

**Determinants of Loan Recovery in a Student Financing Organization:  
Case of Higher Education Loans Board**

**BY**

**KIMANI VENAZIO KURIA**

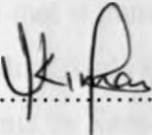
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I, Kimani Venazio Kuria acknowledge that this research project in its form and nature, organization and content is a fruit of my personal effort. To the best of my knowledge and belief it contains no material previously published or written by another person, except when due reference is made in the text of the project.

Kimani Venazio Kuria

Signature..........Date.....09/11/2011.....

This research project has been submitted for examination with my approval as the university supervisor:

MR. Martin Odipo

Signature..........Date.....10/11/2011.....

Lecturer

Department of Accounting and Finance

School of Business

University of Nairobi

## ABSTRACT

The financing of higher education in Kenya has been a big challenge to the Government of Kenya, through Higher Education Loans Board (HELB – hereafter referred to as the Board). There is a growing student population, rising costs of education and an increased dependency by students on financial assistance due to the slow growth in the economy and the impact of poverty levels in the country. This is to be seen against the background of dwindling finances from the Government, who have been the main financers of higher education.<sup>1</sup> The Board has recognized key challenges that it must into account in its operations. These challenges include the need for HELB to mobilize funds and become a self-sustaining organization in the long term; increasing demand for loans by Kenyan students, particularly from private and self sponsored students; the need to maximize the recovery of nonperforming loans by entering into strategic partnerships, which would assist in the netting in of loanees; and the need to reduce the loan default rates

Alternative methods of raising funds urgently need to be looked into by the Board. Secondly, the Board has to deal with the problem of non performing loans which now stands at 45% of the outstanding loans. Ways have to be found to find effective ways of reducing the loan repayment default rate. The use of threats and/or incentives to increase long repayment could be the key.

Lessons drawn from the banking industry in Kenya can also be used to reduce the loan default rate and the level of non performing loans. The strategies used by the banks to reduce these figures can be replicated by HELB.

The Project is therefore an exploratory research on the Determinants of the Higher Education Loans Board loan recovery program.

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Finally I wish to express my love and gratitude to my beloved family and in particular my dearest daughter Eden Njeri Kuria; for the understanding and endless love throughout the duration of my studies. I say THANK YOU and May God Bless you all. Above all, I deeply thank God for his Grace that was sufficient throughout my studies.

## **DEDICATION**

This work is dedicated to my dear child Eden and wife Lucyanne, for enduring my absence while undertaking my Masters Degree programme. Not forgetting my Parents and friends for the support they have given me ever since I was child.

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## **Abbreviations**

<b>CAR</b>	<b>Capital Asset Ration</b>
<b>CBK</b>	<b>Central Bank of Kenya</b>
<b>CRB</b>	<b>Credit Reference Beureau</b>
<b>DBMS</b>	<b>Database Management System</b>
<b>GDP</b>	<b>Gross Domestic Product</b>
<b>GSSLS</b>	<b>Government Subsidized Student Loans Scheme</b>
<b>HELB</b>	<b>Higher Education Loans Board</b>
<b>HELF</b>	<b>Higher Education Loans Fund</b>
<b>KRA</b>	<b>Kenya Revenue Authority</b>
<b>NHIF</b>	<b>National Hospital Insurance Fund</b>
<b>NIC</b>	<b>National Industrial Credit Bank</b>
<b>NPL</b>	<b>Non Performing Loans</b>
<b>NSSF</b>	<b>National Security Social Fund</b>
<b>SSNIT</b>	<b>Social Security and National Insurance Trust</b>
<b>USLS</b>	<b>University Students Loans Scheme</b>

## CHAPTER 1

### 1.0 INTRODUCTION

#### 1.1 Background

Government-sponsored student loans schemes are in place in some 70 countries and regions round the world. Student loans schemes, usually concerned with tertiary education, are of particular interest to governments because these schemes are able to contribute to the solution of a range of pressing policy problems that governments face (Adrian Ziderman, July 2008).

Student loans are able to relieve pressures on national budgets by facilitating greater cost sharing though the raising of tuition and other university fees. They both enable students to avoid the burden of the up-front payment of increased tuition fees, as well as enabling them to delay loan repayment until they are in receipt of the higher salaries that generally accrue to university graduates. Liberated resources can be used in areas of greater priority for society, both outside and within the education sector and notably basic education. Greater cost recovery can provide additional funds for the expansion of the university system, to accommodate increases in the social demand for tertiary education. Targeted at the disadvantaged, subsidized loans schemes may lead to greater access to university education for the poor and minority groups, thus contributing to social equity. And loans offered at favorable conditions for study in particular fields, can lead to a loosening of skilled manpower bottlenecks that inhibit social, economic and industrial development.

Considerable differences are evident in loans schemes across countries. Schemes differ not only in the underlying objectives pursued, but also in such parameters as organizational structure, sources of initial funding, student coverage, loans allocation procedures and collection methods. However there is one element that is common to almost all government-sponsored loans schemes: they are highly subsidized by governments. This means that, unlike commercial loans, a sizeable proportion of the total loans outlay by the loans body, be it government department, loans scheme authority or commercial bank, will not be received back in repayment. This gap between total loan disbursements and overall loans recovery is accounted for by two elements. First, there are built-in interest rate subsidies, incorporated into the design of the loans scheme.

And, second, there are inefficiencies in running the scheme, in terms of substantial repayment default and high administration costs.

## 1.2 Defining Loan Repayment and Loans recovery

### a) Loan Repayment

The loans repayment ratio measures how much of a loan average borrower is required to repay: it is defined as the ratio of required repayments to the loan size received, both measured in terms of terms of present values.

### b) Loan recovery

Since the repayment ratio relates to the typical borrower; it fails to show the extent of recovery to the loans fund, from the overall viewpoint of the scheme as a whole. Even if student loans were not subsidized, and the individual student was required to repay in full, not all of the sums loaned would be recouped by the loan authorities. The extent of such a shortfall would be dependent on the level of administrative efficiency under which the loans scheme is run. Thus, overall loans recovery depends not only on the total of all individual cash repayments. It takes account also of administrative costs that are not passed on to the student borrowers and of the extent of repayment default.

Repayment default is broadly defined to include payment in arrears and repayment evasion. An efficiently managed loans scheme will both maintain administrative costs at reasonably low levels and minimize the extent of repayment default.

Loans recovery, then, focuses more widely on the scheme as a whole, rather than on the individual borrower. It is concerned with the question of how much of the total outlays of the loans scheme (total loans disbursements plus all other costs including administration) will be recovered through loans repayment. It takes into account all of the items listed, both the fixed, built-in design factors as well as the effects of administrative efficiencies in running the scheme. Thus, if some borrowers defaulted, total repayment receipts would fall, but the individual required repayment ratio would remain unchanged. The *recovery ratio* is measured by the ratio of total (discounted) repayments to total (discounted) outlays. Clearly, the recovery ratio is

always lower than the repayment ratio, because the latter takes no account of the probability of repayment default and does not include general administration costs.

In some schemes, there is an additional, though usually minor, element affecting the recovery ratio. This is the possibility of canceling individual repayment obligations ("forgiveness") for such reasons as disability, student academic performance and the encouragement of graduates to enter skills-shortage occupations.

Higher education in the 21<sup>st</sup> century has become increasingly important not only to individuals but also for enriched lives, enhanced status, and great earning power and also to the larger society for the sake of economic prosperity generally as well as the advancement of democracy and social justice. However in spite of this universally recognized importance, and in spite of higher education's place as a principal claimant on public treasuries everywhere, higher education, is suffering from increasing demand due to overcrowding and capacity limitations due to rising enrollment of both government sponsored and self sponsored students to public universities plus enrollments to private universities (which exclude large numbers of qualified potential students from lower income families and those who are orphaned hence unable to enroll anywhere). It has therefore been a challenge to the government of Kenya through Higher education loans board to perfectly finance and recover funds for the higher education sector due to this growth which in turn lead to high rates of non-performing loans and default rates.

### **1.3 The Higher Education Loans Board**

The Higher Education Loans Board which is the main body that lends loans to students and also recovers when they are through with their education was established by an Act of Parliament. The statute known as The Higher Education Loans Board Act, 1995 was legally established as Act number 3 of 1995. It came into existence on the 21st day of July 1995 through Kenya Gazette Supplement (Cap 213A).

The history of the Higher Education Loans Board dates back to 1952 when the then colonial government awarded loans under the then Higher Education Loans Fund [HELFF] to Kenyans pursuing university education in universities outside East Africa notably Britain, the USA, the former USSR, India and South Africa.

Students who were pursuing university education in universities outside East Africa and were not on scholarships were advanced loans by the then government against securities such as Land Title Deeds, Insurance policies and Written Guarantees. However by 1974, provision of education in general had expanded dramatically as a result of the heavily subsidized primary and secondary education and the general yearning for education by most Kenyan families. Consequently, the number of students seeking university education had grown to an extent that it was becoming increasingly difficult to adequately finance university education by providing full scholarships and grants by the Government.

The Government therefore introduced the University Students Loans Scheme (USLS), which was managed by the Ministry of Education. Under the scheme, Kenyan students pursuing higher education at Makerere, Nairobi and Dar es Salaam universities received loans to cover their tuition and personal needs, which they would repay on completion of their education.

However, the University Students Loans Scheme (USLS) was plagued with a number of problems right on the onset. It lacked the legal basis to recover matured loans from loanees. In addition, the general public and university students wrongly perceived that the loan was a grant from the government, which was not to be repaid.

In order to address this problem, in July 1995 the Government through an act of Parliament established the Higher Education Loans Board to administer the Student Loans Scheme. In addition, the Board is also empowered to recover all outstanding loans given to former university students by the Government of Kenya since 1952 through HELF and to establish a Revolving Fund from which funds can be drawn to lend out to needy Kenyan students pursuing higher education. The establishment of a revolving fund was also expected to ease pressure on the exchequer in financing education.

HELB required for the students to report themselves to the agency soon after they completed their study and re-pay the loan at fixed amount one year after they graduated. Based on the latest information of student's study status, the agency will prepare the Repayment Schedule which among other things consists of loan amount, loan period and the monthly repayment which need to be made by the students. Normally, the repayment amount is generated using the interest rate

and the principle amount of the loan, however HELB would take into account the level and type of employment of the borrowers and the size of the salary

#### **1.4 Statement of the Problem**

The basic characteristic of all student loan schemes is that students are offered the chance to borrow money to help them finance tuition costs or living expenses. After completing their studies, graduates must repay the amount borrowed, with or without interest. The success of loans schemes aimed at cost recovery may be gauged by the extent to which effective loans recovery is achieved – i.e. that the value of expected repayments do in fact cover the loan amount received. From this viewpoint, past experience with loans programs in developing countries has been disappointing; very few loans schemes achieve cost recovery ratios (measured as the ratio of total net repayments received to the loan size) that are in excess of 50 percent and in many cases considerably less (Ziderman, A, 2004). Low loans recovery may reflect the way in which an otherwise financially-sound loans scheme is administered; in particular, excessive repayment default and high administration costs of loan servicing and collection will lead to a shortfall of repayments in relation to the loans size. But these are factors that are subject to correction through improvements in process and greater internal efficiency. Less readily tractable are those causes of poor loans recovery which are built structurally into the loans scheme at the outset, in the form of overly generous repayment conditions. In very many schemes such loans subsidy, stemming from below-market rates of interest, repayments in nominal terms and long grace periods, constitutes the dominant factor accounting for poor loans recovery.

Although loan schemes work well in some countries such as Australia, China, India Indonesia and other Asian countries, in others they have worked poorly and have suffered from high default rates (Ziderman, A,2004). A growing number of countries are adopting income-contingent loan systems, sometimes referred to as graduate tax, in which loan repayments are a fixed proportion of a graduate's annual income. Although experience to date is limited, such systems can, in theory, achieve a better balance between effective cost recovery and risk to the borrower.

Administration is generally simpler and cheaper under such schemes because loan recovery is handled through existing collection mechanisms, such as the income tax administration or the social security system. Income-contingent loans are also more equitable and satisfy more fully

the ability-to-pay principle, since graduates' payments are in direct proportion to their income. For example, the student support system in Sweden minimizes the risk of student default by limiting repayments to four percent of income after graduation. Ghana has adopted a similar program which collects payments through the national social security system. In Australia, income-linked loan payments are made through the tax system. The rate of repayment is two, three or four percent of taxable income, depending on how much a graduate earns. The existence of a comprehensive student loan scheme has enabled Australia to introduce cost-sharing in public higher education, representing up to 20 percent of unit costs, and achieve a 30 percent expansion in enrollment in a few years without a significant increase in public subsidies. A similar system has been established in New Zealand. In Singapore, the National Social Security and Pension Fund offers educational loans to parents who can then repay at the same time as they make their regular out-of-salary contributions to the Fund. (World Bank)

The performance of HELB in terms of loan recovery is no exception. The level of non – performing loans stood at 45% (Kshs.7.9 billion) as at 30th June 2010 (HELB database loan portfolio). Various measures and incentives have been put in place in order to boost the loan recovery efforts these measures include, Data Sharing with Strategic Partners such as NHIF, NSSF and KRA, Tracking of Loanees Through the Provincial Administration, Partnering with the Credit Reference Bureau and Imposing penalties on loanees for non-compliance

Despite the measures put place by the Board to increase recovery, the still has been reluctance by the ex- loanees to repay.This study seeks to assess the main determinants of loan recovery by HELB, which of the methods employed by HELB are more effective and improve loan recovery or rather should HELB adopt the income-contingent system?

### **1.5 Objective of the Study**

The objective of this study is to establish determinants of loans recovery methods.

## **1.6 Importance of the study**

The result of this study will be of importance to:

The management of HELB - the study will shed light on how to overcome challenges being faced by the board in recovering funds from loanees so as to reduce the size of the non performing loans.

Students borrowing loans will also benefit from this study because it will also give them an understanding of the main reasons why the loans might end up being non-performing and the possible results and consequences of failing to service these loans. This will in turn help them prepare in advance how to go through the repayment of the loan and unemployment.

To the government, this study will help in the formulation of a good legal framework which will create a good working environment to HELB hence enable it to recover most of its debt on time to benefit the rising number of needy students. This will reduce HELB's over reliance on treasury to fund its operations and loan disbursement.

To the academic researchers, the study will contribute to the existing body of knowledge in the area of risk management and particularly non banking institutions responses to challenges of non performing loans.



## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Introduction

This chapter will explore the various theories relating to loan recovery and loan defaulting, studies that have been conducted in both the developed and developing countries with regard to what practices can be put into place to reduce non performing loans hence contributing to more loan recoveries.

#### 2.2 Definition of terms

##### 2.2.1 Non-performing loans

The central bank of Kenya defines NPLs as those loans that are not being serviced as per loan contracts and expose the financial institutions to potential losses (CBK, 1997). It is important to note that non-performing loans refer to accounts whose principal or interest remains unpaid 90 days or more after due date.

##### 2.2.2 Repayment Ratio: the individual loan account

First, there are factors that are “built-in” to the scheme, as elements of its design. Lending conditions in virtually all government-sponsored loans schemes are “softer” than those on regular commercial loans; this difference represents a subsidy received by the student, in the sense that the borrower is not required to pay back the full value of the loan received. These conditions include below-market interest rates on the loan, periods in which no interest is levied on outstanding debt (both during study and in grace periods after study completion) and repayments not linked to the rate of inflation. The effect of these built-in subsidies is amplified where amortization periods are long. The larger are these built-in subsidies, the less of the original loan is the individual borrower required to repay; the difference between original loan size and actual required repayment represents, effectively, a “hidden grant” to the student taking out a loan. The *loans repayment ratio* measures how much of a loan an average borrower is required to repay: it is defined as the ratio of required repayments to the loan size received, both measured in terms of present values. The *hidden grant ratio* (how much of the loan does not need to be repaid) is equal to 100 percent minus the repayment ratio (Usher, 2005).

### 2.2.3 Loans Recovery: the overall perspective

Since the repayment ratio relates to the typical borrower; it fails to show the extent of recovery to the loans fund, from the overall viewpoint of the scheme as a whole. Even if student loans were not subsidized, and the individual student was required to repay in full, not all of the sums loaned would be recouped by the loan authorities. The extent of such a shortfall would be dependent on the level of administrative efficiency under which the loans scheme is run. Thus, overall loans recovery depends not only on the total of all individual cash repayments. It takes account also of administrative costs that are not passed on to the student borrowers and of the extent of repayment default.

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### 2.3 Related Literature.

Empirical studies of recovery rates primarily focus on bonds. There are relatively few papers on bank loans since it is difficult to obtain loan recovery data, given that loans are private debt contracts (Frye 2000). On a descriptive level, several empirical studies on defaulted loans show that the recovery rates exhibit a bimodal distribution (Araten et al. (2004); Asarnow and Edwards (1995); Schuermann (2004)). That is, many defaults result in full recovery, while the weight of others has zero or very low recovery rates. Dermine and Neto de Carvalho (2006) find a similar distribution for loans in a sample drawn from one bank. Other studies do not confirm bimodality, but instead show that loan recovery rates are skewed to the right, while bond recoveries are

skewed to the left (Emery 2007)). The inconsistent results in these studies may be due to differences in datasets and/or time periods.

Examining Moody's database of ultimate recoveries, (Emery 2007) finds the recovery rate on bank loans averages 80% at resolution, compared to only 65% for bonds. (Asarnow and Edwards 1995) present a univariate analysis of bank loan default data on 831 commercial and industrial loans (C&I) and 89 structured loans made by Citibank over 24 years and find an average recovery of 65% for C&I loans and 87% for structured loans. The higher recovery rate on structured loans reflects the fact that such loans are heavily collateralized and contain many restrictive covenants. (Acharya, Bharath, and Srinivasan 2007) report a recovery rate of 81.12% for bank loans, 59% for senior secured bonds, 56% for senior unsecured bonds, 34% for senior subordinated bonds, 27% for subordinated bonds, and 18% for junior subordinated bonds for the period from 1982 to 1999.

Most of the earlier academic studies on credit risk assumed that the probability of default (PD) and recovery rates (RR) are uncorrelated. There are reasons to doubt this assumption, however, since studies on credit rating transitions have shown that recovery and default are both related to conditions external to the firm. For example, (Carty 1997) examines 77 years of credit rating changes from 1920 to 1996 and documents that movements in credit quality are correlated with macroeconomic, industrial, geographic, and temporal factors. (Nickell, Perraudin, and Varotto 2000) estimate an ordered probit model for credit ratings on long-term bonds between 1970 and 1997 and show that the probability of rating changes depends on the stage of the business cycle, industry effects, and other factors.

In a recent literature review, Altman (2006) notes that collateral values, which theory suggests and evidence shows affect bond and loan recovery rates, decline as economic conditions deteriorate, while at the same time the number of defaults increases. (Altman, Brady, Resti, and Sironi 2005) find a negative relation between aggregate default rates and recovery rates on bonds over the period 1982-2002. They show that previous studies, which ignored this correlation, understated both expected and unexpected losses. (Hu and Perraudin 2002) find that aggregate issuer-based default rates are negatively related to recovery rates (-22% for post-1982 quarters and -19% for 1971-2000 quarters).

On the theoretical front, a number of models have recently been developed that explicitly investigate the default-recovery correlation. In a model for implied recoveries, (Das and

Hanouna 2007) use a Merton (1974)-based technique for extracting recovery rate term structures from credit default swap spread curves and empirically find that the recoveries over the period 2000-2002 exhibit a strong negative correlation with default probabilities. (Jokivuolle and Peura 2000) approach the correlation question indirectly via an option-pricing-based model for bank loans in which collateral value varies stochastically and is correlated with PD. They assume that the firm's asset value does not determine the RR, but does have a positive relation with collateral value, and they obtain an inverse relationship between realized default rates and recovery rates. In short, both recent theoretical models and empirical analyses point to a likely negative relation between default and recovery rates.

The current paper studies factors that affect defaulted bank loan recovery rates. The paper differs from the existing literature on recovery rates in that it uses discounted settlement rates in Moody's Ultimate Recovery Database instead of trading prices as proxies for recovery and the data examined include only defaulted bank loans, not bonds nor a combination of bonds and loans, and the loans were made by a variety of financial institutions to numerous industrial companies rather than a specific loan data set from a single bank.

## **2.4 Review of Empirical studies in related areas**

### **2.4.1 Loan Default and Non Performing Loans**

Other reviews of international experience have focused on developing countries, where the effectiveness of student loans has often proved disappointing. The rate of default is as high as 80% in some countries (Wood-hall 1992, p. 355). In the early 1990s a series of international forums on student loans organized by the International Institute for Educational Planning (IIEP) analyzed experiences in the United States, Europe, and in developing countries. An evaluation of student loan experience in developing countries was summarized with the conclusion that "student loans can make a contribution to relieving the financial pressures facing higher education, provided that loan programs are properly designed, effectively managed and a high rate of recovery is achieved (Wood-hall 1992, p. 355).

The requirements for success include first of all, sound financial management, including appropriate interest rates to maintain the capital value of the loan fund and cover administrative costs. Secondly, a sound legal framework to ensure that loan recovery is legally enforceable. Third, effective machinery for loan recovery, to minimize default. Finally, publicity campaigns

to ensure widespread understanding and acceptance of the principles of student loans and the importance of the obligation to repay.

These broad conclusions on feasibility and scope for use of student loans in developing countries were echoed in a comparative study for the World Bank by Adrian Ziderman and Douglas Albrecht 1995, who concluded that: "student loans have received much attention both in the literature and in practice. While they have not always worked well ... suitably reformed, they can constitute a productive, though limited mechanism for cost recovery" (p. 371).

With such a low recovery rate, the program is struggling and appears unlikely to survive in the long run unless it continues to receive heavy subsidies from the Government of Kenya. The Chronicle of Higher Education observes that the default rates for borrowers from public and private universities and from community colleges in the U.S.A. have increased since 1995. Federal student loan volume has more than doubled since 1992 from \$15 billion to about \$34 billion in 1997. During the period the loan defaults amounted to \$10.4 billion. This is a lot of money and demonstrates the difficulty associated with loan recovery even in developed countries such as the United States. As a measure to reduce the loan default rates, several loan recipients have been taken to court, and in addition, the Internal Revenue Service (IRS)-the nation's federal tax collector-has also been able to identify some defaulters and withhold their tax refunds as a way of forcing them to meet their obligations to the loan program.

A number of studies have examined loans repayment and loans recovery in various country loans schemes. These studies take two forms: individual country studies and comparative studies. Examples of country level studies are to be found in Wandiga (1997), which examines the Kenyan loans scheme, and in Chung and Hung (2003) which reports on student loans in Hong Kong. But because these individual studies use somewhat different methodologies, it is difficult to draw any comparative conclusions from an examination of the differing results, across countries.

A few comparative studies are available, each relating to a number of country loans schemes. Each of the comparative studies employed a common methodology to examine the county loans schemes under scrutiny. The classic study by Johnstone (1986), which introduced the hidden grant concept, measured the size of the hidden grant in loans schemes in the Federal Republic of Germany, the United States and Sweden. Carlson (1992) compared loans schemes within Latin

America and the Caribbean, while Ziderman (2004) reported the results from a comparative study of five loans schemes in S.E. Asia. However, all of these comparative studies have a limited coverage: Johnstone's study relates to industrialized countries while the Carlson and Ziderman studies are regional in focus.

The comparative study by Ziderman and Albrecht (1995) is more general and far-ranging than the other studies noted above. Computing repayment and recovery ratios for student loans schemes in 19 countries, the study covered a larger number of countries, included both developing and industrialized and was not restricted to a regional coverage. However, the findings relate to loans scheme conditions as they stood fifteen to twenty years ago.

The issue of non performing loans has recently been given prominence by the banking industry, HELB as a financial institution can not be left behind in the issue since it is facing the same problems of non performing loans. Documentation in regards to non performing loan in institutions concentrating with lending of educational loans are scarce, most of the literature is mainly in relation to the banking sector.

In the banking literature, the problem of NPLs has been revisited in several theoretical and empirical studies. A synoptic review of the literature brings to the fore insights into the determinants of NPL across countries. A considered view is that banks' lending policy could have crucial influence on non-performing loans (Reddy, 2004). According to an IMF report (1994) in Uganda the country's banking industry was described as extremely weak, with huge non-performing loans and some banks teetering on the verge of collapse. The report notes that reeling from years of economic mismanagement and political interference, Uganda's banking industry posted huge losses in the early 1990s. To help address credit risk management in Ugandan banks, the government introduced a statute that deals with several issues such as insider lending, following the scandal in which billions of shillings were lent without sufficient collateral to Greenland Bank by one of the then newly privatized Uganda Commercial Bank Ltd. The statute further seeks to reduce owner concentration.

According to a study by Brownbridge (1998), most of the bank failures were caused by nonperforming loans. Arrears affecting more than half the loan portfolios were typical of the failed banks. Many of the bad debts were attributable to moral hazard: the adverse incentives on

bank owners to adopt imprudent lending strategies, in particular insider lending and lending at high interest rates to borrowers in the most risky segments of the credit markets.

According to Brownbridge (1998), the single biggest contributor to the bad loans of many of the failed local banks was insider lending. In at least half of the bank failures, insider loans accounted for a substantial proportion of the bad debts.

Fuentes and Maquieira (1998) undertook an in-depth analysis of loan losses due to the composition of lending by type of contract, volume of lending, and cost of credit and default rates in the Chilean credit market. Their empirical analysis examined different variables which may affect loan repayment: (a) limitations on the access to credit; (b) macroeconomic stability; (c) collection technology; (d) bankruptcy code; (e) information sharing; (f) the judicial system; (g) prescreening techniques; and (h) major changes in financial market regulation. They concluded that a satisfactory performance of the Chilean credit market, in terms of loan repayments hinges on a good information sharing system, an advanced collection technology, macroeconomic performance and major changes in the financial market regulation.

Lis, *et al.*, (2000) used a simultaneous equation model in which they explained bank loan losses in Spain using a host of indicators, which included GDP growth rate, debt-equity ratios of firms, regulation regime, loan growth, bank branch growth rates, bank size (assets over total size), collateral loans, net interest margin, capital asset ratio (CAR) and market power of default companies. They found that GDP growth (contemporaneous, as well as one period lag term), bank size, and CAR, had negative effect while loan growth, collateral, net-interest margin, debt equity, market power, regulation regime and lagged dependent variable had positive effect on problem loans. The effect of branch growth could vary with different lags.

Nishimura *et al.*, (2001) state that one of the underlying causes of Japan's prolonged economic stagnation is the non-performing or bad loan problem. They explain that some of the loans made to companies and industries by financial institutions during the bubble era became nonperforming when the bubble burst. This delayed structural reforms and prevented the financial intermediary system from functioning properly.

Bloem *et al.*, (2001) suggested that a more or less predictable level of non-performing loans, though it may vary slightly from year to year, is caused by an inevitable number of 'wrongeconomic decisions' by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, *etc.*). Under such circumstances, the holders of loans can make an allowance for a normal share of non-performance in the form of bad loan provisions, or they may spread the risk by taking out insurance. Enterprises may well be able to pass a large portion of these costs to customers in the form of higher prices. For instance, the interest margin applied by financial institutions will include a premium for the risk of nonperformance on granted loans.

Altman, *et al.*, (2001) analyzed corporate bond recovery rate adducing to bond default rate, macroeconomic variables such as GDP and growth rate, amount of bonds outstanding, amount of default, return on default bonds, and stock return. It was suggested that default rate, amount of bonds, default bonds, and economic recession had negative effect, while the GDP growth rate, and stock return had positive effect on corporate recovery rate.

In another study of Chile, Fuentes and Maquieira (2003) analyzed the effect of legal reforms and institutional changes on credit market development and the low level of unpaid debt in the Chilean banking sector. Using time series data on yearly basis (1960-1997), they concluded that both information sharing and deep financial market liberalization were positively related to the credit market development. They also reported less dependence of unpaid loans with respect to the business cycle compared to interest rate of the Chilean economy.

Mohan (2003) conceptualized 'lazy banking' while critically reflecting on banks' investment portfolio and lending policy. In his study of institutional finance structure and implications for industrial growth, Mohan (2004) emphasized on key lending terms of credit, such as maturity and interest-terms of loans to corporate sector. The Indian viewpoint alluding to the concepts of 'credit culture' owing to Reddy (2004) and 'lazy banking' owing to Mohan (2003) has an international perspective since several studies in the banking literature agree that banks' lending policy is a major driver of non-performing loans (McGoven, 1993, ).

Jimenez and Saurina (2003) used logit model for analyzing the determinants of the probability of default of bank loans in terms of variables such as collateral, type of lender and bank borrower relationship while controlling for the other explanatory variables such as size of loan, size of borrower, maturity structure of loans and currency composition of loans. Their empirical results



suggested that collateralized loans had a higher probability of default, loans granted by savings banks were riskier and a close bank-borrower relationship had a positive effect on the willingness to take more risk. At the same time, size of bank loan had a negative effect on default while maturity term of loans, *i.e.*, short-term loans of less than 1-year maturity had a significant positive effect on default.

Reddy (2004) critically examined various issues pertaining to terms of credit of Indian banks. In this context, it was viewed that the element of power has no bearing on the illegal activity. A default is not entirely an irrational decision. Rather a defaulter takes into account probabilistic assessment of various costs and benefits of his decision

In Ghana, a study by (Ziderman and Albrecht, 1995) showed that eligible students are granted a loan after they have entered into agreement with the Social Security and National Insurance Trust (SSNIT) which administers student loans. A recipient of the loan is registered by the SSNIT and given a provisional social security number and membership certificate. On completion of studies, the provisional social security number becomes the graduate's permanent social security number and the student loan program collects payments through the social security system. Graduates repay their loans through their standard social security deductions which go to their education budget rather than to their own benefit account. Students therefore, repay their loan through an increased social security tax rate rather than by differing contributions to their own retirement accounts until that loan are repaid. Each borrowing students must have two guarantors who are wage earners and thus traceable by the government. As a result of this effective guarantee system Ziderman and Albrecht (1995) find that default rates are negligible.

There are two national students' loans schemes in China, both formally established in 1999, one is subsidized by government, the second operates on commercial lines (Shen, H and Li, W. 2003). The Government Subsidized Student Loans Scheme (GSSLS) is the main loans scheme in China. It is aimed at poor students enrolled full-time in regular public universities. Loan capital is provided by four state-owned commercial banks. While educational institutions initially process loan applications, the commercial banks are responsible both for selection, lending out of loans and collection of due repayments; they also bear most of the default risk. The banks receive the commercial rate of interest on loans, half of which is paid by government. While the

commercial banks put up the loan capital, the total loan volume is constrained by the system of institutional 'quotas', based on the total amount of interest support available from government and by the willingness of commercial banks to provide loans. There are no formal guarantors on loans; students own personal credit acts by way of guarantee, with no consideration of an applicant's credit history. Repayment is due four years after graduation (Shen, H. 2004). Unlike the government-subsidized scheme, the General Commercial Student Loans Scheme (GCSLS) operated by commercial banks (and rural credit co-operative unions) is open to students in private as well as public universities, and regardless of socio-economic status. Interest on loans is charged at the commercial market rate, without government subsidy.

Repayment periods differ, because the various participating banks have their individual loan regulations. Shen H. (2004) observes that since loans are guaranteed through the assets of parents/guardians, the risk of default is minimized, but on the downside the scheme is limited in practice to students from middle and upper class families with the required assets for collateral. Due to the nature of their business, commercial banks expose themselves to the risks of default from borrowers. Prudent credit risk assessment and creation of adequate provisions for bad and doubtful debts can cushion the banks risk. However, when the level of non-performing loans (NPLs) is very high, the provisions are not adequate protection. According to the CBK (July,1999) the level of NPLs in 1998 was estimated at Shs. 80 billion or 30% of advances, up from 27% in 1997 as compared to 81.3 billion or 33.4% of total loans in November 2001. This can be compared with levels of NPLs in other countries. According to Shirazi (2002), the NPL ratio among Taiwanese banks was estimated at 7.7 percent by the end of 2001, while the ratio among grassroots financial institutions was 16.37 percent. In the Philippines non-performing loans ratio as at July 15, 2001 stood at 16.81 percent of the total loan portfolio, up from 16.76 percent a month before, Comparing, the ratio of non performing loans in Kenya of 33% to similar African economies as at the end of 2000, the ratio is much lower in Zimbabwe (24%), Nigeria (11%) and South Africa (3%) (CBK 2001).

Kenya has experienced banking problems since 1986 culminating in major bank failures (37 failed banks as at 1998) following the crises of; 1986 - 1989, 1993/1994 and 1998 (Kithinji and Waweru,2007). The crises were mainly attributed to NPLs (Ngugi, 2001). For example, Daima

bank. according to Ngugi (2001) was placed under statutory management for failing to meet the minimum core capitalization threshold - among as well as poor management of loan portfolios.

Bett (1992), while looking at financial performance of the banking sector observed that loan portfolios deteriorate as banks keep lending to their major big borrower because of fear that if they fail, the bank will equally follow suit. He also observed that failed banks were lending at high interest rates to mainly speculators and high risk operators who were unable to repay.

Matu (2001), looked at the applicability of financial crisis predictive model to bank failure in Kenya and observed that the high levels of non performing loans put pressure on banks to retain high lending rates in an attempt to minimize the losses associated with these loans.

According to Mucheke (2001), the key causes of non performing loans in the banking industry are bad lending practices, incompetence on the part of the bank risk managers, political interference in the management of state controlled banks and economic declines.

Obiero (2002), found that the 39 banks which failed during the period 1984 and 2002, 37.8% collapsed mainly due to quality of lending. Though most banks pride in clear and sound lending policies, the reality is that they have been quite reckless in their lending activities. Coupled with this the is the immense pressure particularly on government controlled banks to lend to politically connected individuals and institutions regardless of the credit standing (market intelligence).

Awino (2000) found out that lack of policies in loan recovery strategy which cuts across various areas of operation is the cause of problem in the loan recovery efforts and unless HELB takes a bold step in tackling this issue by formulating clear and well documented policies which acts as a source of reference for all of its activities, then its role of financing higher education in Kenya will still be hampered by many problems at stake. It must now identify itself with those strategic choices which will see it award loans to all the needy Kenyans and remain a viable institution with no dependency on the exchequer at all, for this will be the pinnacle of its success in this millennium and beyond.

According to Omuodo (2003), as pressure mounts on the banking industry's profitability resulting from over reliance on interest income by banks, it is strategically imperative that banks focus on other revenue streams. National Industrial Credit Bank, NIC, introduced new products to diversify revenue and to keep its head above the water. Omuodo adds that part of NIC Bank's strategy has been to diversify revenues, by expanding the scope of its activities in addition to its predominant asset finance focus and offering more general commercial banking facilities and other products. Premium financing and provision of custodial services have reduced over reliance on interest income hence.

Lalampaa (2006), in his study entitled "Response by higher education loans board to the environmental challenges of financing higher education in Kenya", noted that the environment within which the Higher Education Loans board operates presents great challenges and the situation has not been made better by the low funding from the exchequer, high level of nonperforming loans, rapid growth of universities in Kenyan system hence increased number of possible beneficiaries, the ravaging HIV/Aids pandemic, migration of loanees, falsification of particulars by loan applicants so as to receive full amounts, and the high unemployment levels in the country where students lucky enough to get a university degree have no guarantee of finding employment.

The study concluded that the board had various strategies in response to the challenges which includes partnering up with various stakeholders to enhance its loan recovery to boost its funds for further loaning e.g. Kenya revenue authority and National Social Security Fund, establishment of electronic fund transfers, setting up of disaster recovery site to ensure that it does not lose any data of its loan beneficiaries, and the board has an Act that would see those who give false information being liable to prosecution when found and their loans cancelled.

#### **2.4.2 Factors Leading to Low Loan Recovery**

The financial viability of any loan program depends on the extent to which loan outlays are recovered by the lending body. A number of factors hinder full recovery of loans. These may be divided into two groups.

First, there are factors that are built-in to the scheme, as elements of its design. Lending conditions on all government sponsored loans schemes are 'softer' than those on regular

commercial loans schemes. This difference represents a subsidy received by the student, in the sense that the borrower is not required to pay back the full value of the loan required.

These conditions include below-market interest rates on the loan, periods in which no interest is levied on the outstanding debt (both during study and in grace periods after study completion) and repayments that are not linked to the rate of inflation. The effect of these built-in subsidies is amplified where amortization periods are long. The larger these built-in subsidies are, the less of the loan the borrower is required to repay. The difference between the original loan and the actual required repayment represents, effectively, a 'hidden grant' to the student taking out a loan.(Hua Shen, Adrian Ziderman,2008)

Even if the student loans were not subsidized and the individual student was required to repay the loan in full, not all of the sums loaned would be recouped by the loan authorities. The extent of such a shortfall would be dependent on the level of administrative efficiency with which the loans scheme is run. Thus, overall loan recovery depends not only on cash repayments but also on administrative costs that are passed on to borrowers and on the level of repayment default. Repayment default is broadly defined to include payment in arrears, repayment evasion and the cancellation of individual repayment obligations (waivers) for such reasons as death or physical disability.

Whereas many prior studies evaluated the association between borrower or institutional characteristics and default behavior, the general finding of most researchers today is that college success plays a bigger role in predicting who will default than either the background of the borrower or the type of institution attended. All else being equal, students who are successful in their studies tend to have lower default rates than those who are not. This is a hopeful finding in that loan repayment appears to hinge on factors that are at least partially under the control of the borrower, the school and the recovering institution. This literature review will cover research into the variety of factors which may play a role in defaults and practices which can be put into place to ensure reduction in non performing loans hence contributing to a rise in loan recoveries.

#### **2.4.2.1 College Success Variables**

According to (Volkwein et al 1998) University experience and success variables are those that occur in University and which the University, the borrower, or both have some ability to affect. These characteristics include college major, academic achievement, transfer status, educational goals of the student, financial support, and degree completion. The reason for the correlation

between University success and default behavior is unknown; however, it is possible that the hard work and responsibility that result in college success are established habits that carry over to other responsibilities in students' lives, such as loan repayment. Also, borrowers who achieve success in college will most likely obtain better positions in the job market and be in a better position to repay their loans after they leave school (Steiner and Teszler 2003).

#### **a. Graduation**

In a study by (Woo 2002) on borrowers, failure to complete the academic program was one of the strongest predictors of default among all types of students.

In a study by (Steiner Teszler 2003) of Texas A&M University students, borrowers who did not graduate had a nearly 14 percent default rate while borrowers who did graduate had less than a 2 percent default rate. The study further indicates that borrowers who obtain degrees have low default rates no matter what type of degree (Bachelor of Science, Bachelor of Arts, etc.) they get. Although Grades acquired In the university is also a predictor of loan default and repayment behavior, a national study of borrowers who began higher education between 1973 and 1985 found that degree completion is more important than grades earned. Earned degree also outweighs the influence of institution type, especially among African Americans (Volkwein et al. 1998).

#### **b. Continuous enrollment**

In a study by (Podgursky et al. 2002), students who are continuously enrolled are less likely to default than students who drop out. This result was not driven solely by program completion: students who did not graduate but were continuously enrolled had a substantially lower probability of default than similar non-graduates with interrupted enrollment periods.

In another study by (Woo 2002), leaving school is a significant risk factor in predicting default. This was true for students in Woo's California study in all programs and types of schools. Borrowers who withdraw from school for whatever reason have higher default rates, with default rates rising as the number of times withdrawn rise. In addition, students who withdraw for administrative or academic reasons have higher default rates than students who withdraw for work-related reasons (Steiner and Teszler 2003).

## **2.4.2.2 Post University variables**

### **a. Unemployment**

Post-University characteristics are those that occur after a borrower has left school and include educational and occupational attainment (i.e. income, highest degree earned, occupation, and indebtedness), marital status, and number of dependents. Woo found that the strongest post-school variable associated with default is filing for unemployment insurance. Borrowers who experienced unemployment showed an 83 percent increase in their probability of default over their original probability (Woo 2002). Nationally, borrowers indicate that the most important reasons for default are being unemployed (59 percent said this) and working at low wages (49 percent) (Volkwein et al. 1998). In a study of borrowers who left postsecondary education between 1976 and 1985, defaulters were surveyed about the importance of various factors (many of which were post-college factors) that may have led to their default, including unemployment, low income, the presence of other more important loans to repay, dissatisfaction with their educational program, and intervening personal problems. Some 83 percent of proprietary school borrowers and 74 percent of two-year school borrowers said that being unemployed and without income were very or somewhat important reasons for their having defaulted (Dynarski 1994).

### **b. Income**

Not surprisingly, borrowers with high earnings after they leave University are less likely to default than those with low earnings. This fact underlines the risk students assume in taking out large loans and then entering low-paying careers. But, in predicting default, this income variable was only half as strong as the variables for unemployment or dropping out (Woo 2002).

Flint found that lower disposable incomes and greater incongruence between undergraduate major and current employment are risk factors for default (Flint 1997). In an earlier study, defaulters were surveyed about the importance of various factors (many of which were post-college factors) that may have led to their default, including unemployment, low income, the presence of other more important loans to repay, dissatisfaction with their educational program, and intervening personal problems. Some 69 percent of four-year school borrowers said they were working, but had insufficient funds (Dynarski 1994). Having an adequate disposable income is a necessary, but not sufficient, condition for honoring the terms of a student loan. Low

incomes increase default risk, but many of those having the apparent ability to repay nevertheless choose not to. In this study, 11.6 percent of borrowers who had disposable incomes greater than total amount borrowed ended up defaulting, whereas 83 percent of borrowers with disposable incomes less than total amount borrowed were in repayment (Flint 1997).

### **c. Personal and Family**

Being separated, divorced, or widowed increases default probability by over 7 percent, and having dependent children increases default probability by 4.5 percent per child (Volkwein and Szelest 1995). Having dependent children combined with being single, separated, divorced, or widowed produces default rates above 40 percent (Volkwein et al. 1998). The variables that reduce default are substantially the same across ethnic populations, but their influence on non-Whites is larger than it is on Whites: among all populations, being female and being married lower the default rate and do so more dramatically for non-Whites than for Whites (Volkwein et al. 1998).

### **d. Loan Repayment Factors**

Borrowers who have ever been in deferment or forbearance are less likely to default, perhaps because borrowers who are organized enough to follow through on using deferments are also better able to handle repayment in general (Woo 2002).

Borrowers who went into delinquency more than once were more likely to default. Each period of delinquency increases the borrower's chances of default by 4.8 percentage points, which is almost 50 percent of the original probability (Woo 2002).

### **e. Knowledge of Repayment Obligation**

Lack of knowledge about repayment is not a strong factor in default: 93 percent of borrowers surveyed realized the loan had to be repaid. However, one in four was confused by the repayment process, and three out of four were not aware of loan deferment options (Volkwein et al. 1998).



## **f. Repayment after Default**

Follow-up studies of defaulters reveal that two out of three reported making payments since the official default first occurred. Not only did 66 percent resume payment, but 31 percent completed payment (Volkwein and Cabrera 1998).

### **2.4.2.3 Background Characteristics of Borrowers**

Background characteristics are those the student brings with him or her to the university which an institution has little or no ability to affect, such as age, gender, ethnicity, parents' education and income, high school curriculum and achievement, borrower aptitude and attitude. The latter – attitude – refers to the borrower's attitude toward a variety of things which could affect his or her propensity to default, including loans, debt, and other financial responsibilities (Volkwein and Szelest 1995).

#### **a. Gender**

Woo found that being female decreased a borrower's chance of default by 36 percent (Woo 2002).

A study of Missouri borrowers also found that men are more likely to default than women (Podgursky et al. 2002).

A third study, this one national, found that being male increases default probability by 5.8 percent (Flint 1997).

However, Volkwein and Szelest found no significant difference in default rates between males and females (Volkwein and Szelest 1995).

A mid-1980s study of Pennsylvania borrowers found no link between gender and default (Knapp and Seaks 1992).

#### **b. Age**

Older students are more likely to default than younger students, perhaps due to a weakening of ties to parents and family who might assist a student experiencing financial difficulties (Woo 2002).

The Missouri study also found that older students are more likely to default than younger students (Podgursky et al. 2002). Each year beyond the age of 21 increases default probability by 3 percent (Flint 1997).

### **c. Ethnicity**

Background variables associated with lower default rates include being Asian American or White, having a college-educated parent, and coming from a family with an income over \$30,000. Variables associated with higher default rates are being African American or American Indian, coming from a family of little formal education, and having a GED or no high school diploma (Volkwein et al. 1998).

However, Volkwein et al. find that borrowers in every ethnic group who have similar earned degrees, marital status, and family size exhibit almost identical records of earned income and loan repayment. Thus, the borrower's socioeconomic status, type of institution attended, grades earned, and choice of major appear to be less important than whether he or she completed a degree, is married or single, and has dependent children. African Americans and Hispanics have lower levels of degree attainment, lower levels of academic achievement, almost twice the number of children, and twice the rate of separation and divorce, than Whites. These circumstances, rather than ethnicity, appear to explain the differences in default rates (Volkwein et al. 1998).

#### **2.4.2.4 Family Background and Income**

Background variables associated with lower default rates include being Asian American or White, having a college-educated parent, and coming from a family with income over \$30,000. Variables associated with higher default rates are being African American or American Indian, coming from a family of little education, and having a GED (General education development) or no high school diploma (Volkwein et al. 1998). Parents' income has an impact on default: an increase of one thousand dollars in income lowers the default risk by two-tenths of a percent; a ten thousand dollar increase lowers the probability by two percentage points (Knapp and Seaks 1992). Most borrowers, even from poor families, do not default on student loans (Woo 2002). The presence of both parents lowers the probability of default by about 2.7 percentage points, while the absence of a father increases the probability of default by 2.5 percentage points (Knapp and Seaks 1992).

#### **2.4.2.5 Academic Preparedness**

In general, the higher the high school class rank of a borrower, the less likely the borrower is to default. Borrowers whose high school class rank was below the 25<sup>th</sup> percentile had a 12.8 percent default rate compared to a 3.2 percent default rate for borrowers at or above the 90<sup>th</sup> percentile. However, the relationship is fairly weak compared to other variables in the study (Steiner and Teszler 2003).

Borrowers with higher SAT Equivalency Scores (Equivalency Scores convert non-SAT scores to the SAT scale for students who took the ACT) have lower default rates. For borrowers with a combined verbal and math SAT score below 900 the default rate was 6.9 percent versus 4.4 percent for borrowers with a combined SAT of 901 to 1400. However, it should be noted that the vast majority of borrowers in the study had SAT scores above 900 (Steiner and Teszler 2003).

There is virtually no difference in the default rates of borrower who met the minimum high school coursework requirements for Texas (4 credits of English, 3.5 of math, 3 of science, and 2 of a foreign language) and those who did not meet them (Steiner and Teszler 2003).

In a study of borrowers at two-year schools, having a GED as opposed to a regular high school diploma was associated with a higher default rate (Christman 2000).

#### **2.4.2.6 Borrower Attitude**

A study of non-federally guaranteed loans extended to law school students in the early 1990s challenges the notion that there are institutional as well as borrower explanations for default. In this study, variables associated with borrower characteristics, such as ethnicity and family income, were entered first into the model followed by institutional variables. The study found that, after taking into account the characteristics a student brought with him or her to postsecondary study, very little predictiveness was added to the model by also taking into account the characteristics and practices of the school the borrower attended. That is to say, this study found default is primarily related to borrower willingness and ability to repay, not to anything the institution is doing (Monteverde 2000).

Quantitative research as well as interviews with students, staff, and faculty indicate that students possess certain characteristics independent from the institution that cause them to default on their loans, including their attitude toward debt and default and dissatisfaction with the institution (Christman 2000).

### **2.4.2.7 Debt**

#### **a. Level of Indebtedness**

Although the opposite would seem to make more sense, borrowers with high indebtedness are actually less likely to default than borrowers with low indebtedness, perhaps because high indebtedness is associated with more schooling and thus more success, which is the main variable associated with graduation rates than all other borrowers. Not surprisingly, borrowers who take out small loan amounts are more apt to stay in school a short time and have lower graduation rates than other borrowers. That is, the loan amount is a partial proxy for education attainment (Steiner and Teszler 2003).

Other studies also found that the amount borrowed has either no effect or a beneficial effect on repayment. Having higher indebtedness is associated with lower default rates, perhaps because higher levels of indebtedness resulting from additional years of schooling and degree attainment allow borrowers to compete more successfully in the labor market for jobs and income (Volkwein et al. 1998). Borrowers with low default (Woo 2002).

Borrowers with small debts are more likely to default than those with large debts. It appears that the decision to incur additional debt by a borrower who is already in school is not as consequential as the initial decision to borrow in the first place (Woo 2002). A study on how student borrowers perceive their education debt indicates that, although students who received Pell Grants as undergraduates (i.e. low-income borrowers) have debt and loan payment levels similar to overall averages, they report lower starting salaries and current earnings than other borrowers, resulting in higher average payment-to-income ratios that may make repayment difficult (Baum and O'Malley 2003).

#### **b. Perception of Debt**

Debt load and the fear of taking on debt influence student decisions ranging from institutional choice to major to personal decisions. In a study examining the influence of debt load on college persistence, the authors found that borrowers in repayment expressed anger at having to assume more debt than students of a generation earlier (Cofer and Somers 1999).

In the 2002 National Student Loan Survey, Pell recipients who left school without completing a degree were much more likely than other non-completers to report that loans played a significant role in the decision to leave (Baum and O'Malley 2003).

Students and their families are willing to invest time and money and to assume debt when the students are rewarded by grants and good grades and feel socially integrated into the campus env

#### **2.4.2.8 School-type Variables**

Borrowers who attend doctoral-granting institutions tend to have lower default rates and borrowers who attend proprietary (i.e. for-profit) institutions tend to have higher default rates. Nevertheless, although student loan policy and national legislation is based substantially on the belief that colleges and universities exert considerable influence on the actions of their students, Volkwein et al. (1998)

Woo also found that the fact that students in short-term (proprietary or two-year) programs have a higher default rate than students in long-term (four-year) programs appears to be a function of the types of students who enroll in the programs rather than some factor associated with the programs or schools themselves (Woo 2002). Despite earlier studies to the contrary, there is little evidence that institutional characteristics have an impact on default. Rather, loan repayment and default behavior can mostly be predicted by the characteristics of individual borrowers, including choice of major, performance in college, and subsequent postcollege achievement and behavior. Staying in college, earning good grades, completing a degree, getting and staying married, and not having dependent children are all actions that lower the likelihood of default (Volkwein and Szelest 1995). The student body size of an institution does not appear to play a role in default. If monitoring of students and close personal contact reduced default, then smaller school size and lower default rates would go together, but researchers find the relationship to be inverse and not significant (Knapp and Seaks 1992).

### **2.5 Conclusion**

From the review of past studies above, it is clear that the issue of non performing loans poses a great challenge within the banking and non banking sector. The major factors which have been highlighted as the major contributors of non performing loans includes high interest charged to borrowers, poor quality of lending, political interference especially within the state owned

institutions, incompetence on the part of the bank risk managers and poor management of loan portfolios among others. This therefore calls for a study to investigate, the credit risk practices and non performing loans at HELB as compared to other financial institutions (banks), and effectiveness and efficiency of the Kenyan student loan scheme recovery mechanisms.

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This section will describe the research design and methodology of the study. In this stage decisions will be made about how the research will be executed and how respondents will be approached as well as when, where and how the research will be completed. The section therefore will entail the way the study will be designed, the population, the type of data and its collection techniques and the data analysis procedure.

#### **3.2 Research Design**

The study will adopt a case study research design approach. It was preferred because the study required an in depth understanding of challenges of effective loan recovery at HELB. It was also found to be the ideal as it would allow in depth examination of the problem and also because the study will be qualitative in nature. This would help the researcher in underlying principles as it would provide a systematic way of collecting data, analyzing information and reporting results. It is said that case studies provide insight for problem solving, evaluation and strategy (Cooper and Emory 1996), furthermore Patton (2002) state that the intention of a case study is to gather data at a particular point in time and use it to describe the nature of existing conditions. Since the aim of this study will be to assess effective methods of loan recovery at HELB a case study research design will be most suitable for the study.

#### **3.3 Target Population**

The population will be drawn from the Higher Education Loans Board (HELB) because this is a case study of the organization it will comprise of 2 persons who prepare reports from the two main departments of HELB lending and Recovery that is 1 person from each department.

#### **3.4 Data collection**

Secondary data on the core Loan recovery variables will be used in this study. This data will be obtained from HELB's database and reports for the period between 1999-2010. Operational Definitions Sheet will be used in this study to define the metrics to be used so that data collection

across the board's departments is consistent. This is because the various data to be used are defined in varying metrics so standardizing is necessary for the appropriate and accurate analysis. Regression analysis will then be used to assess which of the factors affecting loan recovery have had the greatest impact on non-performing loan reduction using the non-performing loans as a proxy loan recovery.

### 3.5 Data Analysis

#### 3.5.1 Model Specification

The equation specified in equation 3.1 will be estimated to determine whether there is significant variation between trends in loan recovery and key loan recovery variables which include repayments from the public sector, repayments from the private sector, and repayments from self (individuals) and imposing of penalties. To capture the reforms established within HELB, dummy variables are also included in the estimable equation as follows:

$$(1 - NPL \text{ Ratio}) = \beta_0 + \beta_1 PBS + \beta_2 PVT + \beta_3 SSE + \beta_4 STG + \beta_5 PEN + \varepsilon \quad (3.1)$$

Where:

NPL - Non-performing Loans

PBS – Recoveries from the public sector.

PVT – Recoveries from the private sector.

SSE – Recoveries from individuals and self employed.

STG – is a dummy variable that is 1 in the years whereby HELB had an established process of using strategic partners (kra and Nssf) to recover loans and 0 in the years where the mechanism had not been established.

PEN- is a dummy variable that is 1 in the years whereby HELB had an established process of imposing penalties and screening through CRB on defaulters and 0 in the years where the mechanism had not established.

$\beta_0, \beta_1, \dots, \beta_5$  are the parameters to be estimated and  $\varepsilon$  is the error term. Ordinary least square (OLS) method will be used.



## CHAPTER FOUR

### 4.0 DATA ANALYSIS AND FINDINGS

#### 4.1 Descriptive Statistics

Table 1: Total Recoveries (figures in Kshs)

Financial Yr	Public Sector	Private sector	Individual	Total Recoveries	% change
1999/2000	329,991,270	59,621,578	2,619,610	392,232,459	
2000/2001	430,309,141	80,090,741	4,704,287	515,104,169	31.33%
2001/2002	455,392,672	87,737,911	5,629,970	548,760,553	6.53%
2002/2003	472,836,048	103,103,112	7,892,085	583,831,246	6.39%
2003/2004	488,596,658	148,030,570	37,431,927	674,059,155	15.45%
2004/2005	548,842,475	176,738,377	48,857,138	774,437,990	14.89%
2005/2006	604,977,013	221,969,348	54,234,166	881,180,527	13.78%
2006/2007	694,216,753	281,570,189	54,704,274	1,030,491,216	16.94%
2007/2008	796,981,923	443,381,660	97,263,100	1,337,626,683	29.80%
2008/2009	922,388,986	609,009,247	124,024,692	1,615,470,308	20.77%
2009/2010	1,074,962,703	721,880,517	130,018,438	1,926,861,658	19.28%
2010/2011	1,075,772,400	746,218,750	479,207,802	2,301,198,951	19.43%

Total recoveries have been gradually increasing over the period 1999/2000 to 2010/2011; this is because of the effort by HELB to put in some policies in reducing non-performing loans by following up on loan defaulters. However the policies put in place seem not to perfectly cope with the with the rising loan portfolio and this can be explained by the unstable rate of change on this recoveries, this is evidenced by the drop in rate of change from 29.8% in 2007/2008 to 19.28% in 2009/2010.

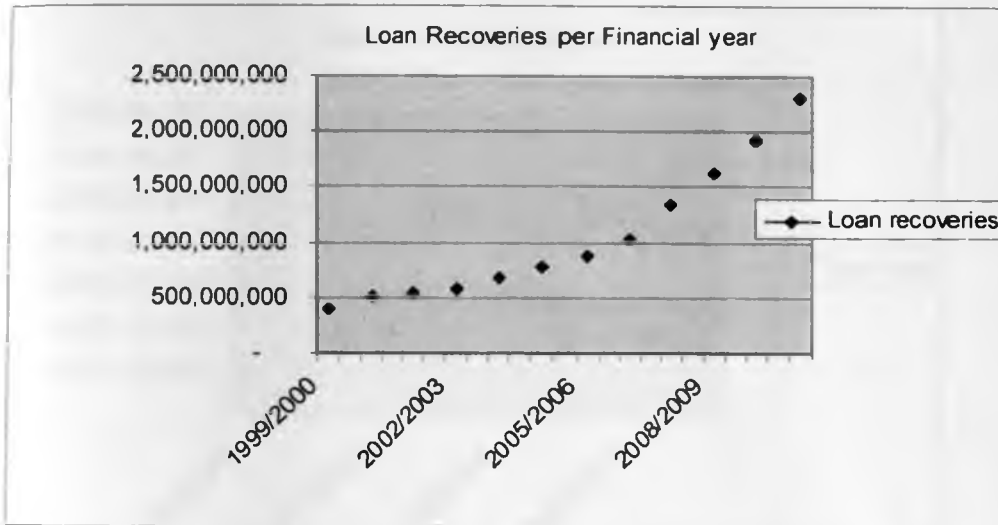
**Table 2: Analysis of Recoveries per sector (figures in Kshs)**

<b>Financial Yr</b>	<b>% of Public sector</b>	<b>% of Private sector</b>	<b>% of individual &amp; self employed</b>
1999/2000			
2000/2001	84.13%	15.20%	0.67%
2001/2002	83.54%	15.55%	0.91%
2002/2003	82.99%	15.99%	1.03%
2003/2004	80.99%	17.66%	5.55%
2004/2005	72.49%	21.96%	6.31%
2005/2006	70.87%	22.82%	6.15%
2006/2007	68.66%	25.19%	5.31%
2007/2008	67.37%	27.32%	7.27%
2008/2009	59.58%	33.15%	7.68%
2009/2010	57.10%	37.46%	6.75%
2010/2011	46.75%	32.43%	20.82%
<b>Mean</b>	<b>69.19%</b>	<b>25.20%</b>	<b>5.82%</b>
<b>Standard deviation</b>	<b>12.42%</b>	<b>8.41%</b>	<b>5.44%</b>

The Public sector has been contributing the highest collections to HELB for the period studied with a mean of 69.19% with the private sector contributing 25.20% and individuals and self employed contributing an average of 5.82%. However collections from the private sector and from individuals and self employed have been rising gradually taking over from the dominance of the public sector.

## 4.2 Time Series Analysis

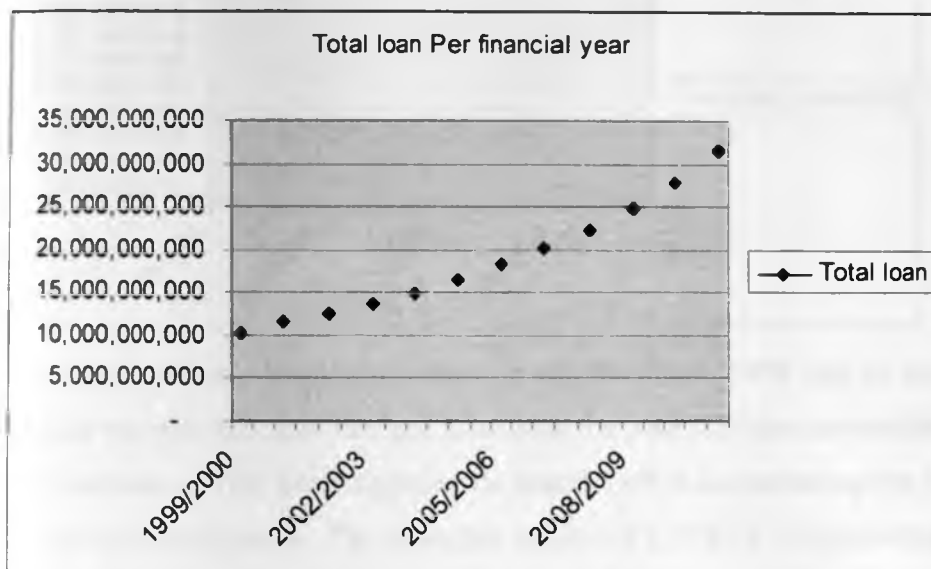
Figure 4.2.1: Total Loan Recoveries Between 1999 – 2011 (figures in Kshs)



Loan recoveries have been on the rise since the year 2000 during this period most of the recoveries were from the government sector that is 84% compared to 15% and 0.7% from the private and individual sectors respectively.

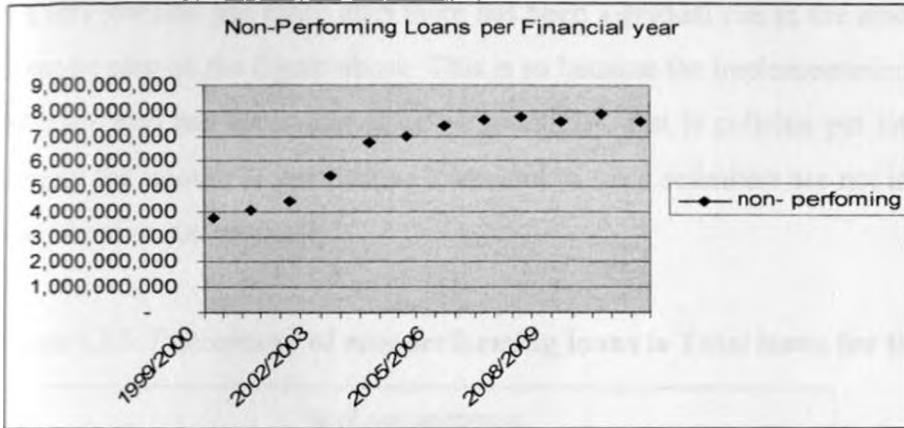
There has been a steady rise in amounts being recovered during the period 2000 to 2011. This can be attributed to the measures that the board has put into place to in order to urge the ex-loanees to repay. Previously before this period the board heavily relied on volunteers for loan recoveries and had unstable trends. But the year 2001 so the introduction of data sharing with the national hospital insurance fund to track loanees and later in 2006 introduction of Kenya revenue authority and National social security fund as strategic partners in gathering information on defaulters and ex-loanees. In the year 2010 the board also started imposing penalties on loan defaulters, introduced data sharing with credit reference bureau and on top of these of this positive publicities. All these combined has helped in the rise of loan recoveries being experienced today.

Figure 4.2.2: Total Loans awarded for the period 1999-2011 (figures in Kshs)



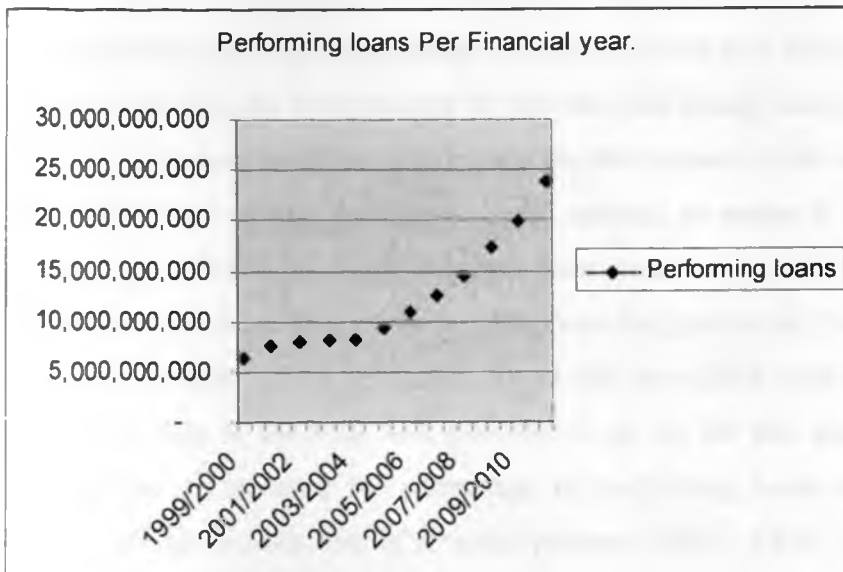
Loan disbursement has been on the increase during the entire period of study. The steady increase in loan disbursement, this has been so because of increase in the number of universities (both private and public universities) for private universities being in the early period of the study and public at the end of the period of study. Another contribution to this rise in total loan is increase in the amount of loan awards to successful students (credit limits) from kshs 42,000 to 55,000 for the maximum award and from kshs 20,000 to kshs 35,000 for the minimum loans awards. This was also backed up by the fact that the number of HELB loan beneficiaries had increased due to rise in the number of students admitted through the joint admissions board (JAB) by the government and also rise of enrollments to the private universities.

Figure 4.2.3: Total Non-performing for the period 1999-2011 (figures in Kshs)



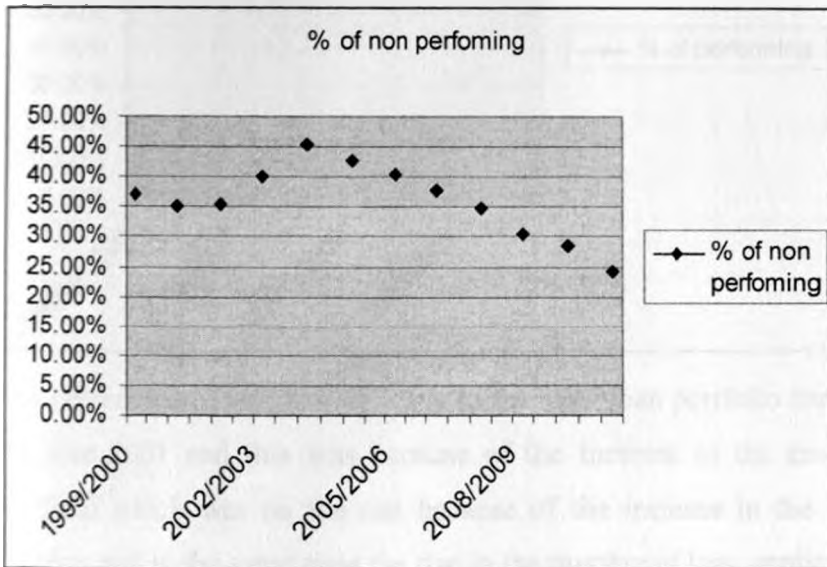
The non-performing loans have been on the rise from 1999 but as from the year 2006 the increase was at a very low rate and then from the year 2010 the non-performing loans figure has been decreasing. This trend signifies the boards' effort in combating the ever growing figure of the non performing loans. The strategies employed by HELB to reduce this figure seems to have been working though at a very slow rate as can be seen on the figure above from the year 2006 the growth rate of the non-performing loans was very slow and as from the year 2010 the growth has been negative. This can be explained because of the measures which have been put into place to by the board to trace defaulters.

Figure 4.2.4: Total Performing Loans for the period 1999-2011 (figures in Kshs)



The total performing loans at the beginning of the period of study i.e 2000-2004 was increasing at a very low rate and there after there has been a gradual rise in the amount of performing loans as can be seen on the figure above. This is so because the implementation of various strategies by the board also has becoming effective gradually, that is policies put into place by the board to increase the amount of performing loans and to trace defaulters are not immediately effective but take effectiveness gradually.

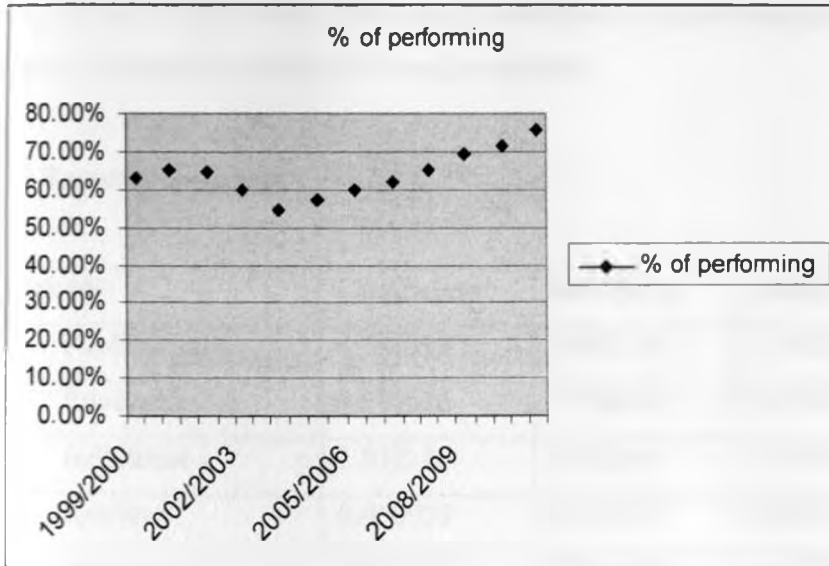
Figure 4.2.5: Percentage of non-performing loans to Total loans fro the period 1999 – 2011



Non performing loans as a percentage of the total loans were rising between the year 2000 and the year 2004 this can be explained by the fact that during this period there was a rise in the amount of total loan awarded. The reason for the increase in the total loan was because of the upwards revision of the maximum credit amount to students from 42,000 to 60,000 and minimum from 20,000 to 35,000 which in turn increased the loan portfolio, other factors which contributed to increase in the loan portfolio was the general rise in levels of unemployment and increase in number of beneficiaries. From the year 2005 onwards the percentage of non-performing loans to the total loan portfolio is on the fall and again this is so because of the boards' effort to increase the percentage of performing loans through imposing of various strategies which include, use of strategic partners (NHIF, KRA, NSSF and CRB) to track the

loan defaulters, imposing of penalties on defaulters and of course use of positive publicity to the general public.

Figure 4.2.6: Percentage of performing loans to Total Loans 1999 – 2011



The percentage of performing loans to the total loan portfolio for the board was dropping from the year 2001 and this was because of the increase in the amount of the boards total loan portfolio which was on the rise because of the increase in the total amount disbursed to the students and at the same time the rise in the number of loan applicants, not forgetting that during this period the board was also facing difficulties in recovering loans mostly due to the rise in the level of unemployment and the number of beneficiaries of the loan.

#### 4.2.7. Prediction of Loan Recoveries, Non-Performing Loans and Total Loan Portfolio

Loan recoveries have been on the rise throughout the entire period of study (appendix II), this is expected to be the same case also in the following years and this is because of the measures and policies which have been put into place by the board to reduce the level of non-performing loans and number of defaulters. For the board to achieve its main target of creating a revolving fund it must therefore maintain these policies and still come up with other measures to deal with defaulters.

Non-performing loans figure has also been rising throughout the entire period of study except during the last year which is 2010 when it dropped (appendix II). This figure of non-performing

loans given the measures and policies which is being put into place by the board is also expected to go down in years after the study.

The total loan disbursed has also been increasing (appendixes I and II) and is predicted to continue rising, this is because of the ever growing number of university students and number of universities, this translates into a swollen number of applicants and hence a rise in the amount of money disbursed as loans to university students.

### 4.3 Regression Results

Variable	Coefficient	Std-Error	t-ratio	P-value
Public Sector	4.18E-10	1.95E-10	2.140702	0.4253
Private Sector	1.29E-10	1.59E-10	0.808308	0.5157
Individual	1.01E-10	2.64E-11	3.838616	0.5039
Kra/Nssf	0.009957	0.014719	0.676446	0.0006
Penalties	0.010802	0.016424	0.657705	0.0405
C	0.377230	0.076653	4.921247	0.0000
R-squared	0.942767			
Adjusted R-squared	0.933229			
S.E. of regression	0.017814			
Sum squared resid	0.009520			
Log likelihood	97.20067			
Durban-Watson stat	0.189133			

The regression analysis indicates that all the variables PBS, PVT, SSE, STG and PEN contributed significantly to the variations in loan recovery (performing loans).

The regression had a correlation coefficient (R<sup>2</sup>) of 0.942767 and an adjusted R<sup>2</sup> of 0.933229. This means that collections from Government sector, Private sector, from individuals and the introduction of using strategic partners (Kra and Nssf), and imposing of penalties on defaulters explain 93 percent of the variation in loan recoveries in HELB.



#### **4.4 Summary of Findings**

The study found that non-dormant (performing loans) loan amount has been rising gradually consisting of 55% of total amount of loan in 2003 and 76% in 2010. With regard to regression analysis all the variables were found to contribute to rise of performing loans hence loan recoveries. However collections from individuals and from the public sector were significant whereas the others contributed relatively.

#### **4.5 Implication of the Findings**

The findings indicate a general rise in performing loans and significant contribution from the public sector and individual payments to the rise of the performing loans. The private sector, use of strategic partners and imposing of penalties on defaulters have also contributed relatively to the rise of performing loans. The significant contribution by individuals and self employed can be attributed to introduction of penalties on defaulters this can be explained by the drastic rise in collections from individuals and self employed by a percentage change of 269% after the introduction of penalties. Introduction of using strategic partners (Kra and Nssf) in 2006 can also be used to explain the percentage changes of 25% in 2006 to 57% in 2008 from collections in the private sector and 10% in 2006 to 16% in 2008 in the public sector.

## **CHAPTER FIVE**

### **5.0 CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Conclusions**

From the study it is indicated that loan recoveries have been on the rise during the period of study, this has been due to the increase in the total amounts of performing loans in this period. The rate of increase in the performing loans and rise in recoveries is however low if compared to the rate of increase of loan disbursement to students, which in turn raises the total amount of loan, this therefore implies that HELB will still continue relying on funding from the ex-chequer unless they come up with better ways of dealing with defaulters.

The ratio of performing to loans to the total loans has been increasing from the year 2003 to the year 2011 this is because HELB stepped up its ways of dealing with defaulters, this is evident in that in 2006 using of Kra and Nssf as strategic partners and introduction of imposing penalties on defaulters in 2010. However the amount of the total loan is also on the rise every year especially and this is due to the rise in demand for loans from the increasing number of university students year by year. This hence reflects that HELB should also step up further and come up with ways of dealing with this ever growing loan portfolio to avoid a rise in non-performing loans which might lead to low loan recovery rates, and this poses the danger for HELB because it might hinder their target of creating a revolving fund.

#### **5.2 Policy Recommendations**

HELB should improve on existing loan recovery policies put in place especially on the private sector, but most importantly HELB should also come up with other policies and methods of improving on loan recoveries and performing loans so as to counter the rising loan portfolio and as a result be in a position to create a revolving fund.

#### **5.3 Limitations**

There are a few studies done on determinants of loan recovery and most of them concentrate on the bonds market and the studies available on educational loan schemes deal with more fundamental issues of student funding by the state.

There are incompatible institutions that offer student loan facilities in Kenya that could have been used to generate comparisons of loan recovery techniques. Most examples used on this research are from data collected from banks and other non-bank financial institutions whereas HELB is a non-profit making organization and therefore not comparable to other profit making organizations.

#### **5.4 Recommendations for further studies**

Due to the radical changes taking place in this field of education, that being rise in demand of the HELB loan hence increasing the loan portfolio and also the changes in policies of recovering the loans from ex-loanees, there is a need to do a similar study in future to test whether findings in this study hold.

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Appendix I: showing percentage of performing and non performing loans to Total loan

	non- performing	Total loan	% non performing	% performing
1999/2000	3,747,996,782	10,133,300,332	0.3699	0.6301
2000/2001	4,037,179,080	11,547,461,597	0.3496	0.6504
2001/2002	4,382,001,021	12,414,473,132	0.3530	0.6470
2002/2003	5,450,473,371	13,601,648,615	0.4007	0.5993
2003/2004	6,734,709,800	14,801,934,995	0.4550	0.5450
2004/2005	6,997,209,924	16,411,908,645	0.4263	0.5737
2005/2006	7,389,240,711	18,305,516,345	0.4037	0.5963
2006/2007	7,651,293,465	20,250,908,945	0.3778	0.6222
2007/2008	7,719,774,577	22,150,434,305	0.3485	0.6515
2008/2009	7,543,047,469	24,738,314,505	0.3049	0.6951
2009/2010	7,891,857,057	27,853,057,405	0.2833	0.7167
2010/2011	7,552,906,649	31,449,024,305	0.2402	0.7598

Appendix II: Percentage of Recoveries per financial year to Total loan.

A/c year	Loan recoveries	Total loan	% of recoveries to Tt loans
1999/2000	392,232,459	10,133,300,332	3.87%
2000/2001	515,104,169	11,547,461,597	4.46%
2001/2002	548,760,553	12,414,473,132	4.42%
2002/2003	583,831,246	13,601,648,615	4.29%
2003/2004	674,059,155	14,801,934,995	4.55%
2004/2005	774,437,990	16,411,908,645	4.72%
2005/2006	881,180,527	18,305,516,345	4.81%
2006/2007	1,030,491,216	20,250,908,945	5.09%
2007/2008	1,337,626,683	22,150,434,305	6.04%
2008/2009	1,615,470,308	24,738,314,505	6.53%
2009/2010	1,926,861,658	27,853,057,405	6.92%
2010/2011	2,301,198,951	31,449,024,305	7.32%

Appendix III: Percentage of each sector to Total Recoveries per year

<b>YEAR</b>	<b>Public Sector</b>	<b>% of Public</b>	<b>Private Sector</b>	<b>% of private</b>	<b>Individual</b>	<b>% Of indiv</b>	<b>Total Recover</b>
2000	329,991,270	84.13	59,621,578	15.20	2,619,610	0.67	392,232,
2001	430,309,141	83.54	80,090,741	15.55	4,704,287	0.91	515,104,
2002	455,392,672	82.99	87,737,911	15.99	5,629,970	1.03	548,760,
2003	472,836,048	80.99	103,103,112	17.66	7,892,085	1.35	583,831,
2004	488,596,658	72.49	148,030,570	21.96	37,431,927	5.55	674,059,
2005	548,842,475	70.87	176,738,377	22.82	48,857,138	6.31	774,437,
2006	604,977,013	68.66	221,969,348	25.19	54,234,166	6.15	881,180,
2007	694,216,753	67.37	281,570,189	27.32	54,704,274	5.31	1,030,49
2008	796,981,923	59.58	443,381,660	33.15	97,263,100	7.27	1,337,62
2009	922,388,986	57.10	609,009,247	37.70	124,024,692	7.68	1,615,47
2010	1,074,962,703	55.79	721,880,517	37.46	130,018,438	6.75	1,926,86
2011	1,075,772,400	46.75	746,218,750	32.43	479,207,802	20.82	2,301,19
Mean		69.19		25.20		5.82	
Std Dev		12.42		8.41		5.44	

Appendix IV: Regression Analysis Data:

Dependent Variable: PERFORMINLRATIO

Method: Least Squares

Date: 10/19/11 Time: 17:06

Sample(adjusted): 2003:1 2011:4

Included observations: 36 after adjusting endpoints

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
PRIVATESECTOR	1.29E-10	1.59E-10	0.808308	0.4253
PEN	0.010802	0.016424	0.657705	0.5157
KRA	0.009957	0.014719	0.676446	0.5039
INDVISECTOR	1.01E-10	2.64E-11	3.838616	0.0006
GOVTSECTOR	4.18E-10	1.95E-10	2.140702	0.0405
C	0.377230	0.076653	4.921247	0.0000
R-squared	0.942767	Mean dependent var	0.639956	
Adjusted R-squared	0.933229	S.D. dependent var	0.068937	
S.E. of regression	0.017814	Akaike info criterion	-	
			5.066704	
Sum squared resid	0.009520	Schwarz criterion	-	
			4.802784	
Log likelihood	97.20067	F-statistic	98.83544	
Durbin-Watson stat	0.189133	Prob(F-statistic)	0.000000	