which have embraced the quality philosophy. Nevertheless, there is still a lack of empirical evidence that the endorsement of quality management has led, of itself, to any greater measure of success. In fact there are several well documented cases of companies which have failed spectacularly, despite their high profile quality efforts. For example, several past winners of the Baldrige Award have experienced financial difficulties and at least one has called in the receivers (Brown,Mark and Graham1994), (DeCarlo & Sterret 1990), (Hakes 1994)

The emergence of the locally owned private sector financial institutions has been characterized with several episodes of bank failures. (Sheng 1996), which makes one wonder whether the financial sector reforms have achieved their objectives of promoting a more competitive, efficient and prudent sound banking system.

There are several further questions which arise, and which must be answered in order to lucidate the basic research questions: There have been a large number of qualitative surveys on the effectiveness of quality management, TQM and BS5750. One problem which besets the investigation of quality issues is the lack of available quantitative information. For example, operational quality measures are generally classed as management information and are therefore often treated as of a confidential nature. It is with these observations in mind that, it was clear, further investigation into the possible link between quality management and financial performance would be useful, and this study was initiated.

1.3 OBJECTIVES OF THE STUDY

- To identify the relationship, if any, between quality improvement management and financial performance.
- To assess financial benefit associated with improved quality management.

1.4 IMPORTANCE OF THE STUDY

1. The use of quality management techniques is rising steadily throughout most sectors including the banking sector and therefore any benefits from the implementation of quality management are expressed in terms of marketability, reputation, reliability, repeatability and customer loyalty. Other reasons for implementing quality techniques in the banking sector are expounded such as competitive pressures, legislative demands, market requirements and customer/vendor specifications.

2. There is a possibility that quality initiatives are costing more than many banks realize. It therefore will follow that the findings of the study will be important to the banking sector especially to the banks managers whose aim is to avoid corporate failure and at the same time earn an acceptable return to shareholders and depositors.

3. Many banks may take up quality management as a way of improving themselves for the sake of their workforce, products e.t.c.

4. Quality management is used as a method of streamlining the business and making the management of the banks more efficient.

5. The central bank supervisory role over all commercial banks would be enhanced, made more effective and efficient. This would arise from the fact that central bank would concentrate on the identified critical factors of quality that would steer good financial performance in the commercial banks.

CHAPTER 2

LITERATURE REVIEW

2.1 FACTORS THAT INFLUENCE QUALITY IMPROVEMENT

The methods and techniques of quality management are spreading at an ever increasing rate through out all aspects of business in both the public and private sectors. This spread is fuelled by many factors.

- Legislative- In some cases, quality system standards are required by the law.
- Competitive- In many industry sectors, quality management is required merely to enter the market place.
- Marketing – Quality management is used as a marketing tool, in order to underline the quality of the product.
- Aesthetic – Some organizations may take up quality management as a way of improving themselves for the sake of their work force, products e.t.c.
- Reliability – As products take more complex, the reliability of the components becomes ever more important, and one of the main objectives of quality management is to improve by reducing variation.
- Financial - Quality management is used as a method of streamlining the business and making the management of the organization more efficient.

The factors listed above are of varying degrees of measureability, and will have different degrees of importance depending on the nature of the organization. It is the last of these factors – financial – that will be investigated in the research project.

2.2 QUALITY PERFORMANCE ASSESSMENT

There are several established methods of measuring quality performance and these methods are discussed and reviewed below.

(a) Quality Costing

This technique has been consistently referred to in almost every book available on quality management. The general principles or the method are contained in BS6143 - A Guide to the Economics of Quality Part 2 British Standards Institution (BS6143 Part 2- Guide to the Economics of Quality1991).

Quality costing first emerged in the 1950's notably, in Juran's Quality Control Handbook (Juran 1951), where the economic value of quality management was first discussed in very general terms. At that time, a common perception was that quality could be equated with high levels of cost. The benefits and savings which appeared to accrue from mass production techniques and economies of scale and the resulting reductions in overheads seemed to provide the most important and viable source of cost reduction. (Kaplan & Johnson 1987). However, statisticians and engineers such as (Juran 1951), (Deming 1983) and (Shewhart 1980) were already making the positive connection between quality and economic considerations. One of the first books on the subject of modern quality control techniques had a title, which clearly made that connection - "The Economic Control of Quality of Manufactured Product" (Shewhart 1981). However, until Juran's first attempt to raise the issue of a "cost of quality", little was done to formalize this important relationship. The formal technique of Prevention, Appraisal and Failure costing [PAF costing) was first suggested in an article "The Quality Manager and Quality Costs" (Masser 1957). The technique was further refined and a definitive book - "Quality Costs -What and How " ASQC Quality Costs Committee,(1967) set out the principles for quality costing.

Attempts to define, refine and change the terms "quality costs" and "cost of quality" have been made by many authors (Feigenbaum 1961) ,(Juran 1951),(Dale & Plunkett 1991). Juran suggested that quality costs were "costs which are associated with making, finding, repairing or avoiding defects". Since that time, there have been few major developments in the area of techniques used in the collection of PAF costs. However, there has been a substantial number of articles and books written on the subject over the past 25 years. Many of these articles are simple exhortations to use the techniques and as such are not new. However, there are also many papers which discuss the positioning of quality costing in relation to the quality management system (Campanella 1990),(Batson 1988).

The purposes for which quality costing can be used are sometimes unclear. Many articles indicate that quality costing proves a direct link between quality and profitability. A typical example is in (Hamson.1994), where the statement "TQM Can Save Nearly $300 Billion For Nation" is used as a title. This is based on typical quality costs being extrapolated according to the GNP (Gross National Product) of the United States. A NEDC [National Economic Development Council) report NEDC ,(1985), published in (1985), suggested that UK manufacturing industry could save up to £6 billion per year by reducing quality costs. However, in Garvin's book "Managing Quality" (Garvin 1988)., and in Kaplan & Norton's article (Kaplan & Norton 1992) a somewhat less emotive argument is sustained which indicates that there may be a fairly tenuous link between quality and profitability. Some writers seem to have lost sight of the fact that quality costing is merely a tool which can be used incorrectly as easily as it can be used for its original purpose.

An alternative technique for quality costing is detailed in a development of the previously referenced BSI Standards Institution, BS6143 part 1, (1992). This technique separates costs into those of conformance and nonconformance, whilst making use of a process analysis methodology. At the present time there is little that has been written with regard to this method.

(b) Quality related performance measurement

At the operational or indeed the individual level, quality is not generally measured in financial terms - if a quality error or problem occurs on a production line, it is not costed - it will be counted. It may well be costed at a later stage, in which case it becomes a reporting tool. Therefore, in some respects, quality improvement may be best controlled and implemented by the use of operational or non-financial measures. Maskell, in a series of articles (Maskell 1989)., indicates that day to day control of manufacturing and distribution operations are better handled with non-financial measures, whilst financial measures are still of importance to external reporting. Further development of a range of performance measures in the area of this project is recorded in a later book (Maskell 1991).

The types of performance measures which can be used in the context of quality have to be tailored according to the nature and objectives of the business. Several methods have been suggested as to a structure for performance measurements. Kaplan & Norton suggest a "Balanced Scorecard" structure which ensures collection of performance measures from a range of perspectives: Internal, Customer, Financial and Innovative (Kaplan & Norton 1992), in their article, they stress the problems of over-collection as well as under-collection of performance measures, whilst they also encourage a balanced view of performance measures which reflects the dynamic structure required of an effective performance measurement system. Another system of performance measures, suggested by Lynch & Cross, uses a pyramid Structure (Lynch & Cross 1991). This method is designed to cascade performance measures down through strategic, tactical and operational requirements of an organisation. Both these systems provide frameworks for ensuring a wide range of measures relevant to the objectives of the organisation. The structures do not provide any aggregated measure of quality or performance. Their purpose is to enable a balanced view of a whole range of performance measures to be taken so that relative fluctuations can be observed and understood. One major advantage of these types of measurement systems is that they can be applied to any type of business situation.

(c) Measures of business excellence

Over the past few years, there has been an increasing interest in the use of methods that attempt to measure business excellence (Bemowski & Stnitton 1995). The 'Baldridge Award' is the most popular method of this type. It. was first presented in 1988 after a substantial amount of consultation with industry experts and academics. It is described as "one of the fastest growing methods used by organizations to measure and achieve a world class rating" (Hakes 1990). A detailed description of the criteria and requirements of the Award scheme is contained in "Baldridge Award Winning Quality" (Brown, Mark and Graham1994), (Deming 1983). Assessment based on this method involves a substantial exercise. Use of this method for this project. was likely to yield reliable results, was considered impractical at the stage.

(d) Quality system standards

Prior to 1979, the only quality system standards in use in Britain were those based on defence [AQAP) requirements. BS5750 British Standard Institution,(1994) first appeared in that year, and has since gained steadily increasing acceptance throughout most industrial sectors. The equivalent international standards ISO 9000 series are identical to BS5750 and are being used worldwide. A quality management system is a key building block for total quality (Munro-Faure 1991). It does not provide a guarantee of product quality, but assures the performance of the quality management system. A systematic progression exists in the quality related strategy of most organisations of Inspection to Quality Control to Quality Assurance and finally to TQM (Dale, Plunkett & Lascelles 1990).

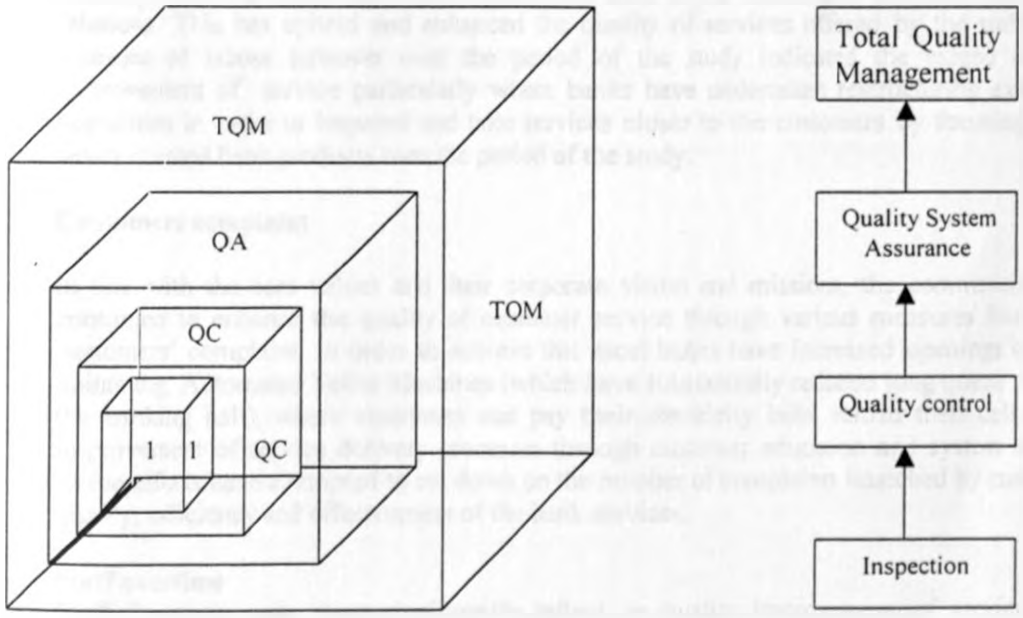

Figure 2.1 Evolution of Quality Management

Figure 2.1 adapted from (Dale, Plunkett & Lascelles 1990) graphically illustrates the widening scope and progress of an increasingly quality-oriented company. Thus the implementation of quality system standards, which equate to the Quality Assurance status is arguably a well defined step on the way to TQM.

2.3 MEASUREMENT OF QUALITY IMPROVEMENT

The first stage in the project was to conduct a series of interviews with quality managers in order to establish how the quality performance of banks could be measured. During the series of interviews, critical quality performance measures were discussed from the following preliminary list.

1. Personnel – Labour turn over
2. Customers complaint
3. Absenteeism
4. Overtime as % of Total Working Time
5. Cost of quality
6. Machine breakdown (downtime as a % of total time which has been caused by quality related problems)
7. Staff training
8. Auditors Report
9. Minimum statutory compliance
10. New Product Development Time
11. Budget/Forecast Accuracy
12. Scrap cost

1) **Staff-labour turnover**

The staff performance is a critical quality variable factor. Over the years in the commercial bank industry, and despite the challenges experienced, most of the banks have maintained sound industrial relations. This has upheld and enhanced the quality of services offered by the staff. However, a measure of labour turnover over the period of the study indicated the extend of the quality improvement of service particularly where banks have undertaken restructuring exercise in their operations in order to improve and take services closer to the customers by focusing more on the newly created bank products over the period of the study.

2) **Customers complaint**

In line with the core values and their corporate vision and missions, the commercial banks have continued to enhance the quality of customer service through various measures like reduction in customers' complaint. In order to achieve this most banks have increased openings of new paying points e.g. Automated Teller Machines (which have substantially reduced long queue of customer in the banking hall), where customers can pay their electricity bills, reload their cell phones e.t.c. Improvement of service delivery processes through customer education and system reinforcement. These efforts have attempted to cut down on the number of complaints launched by customers on the quality, efficiency and effectiveness of the bank services.

3) **Staff overtime**

Staff Overtime costs most significantly reflect on quality improvement of services offered by commercial banks. The cost implementation arising from staff overtime was assessed as an indicator of improvement on staff performance and productivity.

4) **Cost of quality**

Cost of quality for commercial banks included the cost of installing Automated Teller Machines; cost incurred as a result on reviewing and adapting new systems e.g. new system that was meant to comply with Year 2000 compliant. The trend of these costs would significantly reflect cost control efforts to manage them closely hence enhance quality of services delivered to customers.

5) **Staff absenteeism**

Productivity and efficiency in the commercial banks is affected by frequency in staff absenteeism. Absenteeism results in under-staffing necessitating long queue in the banking hall. Consequently long queues gives rise to increased customer complaints and poor services quality delivery to customer. Breakdown in service is a common feature in the small banks which are understaffed and the problem accelerated by absenteeism. Absenteeism is critical where a commercial bank has specialized in personalized banking.

6) **Machine breakdown**

System breakdown in the computer can significantly affect the quality of service delivered to the customer. Frequency in system breakdown can affected flow of information between the bank and it's customers. Bank statements are delayed. ATM withdrawal by customers is affected, payment of electricity and reloading of cell phone is also delayed and affected. The frequency of telephone call responses is critical for quality service to the customers as well.

7) **Staff training**

Staff training is a pre-requisite for improvement in better quality delivery to customers. Training on modern techniques, on customer service care, training staff on technology of computer can enhance improvement of customer service delivery. The cost investment in staff training both on new and current staff is a significant indicator on the value of quality improvement by the commercial banks over time.

8) **Audit report**

The number of times that external audit is carried out. Quality is reflected in the bank operations if proper audit work is done quarterly, than when its done only yearly. The more times the audit is done and action taken on the recommendation of the auditor the better the improvement on banks quality delivery services and operation to the customer.

9) **Compliance with statutory requirements**

Commercial banks quality improvement on delivery of service to customers is better enhanced where the banks has demonstrated complete compliance with statutory requirement on;

- Capital base
- Cash ratio
- Reserve ratio

10) **Development of new product**

Innovation and development on new products. Commercial banks quality improvement can better be reflected on the time factor and frequency of introducing new products in the market. The impact of the new product can be measured in terms of increase in turnover before and after the introduction.

11) **Forecast accuracy**

Many banks budget their operations in an attempts to maintain quality standards to expectations. This is done through profit budgets; costs budgets and customer turnover in a given period. Forecast accuracy is important as it used as a monitoring and evaluation tool to achieve targets particularly by large banks.

12) **Scrap costs**

Scrap costs in the banking industry would be categorised as costs which are both abnormal and normal costs that are beyond control of the management. However such costs are on the rise and causing concern to the banks operating efficiency. Such costs would include dormant accounts and which the banks continue to hold in their books. Customers holding such accounts would deposit minimum amounts and leave them dormant. Other accounts of this nature include unclosed accounts where customers have notified the banks to close the accounts but due to unavoidable circumstances the account still remain in the bank books. These accounts attracts high costs of maintenance by banks and which subsequently are not recovered from customers accounts for luck of sufficient funds.

2.4 ASSESSMENT OF FINANCIAL PERFORMANCE

The interpretation and analysis of financial accounting statements provides a framework for making informed judgements about a firm's financial performance and financial status. However, there are limitations to conventional methods of interpreting financial statements due to problems inherent in accounting practice (Glautier & Underdown 4th Edition). These problems undermine the usefulness of financial accounting statements (Johnson 1992). Nevertheless, these statements provide the financial accounting information that is disclosed to shareholders and investors and are thus the main source of information for interpretation. It must be stressed, however, that financial statements are by their nature historic and their main use is to monitor the past performance of a company. Historical information is not suitable for providing performance measurements that are meaningful for decision-making or for predicting future improvements. However, past trends may be used to assist in the prediction of future financial performance (Maskell 1991).

2.5 METHODS OF MEASURING FINANCIAL PERFORMANCE

The two major methods of evaluating financial performance can be in two basis:
(i) Accounting data based and
(ii) Market based.
This study considers both methods in this chapter and an outline of both is given with their advantages and disadvantages.

2.6 ACCOUNTING DATA BASED METHODS (Traditional Techniques)

These are methods which utilize accounting data, they include annual profits, earnings per share, return on capital employed or return on shareholder's equity, total return rate on assets and earnings growth rate. Most of the accounting measures are based on ratio analysis and it is important at this stage to look at various characteristics of ratios identifying some of their strengths and weaknesses.

Characteristics of ratios

Ratios are quantified concepts that allow an entity to be evaluated against its peers (likes) and its own historical performance. Evaluation of financial performance of banks largely employ skills of financial analysts who have the art of interpreting financial statements, and ratio analysis is major tool in this task.

Ratios can be classified into two, time and snapshot. Time ratios measures period-to-period changes of a single, item (e.g earnings), while snapshot measure a relationship between two items in a single period (e.g. earnings to assets both in .1988). However, what is important in ratio analysis is the level and trend. For example apart from establishing earnings as, being 20% of asset (level) one would want to know whether that ratio has been on a rising or falling (trend) over time.

Ratios can also be classified into normative and descriptive. Normative are those which permit value judgment (e.g. return on assets, net charge-offs to loans and equity formation rate). Descriptive do not permit immediate value judgment, but will tell more about the kind of entity one is analysing (e.g net interest margin, and break-even yield). To arrive at the comparative performance analysis for the Kenyan banking sector one must come out with the "mean" ratios of institutions in the same peer group (i.e those same in size, operations, locations and/or network). Ratios are also interact because one ratio can be explained by one or more other ratios. "The point is that it is essential to relate ratios together in order to make valid interpretations" (Brown 1968) and (Beaver 1979).

This means the fewer the ratio used in analysis the greater the risk of misinterpretation This problem can be compounded by the judgmental conclusions drawn by analysts.

Arguments for Accounting Economic Based Measures

1. Accounting numbers will effect any actions that are taken by managers. This means whenever managers take any actions that do not work towards improving shareholders wealth then the same will be reflected in accounting earnings figure and on any other earnings based figures or ratios. "The capital market response to an earnings announcement is correlated with the magnitude of the, unexpected component of the earnings number" (Brown 1968) and (Beaver 1979). This means the share prices of a quoted bank will fall to reflect any unexpected fall earnings and vise versa

2. Accounting ratios can be used to predict effects of some firm's position in future. (Altman 1968) used accounting ratios to discriminate between bankrupt and non – bankrupt firms where he established that the firms could have been predicted correctly two years before bankruptcy. Similarly Wansley's studies of (1983) showed that price earning ratio and other accounting ratios could be used to discriminate between firms that were takeover targets and that were not, he concluded that a correct prediction could have been made a year before the takeovers. Beaver used 30 different financial ratios and he concluded that investors use the information content of ratios in predicting corporate sickness or failure and he suggested that ratios can be used to predict failure five (5) years prior to failure. These studies show that investors and other financial decision makers can base their actions/decisions on ratio analysis.

3. Kaplan has argued that accounting measures act as a better assessment tool on managerial performance or actions than market based measures. This is because market based measures are more prone to external factors that are outside managers control.(e.g stock price/ government actions, labour shortage; general business conditions) .

4. Accounting figures are based on standard generally accepted rules, which can be used by auditors to verify their accuracy. Thus they are better measures because they are checked by both independent parties (auditors) and any users who are familiar with such rules.

5. Accounting measure are simple to compute and the information required is always readily available. For example, bank and financial institutions are legally required to publish their annual balance sheet once a year in any public daily news. This means some accounting information for the sector is readily available to any interested party through the press.

Disadvantages of Accounting Based Measures

Financial statements data have inherent limitations, and it follows then that ratios inherit some limitations from them.(Miller 1966) argued that earlier studies were theoretically and practically wrong because they emphasised individual ratios as opposed to combination of highly reflective ratios or multivariate ratios that were studied by (Altman 1971).

1. Accounting numbers are based on 'ad-hoc' rules specified by the accounting profession. Lack of consistency of these rules within and between firms is a problem in arriving at true comparative analysis. For example institutions being compared may have drawn their accounts using different accounting policies like KBC who used historical cost with modification for revaluation of freehold and lease properties in 2001, which other banks may not have.

2. When accounting numbers reflect an increased performance it is not automatic that shareholders wealth also increases correspondingly. (Rappaport 1981) identified this feature in USA between (1974) and (1979) when EPS grew by 15% while in the same period return to ordinary shares was below inflation rate or negative. This means in some situations there may be some inconsistency between accounting measures and shareholders wealth. This feature would be more significant in periods of high inflation.

3. Management can increase accounting earnings by using actions that do not benefit the stockholder or even decrease the firm's value. (Kaplan 1988). e.g. sell—of assets whose market value is well in excess of book value or changing accounting policies like depreciation methods.

4. Window dressing of accounts is another disadvantage. This is serious in banking industry as it is easily employed to derive some desired balance sheet appearance. It is mainly used to conceal poor or deteriorating financial positions.

2.7 MARKET BASED MEASURES

Out of the above negative arguments on accounting based measures other non-accounting based methods have been developed and the most important one is the market based. Shareholders are interested with what they can fetch incase they sell the share now or in future. This means market values would be of more relevance to them than accounting-based or book values.

Advantages of Market-based Measures:

1. Managers cannot easily manipulate share price values as compared to accounting numbers which can easily be manipulated through change of accounting policies.

2. Share prices are derived from market forces (demand and supply) by investors, or brokers who act on any information related to the firm. This process makes it a more objective measure than the accounting measures which are based on arbitrary accounting principles applied by managers.

3. Measuring shareholders wealth using market based information. In simple, change in shareholders wealth = change in share price over a period plus dividends over the period, (i.e. after making adjustment for inflation).

4. Market share price is seen to be a better estimate of future cash flows than book values.

Disadvantages of Market Measures

1. A share price may not really reflect the real value of the firm because it considers only that information which is available to the public and may not include any inside information.

"The people within the firm do not want to tell the world about all those transactions, partly because it would be costly and partly because it would give out information the firm might regard as proprietary" Fisher Black.

This means the conditions of inadequate disclosure of information forces users of financial statements to manipulate what is reported to get out the best estimates of a firm's value.

2. It may be unfair to use share prices to evaluate financial performance of managers because share prices incorporate external market factors which are beyond the managers control (Kaplan 1988) If, used it, may cause some unfavourable transfer of wealth between shareholders and managers.

3. Kenya capital market may not be well developed and even some publicly available information is not adequately processed. This is because for share prices to reflect true shareholders wealth there must be a mature and an efficient capital market. From the above arguments against market based measures one can conclude that Kenyan banking sector share prices may have little or no relation to the true value of banks.

2.8 SELECTION OF AN APPROPRIATE METHOD

Where an efficient capital market exists then the market determines the prices of securities of various firms and security prices have been shown to be useful forecasts of firm performance reflecting future performance in a relatively unbiased way. In countries like Kenya where capital markets are not well developed as quoted earlier we are forced to rely on available financial data which takes us to traditional form of analysis. The basic difference of the two methods is that market prices reflect a point in time value while accounting data based values are associated with a period as they measure change in value over a period. This may explain why published accounts must have previous year's figures to facilitate evaluation of change in value over time. Beaver in his later studies concluded that there was no perfect association between ratio forecasts and market movements he suggested that investors look at both ratio and non-ratio information (Beaver 1968) From the above analysis of the two major methods it can be concluded that none may be considered the best. It is recommended that both are used because a single method may not be best for all firms. Consideration was given to the purpose of measurement e.g. if it is for evaluation of management then it is more sensible to use that which has less influence from external factors.

CHAPTER 3

RESEARCH METHODOLOGY

POPULATION

e population of the study covered the entire banking industry comprising of 46 Commercial banks in nya under the banking act (CAP 488) Section (4) and (5) that were listed in the Directory of commercial nks as at 31st December 2002. Subsequently, the project was carried out under census, and therefore no mpling was done. The list of the banks is shown in Appendix III. The research covered the period between 98 and 2002.

DATA COLLECTION

e study made use of both primary and secondary data. Primary data was collected using semi-structured estionnaire, which were administered by the researcher. A sample Questionnaire developed for this purpose is attached as Appendix II. Questionnaire was administered to the head of quality and assurance partment of the banks under study to ensure that respondents interpreted the questions correctly leading to re accurate information. Secondary data was sourced from published annual financial statements of the nks

nancial performance and evaluation tools

order to make an effective and thorough assessment of the financial performance of commercial nks for the period 1998-2002, we applied ratio analysis as the financial assessment tool. The sults of the analysis were evaluated against appropriate criteria i.e. Industry standards. The dustry standards were based on the commonly used model known as CAMEL, as founded by the deral Reserve Bank.

sides the CAMEL model, which focuses much on external performance, we could also have used Bench arking, Kaizen Concept and Value Added Statement for internal evaluation performance assessment. wever, for this particular study we restricted to the external performance.
ached ratios were used to evaluate the models mentioned.

AMEL model components include
Capital A-Asset quality M-Management E-Earnings quality L-Liquidity

mmercial banks are rated, ranked and assessed on each parameter and given overall composite ratings as re under.

ATINGS
1. Strong 2.Satisfactory 3. Fair 4. Marginal 5. Weak

ade 4 and 5 reflects banks that have a higher probability of failure and regulatory authority should monitor m closely to avert any crisis or failure.

ORMANCE NG	CAPITAL ADEQUACY	ASSET QUALITY	EARNINGS	LIGUIDITY	COMPOSITE RATING
	Capital/ Deposit	Non-Provisions/ Advances	Net profit/ Total Asset	Net liquid Asset/ Total deposit	

Strong	Over 15%	0-5%	Over 3%	Over 34%	1.0-1.4
Satisfactory	9.6-15%	5.1-10.0%	2.2-2.9%	26-34%	1.5-2.4
Fair	7.5-9.5%	10.1-15%	1.0-1.9%	20-25%	2.5-4.4
Marginal	5.0-7.4%	15.1-20%	0.0-0.9%	15-19%	3.5-4.4
Unsatisfactory	Under 5%	Over 20%	Net Loss	Under 15%	4.5-5.0

Evaluation of the Model

1. Liquidity- $\frac{\text{Average cash and short-term services}}{\text{Average Total Assets}}$

The ratio indicates the proportion of total assets held in cash, debtors and short-term securities. How many times total Assets is covered by current Assets.

2. Leverage ratio- can be looked from two ratios

(ii) (a) $\frac{\text{Average Net Worth}}{\text{Average Total Assets}}$ (b) $\frac{\text{Average Net Worth}}{\text{Average Deposits}}$

Under camel this ratio measures capital adequacy capability

3. Profitability Ratio

(a) Return on Assets = $\frac{\text{Net Income}}{\text{Average Asset}}$

(b) Profitability on Investment (ROI) = $\frac{\text{Net Income}}{\text{Investment}}$

Under camel model this test is on earning where the position reflects a strong position over 3%.
Other profitability ratio to measure earnings include

(c) Return on Equity = $\frac{\text{Net income}}{\text{Average Equity}}$ (d) Profit Margin = $\frac{\text{Net income}}{\text{Total operating income}}$

This ratio reflects Return on Equity

4. Efficiency and Productivity Ratio

(i) $\frac{\text{Non-Interest Expenses}}{\text{Total Operating Expenses}}$ (ii) $\frac{\text{Non – Interest income}}{\text{Total Operating Income}}$

(iii) $\frac{\text{Total operating income}}{\text{Average Total Assets}}$ (iv) Asset quality = $\frac{\text{NPV Provisions}}{\text{Total Advances}}$

Under the camel model, this is a test for asset quality.

2..Risk analysis – under this ratio we can analyse it as

a $\frac{\text{Net Loans}}{\text{Average Assets}}$ b. $\frac{\text{Net Loans}}{\text{Deposits}}$

c. $\frac{\text{Loan loss Provision}}{\text{Gross Interest Income}}$ d. $\frac{\text{Loan Loss Provision}}{\text{Average Assets}}$

This reflects a better way of managing risk, overtime.

(i) Earnings and Profitability Ratios

Earnings is the most important factor to analyze because it is essential for:-
a) Absorption of loan losses
b) To finance internal growth and act as an indicator of shareholders wealth growth through earnings formation rate (EFR).

c) Earnings growth rate is compared to asset growth. If asset growth is high while earnings growth is low then assets of lower profitability may have been acquired (reducing earnings growth) or asset expansion at the expense of profitability has been undertaken.

To evaluate earnings return on total assets (ROA)/ net earnings divided by total assets is examined. This is a level ratio, other level indicators include- return on stockholders' equity or networth.

(ii) Conditional Analysis Ratios

Lyons Intrator and Probber argue that it is important to do further analysis on capital adequacy, asset quality, liquidity, and off-balance sheet risk, to be able to come out with better performance evaluation of any banking sector. The justification of extending analysis to these aspects is because earnings effect is finally reflected in these items. At the same time poor earnings may be realised out of the poor firm's conditions that may be reflected in these four areas.

a) Capital Adequacy

Capital adequacy and formation can be evaluated through four ratios:- (i) equity formation rate (EFR) (ii) capital as a percentage of total assets, (iii) capital to total loans and (iv) capital to total deposits. The Basle Committee report of mid-1980s plus the Central Bank of Kenya Act requires banks to maintain a minimum capital at 10% of total assets.

EFR= Retained Earnings/Shareholder' equity. It shows the extent to which equity growth can support loan or asset growth.

b) Liquidity Position.

Section 19 of the Banking Act of 1989 requires banks and financial institutions to maintain a liquidity level of 20% and 24% of their total deposit liabilities respectively. Where liquid assets include cash in hand, net balances with the Central Bank, current accounts with other banks and financial institutions plus uncleared effects, and Kenya Government Bills (Salami 1989).

Liquidity is a relative term, it is considered to include only those assets that can be converted into cash in the shortest time possible with a minimum loss. In this banking sector any asset that can be liquified into cash within a period that is less or equal to 90 days is considered to be liquid. Liquidity management is the focal point of commercial bank's management

Liquidity acts as defence from unexpected losses that may arise out of deposit run-off crisis or when external fund interest rates rocket forcing the bank to get other funds, e. g acquiring additional liabilities under adverse market conditions like Trade Bank and Panafrican Bank.
The following ratios were employed in evaluating liquidity position: -

(i) Quick assets to deposits = $\frac{\text{Cash + Marketable Securities}}{\text{Total Deposits}}$

This measures the ability to liquidate current assets to meet deposit run-offs.

(ii) Loans to deposits = Total loan/Total Deposits. This measures the extent to which deposits are locked up in Loans or the extent to which deposit money is utilized.

(iii) Current ratio = Current Assets/Current liabilities. It measures the ability of liquidating current assets to meet current liabilities as they fall due.

Liquid assets that are maintained to meet the minimum legal requirements are of extremely limited use as assets. Bankers generally consider legally required reserve balances as part of the most illiquid segment of their asset portfolio. They see it as useful over long periods just as a cushion against penalty rates of interest. This means banking sector is being forced to sacrifice profitability at the expense of meeting legal requirements.

(c) Asset Quality

Most of the ratios that were meant to measure this condition were not available on published accounts unless one got access to more detailed accounting data. Ratios such as:(i) percentage of non-performing, loans and (ii) non-current loans to total loans, and (iii) loan loss reserves to-total loans were better measures if relevant data were accessible. In published accounts net loans (after deducting provisions) to total assets shows what portion of assets is in loans. The trend of this ratio should be compared to deposit liability growth rate.

Market related measures

Use of price earning ratio where a company's market price and most recent earnings is used to arrive at estimated value, this is a popular method (Mellet and Edward 1988). In this method earnings is multiplied by a standard price earnings ratio to get an estimated firm value. Trend analysis of such values may give an indication of the financial performance of each institution if the relevant data were available. The basic problem is that most of these institutions are privately owned and are not quoted in the stock exchange. Other closely related methods that could be used include dividend yield basis. As mentioned earlier in a section above; inefficiency of Kenya Capital Market was disqualified as the use of most market based methods. In view of the above analysis, of market based measures in Kenyan banking sector this study employed only accounting based performance measures.

Quality Improvement performance measure

A questionnaire was constructed, as attached in Appendix II. In order to match the available financial data, and obtain information which would reveal changes over a period of time, respondents were asked to provide information for a five year period. The analysis of changes in indicators over a period of time was considered to be of paramount importance, rather than the absolute data, which could be vulnerable to methods and consistency of measurement. The following information was requested in the questionnaire;

1. Personnel – Labour turn over
2. Customers complaint
3. Absenteeism
4. Overtime as % of Total Working Time
5. Cost of quality
6. Machine breakdown (downtime as a % of total time which has been caused by quality related problems)
7. Staff training
8. Auditors Report
9. Minimum statutory compliance
10. New Product Development Time
11. Budget/Forecast Accuracy
12. Scrap cost

13. Please estimate your own quality rating on a scale of 1 to 10 over the past 5years (eg poor quality = 1 and world class == 10]
14. Turnover
15. Profit before tax
16. Return on capital employed (%)
17. Gearing (%)
18. Liquid ratio
19. Turnover per employee

Measures of quality improvement variables

1. **Staff-labour turnover** - Computation of labour turnover ratio yearly assessed over the period of study. The ratio that was computed by taking the total number of employees recruited in a year over the total number of employees who left in the same year.

2. **Customers complaint**-Number of customers' complaints yearly assessed over the whole period of the study. The increase/ decrease in the number of customers complaints measured the quality of services offered to the customer.

3. **Overtime**
Overtime costs most significantly reflect on quality improvement of services offered by commercial banks. The cost implementation arising from overtime was assessed as an indicator of improvement on staff performance and productivity. The measure of overtime cost was on a yearly basis assessed over the period of study.

4. **Cost of quality** - Cost spend on Year 2000 complaint, Automated Teller Machine and other extra cost on quality assessed on a yearly basis over the period of the study.

5. **Absenteeism** – This is the number of days reported absent on a yearly basis assessed over the period of study.
6. **Machine breakdown**-This is the number of times (days) machines are out of order on a yearly basis assessed over the period of study.

7. **Staff training**-This is the cost of training staff on a yearly basis assessed over the period of study.

8. **Audit report**-This is the number of times audit is carried out relative to audit costs on a yearly basis assessed over the period of study.

9. **Compliance with statutory requirements**- This is the capital base, ratio & reserve compared to minimum on a yearly basis assessed over the period of study.
10. **Development of new product**-The increase/decrease in turnover as a result of development of new products, time taken to develop the product on a yearly basis assessed over the period of study.
11. **Forecast accuracy**
This is an indication of forecast accuracy on profit, costs, turnover, number of active customers etc. on a yearly basis assessed over the period of study.

12. **Scrap costs** - The measure included the number of Dormant accounts, unclosed accounts with notification of closure. Dormant and unclosed accounts costs on a yearly basis assessed over the period of study.

The key quality variables considered in this research were measured as followed

1. **Labour Turnover(%)** = $\frac{\text{No of employees (begin-year)} - \text{No. of employees (End -year)}}{\text{No of employees at the beginning - year}}$

2.**Customer complaint (%)** = No of complains by customers in a year
No of total customers in the year

3. **Overtime (%)** = Total overtime worked (days)
Total normal working days

4. **Absenteeism (%)** = Total days absent in a year
Total normal working days

5.**Cost of quality (%)** = Total expenditure on Quality (Technology, Staff training e.t.c)
Total costs

The questionnaire was designed to be simple and straightforward. Since the data for questions 14 to 19 could be obtained from bank annual reports, this part of the information was computed from the annual bank reports. The questionnaire piloted with 46 banks.

3.3 DATA ANALYSIS

(a) Data presentation methods used was tables, and diagrams. The data was analyzed using tables and descriptive statistics such as frequencies and percentages.

(b) The data collected was analyzed using multiple linear regression and correlation analysis.
Phillips et al (1970:178), used multiple regression to find out the relationship between income measures and bank stock values. Staubus (1965:125) used regression to find the association of financial accounting variables with common stock values. In 1973 0' Connor used a step-wise multiple regression analysis in his attempt to find out the usefulness of financial ratios to investors in common stocks.

Further task was to perform a correlation analysis so as to determine the relationship between various quality improvement variables and the financial variables as calculated above. Pearson's product moment correlation coefficient was used since it is nonparametric and thus requires no prior specifications as to the distributions of the parameters. It also enables the carrying out of non parametric tests of significance and besides its easier to interpret. Each of the variable sets of quality improvement measurement was compared with the variable sets of financial parameters thus producing several rank correlations. A positive coefficient and a negative coefficient denote a positive and negative financial/quality relationship respectively. The ultimate conclusion as to the nature of the relationship depended on the dominance of the coefficients (either positive or negative coefficients dominated).

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 DATA ANALYSIS

The data both financial and quality measures were sorted between the year 1998 – 2002. The financial data was extracted from the financial statements and analysis of ratios done. This is captured under appendix I, the absolute figures and the computed ratios. In order to analyze the relationship between financial performance and quality variables, the product moment co-efficient of correlation was used in an attempt to provide a measure of the strength of association between the identified variables which were

- return on asset - liquidity - leverage
- efficient on productivity

The above variables were regressed against all the following identified quality improvement variables

- customer complaints - staff labour turnover - staff overtime
- staff absenteeism - cost of quality

A series of interviews with thirty seven banks was conducted in order to determine objective quality measures. The information gathered was used to supplement the earlier constructed questionnaire, which was not very successful method of collecting the required data. The major reason being the sensitivity and confidentiality of the nature of the information. Almost all the banks expressed the fear to expose the kind of information that was required in the questionnaire and instead preferred personal interview. Even then the detailed information gathered on quality measurement did not provide the foundation to the research that was originally expected. Secondly we initially had a sample of 46 banks but nine were disqualified on the grounds of difficulty in getting records (4 banks), under statutory management (3 banks), and (2 banks) registered after 1998. 1998 was the beginning period of the analysis.

Commercial banks measure many aspects of quality on an on-going basis. As this research required the investigation of objective quality measures, an interview approach was considered necessary to establish practical measures used by commercial banks.

In order to provide relevant data for analysis, It was considered important that quality improvement variable measures should fulfill the following criteria.

- Required information should be readily available
- Historical information should be obtainable (1998 - 2002)
- Measures should reflect the quality of the bank
- Measures should be universal and should not be specific to a particular type of bank. Measures should reflect progress over time and not snapshots which can be the result of short term policies rather than long term quality objectives
- Measures should encompass as many facets of quality as possible.

To facilitate the measure of the relationship between quality variable and financial variable, a multiple regression calculations were carried out using the SPSS statistical package. The following shows the summaries of the coefficients used to formulate the multiple functions of the form. $y = a+bx_1 + bx_2 +bx_3+bx_4 + bx_5$ While the financial variable were all in percentage form, the quality variables were in different units. This called for standardisation (using logarithmns) of the coefficients to formulate the multiple function of the form.

$$y= a + b_1 Logx_1 + b_2 Logx_2 + b_3 Logx_3 + b_4 Logx_4 + b_5 Logx_5$$

STANDARD COEFFICIENTS

	Constant –(a)	bx_1	bx_2	bx_3	bx_4	bx_5	R^2	r
LIQUIDITY	51.241	0.354	0.174	-0.216	-0.749	0.088	0.253	0.503
LEVERAGE	24.886	-0.200	0.326	0.023	-0.167	-0.142	0.147	0.383
RETURN ON ASSET	-3.328	-0.482	0.184	-0.037	0.488	0.007	0.151	0.389
EFFECIENT PRODUCTIVITY	5.513	0.203	0.223	-0.009	-0.055	0.047	0.111	0.383

Where the coefficients are explained as;

bx_1 - staff labour turnover
bx_2 - customer complaints
bx_3 - staff overtime
bx_4 - staff absenteeism
bx_5 - cost of quality

4.2 THE EFFECT OF QUALITY IMPROVEMENT ON LIQUIDITY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.503[a]	.253	.132	6.55290	.253	2.096	5	31	.093	1.775

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN

b. Dependent variable: Liquidity

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	450.008	5	90.002	2.096	.093[a]
	Residual	1331.157	31	42.941		
	Total	1781.165	36			

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN

b. Dependent variable: Liquidity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	51.241	12.425		4.124	.000
	LOGLABOU	1.626	1.287	.354	1.263	.216
	LOGCUSCO	1.387	1.582	.174	.877	.387
	LOGOVETM	-1.001	1.046	-.216	-.958	.346
	LOGABSEN	-4.185	1.818	-.749	-2.302	.028
	LOGCOSTQ	.302	.745	.088	.405	.688

a. Dependent variable: Liquidity

The effect of quality on liquidity is measured by the multi-regression function.

$$y= 51.241+0.354x_1+ 0.174x_2 - 0.216x_3 - 0.749x_4 +0.088x_5$$

The function can be explained and interpreted as;

labour turnover – an increase of staff labour turnover by 0.354 brings a unit change in liquidity.

customer complaints - an increase of 0.174 of customer complaint brings a unit change to liquidity.

staff over time - a decrease of 0.216 of staff overtime brings a unit change in liquidity.

staff absenteeism - a decrease of staff absenteeism by 0.749 brings a unit change in liquidity.

cost of quality - an increase in cost of quality by 0.088 brings a unit change in liquidity.

constant - any change in liquidity brought about by the combined quality variables would only take effect above 51.241, otherwise liquidity would remain fixed regardless of any movement by the quality variables below the constant.

General Effect of Quality Variables on Liquidity

Staff absenteeism is observed to have a greater effect on liquidity, followed by staff labour turnover, staff overtime, customer complaints and lastly cost of quality.

Correlation Coefficient

The correlation Coefficient r = 0.503 which indicate an average positive association between liquidity (financial variable) and the combined five quality variable i.e staff labour turnover, customer complaints, staff overtime and cost of quality

Coefficient of Multiple Determination R^2

R^2 – this shows the combined effect of the five independent variables and indicate that 25.3% of the movement in liquidity is brought about by combined movement in labour turnover, customer complaints, staff overtime, staff absenteeism and cost of quality. 25.3% of the variations in liquidity is explained by the five combined quality variables and the remaining 74.7% is explained by variations in random or random variations plus the combined effect that others (omitted variables) have on the liquidity.

4.3 EFFECT OF QUALITY IMPROVEMENT ON LEVERAGE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.383[a]	.147	.009	9.17161	.147	1.068	5	31	.397	2.399

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN

b. Dependent variable: Leverage

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	449.005	5	89.801	1.068	.397[a]
	Residual	2607.673	31	84.118		
	Total	3056.678	36			

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN

b. Dependent variable: Leverage

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.886	17.391		1.431	.162
	LOGLABOU	-1.201	1.801	-.200	-.667	.510
	LOGCUSCO	3.407	2.214	.326	1.539	.134
	LOGOVETM	.141	1.463	.023	.096	.924
	LOGABSEN	-1.218	2.545	-.167	-.479	.635
	LOGCOSTQ	-.637	1.043	-.142	-.611	.546

a Dependent variable: Leverage

$$y = 24.866 - 0.2x_1 + 0.326x_2 + 0.023x_3 - 0.167x_4 - 0.142x_5$$

The function can be explained and interpreted as;

labour turnover – a decrease of staff labour turnover by 0.2 brings a unit

		change in leverage.
customer complaints	-	an increase by 0.326 of customer complaints brings a unit change in leverage.
staff over time	-	an increase by 0.023 of staff overtime brings a unit change in leverage.
staff absenteeism	-	a decrease of staff absenteeism by 0.167 brings a unit change in leverage.
cost of quality	-	a decrease in cost of quality by 0.142 brings a unit change in leverage.
constant	-	any change in leverage brought about by the combined quality variables would only take effect above 24.866, otherwise leverage would remain fixed regardless of any movement by the quality variables below the constant.

General Effect of Quality Variables on Leverage

Customer complaints is observed to have a greater effect on leverage, followed by staff labour turnover, staff absenteeism, cost of quality and lastly staff overtime.

Correlation Coefficient

The correlation Coefficient r = 0.383 which indicate a weak positive association between leverage (financial variable) and the combined five quality variable i.e staff labour turnover, customer complaints, staff overtime and cost of quality

Coefficient of Multiple Determination R^2

R^2 – this shows the combined effect of the five independent variables and indicate that 14.7% of the movement in leverage is brought about by combined movement in labour turnover, customer complaints, staff overtime, staff absenteeism and cost of quality. 14.7% of the variations in leverage is explained by the five combined quality variables and the remaining 85.3% is explained by variations in random or random variations plus the combined effect that others (omitted variables) have on the leverage.

4.4 EFFECT OF QUALITY IMPROVEMENT ON PROFITABILITY

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.389[a]	.151	.015	1.52547	.151	1.106	5	31	.377	1.665

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN

b. Dependent variable: Return on Asset

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.869	5	2.574	1.106	.377[a]
	Residual	72.139	31	2.327		
	Total	85.008	36			

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN

b. Dependent variable: Return on Asset

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.328	2.893		-1.151	.259
	LOGLABOU	-.484	.300	-.482	-1.614	.117
	LOGCUSCO	.321	.368	.184	.873	.389
	LOGOVETM	-.038	.243	-.037	-.154	.878
	LOGABSEN	.595	.423	.488	1.406	.170
	LOGCOSTQ	.005	.173	.007	.031	.975

a. Dependent variable: Return on Asset

$$y = -3.328 - 0.482x_1 + 0.184x_2 - 0.037x_3 + 0.488x_4 + 0.007x_5$$

The function can be explained and interpreted as;

labour turnover – a decrease of staff labour turnover by 0.482 brings a unit change in profitability.

customer complaints - an increase of 0.184 of customer complaints brings a unit change to profitability.

staff over time - a decrease of 0.037 of staff overtime brings a unit change in profitability.

staff absenteeism - an increase of staff absenteeism by 0.488 brings a unit

change in profitability.

cost of quality - an increase in cost of quality by 0.007 brings a unit change in profitability.

constant - any change in profitability brought about by the combined quality variables would only take effect above –3.328, otherwise profitability would remain fixed regardless of any movement by the quality variables below the constant.

General Effect of Quality Variables on Profitability

Staff absenteeism is observed to have a greater effect on profitability, followed by staff labour turnover, staff overtime, customer complaints and lastly cost of quality.

Correlation Coefficient

The correlation Coefficient r = 0.389 which indicate a weak positive association between profitability (financial variable) and the combined five quality variable i.e staff labour turnover, customer complaints, staff overtime and cost of quality.

Coefficient of Multiple Determination R^2

R^2 – this shows the combined effect of the five independent variables and indicate that 15.1% of the movement in profitability is brought about by combined movement in labour turnover, customer complaints, staff overtime, staff absenteeism and cost of quality. 15.1% of the variations in profitability is explained by the five combined quality variables and the remaining 84.9% is explained by variations in random or random variations plus the combined effect that others (omitted variables) have on the profitability.

4.5 EFFECT OF QUALITY IMPROVEMENT ON EFFICIENT PRODUCTIVITY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.333[a]	.111	-.032	3.04702	.111	.776	5	31	.575	2.059

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN

b. Dependent variable: efficient productivity

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	36.007	5	7.201	.776	.575[a]
	Residual	287.815	31	9.284		
	Total	323.822	36			

a. Predictors: (Constant), LOGCOSTQ, LOGCUSCO, LOGLABOU, LOGOVETM, LOGABSEN
b. Dependent variable: efficient productivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.513	5.778		.954	.347
	LOGLABOU	.397	.598	.203	.664	.512
	LOGCUSCO	.758	.735	.223	1.031	.310
	LOGOVETM	-.017	.486	-.009	-.036	.972
	LOGABSEN	-.130	.845	-.055	-.154	.879
	LOGCOSTQ	069	.347	.047	.199	.843

a. Dependent variable: efficient productivity

$$y = 5.513 + 0.203x_1 + 0.223x_2 - 0.009x_3 - 0.055x_4 + 0.047x_5$$

The function can be explained and interpreted as;

labour turnover – an increase of staff labour turnover by 0.203 brings a unit change in efficient productivity.

customer complaints - an increase by 0.223 of customer complaints brings a unit change to efficient productivity.

staff over time - a decrease by 0.009 of staff overtime brings a unit change in efficient productivity.

staff absenteeism - a decrease of staff absenteeism by 0.055 brings a unit change in efficient productivity.

cost of quality - an increase in cost of quality by 0.047 brings a unit change in efficient productivity.

constant - any change in efficient productivity brought about by the combined quality variables would only take effect above 5.513, otherwise productivity would remain fixed regardless of any movement by the quality variables below the constant.

General Effect of Quality Variables on Efficient Productivity

Customer complaints is observed to have a greater effect on efficient productivity, followed by staff labour turnover, staff absenteeism, cost of quality and lastly staff overtime.

Correlation Coefficient

The correlation Coefficient r = 0.389 which indicate a weak positive association between efficient productivity (financial variable) and the combined five quality variable i.e staff labour turnover, customer complaints, staff overtime and cost of quality

Coefficient of Multiple Determination R^2

R^2 – this shows the combined effect of the five independent variables and indicate that 11.1% of the movement in efficient productivity is brought about by combined movement in staff labour turnover, customer complaints, staff overtime, staff absenteeism and cost of quality. 11.1% of the variations in liquidity is explained by the five combined quality variables and the remaining 88.9% is explained by variations in random or random variations plus the combined effect that others (omitted variables) have on the efficient productivity.

4.6 GENERAL FINDINGS

In general overview, the correlation coefficient of all the tests carried out indicated a rather weak positive linear association between financial variables and quality variables. A strong correlation between two variables would produce an r value in excess of +0.9 or - 0.9. In all the cases tested, it was below + 0.5. The test of reliability carried out under coefficient of determination indicated an R^2 of less than 25%. Generally an R^2 of 0.30 or higher passes the reliability test. Even though, the result of the correlation coefficient demonstrates a weak association between the two variables and, while the coefficient of determination demonstrates that quality improvement variable is a weak predictor of financial performance these two observations of r and R^2 should not be used as the basis of our conclusion on the relationship of financial variables and quality variables. The reason being that there were other financial and quality variables that were never considered. In our analysis we only had four financial variables and five quality variables.

CHAPTER 5

SUMMARY AND CONCLUSIONS

5.1 INTRODUCTION

The use of quality management techniques is rising steadily throughout most sectors including banking. Any benefits from the implementation of quality management are expressed in terms of marketability, reputation, reliability, repeatability and customer loyalty. Other reasons for implementing quality techniques are expounded such as competitive pressures, legislative demands, market entry requirements and customer/vendor specifications. However, in much of the literature, the emphasis is on the financial gains to be made from improved quality management.

5.2 INTERVIEWS

A common factor which emerged from all the interviews conducted during the study was that the key motivation for implementing quality improvement was profit related. In addition, the need to use standardised quality systems was regarded as essential in order to provide a basic structure from which their own quality systems could be developed. It was also obvious from the interviews that measurement of quality performance was regarded as highly important.

5.3 DATA COLLECTION AND ANALYSIS

Despite the extensive use of performance measurement within the banks surveyed in the questionnaire few banks were willing to reveal this type of management information. In view of this crucial problem, a different approach was taken in order to obtain meaningful information through interviews. The data analysis presented in Chapter 4 demonstrates that nearly all the banks register weak correlation coefficient in terms of their financial performance in relation to quality improvement. This is particularly evident in the major indicators of profitability, liquidity and efficiency. The results do not endorse the belief that the more quality-orientated banks will be more efficient and effective than the non-quality orientated banks. This does not again necessarily imply that quality initiatives have proved satisfactory, as many other factors undoubtedly need to be taken into consideration, such as

Economic factors:
Customer demand
Interest rates
Wage inflation
Tax changes
Currency exchange rates

Market factors:
Level of competition
Product development
Technology
Industry sector

However, many of the above factors will have an effect on banks whether or not they have high correlation or low. Many of the results revealed in this analysis appear not to accept the theoretical benefits of quality management.

5.4 CONCLUSION

- Quality initiatives result in fairly weak improved financial performance. the evidence of the research indicate that a clear but weak link exists.
- Quality improvement does appear to have short term or direct effect on financial performance. However there are undoubtedly other benefits to be gained from improved quality, but they may be very difficult to measure.

5.5 LIMITATION OF THE STUDY

- Given the nature of the study, many banks expressed a lot of fear in filling the questionnaire. At that point, I resorted to personal interviews to gather the quality variable measures. A major weakness with personal interviews is the difficulty of verifying the information.
- Ratios though useful tools in evaluating performance, they are constructed from historical accounting data which are subjected to different interpretation and even to manipulation by those who prepare the accounting data.

5.6 SUGGESTION FOR FURTHER RESEARCH

There are several potential areas of investigation, which could be added to the existing study:

- Use of alternative quality indicators
- Extending the time period
- Detailed study by size of banks
- Detailed study by industry i.e. financial industry sector to include micro finance, building societies insurance companies e.t.c.

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APPENDIX I
RATIOS AND SUMMARIES

AVERAGE TOTAL ASSETS (KSHS)

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	3,174,292	29,745,755	2,900,500	2,759,500	2,892,622.5
B2	3,623,702.5	2,951,994.5	2,634,498	2,613,255	2,460,248.5
B3	4,412,243.5	3,567,905	3,196,000	3,005,500	2,583,346.5
B4	3,911,322.5	2,838,760	2,549,000	2,707,500	2,757,051
B5	79,780.5	72,012	69,834.5	69,827	65,462.5
B6	2,494,159.5	2,259,825	2,071,500	2,149,000	2,138,221
B7	8,826,586.5	8,134,921	6,845,717	5,551,500	5,449,123
B8	1,064,162.5	896,431	783,611	590,450	43,772
B9	28,935,850	24,976,503.5	18,514,346	13,168,500	11,075,658
B10	16,151,968.5	14,357,820.5	12,271,969	11,935,679	10,663,409
B11	2,826,175.5	2,665,395.5	2,247,000	2,027,500	1,889,455.5
B12	25,524,209.5	22,335,525	22,813,374	21,787,153.6	19,719,197
B13	5,217,973	5,751,419	5,178,000	4,400,141.5	3,967,599
B14	2,907,501.5	3,412,137	3,711,500	3,682,000	3,388,412
B15	5,801,584.5	5,243,383.5	5,500,172	5,904,500	6,193,749
B16	2,390,234	2,258,463.5	2,097,500	2,026,500	2,118,539
B17	1,199,019	1,271,294	1,154,626	941,500	884,628.5
B18	4,966,910	4,657,711.5	4,531,000	4,285,500	4,540,385.5
B19	4,108,048.5	4,092,057.5	3,906,500	3,812,500	2,910,277.5
B20	3,656,340	3,313,597.5	3,115,500	2,744,500	2,259,123.5
B21	2,986,550	2,807,277.5	2,795,000	2,730,191.8	2,384,646.6
B22	3,913,103	3,329,483.5	2,837,444	2,432,500	2,416,344

B23	6,186,654.5	6,055,129.5	5,723,000	5,640,000	5,378,161
B24	3,738,813.5	3,897,280.5	4,332,197	3,298,653.5	2,019,925
B25	1,681,624.5	1,731,862.5	1,692,000	1,645,000	1,629,000
B26	7,138,245.5	6,790,040	6,221,000	5,913,000	5,541,233.5
B27	62,369,474	6,915,4286	74,294,429	76,879,010.5	75,809,965
B28	3,996,479.5	4,108,511	4,206,681	4,185,367	4,033,559
B29	886,274.5	7,919,101.5	7,327,000	7,277,500	7,688,149.5
B30	24,267,921	23,632,311.5	24,541,880.5	25,443,320	27,394,826
B31	1,667,566	1,112,159.5	1,110,500	715,000	629,741.5
B32	3,463,066	2,957,319	2,445,000	2,105,500	2,011,546
B33	2,787,623	2,238,868	1,584,500	1,571,500	1,603,552.5
B34	7,316,962	6,860,838	7,071,000	6,789,000	6,557,848.5
B35	58,086,934	51,963,234.5	46,812,000	41,161,000	35,467,272
B36	1,667,190	1,478,504.5	1,371,500	1,556,000	1,739,692
B37	2,933,616.5	2,890,641	3,574,149	3,576,978	3,852,379

AVERAGE CASH AND SHORT TERM SECURITIES (KSHS)

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	528,922	4,363,875	405,500	534,500	587,674
B2	393,305.5	510,151	689,742	769,414.5	759,605.5
B3	588,878.5	472,101.5	439,000	434,000	441,291.5
B4	375,720	316,054	227,000	254,500	368,677.1
B5	13,709	11,300.5	11,901	12,870.5	13,821
B6	602,549	530,090.5	529,000	865,500	1,015,065.5
B7	1,339,605	1,311,853	1,163,500	1,102,000	1,298,607
B8	175,565	269,912	348,859.5	224,435	112,550
B9	7,444,755.5	7,080,653.5	6,296,500	3,732,000	3,673,054.5
B10	5,598,572	4,650,340	3,575,943	3,296,341.5	2,707,990
B11	646,820.5	544,309.5	267,500	193,000	376,234.5
B12	3,356,767	3,503,170.5	3,828,482.5	3,807,612	4,429,923.2
B13	1,211,301	1,537,800	1,145,000	661,209	551,380
B14	370,878.5	373,685.5	353,000	427,500	568,498
B15	1,507,274	1,330,228	871,875.5	1,173,000	1,468,458
B16	469,525	443,645	417,000	536,000	642,207
B17	262,265	303,250.5	231,446.5	180,000	232,191
B18	707,825.5	633,592	677,000	659,000	855,251
B19	968,662.5	832,365	770,000	891,500	827,211
B20	1,244,507	1,082,581	959,000	1,035,000	972,768.5
B21	508,902.5	476,973	434,000	455,839.1	439,160.2
B22	746,291	515,663	452,735.5	397,500	398,133
B23	1,322,871.5	1,177,478	1,119,000	1,028,000	1,096,671
B24	994,204.5	814,709.5	748,817	830,606.5	756,499
B25	268,111	748,750.5	1,056,000	674,000	344,000

B26	1.267.769.5	1.378.303	1,319,000	1,306.500	1,351,000
B27	10,852,070	10,111,540.5	10,703,754	10,378,149	9,606,638.5
B28	1,171,153	1,266,559	1,376,281.5	11,332.37.5	810,570.5
B29	748,535	1,332,552	1,055,500	1,079,000	1,168,318
B30	1,400,442	1,444,616	1,490,828.5	1,217,259.5	3,036,820.5
B31	417,291.5	368,116	339,000	288,000	230,264.5
B32	770,643.5	830,501.5	748,000	531,500	484,336
B33	388,307	282,517.5	318,000	390,000	408,888.5
B34	2,074,909	1,063,072.5	1,198,500	1,179,500	677,500
B35	11,442,622.5	10,921,725	10,661,500	7,489,500	6,201,189.5
B36	249,230	263,126	266,500	286,500	297,726
B37	591,465	659,236	796,252.5	823,867	1,047,276.5

AVERAGE NETWORTH (KSHS)

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	366,605	337,777	312,500	291,000	271,303
B2	612,115.5	596,938.5	556,352	492,271	430,455.5
B3	399,238.5	373,616	350,000	321,500	302,655.5
B4	578,499.5	350,964	360,000	396,509	433,532.7
B5	9,096.5	9,135	8,846	8,453.5	7,519.5
B6	386,120	368,906	355,500	343,500	282,958.5
B7	1,483,059.5	1,448,884	1,393,860.5	1,299,000	1,189,078
B8	349,981	326,359	267,311.5	166,348.5	112,863
B9	4,040,819.5	3,154,629	2,084,326	1,747,000	1,463,260
B10	1,575,292	1,566,840.5	1,494,600	1,390,363	1,255,523.5
B11	600,461.5	779,123.5	981,000	911,500	827,739.5
B12	2,295,905.5	1,740,784.5	2,209,359.5	2,948,189.5	3,246,690.2
B13	737,488.5	684,118	625,000	495,548.5	335,593
B14	1,130,669.5	1,186,055.5	1,238,500	1,226,000	1,209,961
B15	1,039,907	1034,860	1,018,954.5	963,500	789,681.5
B16	393,590	374,316.5	367,500	352,500	281,514.5
B17	240,961	226,130.5	209,223	150,000	90,038.5
B18	530,882	491,466.5	458,000	424,000	382,568.5
B19	386,154	366,201.5	350,000	338,500	229,609
B20	364,499.5	320,775	281,500	246,000	191,436
B21	344,433	288,670	271,000	275,656	240,208
B22	570,896.5	491,390.5	419,036.5	347,000	259,085.5
B23	1,172,121	1,104,090	1,023,000	918,500	781,998.5
B24	567,539	581,182.5	593,779.5	387,330	185,943.5

B25	380,506.5	849,975	1,210,000	823,000	818,000
B26	1,085,295	1,076,956	1,058,000	1,029,000	969,508.5
B27	6,712,565	8,103,046.3	8,444,824.5	8,527,147	8,143,870.5
B28	682,145	669,129	647,879	624,324.5	885,100.5
B29	2,449,739	2,305,551.5	2,126,000	1,964,500	1,797,387
B30	1,818,010	1,937,312	2,135,496.5	1,260,824	1,867,534.5
B31	273,660	265,354	191,500	116,000	107,456
B32	509,896.5	446,243.5	388,500	329,000	277,946
B33	766,900.5	706,645	292,000	222,500	101,327.5
B34	641,259	825,158	1,004,000	984,000	935,746.5
B35	4,578,734.5	4,522,479.5	4,830,000	4,525,000	3,558,968.5
B36	677,490.5	539,701.5	427,500	492,000	55,393.5
B37	471,951.5	459,640	447,883.5	435,577.5	400,326.5

NET INCOME (KSHS)

	Yr 2002	Yr 2001	Yr 2000	Yr 1999	Yr1998
B1	30,102	27,571	24,000	21,000	23.000
B2	15.087	16.267	15.906	14,756	19.988
B3	32,013	32.740	28,000	29.000	35.000
B4	61,144	71,285	58,000	70.000	63.000
B5	1,783	2,955	2,068	2.254	3.000
B6	36,654	48,24	42,000	40,000	43.000
B7	128,425	100,727	170,298	166,000	128,000
B8	32,158	20,086	18,009	4,134	8,054
B9	786,824	418,599	407,302	316,000	255,000
B10	228,145	325,947	247,614	284,361	352,773
B11	77,204	13,995	14,000	40,000	62,000
B12	276,423	286,154	1,437,753	78,741	57,982.4
B13	28,505	30,289	39,000	105,000	101,008
B14	29,068	67,933	54,000	90,000	114,000
B15	73,002	24,624	138.557	140,000	124.000
B16	43,915	17,316	19,000	12,000	26.000
B17	14,292	14.547	505	11,000	12.000
B18	45,898	33,308	34,000	31,000	49.000
B19	21,502	18.417	14,000	9,000	17,000
B20	53,272	74,118	73,000	57,000	72.000
B21	76,848	69,544	52,000	71,000	94,662
B22	127,337	101,635	78,094	65,000	52,000
B23	128,882	154,564	86,000	129,000	142,000
B24	23,124	24,327	38,375	28,677	12,183

B25	79,868	219,485	62,000	2,000	20,000
B26	59,766	68,159	91,000	72,000	159,000
B27	3,000,639	195,644	464,469	1,554,665	914,800
B28	40,038	54,416	76,779	71,696	124,590
B29	229,135	257,119	312,000	360,000	289,000
B30	198,758	298,868	2,206,254	2,649,000	2,821,773
B31	5,904	8,363	12,000	14,000	4,000
B32	50,238	40,628	34,000	30,000	18,000
B33	8,812	47,141	12,000	3,000	5,000
B34	15,886	207,062	321,000	32,000	381,000
B35	2,210,152	2,229,561	2,142,000	1,753,000	1,594,000
B36	134,175	251,633	23,000	153,000	13,000
B37	14,399	10,224	13,289	11,323	51,632

TOTAL OPERATING INCOME(KSHS)

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	246,461	288,182	272,000	243,000	259,000
B2	240,653	208,441	222,994	209,292	199,333
B3	347,183	305,122	283,000	302,000	305,000
B4	299,050	283,532	280,000	295,000	313,000
B5	11,494	11,262	11,324	10,857	10,486
B6	218,017	225,426	230,000	203,000	189,000
B7	717,359	728,723	688,379	535,000	1,208,000
B8	125,361	95,011	93,510	71,687	70,457
B9	2,416,108	1,732,056	148,165	1,238,010	1,086,000
B10	1,283,527	1,267,023	1,282,332	1,191,379	1,223,317
B11	639,139	304,050	220,000	206,000	258,000
B12	2,910,865	2,023,817	1,950,208	2,290,348	2,321,399
B13	344,497	421,107	511,000	467,000	451,593
B14	307,864	344,662	409,000	316,000	334,000
B15	444,518	357,615	504,228	58,900	487,000
B16	201,438	189,595	177,000	191,000	168,000
B17	107,214	121,979	118,288	93,000	92,000
B18	369,292	297,193	266,000	298,000	248,000
B19	275,287	257,225	260,000	269,000	270,000
B20	255,453	273,785	262,000	215,000	221,000
B21	252,779	262,786	263,000	235,000	300,634
B22	460,941	408,735	354,306	296,000	217,000
B23	525,466	577,836	551,000	43,000	597,000
B24	228,183	220,455	274,108	303,677	126,381

B25	67,636	92,191	196,000	193,000	151,000
B26	394,228	375,805	427,000	423,000	508,000
B27	7,692,698	8,877,582	9,370,000	5,390,000	7,060,000
B28	218,571	232,778	250,222	273,741	327,521
B29	831,494	854,404	941,000	1,047,000	1,021,000
B30	3,448,241	2,438,672	1,757,263	2,124,000	991,842
B31	33,685	91,897	98,000	75,000	61,000
B32	303,118	254,672	208,000	178,000	188,000
B33	237,860	163,303	142,000	169,000	127,000
B34	468,003	362,429	373,000	503,000	391,000
B35	6,673,992	6,491,035	6,206,000	5,723,000	5,660,000
B36	348,234	454,751	266,000	293,000	255,000
B37	160,286	177,687	170,565	151,481	200,966

LIQUIDITY RATIO (Average cash and short term securities) / Average Total assets

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	16.66%	14.67%	13.98%	19.37%	20.32%	17%
B2	10.91%	17.28%	26.18%	29.44%	30.88%	22.968%
B3	13.35%	13.23%	13.74%	14.44%	17.08%	14.368%
B4	9.61%	11.13%	8.91%	9.40%	13.37%	10.484%
B5	17.18%	15.69%	17.04%	18.43%	21.11%	17.89%
B6	24.16%	23.46%	25.54%	40.27%	47.47%	32.18%
B7	15.18%	16.13%	17.00%	19.85%	23.83%	18.398%
B8	16.50%	30.11%	44.52%	38.01%	25.89%	31.006%
B9	25.73%	8.35%	34.01%	28.34%	33.16%	25.918%
B10	34.66%	32.39%	29.14%	27.62%	25.40%	29.842%
B11	22.89%	20.42%	11.90%	9.52%	19.91%	16.928%
B12	13.15%	15.68%	16.78%	17.48%	2.47%	13.112%
B13	23.21%	26.74%	22.11%	15.03%	13.90%	20.198%
B14	12.76%	10.95%	9.51%	11.61%	16.78%	12.322%
B15	25.98%	25.37%	15.85%	19.87%	23.71%	22.156%
B16	19.64%	19.64%	19.88%	26.45%	30.31%	23.184%
B17	21.87%	23.85%	20.05%	19.12%	26.25%	22.228%
B18	14.25%	13.50%	14.94%	15.38%	18.84%	15.382%
B19	23.58%	20.34%	19.71%	23.38%	28.42%	23.086%
B20	34.04%	32.67%	30.78%	37.71%	43.06%	35.652%
B21	17.04%	16.99%	15.53%	16.70%	18.42%	16.936%
B22	19.07%	15.49%	15.96%	16.34%	16.48%	16.668%
B23	21.38%	19.45%	19.55%	18.23%	20.39%	19.8%
B24	26.59%	20.90%	17.28%	25.18%	37.45%	25.48%

B25	15.94%	43.23%	62.41%	40.97%	21.12%	36.734%
B26	17.76%	20.30%	21.20%	22.10%	24.38%	21.148%
B27	17.40%	14.62%	14.41%	13.50%	12.67%	14.52%
B28	29.30%	30.83%	32.72%	27.08%	20.10%	28.006%
B29	8.45%	16.83%	14.41%	14.83%	15.20%	13.944%
B30	5.77%	6.11%	6.07%	4.78%	11.09%	6.764%
B31	31.91%	26.07%	30.53%	40.28%	36.56%	33.07%
B32	22.25%	28.08%	30.59%	25.24%	24.08%	26.048%
B33	13.93%	12.62%	20.07%	24.82%	25.50%	19.388%
B34	28.36%	15.49%	16.95%	17.37%	10.33%	17.7%
B35	19.70%	21.02%	22.78%	18.20%	17.48%	19.836%
B36	14.95%	17.80%	19.43%	18.41%	17.11%	17.54%
B37	20.16%	22.81%	22.28%	23.03%	27.19%	23.094%

NET WORTH RATIO (Average networth) –(LEVERAGE)
Average Total assets

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	11.55%	11.36%	10.77%	10.55%	9.38%	10.722%
B2	16.89%	20.22%	21.12%	18.84%	17.50%	18.914%
B3	9.05%	10.47%	10.95%	10.70%	11.72%	10.578%
B4	14.79%	12.36%	14.12%	14.64%	15.72%	14.326%
B5	11.40%	12.69%	12.67%	12.11%	11.49%	12.072%
B6	15.48%	16.32%	17.16%	15.98%	13.23%	15.634%
B7	16.80%	17.815	20.36%	23.40%	21.82%	20.039%
B8	32.89%	36.41%	34.11%	28.17%	25.96%	31.508%
B9	13.96%	12.63%	11.26%	13.27%	13.21%	12.866%
B10	9.75%	10.91%	12.18%	11.65%	11.77%	11.252%
B11	21.25%	29.23%	43.66%	44.96%	43.81%	36.582%
B12	9.00%	7.79%	9.68%	13.53%	16.46%	11.292%
B13	14.13%	11.89%	12.07%	11.26%	8.46%	11.562%
B14	38.89%	34.76%	33.37%	33.30%	35.71%	35.206%
B15	17.92%	19.74%	18.53%	16.32%	12.75%	17.052%
B16	16.47%	16.57%	17.52%	17.39%	13.29%	16.248%
B17	20.10%	17.79%	18.12%	15.93%	10.18%	16.424%
B18	10.69%	10.55%	10.11%	9.89%	8.43%	9.934%
B19	9.40%	8.95%	8.96%	8.88%	7.89%	8.816%
B20	9.97%	9.68%	9.04%	8.96%	8.47%	9.224%
B21	11.53%	10.28%	9.70%	10.10%	10.07%	10.336%
B22	14.59%	14.76%	14.77%	14.27%	10.72%	13.822%
B23	18.95%	18.23%	17.88%	16.29%	14.54%	17.178%
B24	15.18%	14.91%	13.71%	11.74%	9.21%	12.95%

B25	22.63%	49.08%	71.51%	50.03%	50.21%	48.692%
B26	15.20%	15.86%	17.01%	17.40%	17.50%	16.594%
B27	10.76%	11.72%	11.37%	11.09%	10.74%	11.136%
B28	17.07%	16.29%	15.40%	14.92%	21.94%	17.124%
B29	27.64%	29.11%	29.02%	26.99%	23.38%	27.228%
B30	7.49%	8.20%	8.70%	4.96%	6.82%	7.234%
B31	20.93%	18.79%	17.24%	16.22%	17.06%	18.048%
B32	14.72%	15.09%	15.89%	15.63%	13.82%	15.03%
B33	27.51%	31.56%	18.43%	14.16%	10.06%	20.344%
B34	8.76%	12.03%	14.20%	14.49%	14.27%	12.75%
B35	7.88%	8.70%	10.32%	10.99%	10.03%	9.584%
B36	40.64%	36.50%	31.17%	31.62%	32.15	34.416%
B37	16.09%	15.90%	12.53%	12.18%	10.39%	13.418%

PROFITABILITY RATIO (Net income) = (Return on Asset)
Average assets

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	0.95%	0.93%	0.83%	0.76%	0.80%	0.854%
B2	0.04%	0.55%	0.60%	0.56%	0.81%	0.512%
B3	0.73%	0.92%	0.88%	0.96%	1.35%	0.968%
B4	1.56%	2.51%	2.28%	2.59%	2.29%	2.246%
B5	2.23%	4.10%	2.96%	3.23%	4.85%	3.474%
B6	1.47%	2.16%	2.03%	1.86%	2.01%	1.906%
B7	1.45%	1.24%	2.49%	2.99%	2.35%	2.104%
B8	3.02%	2.24%	2.30%	0.70%	1.85%	2.022%
B9	2.72%	1.68%	2.20%	2.40%	2.30%	2.26%
B10	1.41%	2.27%	2.02%	2.38%	3.31%	2.278%
B11	2.73%	0.53%	0.62%	1.97%	3.28%	1.826%
B12	1.08%	1.28%	6.30%	0.36%	0.29%	1.862%
B13	0.55%	0.53%	0.75%	2.39%	2.55%	1.354%
B14	1.00%	1.99%	1.45%	2.44%	3.36%	2.048%
B15	1.26%	0.47%	2.52%	2.37%	2.00%	1.724%
B16	1.84%	0.77%	0.91%	0.59%	1.23%	1.068%
B17	1.19%	1.14%	0.04%	1.17%	1.36%	0.98%
B18	0.92%	0.72%	0.75%	0.72%	1.08%	0.838%
B19	0.52%	0.45%	0.36%	0.24%	0.58%	0.43%
B20	1.46%	2.24%	2.34%	2.08%	3.19%	2.262%
B21	2.57%	2.48%	1.86%	2.60%	3.97%	2.696%
B22	3.25%	3.05%	2.75%	2.67%	2.15%	2.774%
B23	2.08%	2.55%	1.50%	2.29%	2.64%	2.212%
B24	0.62%	0.62%	0.89%	0.87%	0.60%	0.72%

B25	4.75%	12.67%	3.66%	0.12%	1.23%	4.486%
B26	0.84%	1.00%	1.46%	1.22%	2.87%	1.478%
B27	4.81%	0.28%	0.63%	2.02%	1.21%	1.79%
B28	1.00%	1.32%	1.83%	1.71%	3.09%	1.79%
B29	2.59%	3.25%	4.26%	4.95%	3.76%	3.762%
B30	0.82%	1.26%	8.99%	10.41%	10.30%	6.356%
B31	0.45%	0.59%	1.08%	1.96%	0.64%	0.944%
B32	1.45%	1.37%	1.39%	1.42%	0.89%	1.304%
B33	0.24%	2.11%	0.76%	0.19%	0.31%	0.722%
B34	0.22%	3.02%	4.54%	0.47%	5.81%	2.812%
B35	3.80%	4.29%	4.58%	4.26%	4.49%	4.284%
B36	8.05%	17.02%	1.68%	9.83%	0.75%	7.466%
B37	0.49%	0.35%	0.37%	0.32%	1.34%	0.574%

EFFICIENCY AND PRODUCTIVITY RATIO

(Total Operating Income)
Average Assets

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	7.76%	9.52%	9.38%	8.48%	8.95%	8.818%
B2	0.66%	7.06%	8.46%	8.01%	8.10%	6.458%
B3	7.87%	8.55%	8.85%	10.05%	11.81%	9.426%
B4	7.65%	9.99%	10.98%	10.90%	11.35%	10.174%
B5	14.41%	15.64%	16.22%	15.55%	16.02%	15.568%
B6	8.74%	9.98%	11.10%	9.45%	8.84%	9.622%
B7	8.13%	8.96%	10.06%	9.64%	22.17%	11.792%
B8	11.78%	10.60%	11.93%	12.14%	16.21%	12.532%
B9	8.35%	6.93%	8.02%	9.40%	9.81%	8.502%
B10	7.9%	8.82%	10.45%	9.98%	11.47%	9.724%
B11	22.61%	11.41%	9.79%	10.16%	13.65%	13.524%
B12	11.40%	9.06%	8.55%	10.51%	11.77%	10.258%
B13	6.60%	7.32%	9.87%	10.61%	11.38%	9.156%
B14	10.59%	10.10%	11.02%	8.58%	9.86%	10.03%
B15	7.66%	6.82%	9.17%	1.00%	7.86%	6.502%
B16	8.43%	8.39%	8.445	9.43%	7.95%	8.529%
B17	8.94%	9.59%	10.24%	9.88%	10.40%	9.81%
B18	7.445	6.38%	5.87%	6.95%	5.46%	6.421%
B19	6.70%	6.29%	6.66%	7.06%	9.28%	7.198%
B20	6.99%	8.265	8.41%	7.83%	9.78%	8.255%
B21	8.46%	9.36%	9.41%	8.61%	12.61%	9.69%
B22	11.78%	12.28%	12.49%	12.17%	8.98%	11.54%
B23	8.49%	9.54%	9.63%	9.63%	11.10%	9.678%
B24	6.10%	5.66%	6.33%	9.21%	6.26%	6.712%

B25	4.02%	5.32%	11.58%	11.73%	9.27%	8.384%
B26	5.52%	5.53%	6.86%	7.15%	9.17%	6.846%
B27	12.33%	12.84%	12.61%	7.01%	9.31%	10.82%
B28	5.47%	5.67%	5.95%	6.54%	8.12%	6.35%
B29	9.38%	10.79%	12.84%	14.39%	13.28%	12.136%
B30	14.21%	10.32%	7.16%	8.35%	3.62%	8.732%
B31	6.40%	6.51%	8.82%	10.49%	9.69%	8.382%
B32	8.75%	8.61%	8.51%	8.45%	9.35%	8.734%
B33	8.53%	7.29%	8.96%	10.75%	7.92%	8.69%
B34	6.40%	5.28%	5.28%	7.41%	5.96%	6.066%
B35	11.49%	12.49%	13.26%	13.90%	15.96%	13.420%
B36	20.89%	30.76%	19.39%	18.83%	14.66%	20.906%
B37	5.45%	6.15%	4.77%	4.23%	5.22%	5.164%

STAFF LABOUR TURNOVER

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	60	40	80	60	40	52
B2	40	31	8	54	52	27.6
B3	100	150	100	150	100	120
B4	50	100	50	200	100	100
B5	400	800	600	100	500	480
B6	70	38	122	89	220	107.8
B7	5	10	7	10	40	14.4
B8	2	3	4	7	2	3.6
B9	3	2	0	2	2	1.8
B10	8	3	2	17	6	7.2
B11	60	20	40	40	110	54
B12	5	12	14	82	37	30
B13	2	4	2	1	2	22
B14	2	10	2	2	8	4.8
B15	2	5	2	1	4	2.8
B16	5	4	3	2	2	3.2
B17	2	3	2	2	2	22
B18	0	2	4	1	1	1.6
B19	20	40	20	80	20	36
B20	4	3	6	3	4	4
B21	2	3	5	4	1	3
B22	5	6	13	9	5	7.6
B23	9	3	0	5	2	3.8
B24	2	9	7	4	7	5.8
B25	4	6	6	2	3	4.2
B26	13	16	7	6	15	11.4
B27	300	100	200	200	300	220
B28	3	11	2	4	5	5
B29	3	3	3	4	3	3.2
B30	5	17	14	14	24	14.8
B31	3	5	8	9	9	6.8
B32	1	5	4	6	2	3.6
B33	2	3	3	4	8	4
B34	7	0	5	6	7	5
B35	60	100	200	200	1,200	352
B36	0	1	4	4	7	3.2
B37	5	12	2	12	30	12.2

TOTAL NUMBER OF EMPLOYEES

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	600	560	480	540	500
B2	321	352	344	397	403
B3	1,400	1,250	1,350	1,200	1,300
B4	1,750	1,650	1,700	1,500	1,600
B5	3,000	3,800	4,400	4,500	5,000
B6	261	299	421	510	730
B7	253	263	270	280	320
B8	34	31	27	20	22
B9	80	82	82	80	18
B10	156	151	157	174	180
B11	500	480	520	560	450
B12	783	771	757	675	638
B13	134	138	136	137	135
B14	103	113	111	113	105
B15	148	143	145	144	140
B16	71	67	70	68	70
B17	79	82	84	86	88
B18	71	73	69	68	69
B19	220	180	200	120	100
B20	196	193	199	196	192
B21	93	96	91	87	86
B22	166	160	147	138	143
B23	132	129	129	124	122
B24	242	233	226	222	215
B25	117	111	105	107	110
B26	792	776	769	763	748
B27	6,300	6,400	6,600	6,800	6,500
B28	116	127	129	125	120
B29	163	160	163	159	156
B30	1869	1852	1838	1824	1800
B31	276	271	263	254	245
B32	129	124	128	122	120
B33	172	175	172	168	160
B34	243	243	238	232	225
B35	600	700	900	1,500	2,700
B36	128	129	123	119	112
B37	122	110	108	120	150

NUMBER OF CUSTOMER COMPLAINTS

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	40	70	60	40	50	56
B2	194	148	125	104	49	124
B3	40	28	30	24	20	28.4
B4	70	60	55	40	50	55
B5	800	600	500	300	400	520
B6	70	85	100	90	120	93
B7	84	90	125	110	140	109.8
B8	72	101	80	55	70	75.6
B9	9	6	10	15	18	11.6
B10	120	160	200	140	180	160
B11	180	158	150	160	140	157.6
B12	471	415	843	621	460	562
B13	19	13	12	16	22	16.4
B14	269	209	189	171	165	200.6
B15	101	55	66	81	97	80
B16	72	61	68	55	42	59.6
B17	71	56	39	33	48	49.4
B18	36	29	23	32	26	29.5
B19	50	40	35	30	40	39
B20	96	88	76	81	62	80.6
B21	55	39	42	46	33	43
B22	51	49	52	46	37	47
B23	42	62	32	53	38	45.4
B24	118	92	101	83	79	94.6
B25	107	64	88	97	77	86.6
B26	248	297	217	192	242	239.2
B27	520	680	450	280	400	466
B28	97	84	89	91	77	87.6
B29	84	71	93	69	52	73.8
B30	406	362	382	351	325	365.2
B31	93	78	62	57	88	75.6
B32	92	48	84	63	71	71.6
B33	91	57	73	62	88	74.2
B34	37	41	34	21	27	32
B35	134	123	134	153	140	136.8
B36	82	78	93	73	89	83
B37	58	32	48	28	50	43.2

TOTAL NUMBER OF CUSTOMERS

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	11,600	12,400	11,200	12,000	10,800
B2	369	258	219	217	245
B3	17,000	16,000	15,400	14,000	23,400
B4	15,200	14,800	15,000	14,900	14,300
B5	182,000	200,000	180,000	187,000	183,000
B6	1,030	1,320	1,410	1,185	1,000
B7	1,560	1,184	1,060	1,015	920
B8	881	848	771	588	355
B9	256	410	290	365	365
B10	1,365	1,255	1,482	1,604	1,296
B11	6,000	5,500	5,000	5,000	4,700
B12	2,230	2,194	2,350	2154	1,900
B13	166	177	201	189	190
B14	275	245	232	256	231
B15	176	170	201	198	182
B16	189	155	174	149	139
B17	125	129	140	154	135
B18	333	341	314	287	265
B19	5,000	4,000	4,000	3,000	3,000
B20	340	315	326	275	267
B21	463	429	401	368	358
B22	333	300	338	297	317
B23	509	501	515	544	491
B24	774	713	645	560	620
B25	527	464	456	437	440
B26	1783	1811	1537	1732	1490
B27	99,800	111,200	112,500	132,500	124,000
B28	408	384	367	379	359
B29	518	529	491	472	495
B30	4,564	4,656	4,385	4,542	4,171
B31	697	619	632	589	624
B32	453	483	467	409	390
B33	462	429	410	379	353
B34	1,564	1,431	1,479	1,222	1,094
B35	8,348	7,146	6,350	6,540	6,110
B36	560	535	547	515	505
B37	17,421	13,516	13,768	13,064	11,874

STAFF OVERTIME WORKED (DAYS)

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	5,416	5,000	4,166	4,500	4,083	4,633
B2	81	44	40	37	34	47.2
B3	2,917	3,083	3,167	2,750	3,250	3,033.4
B4	1,417	1,375	1,200	1,333	1,300	1,325
B5	22,500	26,250	27,083	29,833	35,000	28,133.2
B6	250	188	158	313	208	223.4
B7	450	375	558	658	800	568.2
B8	1,842	1,679	1,463	1,083	1,192	1,451.8
B9	221	256	318	333	375	300.6
B10	767	695	608	438	529	607.4
B11	2,166	2,291	2,041	2,416	2,500	2,282.8
B12	851	1,485	1,184	1,035	1,083	1,127.6
B13	327	268	445	353	313	341.6
B14	488	523	598	654	767	606
B15	298	272	441	345	378	346.8
B16	280	148	235	157	170	198
B17	266	105	119	133	193	163.2
B18	461	533	550	595	675	562.8
B19	1,583	1,750	1,667	1,833	1,875	1,741.6
B20	408	381	352	270	327	347.6
B21	310	289	326	345	237	301.4
B22	346	532	439	386	488	438.2
B23	300	285	262	308	191	269.2
B24	280	425	384	328	343	352
B25	535	637	695	614	650	626.2
B26	658	716	695	809	911	757.8
B27	170,833	220,833	175,000	191,666	145,833	180,833
B28	275	247	273	290	302	277.4
B29	338	318	346	290	295	317.4
B30	1,205	9,875	1,000	933	1,070	2,816.6
B31	248	316	429	345	320	331.6
B32	161	192	136	175	150	162.8
B33	273	288	314	293	340	301.6
B34	409	355	470	391	454	415.8
B35	1018	708	658	542	696	724.4
B36	305	300	290	327	341	312.6
B37	6,666	6,500	5,750	5,833	6,250	6,199.8

TOTAL NORMAL WORKING TIME (DAYS)

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	82,500	79,166	65,833	66,667	62,500
B2	51,667	45,750	44,916	43,708	46,833
B3	121,333	108,333	117,000	104,000	112,666
B4	150,000	141,666	129,167	158,333	137,500
B5	1,333,333	1,166,666	916,666	1,083,833	1,300,000
B6	50,000	62,500	77,083	83,333	84,583
B7	19,933	18,200	20,800	24,266	27,733
B8	87,916	83,333	61,667	62,500	84,583
B9	7,280	7,106	7,106	6,933	6,760
B10	8,450	8,612	8,504	9,425	9,750
B11	337,500	358,333	341,667	329,166	366,667
B12	67,860	66,820	65,607	58,500	55,293
B13	11,613	11,960	11,786	11,873	11,700
B14	8,926	9,793	9,620	9,793	9,100
B15	14,430	13,943	14,138	14,040	13,650
B16	5,893	5,546	5,806	5,633	6,066
B17	76	7,995	8,190	8,385	8,580
B18	6,153	6,326	5,980	5,893	5,980
B19	12,500	12,916	13,333	14,583	12,500
B20	19,110	18,817	19,402	191,10	18,720
B21	8,970	9,263	8,775	8,482	8,385
B22	16,185	15,600	14,332	13,455	13,942
B23	12,870	12,577	12,577	12,090	11,895
B24	23,595	22,717	22,035	21,645	20,962
B25	11,407	13,227	9,100	11,591	10,725
B26	73,125	78,000	76,050	75,075	72,930
B27	62,916	633,333	575,000	616,666	554,166
B28	10,725	13,650	12,675	12,488	11,700
B29	19,929	17,716	11,687	12,608	15,600
B30	133,441	147,916	162,575	141,716	156,000
B31	24,879	20,629	222,925	25,141	23,887
B32	11,566	13,358	10,433	12,520	12,188
B33	14,595	14,945	17,170	16,591	15,600
B34	25,058	24,716	25,809	22,487	21,938
B35	550,000	683,333	591,666	754,166	700,000
B36	13,016	12,233	12,605	10,433	10,920
B37	35,000	36,333	37,416	36,666	36,833

TOTAL ABSENTISM TIME (DAYS)

	Yr2002	Yr2001	Yr2000	Yr1999	Yr1998	MEAN
B1	19,800	23,000	20,000	23,600	25,700	22,420
B2	16,347	16,073	14,558	11,354	11,898	14,046
B3	37,900	38,900	36,400	42,000	40,008	39,041.6
B4	63,400	61,800	55,000	59,000	62,000	60,240
B5	190,000	182,400	175,600	223,500	185,000	191,300
B6	8,080	10,875	11,920	16,848	25,560	14,656.5
B7	8,875	9,233	9,482	9,848	11,221	9,731.8
B8	1,204	1,092	957	718	783	950.8
B9	2,940	2,960	2,876	2,922	2,730	2,885.6
B10	5,601	5,579	5,517	6,178	6,328	5,840.6
B11	16,600	14,700	163,000	187,000	119,500	100,160
B12	27,757.7	27,047	20,675	23,703	22,443	24,325.14
B13	4,694	5,016	4,760	4,888	4,767	4,825
B14	3,827	4,219	4,129	4,199	4,123	4,099.4
B15	4,808	4,724	4,647	4,626	4,494	4,659.8
B16	2,040	1,980	2,070	1,950	2,160	2040
B17	2,910	2,930	2,940	3,130	3,080	2,998
B18	2,485	2,645	2,445	2,560	2,415	2,510
B19	5,750	4,650	5,340	3,200	2,700	4,328
B20	6,860	6,755	7,025	6,860	6,720	6,844
B21	3,404	3,575	3,330	3,250	3,182	3,348.2
B22	5,810	6,080	6,027	4,830	5,577	5,664.8
B23	4,884	4,803	4,863	4,588	4,574	4,742.4
B24	8,954	8,621	8,422	8,214	7,955	8,433.2
B25	4,439	4,322	4,267	4,422	4,634	4,416.8
B26	31,582	32,923	29,227	29,458	28,632	30,364.4
B27	161,000	145,000	162,000	14,000	160,000	128,400
B28	3,562	4,080	4,195	4,030	3,960	3,965.4
B29	4,210	5,470	4,950	5,900	5,920	5,290
B30	61,470	59,703	63,472	58,261	66,407	61,862.6
B31	7,735	6,105	9,890	8,087	8,575	8,078.4
B32	4,315	4,400	3,580	3,350	4,200	3,969
B33	5,155	4,695	5,250	4,860	5,600	5,112
B34	7,760	8,295	6,382	9,262	8,196	7,979
B35	24,124	27,382	37,004	57,110	110,940	51,312
B36	4,513	5,918	4,926	5,450	4,144	4,990.2
B37	3,540	3,950	4,150	4,600	4,100	4,068

COST OF QUALITY (KSHS)

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998	MEAN
B1	94,000,000	58,000,000	151,700,000	10,400,000	2,515,000	63,323,000
B2	210,000	1,400,000	1,015,000	770,000	1,580,000	995,000
B3	950,000	680,000	600,000	600,000	1,000,000	766,000
B4	4,500,000	4,000,000	4,300,000	4,800,000	5,000,000	4,520,000
B5	148,000,000	168,000,000	190,000,000	176,000,000	180,000,000	172,400,000
B6	2,525,000	5,580,000	3,650,000	2,900,000	2,050,000	3,341,000
B7	300,000	400,000	880,000	590,000	615,000	557,000
B8	660,000	164,000	290,000	108,000	381,000	320,600
B9	25,600,000	20,250,000	30,400,000	22,350,000	18,300,000	23,380,000
B10	4,420,000	10,360,000	10,948,000	7,540,000	4,842,000	7,622,000
B11	54,000,000	45,000,000	0	0	0	19,800,000
B12	369,910,000	101,440,000	126,350,000	233,000,000	801,280,000	326,396,000
B13	850,000	1,148,000	3,150,000	2,040,000	3,615,000	2,160,600
B14	313,000	305,000	1,268,000	635,000	1,360,000	776,200
B15	134,000	798,000	412,000	340,000	988,000	534,400
B16	48,000	123,000	162,000	143,000	246,000	144,400
B17	164,500	191,500	525,000	190,000	395,000	293,200
B18	1,265,000	1,480,000	1,870,000	1,115,000	1,950,000	1,536,000
B19	160,000	1,880,000	428,000	190,000	250,000	581,600
B20	660,000	1,045,000	2,995,000	1,762,000	1,417,000	1,575,800
B21	810,000	580,000	2,433,000	1,130,000	1,878,000	1,366,200
B22	160,100	381,500	655,200	475,400	1,103,500	555,140
B23	1,975,000	1,728,000	2,765,000	1,140,000	2,015,000	1,924,600
B24	1,374,000	1,178,000	7,017,000	1,980,000	2,440,000	2,797,800
B25	349,600	2,217,340	792,250	1,643,100	1,561,900	1,312,838
B26	2,365,700	1,180,700	4,870,000	1,440,000	10,814,000	4,134,080
B27	244,000,000	436,000,000	368,000,000	325,000,000	31,200,000	280,840,000
B28	289,000	216,700	394,000	389,100	722,000	402,160
B29	1,094,200	1,885,200	3,950,000	2,400,000	6,150,000	3,095,880
B30	159,346	271,500	800,900	1,206,980	3,241,600	1,136,065.2
B31	246,300	291,000	530,100	411,200	1,220,000	539,720
B32	263,200	195,300	317,800	361,700	760,000	379,600
B33	158,300	213,700	413,000	470,500	1,455,000	542,100
B34	496,300	3,570,300	388,000	2,090,000	4,600,000	2,228,920
B35	46,040,000	41,000,000	31,320,000	29,880,000	22,700,000	34,188,000
B36	7,664,000	1,569,000	825,000	683,100	1,572,400	2,462,700
B37	185,000,000	225,000,000	24,000,000	250,000,000	-	136,800,000

	TOTAL COST (KSHS)				
	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	322.544	428.750	424.000.000	418.000.000	647.000
B2	438.063.000	381.844.000	355.243.000	375.798.000	531.849.000
B3	512.051.000	412.185.000	38.000.000	413.000.000	476.000.000
B4	391.620.000	300.675.000	308.000.000	318.000.000	503.000.000
B5	10,308.000.000	8.354,000,000	9.964.000.000	6,998.000.000	5.810.000.000
B6	270.590.000	25,668.700	264.000.000	256.000.000	357.000.000
B7	903.718.000	1.108.143.000	8.510.000.000	646.000.000	974.000.000
B8	110.850.000	105.910.000	109.893.000	105.910.000	123,476.000
B9	171,341,000	1,767,996,000	1,694,000,000	1,328.000,000	1,551,000.000
B10	1,352,078,000	1,376,929,000	1.445,018,000	1,313,203,000	1,779,527,000
B11	629,598.000	389,721,000	-	-	-
B12	394,209,200	359,217,200	337,100,100	346,117,300	394,107,000
B13	455,790.000	604.600,000	733,000.000	497,000.000	655,143.000
B14	401,282.051.3	412,162.2	521,810,699.6	456,834.532.4	421.052.631.6
B15	534.420.000	568,866.000	695,867.000	80,100.000	124,400,000
B16	249.449.000	301,138,000	301.000.000	335.000.000	455.000,000
B17	17,197,200	190,548,000	222,905,000	173,000	245,000
B18	637,184,000	639,199,000	665,000.000	745.000.000	1,101,000,000
B19	495,675	553,415	595,000	621,000	956,000
B20	297,528,000	315,351,000	314,000.000	278,000,000	354,000,000
B21	265.978.000	318,290,000	349,000.000	291.000.000	379,885,000
B22	604,261,000	548,743,000	501,000.000	471,000.000	585,000,000
B23	552,793,000	643,412,000	791,000,000	962,000,000	10,660,000
B24	376,808,000	407,128,000	528,569,000	616,759,000	4,120,72,000
B25	232,684.000	385.567,000	223,000,000	272.000.000	225,000,000
B26	616,278.000	681,140,000	711,000,000	778.000,000	990,000,000
B27	1,223,406.600	1,090,886,000	1,008,578,300	1,150.947,800	1,649,493,000
B28	301,200,200	337,221,000	324,791,000	341,207,000	573,403,100
B29	777,994,000	755,661,000	827,000,000	957,000,000	1,475,000,000
B30	4,153,465,000	3,754,057,000	4,671,000,100	7,742,000,000	6,682,085,000
B31	143,755,000	183,963,000	1,500,000,000	1,210,000,000	158,000,000
B32	450,766,000	404,974,000	343,000,000	327,000,000	453,000,000
B33	379,163,400	368,866,000	294,000,000	32,500,000	43,200,000
B34	682,086,000	1,032,403,000	1,250,000,000	84,700,000	158,400,000
B35	4,536,321,000	4,653,970,000	430,400,000	4,343,000,000	5,638,000,000
B36	318,484,000	274,812,000	24,500,000	284,000,000	382,000,000
B37	2,775,210,000	334,416,000	402,598,000	457,622,000	-

STAFF LABOUR TURNOVER RATIO

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	10.00%	7.14%	16.67%	11.11%	8.00%
B2	12.46%	8.81%	2.33%	13.57%	1.24%
B3	7.14%	12.00%	7.41%	12.50%	7.69%
B4	2.86%	6.06%	2.94%	13.33%	6.25%
B5	13.33%	21.05%	13.64%	2.22%	10.00%
B6	26.82%	12.71%	28.98%	17.45%	30.14%
B7	1.98%	3.80%	2.59%	3.57%	12.50%
B8	5.88%	9.68%	14.81%	35.00%	9.09%
B9	3.75%	2.44%	0.00%	2.50%	11.11%
B10	5.13%	1.99%	1.27%	9.77%	3.33%
B11	12.00%	4.17%	7.69%	7.14%	24.44%
B12	0.64%	1.56%	1.85%	12.15%	5.80%
B13	1.49%	2.90%	1.47%	0.73%	1.48%
B14	1.94%	8.85%	1.80%	1.77%	7.62%
B15	1.35%	3.50%	1.38%	0.69%	2.86%
B16	7.04%	5.97%	4.29%	2.94%	2.86%
B17	2.53%	3.66%	2.38%	2.33%	2.27%
B18	0.00%	2.74%	5.8%	1.47%	1.45%
B19	9.09%	22.22%	10.00%	66.67%	20.00%
B20	2.04%	1.55%	3.02%	1.53%	2.08%
B21	2.15%	3.13%	5.49%	4.60%	1.16%
B22	3.01%	3.75%	8.84%	6.52%	3.50%
B23	6.32%	2.33%	0.00%	4.03%	1.64%
B24	0.83%	3.86%	3.10%	1.80%	3.26%
B25	3.42%	5.41%	5.71%	1.87%	2.73%
B26	1.64%	2.06%	0.91%	0.79%	2.01%
B27	4.76%	1.56%	3.03%	2.94%	4.62%
B28	2.59%	8.66%	1.55%	3.20%	4.17%
B29	1.84%	1.88%	1.84%	2.52%	1.92%
B30	0.27%	0.92%	0.76%	0.77%	1.33%
B31	1.09%	1.85%	3.04%	3.54%	3.67%
B32	0.78%	4.03%	3.13%	4.92%	1.67%
B33	1.16%	1.71%	1.74%	2.38%	5.00%
B34	2.88%	0.00%	2.10%	2.59%	3.11%
B35	10.00%	14.29%	22.22%	40.00%	44.44%
B36	0.00%	0.78%	3.25%	3.36%	6.25%
B37	4.10%	10.91%	1.85%	10.00%	20.00%

CUSTOMERS COMPLAINT RATIO

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	0.34%	0.56%	0.54%	0.33%	0.46%
B2	52.57%	57.36%	57.08%	47.93%	20.00%
B3	0.24%	0.18%	0.19%	0.17%	0.09%
B4	0.46%	0.41%	0.37%	0.27%	0.35%
B5	0.44%	0.30%	0.28%	0.16%	0.22%
B6	6.80%	6.44%	7.09%	7.59%	12.00%
B7	5.38%	7.60%	11.79%	10.84%	15.22%
B8	8.17%	11.91%	10.38%	9.35%	19.72%
B9	3.52%	1.46%	3.45%	4.11%	4.93%
B10	8.79%	12.75%	13.50%	8.73%	13.89%
B11	3.00%	2.87%	3.00%	3.20%	2.98%
B12	21.12%	18.92%	35.49%	28.83%	24.21%
B13	11.45%	7.34%	5.97%	8.47%	11.58%
B14	97.82%	85.31%	81.74%	66.80%	71.34%
B15	57.39%	32.35%	32.84%	40.91%	53.30%
B16	38.10%	39.35%	39.08%	36.91%	30.22%
B17	56.80%	43.41%	27.86%	21.43%	35.56%
B18	10.81%	8.50%	7.32%	11.15%	9.81%
B19	1.00%	1.00%	0.88%	1.00%	1.33%
B20	28.24%	27.94%	23.31%	29.45%	23.22%
B21	11.88%	9.09%	10.47%	12.50%	9.22%
B22	15.32%	16.33%	15.38%	15.49%	11.67%
B23	8.25%	12.38%	6.21%	9.74%	7.74%
B24	15.25%	12.90%	15.66%	14.82%	12.74%
B25	20.30%	13.79%	19.30%	22.20%	17.50%
B26	13.91%	16.40%	14.12%	11.09%	16.24%
B27	0.52%	0.61%	0.40%	0.21%	0.32%
B28	23.77%	21.88%	24.25%	24.01%	21.45%
B29	16.22%	13.42%	18.94%	14.62%	10.51%
B30	8.90%	7.77%	8.71%	7.73%	7.79%
B31	13.34%	12.60%	9.81%	9.68%	14.10%
B32	20.31%	9.94%	17.99%	15.40%	18.21%
B33	19.70%	13.29%	17.80%	16.36%	24.93%
B34	2.37%	2.87%	2.30%	1.72%	2.47%
B35	1.61%	1.72%	2.11%	2.34%	2.29%
B36	14.64%	14.58%	17.00%	14.17%	17.62%
B37	0.33%	0.24%	0.35%	0.21%	0.42%

STAFF OVERTIME RATIO

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	6.56%	6.32%	6.33%	6.75%	6.53%
B2	0.16%	0.10%	0.09%	0.08%	0.07%
B3	2.40%	2.85%	2.71%	2.64%	2.88%
B4	0.94%	0.97%	0.93%	0.84%	0.95%
B5	1.69%	2.25%	2.95%	2.75%	2.69%
B6	0.50%	0.30%	0.20%	0.38%	0.25%
B7	2.26%	2.06%	2.68%	2.71%	2.88%
B8	2.10%	2.01%	2.37%	1.73%	1.41%
B9	3.04%	3.60%	4.48%	4.80%	5.55%
B10	9.08%	8.07%	7.15%	4.65%	5.43%
B11	0.64%	0.64%	0.60%	0.73%	0.68%
B12	1.25%	2.22%	1.80%	1.77%	1.96%
B13	2.82%	2.24%	3.78%	2.97%	2.68%
B14	5.47%	5.34%	6.22%	6.68%	8.43%
B15	2.07%	1.95%	3.12%	2.46%	2.77%
B16	4.75%	2.67%	4.05%	2.79%	2.80%
B17	350.00%	1.31%	1.45%	1.59%	2.25%
B18	7.49%	8.43%	9.20%	10.10%	11.29%
B19	12.66%	13.55%	12.50%	12.57%	15.00%
B20	2.14%	2.08%	1.81%	1.41%	1.75%
B21	3.46%	3.12%	3.72%	4.07%	2.83%
B22	2.14%	3.41%	3.06%	2.87%	3.50%
B23	2.33%	2.27%	2.08%	2.55%	1.61%
B24	1.19%	1.87%	1.74%	1.50%	1.64%
B25	4.69%	4.82%	7.64%	5.30%	6.06%
B26	0.90%	0.92%	0.91%	1.08%	1.25%
B27	27.15%	38.87%	30.43%	31.08%	26.32%
B28	2.56%	1.81%	2.15%	2.38%	2.58%
B29	1.70%	1.79%	2.96%	2.30%	1.89%
B30	0.90%	6.68%	0.62%	0.66%	0.69%
B31	1.00%	1.53%	1.87%	1.37%	1.34%
B32	1392.01%	1.44%	1.30%	1.40%	1.23%
B33	1.87%	1.81%	1.83%	1.77%	2.18%
B34	1.63%	1.44%	1.82%	1.74%	2.07%
B35	0.19%	0.10%	0.11%	0.07%	0.10%
B36	2.34%	2.45%	2.30%	3.13%	3.12%
B37	19.05%	17.89%	15.37%	15.91%	16.97%

STAFF ABSENTISM RATIO

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	6.65%	6.32%	6.33%	6.75%	6.53%
B2	31.64%	35.13%	32.41%	25.98%	25.41%
B3	31.24%	35.91%	31.11%	40.38%	35.51%
B4	42.27%	43.62%	42.58%	37.26%	45.09%
B5	14.25%	15.63%	19.16%	20.62%	14.23%
B6	16.16%	17.40%	15.46%	20.22%	30.22%
B7	44.52%	50.73%	45.59%	40.58%	40.46%
B8	1.37%	1.31%	1.55%	1.15%	0.93%
B9	40.38%	41.65%	40.47%	42.15%	40.38%
B10	66.28%	64.78%	64.88%	65.55%	64.90%
B11	4.92%	4.10%	4.77%	5.68%	32.59%
B12	40.90%	40.48%	31.51%	40.52%	40.59%
B13	40.42%	42.15%	40.39%	41.17%	40.74%
B14	42.87%	43.08%	42.92%	42.88%	45.31%
B15	33.32%	33.88%	32.87%	32.95%	32.92%
B16	34.62%	35.70%	35.65%	34.62%	35.61%
B17	38.26%	36.65%	35.90%	37.33%	35.90%
B18	40.39%	41.81%	40.89%	43.44%	40.38%
B19	46.00%	36.00%	40.05%	21.94%	21.60%
B20	35.90%	35.90%	36.21%	35.90%	35.90%
B21	37.95%	38.59%	37.95%	38.32%	37.95%
B22	35.90%	38.97%	42.05%	35.90%	40.00%
B23	37.95%	38.19%	38.67%	37.95%	38.45%
B24	37.95%	37.95%	38.22%	37.95%	37.95%
B25	38.91%	32.68%	46.89%	38.15%	43.21%
B26	43.19%	42.21%	38.43%	39.24%	39.26%
B27	25.59%	22.89%	28.17%	2.27%	28.87%
B28	33.21%	29.89%	33.10%	33.07%	33.85%
B29	21.12%	30.88%	42.35%	46.35%	37.95%
B30	46.07%	40.36%	39.04%	41.11%	42.57%
B31	31.09%	29.59%	43.14%	32.14%	35.90%
B32	37307.63%	32.94%	34.31%	26.76%	34.46%
B33	35.32%	29.44%	30.58%	29.29%	35.90%
B34	30.97%	33.56%	24.73%	41.19%	37.36%
B35	4.39%	4.01%	6.25%	7.57%	15.85%
B36	34.67%	48.38%	39.08%	52.24%	37.95%
B37	10.11%	10.87%	11.09%	12.55%	11.13%

COST OF QUALITY RATIO

	Yr-2002	Yr-2001	Yr-2000	Yr-1999	Yr-1998
B1	24.00%	288.73%	30.38%	35.40%	41.12%
B2	0.0479%	0.3666%	0.2857%	0.2049%	0.2971%
B3	0.1855%	0.1650%	0.1546%	0.1453%	0.2101%
B4	1.15%	1.33%	1.40%	1.51%	0.99%
B5	1.4358%	2.0110%	1.9069%	2.5150%	3.0981%
B6	0.9331%	2.1739%	1.3826%	1.1328%	0.5742%
B7	0.0332%	0.0361%	0.1034%	0.0913%	0.0631%
B8	0.5954%	0.1548%	0.2639%	0.1020%	0.3086%
B9	1.4959%	1.1454%	1.7946%	1.6830%	1.1799%
B10	0.3276%	0.7524%	0.7576%	0.5742%	0.2721%
B11	8.5769%	11.5467%	0.00%	0.00%	0.00%
B12	93.8360%	28.2392%	37.4814%	67.3182%	203.3153%
B13	0.1865%	0.1899%	0.4297%	0.4105%	0.5518%
B14	0.0780%	0.0740%	0.2430%	0.1390%	0.3230%
B15	0.03%	0.14%	0.06%	0.04%	0.79%
B16	0.02%	0.04%	0.05%	0.04%	0.05%
B17	0.0957%	0.1005%	0.2355%	109.8266%	161.2245%
B18	0.20%	0.23%	0.28%	0.15%	0.18%
B19	32.28%	33.97%	71.93%	30.60%	26.15%
B20	0.22%	0.33%	0.95%	0.63%	0.40%
B21	0.30%	0.18%	0.70%	0.39%	0.49%
B22	0.0265%	0.0695%	0.1308%	0.1009%	0.1886%
B23	0.3573%	0.2686%	0.3496%	0.1185%	0.1890%
B24	0.36%	0.29%	1.33%	0.32%	0.59%
B25	0.15%	0.58%	0.36%	0.60%	0.69%
B26	0.38%	0.17%	0.68%	0.19%	1.09%
B27	19.94%	39.97%	36.49%	28.24%	1.89%
B28	0.10%	0.06%	0.12%	0.11%	0.13%
B29	0.14%	0.25%	0.48%	0.25%	0.42%
B30	0.0038%	0.0072%	0.0171%	0.0156%	0.0485%
B31	0.71%	0.16%	0.35%	0.34%	0.77%
B32	0.06%	0.05%	0.09%	0.11%	0.17%
B33	0.04%	0.06%	0.14%	0.14%	0.34%
B34	0.07%	0.35%	0.31%	2.47%	0.29%
B35	1.01%	0.88%	0.73%	0.69%	0.40%
B36	2.41%	0.57%	0.34%	0.24%	0.41%
B37	0.67%	0.67%	0.06%	0.05%	-

APPENDIX II

QUESTIONNAIRE FOR ALL COMMERCIAL BANKS IN KENYA

Strictly Confidential

Part I Background Information

1. Name of commercial Bank _____
   Contact Address _____
   Contact Person _____
   Designation _____

2. What type of services do you offer? Tick appropriately
   Credit provision _____
   Savings/deposit taking _____
   Consultant/Advisory services _____
   Others (please specify) _____

Part II Quality Assessment

3. Tick the categories of clients you serve to (target clients) and indicate the proportion of the total

Individual depositors _____ (____)
Group of people _____ (____)
Government _____
Business firms _____
Others (please specify) _____

4. Does customers complaint of your services?
   Yes (____)
   No (____)
5. If yes, how do they register their complaint? (Tick as appropriate)
   Through telephone _____
   Through letters _____
   Through closure of Accounts _____
   Others please specify _____
   _____

6. Explain briefly your laid down procedure of handling customers complaint in terms of day's once you receive the complaint from the customers
   Day-1 _____
   Day-2 _____
   Day-3 _____
   Specify others _____
   _____

7. If the customer is not satisfied with the way the complaint is handled, how do you go about it from
   Day-1 _____
   Day-2 _____

Day-3 _____
Specify others_____
_____

8. How would you describe your computerized system(Tick appropriately)
   -Fully computerized
   -Partially computerized
   -Not computerized

9. What are the working times of your bank?
   Weekdays_____
   Weekends_____
   Public/Holidays_____
   Others (specify please)_____
   _____

10. In your Bank identify the causes of absenteeism for employees (Tick appropriately)
    Medical leave _____
    Normal off _____
    Annual leave _____
    Others (specify please)_____

11. Tick appropriately when employees are required to work overtime.
    End of Month_____
    End of week_____
    Begging of month_____
    Public holidays _____
    Others (specify please)_____
_____

12. In the last five years have you introduced any new product? If yes, name the products
    _____
    _____
    _____
    _____

13. **Personnal – Labour Turnover**

	1998	1999	2000	2001	2002
Total No of Employees at beginning of yr					
No of Employees employed in the yr					
No of Employees that left in the Year					

14. **Customer complains status**

	1998	1999	2000	2001	2002
No of customer Complaints registered					
No of customers -personal					

-Corporate					
Tick appropriately					
Customer complaint In percentage -25% -50% -75% -100%					
Estimated Deliveries to Customer in Percentage -25% -30% -75% -100%					

15. **Absenteeism**

Absenteeism in days	1998	1999	2000	2001	2002
Absent on Medical					
Absent on leave (Annual leave)					
Absent on Disciplinary					
Absent on other grounds specify					

What would necessitate Overtime working. Rank them from highest & tick in the box

-Computer system breakdown 1 ☐ 2 ☐ 3 ☐

- Absenteeism of staff 1 ☐ 2 ☐ 3 ☐

- Work Arrears/Over load 1 ☐ 2 ☐ 3 ☐

- Staff inefficiency 1 ☐ 2 ☐ 3 ☐

1 ☐ Ranked Lowest

2 ☐ Ranked Average

3 ☐ Ranked highest

16 **Overtime**

	1998	1999	2000	2001	2002
Overtime cost in the year (Kshs)					
Overtime worked in the year (Hrs/days)					
Total Normal time worked in the year (Hrs/Days)					
Overtime as % of total working time					

17. **Cost of Quality**

Kshs	1998	1999	2000	2001	2002
Computer installation and Maintenance costs					
Software installation and Maintenance costs					
ATM installation and Maintenance costs					
Staff Restructure					

18. **Machine breakdown**

	1998	1999	2000	2001	2002
No of times computer breakdown interms of (hrs/Days)					
No of times software is down(Hrs/Days)					
No of times ATM machines breakdown(Hrs/Days)					

19. **Staff Training**

	1998	1999	2000	2001	2002
No of times training is offered in a year (Days)					
Cost of the training (Kshs)					

20. **Auditors Report**

Tick where appropriately	1998	1999	2000	2001	2002

No of times Audit is taken - Quarterly - Half -Yearly					
Cost of Audit (Kshs)					
Turnover for year (Kshs)					

21. **Statutory Compliance**

	1998	1999	2000	2001	2002
Capital base %					
Cash ratio %					
Cash reserve ratio %					
Minimum Statutory requirement -Capital base -Cash ratio -Cash reserve					

22. **Development of New product**

	1998	1999	2000	2001	2002
How many new product were developed in each year					
Turnover before introduction					
Turnover after introduction					

23. **Please estimate your own rating on a scale of 1-10 over the past 5 years e.g poor quality = 1 and world class = 10**

Tick appropriately	1998	1999	2000	2001	2002
Poor Quality = 1					
World class = 10					

24. **Budget/ Forecasts Accuracy**

	1998	1999	2000	2001	2002
i). Budgeted					

profit					
Actual profit					
ii) Budgeted No of customer					
Actual No of customers					
Budgeted costs (operating)					
Actual costs (Operating)					

25 **Scraps Costs**

	1998	1999	2000	2001	2002
Dormant accounts					
Unclosed Accounts awaiting closure					
Dormant Accounts cost					
Unclosed Accounts costs					
Scrap cost as % of Total Revenue					

APPENDIX III

	LIST OF COMMERCIAL BANKS AS AT DECEMBER 31, 2002	
	BANK	YEAR LICENSED
1	African Banking Corporation Ltd.	1984
2	Akiba Bank Ltd	1995
3	Bank of Baroda(K)Ltd.	1953
4	Bank of India	1953
5	Barclays Bank of Kenya Ltd.	1925
6	Biashara Bank of Kenya Ltd	1984
7	CFC Bank Ltd	1955
8	Chase Bank (K) Ltd-	1991
9	Charterhouse Bank Ltd	1998
10	Citibank N.A.	1974
11	City Finance Bank Ltd	1984
12	Commercial Bank of Africa Ltd.	1967
13	Consolidated Bank of Kenya Ltd.	1989
14	Co-operative Bank of Kenya Ltd.	1968
15	Co-operative Merchant Bank Ltd-	1992
16	Credit Agricols Indosuez	1998
17	Credit Bank Ltd.	1986
18	Daima Bank Ltd	1992
19	Development Bank of Kenya Ltd-	1995
20	Diamond Trust Bank Kenya Ltd.	1994
21	Dubai Bank Kenva Ltd.	1981
22	Equatorial Commercial Bank Ltd.	1995
23	Euro Bank Ltd	1992
24	Fidelity Commercial Bank Ltd-	1992
25	Fina Bank Ltd	1995
26	First American Bank of Kenya Ltd-	1987
27	Guardian Bank Ltd.	1992
28	Giro Commercial Bank Ltd.	1992
29	Habib Bank A. G. Zurich	1978
30	Habib Bank Ltd.	1956
31	Imperial Bank Ltd.	1992
32	Industrial Development Bank Ltd.	1989
33	Investments & Mortgages Bank Ltd.	1980
34	Kenya Commercial Bank Ltd.	1970
35	K-Rep Bank Ltd.	1999
36	Middle East Bank Kenya Ltd.	1980
37	National Industrial Credit	1968
38	National Bank of Kenya Ltd.	1959
39	Paramount Universal Bank Ltd.	1993
40	Prime Bank Ltd.	1992
41	Southern Credit Banking Corporation Ltd.	1980
42	Stanbic Bank Kenya Ltd.	1970
43	Standard Chartered Bank (K) Ltd.	1910
44	The Delphis Bank Ltd	1991
45	Trans-National Bank Ltd.	1985
46	Victoria Commercial Bank Ltd.	1987

APPENDIX IV

INTRODUCTORY LETTER

JANUARY 2003

DANSON MUSYOKI
C/O FACULTY OF COMMERCE
UNIVERSITY OF NAIROBI
P.O. BOX 30197,
NAIROBI.

Dear Sir/Madam,

RE: AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN QUALITY IMPROVEMENT AND FINANCIAL PERFORMANCE BY COMMERCIAL BANKS IN KENYA.

I am a post graduate student at University of Nairobi undertaking research in the banking sector specifically on Quality improvement in relation to financial performance. The study covers all the Commercial Banks in operation as at 31.12.2002.

Your organization therefore forms part of the population of the study and I would greatly appreciate if you could provide the information requested for in the questionnaire.

All responses are strictly confidential and shall be used purely for academic purposes. A copy of this research work can be made available to you upon request
Thank you for your cooperation.

Yours faithfully

Danson Musyoki.