London Metropolitan University

Non-performing bank loans and banking crisis in the Pakistani banking system

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Abstract

This thesis investigates the Pakistani banking crisis, which was the result of non-performing bank loans over the period 1996-98. The thesis uses primary data collected for this research through questionnaires from the credit managers who approved these non-performing bank loans. The questionnaire-based methodology has not been used previously in studies of banking crises and non-performing bank loans. The aim of this thesis has been to investigate the causes of the banking crisis in Pakistan, with particular emphasis on the causes of non-performing bank loans in the five major public owned commercial banks. Although a lot of recent literature has been written on banking crises especially in third world countries, little has been written about the Pakistani banking crisis. The methodology focuses on interviews and questionnaires carried out by the researcher directly with the credit managers, who authorized these non-performing loans. The questionnaires were designed to analyze the lending attributes of the credit managers. Quantitative methodology and standard statistical methods, as well as the application of the ordered probit model which has not been used previously in studies relating to the banking crises and non-performing bank loans, have been used for analysing the survey data. It was found that the banking sector has been riddled with the problems of poor quality management, political influence and the resultant portfolio of high level of non-performing loans that formed the lion share of industry's loans. The inefficiency of the banking sector was highlighted in our findings, showing an increase in interest spread between lending and deposit, as well as unequal distribution of credit among different sectors. After the application of the order probit model we were able to determine communication facilities provided to the credit managers, years of service within the bank, and the years of experience as credit manager, as the variables which have strongly influenced the extent of non-performing bank loans in the five public owned Pakistani commercial banks. It was also found that basic education (BE), professional education (PE) as well as the years of experience as credit manager (YOE) as the variables which have influenced the extent of recovery of non-performing bank loans in public owned Pakistani commercial banks.

Chapter 1

Introduction

This thesis investigates the Pakistani banking crisis, which was the result of non-performing bank loans over the period from 1996-98. Its aim is to examine the reasons that led to a very high percentage of non-performing loans in five large publicly owned commercial banks in Pakistan.

A country's economic success is largely dependent on the efficiency and performance of its financial sector. Theory indicates[1] that a large percentage of non-performing loans can cause bank failure, which can result in banking crisis. The problems in the banking sector lead to output downturns, terms of trade deterioration, and declines in asset prices such as equity and real estate.

Since the early 1980s and 1990s, systemic banking sector problems have occurred in a number of developed and developing countries. In fact Caprio and Kilngebiel (1996, 1997, 1999, and 2002) have identified over eighty-six separate episodes of large-scale bank insolvency. Such proliferation of banking sector problems has raised widespread concern, as banking crisis disturbs the flow of credit to households and enterprises, reduces investment and consumption, and possibly forces viable firms into bankruptcy. As Friedman and Schwartz (1963) discuss, banking crisis jeopardizes the whole payment system undermining the confidence in domestic savings, thus leading to a flight of capital from the country. This decline in domestic savings and large-scale capital outflow may cause bank failures leading to a systemic crisis.

Many of these episodes of banking crises have been so severe that they have changed the perceptions of the depositors/customers and have undermined the economic growth of those countries for decades. There are also now numerous case studies that discuss the problems and crises in the banking sectors across the globe. Although experiences vary

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[1] (Gorton, 1988; Caprio and Klingebiel, 1996; Lindgren, Garcia, and Shal, 1996; Kaminsky and Reinhart, 1996)

quite substantially across countries and over time, it is generally found that banking crises tend to emerge when the macroeconomic environment is weak; in particular, low GNP growth is significantly correlated with increased risk to the banking sector (see Caprio and Klingebel, 1996; Kunt A and Detragiache, 1998; Barth J R, Caprio, and Levine, 2000). The fragility of the banking sector in developing countries can also be due to internal factors within the bank's management which lead to non-performing loans (see Bloem Gorter, 2001).

In almost all developing countries banking systems have suffered due to a large percentage of bad loans and risky credits. Although one can find somewhat similar developments in developed market economies undergoing financial liberalization, much of the overhang of bad loans is caused by directed lending to preferred individuals or favored sectors of economy. These overhang bad loans have created several problems for financial sectors and have seriously hindered the growth of the developing economies. Most state-owned banks have large risk exposures and a weak capital base. They are also vulnerable to bankruptcies on the part of the enterprises to which they have lent, thus weakening their bargaining power and ability to control the borrowers.

For this reason, risk is most important in terms of potential losses. Credit risk is the risk that occurs when a customer defaults, that is, it fails to comply with its obligations to service debt. Default triggers a total or partial loss of any amount that is lent by the bank to its customer. If there are a large number of customers who fail to meet their obligations, this could lead to serious problems with the bank and could even lead to eventual insolvency. In order to avoid this happening, the banks have developed credit rationing which put a ceiling on the amount lent to any one customer and/or customers within a single industry or in a given country. The examination of credit applications is conducted by credit officers or committees, which should reach a minimal agreement before a risk-taking credit decision is made. The delegation rules at various levels of the bank stipulate who is responsible for such commitments. Central reporting of outstanding loans to customers is required to ensure that those amounts stay within the same clients.

Measuring the quality of risk would lead, ultimately, to quantifying the default probability of customers, plus the likelihood of any recovery in the event of default. The probability of default is in reality very difficult to assess and quantify. Santomero (1984) and Allen and Santomero (1997). Historical data on default by rating class or by industry is available but it cannot be applied to every customer, since the lending details as well as the conditions attached to it vary from customer to customer and case to case. It is virtually impossible to know if a certain customer is going to default and to what extent default will occur. The loss depends upon guarantees, either from the third parties or from any collateral posted for recovery in case of default. In short, credit risk is most important where the banking industry is concerned. Credit risk management has evolved dramatically over the last decade. Although banks provide a proliferation of banking services, the basic commercial and industrial lending process still remains the lifeblood of commercial banks and other banking institutions in developing countries. Risk factors in rendering loans have increased in response to a number of forces that have made it essential for every bank to measure and manage its banking risk (see Santomero, 1984 and Allen and Santomero 1997).

The last three decades have witnessed several economic policy changes in Pakistan with far reaching consequences for its financial sector: The 1970s faced a large-scale nationalization process encompassing trade, industry and financial sectors; The 1980s witnessed a beginning of its reversal of policies leading to liberalization and privatization in the financial sector; The 1990s saw the banking sector on the verge of collapse due to the breakdown of governance and loss of financial discipline. The banking industry has been underperforming as a result of a high percentage of non-performing loans. The Pakistani banking industry is dominated by five public-owned commercial banks whose performance has been greatly influenced by the high proportion of non-performing loans. These five commercial banks are the most influential and dominant players, controlling 71 percent of the entire banking sector deposits and 55 percent of the total advances as at 31st December 1998 (see State bank report 1999). The five public owned banks, namely Habib Bank Limited, National Bank Limited, Muslim Commercial Bank, United Bank Limited and Allied Bank Limited suffered huge losses, due to widespread

mismanagement and political corruption, in both lending and loan recovery. As a result, the stock of non-performing loans (NLP) grew by almost 600 percent during 1993-96, with the total amount of NPL of nationalized commercial banks (NCB's) constituting 53 percent of the entire loan portfolio. Since the banking crisis, Pakistani public owned commercial banks have been the center of attention in Pakistan. There has been increasing pressure on the new Government to catch the willful defaulters of these banks and to recover huge amounts of loans, which were taken out with no intention to repay (see Hardy & Patti 2001).

One of the main objectives of this thesis is to examine the extent of non-performing loans in these five public-owned Pakistani commercial banks. The other objective is to analyze the factors (structure, government mismanagement, policies etc) which have lead to an inefficient banking sector with a high proportion of non-performing loans that in turn have resulted in bank failures and the banking crisis. This research goes a long way in explaining the whole banking crisis and its relation to non-performing loans. Although a lot of recent literature has been written on banking crises especially in third world countries (for example, Gonzalez, Parabasioglu and Billings, 1997; Lindgren, Garcia and Saal; 1996; Encoch, Guide, and Hardy, 2002; Honohan, 1997; Classens, Djankov and Klapper, 1999), little has been written about the Pakistani banking crisis. Only one IMF working paper, Hardy and Patti (2001), has examined the banking sector reforms in Pakistan and has made policy recommendations as a pre-requisite for IMF financial assistance

The banking crisis in Pakistan was more or less the making of the banks, their poor management, political corruption and the Governments of that time period. Therefore the structure and aims of this research primarily focus on non-performing loans and the credit managers who assess and approve the loans, rather than on other macro economic factors.

This thesis also contributes to the literature by providing a new methodology for analyzing the causes of non-performing bank loans and banking crises. Primary data is collected through questionnaires from the credit managers who gave these non-

performing loans. The questionnaire-based methodology has not been applied before in empirical studies on banking crises and non-performing bank loans. The study has also applied the ordered probit model, which has not been used previously in studies relating to the banking crises and non-performing bank loans. Therefore the research could become a cornerstone for further academic research into the causes of non-performing bank loans in other developing countries using this methodology.

Structure of the Thesis

The thesis is organized as follows:

The **second** chapter is divided into three sections. The *first section* is the relevant literature review of the banking crisis and non-performing loans. It discuses the causes of the banking crisis, as well as the overall cost incurred by the Country's economy. The *second section* reviews the literature on credit risk, focusing especially on the subjective lending methods used by commercial banks (5C's). It also reviews the modern credit risk management systems and their application in commercial banks. The *third section* focuses on the literature of commercial lending techniques. The final section discusses the overall lending in banks with special reference to South Asian nationalized commercial banks.

The **third** chapter reviews the overall inefficiency of the banking sector and the important events in the history of Pakistani banking. The *first* section investigates in detail the macroeconomic environment and its impact on the Pakistani banking sector. The *second* section highlights the important events in commercial bank intermediation since the creation of Pakistan, and discusses its affect on the banking sector. The *last* section describes the structure of the Pakistani banking sector and evaluates the affect that non-performing loans had on the overall profitability and efficiency of the commercial banking sector.

The **fourth** chapter discusses the methodology used for assessing and analyzing the causes of non-performing bank loans in five major Pakistani public owned commercial

banks. The primary data collected for this research is through questionnaires[2] given to the credit managers who authorized these non-performing bank loans. This chapter is subdivided into *six* sections. The *second* section explains the justification of methodology pertaining to the choice of industry and subject. The *third* section explores reasons for adopting quantitative methodology. The *fourth* section discusses in detail the surveys, including their choice of sample, pilot tests, and design of the questionnaires, their validity and methods used for their analysis. The *fifth* section explains the financial data collected and the method for its analysis. The *sixth* section gives the concluding remarks.

The **fifth** chapter compares and analyses the findings from primary data collected through three different questionnaires[3] (A,B, & C). The *first* section analyzes the demographic characteristics of the credit managers using questionnaire "A". The *second* section statistically compares factors relating to the banks non-performing loans. The personal characteristics of the credit managers relating to banking decisions are also analyzed. The *third* section examines the relationship between the credit managers' personal characteristics and the non-performing bank loans, credit limits assigned to the credit managers and non-performing loans recovered, using the correlation method. The *fourth* section analyzes the findings of questionnaire "B" which directly addresses the reasons for non-performing bank loans of the five public-owned commercial banks. The analysis of questionnaire "B" uses descriptive statistical methods. The *fifth* section statistically analyses questionnaire "C" using the Yule's co-efficient of association to measure the degree of association of credit managers in relation to giving secured or unsecured loans.

The **sixth** chapter includes an application of the ordered probit model. The objective of this chapter is to provide a formal statistical analysis of the surveys. In questionnaire "A", the results are in an order form and therefore suited for application of the order probit model. The chapter is divided into *seven* sections; the *second* section explains the ordered probit model specification. The *third* section discusses the previous empirical literature

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[2] All the completed questionnaires are available on request.
[3] The sample size of the entire three questionnaires is 100, which is the entire population.

on the application and interpretation of the ordered probit model. The *fourth* section reports the variable descriptions and expected signs of the co-efficients. The *fifth and sixth* sections present the results of the ordered probit model for non-performing loans and non-performing loans recovered, as dependent variables respectively. The *last* section gives a summary of the findings.

The **seventh** chapter summarizes the main results and discusses their implications for policies especially on banking regulations and bank management. The chapter also suggests areas of future research.

Chapter 2

Literature review

2.1 Introduction

The aims of this chapter are divided into three sections. The aim of the first section is to focus on the relevant literature review of the banking crisis and non-performing bank loans. It discusses in detail the causes of the banking crisis in light of the different factors[1] which can influence the banking crisis as well as the overall cost incurred on the Country's economy. The aim of the second section is to review the literature on credit risk especially focusing on the subjective lending methods used by commercial banks (5C's). It also highlights the modern credit risk management systems and their application in commercial banks. The aim of the third and last section is to examine commercial lending techniques and factors, which influence the overall lending in banks, with special reference to South Asian nationalised commercial banks.

2.2 Reasons for bank failures

A banking crisis is when a significant fraction of banking sector is insolvent but remains open for business. As Calomiris and Gorton (1991) define the banking crisis when bank debt holders suddenly demand that banks convert their debt claims into cash to and extent that the banks are forced to suspend the convertibility of their debt into cash. Furthermore Demirguc-Kunt and Detragiache (1998) define systemic banking crisis episodes as ones in which:

- Ratio of non-performing loans to total bank loans exceeded 10%.
- Cost of the rescue operation was at least 2% of GDP.

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1 (Macro economic, Microeconomic factors, internal poor management & fraud and governmental mismanagement & corruption)

- Episode involved a large-scale nationalization of banks.

- Extensive bank runs took place or emergency measures (deposit freeze, prolonged bank holidays, or generalised deposit guarantees) were enacted by the government.

Every banking crisis has two principal dimensions that require intervention: the first, a liquidity crisis that threatens widespread depositor panic; the second, a degree of systemic distress represented by large losses in asset values (i.e. non-performing loans) that have generated insolvency of banks and capital deficiencies. Isolated bank failures are inevitable but when a large part of the banking system is paralysed, there are a number of reasons for the causes of banking crises.

Every banking crisis has its own unique dimensions, is typically complex and differs from one another see (Honohan, 1997). In order to understand the reasons behind the banking crisis it is important to discuss the different reasons that have led to a banking crisis. Recent cross-country surveys[2] have highlighted three principle factors which contribute to bank failures and the eventual banking crisis in an entire country. The following are the three principle factors which have led to bank failures and banking crises.

- Macroeconomic factors
- Microeconomic factors (internal poor management & fraud etc.)
- Governmental mismanagement & corruption

Therefore we can conclude that the main factors which have lead to bank failures and banking crisis are macroeconomic factors, microeconomic factors (internal poor management & fraud etc.) as well as governmental mismanagement & corruption.

[2] Cross-country surveys include BIS (1996),Caprio and Klingebiel (1996,97,99), Lindgren et al.(1996)

2.2.1 Macroeconomic factors

The extent to which financial systems are influenced by macroeconomic fluctuations varies enormously from country to country. Honohan (1997) indicates that macroeconomic factors leading to banking crisis have clear characteristics i.e: unusual asset price movements, rapid growth of lending especially for property transaction and for financing stock market positions, capital inflow. Although Honohan (1997) also reports that in some cases, banks have survived the most severe macroeconomic shocks for example (Liberia, Lebanon & Kuwait) which would have outstripped the resources of most conservatively, managed banking systems.

Banking crises caused by macroeconomic factors have occurred worldwide although the factors influencing the banking crises may vary from region to region. Banking crisis studies, relating to Latin American countries, emphasise that macroeconomic roots are a principal cause of the crises. As Gavin and Hausmann (1996) emphasis "Chains break at their weakest link, but that does not mean that the specific flaws in the weakest link fully explain why the chain broke; one needs also to understand what caused the tension on the chain. Indeed straightening a weak link in the chain only works if one succeeds in identifying the weakest link before it snaps... Tension is placed on the chain by economy-wide factors including, in particular, macroeconomic developments. When macroeconomic forces place great strain on the banking system, the weakest bank is the one most likely to fail, but it is the macroeconomic tensions, as much as the weakness of individual banks, that causes the failures[3]".

Davis (1992) and Gavin & Hausman (1995) further argue that macroeconomic factors resulting in the endogenous boom and bust are a major reason for bank failures all over the world. According to them, whilst macroeconomic policies encourage capital inflows, when a withdrawal of foreign capital due to unforeseen events (like wars, global politics etc.) occurs, local banks are placed under immense liquidity pressure. In these circumstances, attempts by the banks to call in loans or to refuse to renew them, leads to selling pressure in the asset market which in turn, both pushes many of the bank's

borrowers into financial distress and reduces the value of the bank's collateral. With this collapse in asset prices, well-founded questions over the viability of the banks, possibly leading to runs, and/or eventual bank failures. Charles Enouch (2000) also examines[4] Latin American banking crises and supports the view that serious macroeconomic imbalances were the principle cause of the banking crises.

Kaminsky and Reinhart (1996) also examine banking crises of Latin American countries by analysing the behaviour of a number of macroeconomic variables in the months before and after a banking crisis; using a methodology developed for predicting the turning points of business cycles, they attempt to identify variables that act as "early warning signals" for crises. A loss of foreign exchange reserves, high real interest rates, low output growth and the decline in stock prices, tend to signal an incoming crisis[5]. Their research shows how these macroeconomic factors influence banking crises.

Obstfeld and Rogoff (1995) have also revealed that the banking crises in Latin America countries with fixed exchange rates may also be triggered by an external speculative attack against currency. For example, if devaluation is expected to occur soon, depositors tend to rush to withdraw their bank deposits to convert into currency deposits abroad leaving the domestic bank insolvent[6]. From the above studies we can see that macroeconomic factors were a major cause of the occurrence of the banking crises in Latin American countries.

Macroeconomic factors have also influenced the banking system of several first world and developed economies as illustrated by Gorton (1998)[7], He suggests that in the United States, recessions caused bank panics but bank panics did not cause recessions-a conclusion that applies to overt forms of bank solvency. While discussing the Nordic banking crisis Pazarbasioglu (1998) also reported that boom in lending, resulting in bust

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[3] (Gavin & Hausmann 1996,pp27-28)
[4] Charles Enouch (2000) examines[4] the banking crisis of Argentina, Chile & Uruguay (1979-83)
[5] This approach examines variables contributing to banking crisis like balance of payments etc.
[6] This was seen in Argentina in 1995 when following the Mexican devaluation the deposits lost confidence in their currency anticipating a devaluation and banking system lost 16 percent of its deposits in first quartet of 1995 (IMF,1995)

after a few years, leading to banking crisis, is due to external macroeconomic factors. These two examples prove that macroeconomic factors have even influenced the banking system of several developed economies.

The Asian banking crisis was also greatly influenced by endogenous macroeconomic disturbances and inadequate economic policies. As Corbett & Vines (1998) report, the Asian banking crisis was due to the vulnerability created by inadequate macroeconomic policies. Looking at Thailand's case, the paper argues that a financial collapse can be a consequence of a currency crisis. The paper reveals that devaluation increases the value of unhedged foreign currency liabilities, resulting in lenders believing that the Government will not be able to honour its loans. Panic then sets in, resulting in bank runs and eventual banking crisis.

Caprio and Klingebiel (1999) pointed out that the banking crisis of Japan in the beginning of the 1990s, was a result of the burst of asset price bubble, and the Japanese banks have stayed in the crisis situation for over a decade. The reason for this is attributed to the macroeconomic characteristics of the Japanese economy which were (a) low economic growth, (b) continuation of asset price decline, i.e. asset-price deflation and (c) increase in the liquidity of bank assets and corporate liability.

Hiroshi Nakaso (2001) also gives weight to the argument that the Japanese banking crisis was a result of endogenous macroeconomic disturbances, and specifically, an endogenous boom and bust cycle, where banks, riding on a wave of optimism, over lent to projects, which had poor long-term prospects. The very process of lending contributes to the temporary success of projects as borrowers bid up the price of land and other property, and wealth effects on consumption raise the profitability of most economic activities. Also banks have often misread the macroeconomic factors and have responded over-optimistically to economic upturn by increasing their share of lending based on unrealistic prices and price trends.

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[7] Banking panics and business cycles (determinants of bank run in US during 18th century).

Hiroshi Nakaso (2001) concludes on the basis of his analysis of the Japanese banking crisis that no bank is large enough to generate an asset price boom on its own. Instead, it is frequently observed that bankers working in similar environments tend to follow each other either by attempting to learn by observing the behaviour of others, or, to avoid criticism (from top management, shareholders and regulators), by adopting similar market norms for lending. The shifting in the lending trends of bankers on sectorial creditworthiness may be temporarily self-fulfilling, specially in sectors such as property, where the extent of money lent has led to a surge in asset price, thereby generating further demand from banks. This particular type of lending, based on speculative purchases on the stock market as well as other sectors of the economy leads to unnecessary risk resulting in huge losses and eventual bank failures.

Macro economic indicators have also been one of the major causes of bank failure and eventual banking crisis in several developing countries, Kunt and Detragiache (1997) have reported strong evidence that the emergence of a banking crisis is associated with a deteriorated macroeconomic environment. Particularly in developing countries with low GDP growth, high real interest rates, and inflation significantly increases the likelihood of systemic banking crisis. Bernanke (1983) also adds that financial distress is quite common in developing countries therefore the likelihood of a banking crisis is by far greater.

Shleifer and Vishny (1991) also highlight that developing countries are not only small but also undiversified, being dependent on a narrow range of primary products as their main exports. Sectoral or product-specific supply or demand shocks can translate into sizeable changes in the terms of trade of an undiversified economy, lending to bankruptcy for export- dependent firms and their bankers. This situation was also pointed by Hardy and Patti (2001) in the case of the Pakistani banking crisis, since Pakistan's economy was heavily dependent on its textile sector where over 35 % of the entire portfolio of all banks was also given to the textile sector. Therefore the under-performance of the textile sector had great influence in the banking crisis. The failure of the textile sector was due to the

world decline in demand for cotton clothing[8] and protectionism (quotas) being introduced on cotton clothing by several major importers.

Classens, Djankov and Klapper (1999) have also indicated that external macro economic factors like the external political environment, may present a variety of unforeseen problems in several developing countries. For example, the emergence from a repressed political regime may leave financial contracts open to hitherto unknown types of opportunistic behaviour or fraud. This sudden liberation can lead to the total collapse of banking system as happened in Guinea in 1985, which caused relaxed conditions following the Sekou Toure regime[9]. It is also observed that with each new government following their own agenda, the banking system is left vulnerable to bank failures. This case is amplified especially if banks are state owned and political agendas like privatisation have incubated into more serious problems.

[8] The demand textile clothing reduced due to the introduction of artificial fiber in 1990s as well quotas set by EU & USA.

[9] Under the regime, banks had very little autonomy and were not aware of the most elementary behavior norm of institutional survival, leaving them wide open to fraud.

2.2.2 Microeconomic factors (internal poor management & fraud)

Juan (1995) states that "Contrary to the theory that financial crises are only due to macroeconomic factors, the role of the bank management is a major element in all banking crises, as a potential originator or as a multiplier of losses and economic distortions. The fact is, that good bankers, when in trouble, often become bad bankers, through a sequence of deteriorating attitudes" (Pg. 1). Poor management and ineffective supervision are relevant not only to the crisis of single institutions but to the widespread banking crisis. Juan (1995) in his paper has characterised poor management into four categories: (1) technical mismanagement, (2) cosmetic mismanagement, (3) desperate management and (4) fraud. These do not occur in sequential manner, but when technical mismanagement leads to losses or a need for a dividend reduction, it frequently leads to cosmetic and desperate management. Fraud may be part of this process from the very beginning, but it is dealt with at the end as a part of the dynamics that make good managers become bad managers. Illiquidity is a last consequence of this process, as in the meantime the bank may have lost its capital several times. If this financial distress persists for years and is overlooked by weak supervisory and regulatory systems, it can be obscured by the banker's ability to make bad loans look good by granting new loans. The banking crisis can continue indefinitely,or may progress into overt runs if the public begins to doubt the validity of a Government guarantee, or the Authorities come to recognise the costs of misallocating resources and intervene to restructure or otherwise resolve distressed institutions. As a result, a lot of banking crises when analysed were caused by poor bank management. Therefore, it can be pointed out that applying only macroeconomic remedial action to general financial crisis, without simultaneously addressing the institutional side, may prove ineffective or counterproductive.

Arrow (1982) and Guttentag & Herring (1986) have also indicated that the vulnerability of the financial system to microeconomic factors has increased whenever the environment for banking changes dramatically, especially in the case of developing countries where liberalisation policies such as the removal of credit ceilings or administrative controls on interest rates, when new entrants are permitted, or when

privatisation takes place (as in Mexico 1994-97). This restructuring of the financial institutions increases the volatility of prices facing the market participants and by increasing competition, may place pressure on the profitability of old-established banks, whose cost base has expended under the protection of the old restrictions.

In fact Honohan (1997) suggests that in order to assess the poor management and other microeconomic deficiencies, it is essential to establish if the banks are financially sound and whether they are being managed in a prudent manner by trustworthy persons. In addition to this Honohan (1997) suggests the use of market-based indictors, [10]as well as regulatory information,[11] to foresee the occurrence of the banking crisis.

Caprio and Kingebiel (1999) have also pointed out that banking insolvency has increased due to the financial liberalisation as well as a variety of regulatory and bank-specific management factors – including asset-liability mismatches, insufficient diversification, connected lending and fraud. In fact they report that the general uncertainty, asymmetric information and speculative bubbles led by excessive credit growth, are other factors cited in developing countries.

Maro Pangestu & Manggi Habir (2002) report that individual bank failure can often be traced to lending decisions based on an over-optimistic assessment of creditworthiness. For example: loans to prominent individuals and politicians who are unwilling to repay. Also the recoverability of delinquent loans is not possible since there are no banking laws to safeguard the interest of the banks. Undue concentration of lending is readily available to certain sectors or to particular borrowers; overly paid credit expansion exceeding the technical capacity of the bank's lending function or (if generalised) even exceeding the economy's potential to generate viable projects. The common feature of all these bank failures is due to self-lending or lending to entities associated with bank shareholders or managers. Although such lending is supposedly tightly constrained by regulations, these

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[10] Bankers are first to have the insight of miss-management & fraud in banks
[11] Regulators have useful information for e.g. Loan loss experience and the ratio of capital-weighted assets.

are frequently evaded, bypassed or waived in most developing countries. The founders of these banks use them as a source of providing a convenient and inexpensive form of financing for their personal companies. In this way all lending decisions made by them tend to unnecessarily favour them, which leads to banks falling prey to over-optimism towards certain sectors.

Ball and Feltenstein (2001) in their paper on bank failures in developing countries, also report similar findings that most of the banking crises have occurred because of mismanagement in the lending process. As Hardy and Patti (2001) indicate in the Pakistani Banking crisis, bankers caused huge bank failures by allowing the management to divert a substantial portion of the funds for their personal purposes. A typical example would be self-lending for an associated property venture, which purchases land from the management at an inflated price and , even if the property venture fails, the management benefits. Nadeem and Kardar (1997) also found that reckless and fraudulent behaviour is seen when favoured individuals are lent substantial amount of money against property which is of negligible market value[12].

Tenconi (1988) has also highlighted similar examples of Venezuela (1994) and Guinea (1995) where systemic fraud led to massive a bank crisis. Therefore it can clearly be seen that poor management and bank fraud has become a major banking problem and the potential for fraudulent activities is always on the rise especially in developing countries.

Garber (1996) and Mishkin (1996) also concluded that poor management and unwise lending can lead to over exposure of risky open foreign exchange positions, adopted from uncovered differentials, as was seen in Chile, Turkey and Mexico.

Akerlof and Romer (1993) have termed poor management and ineffective supervision as "*looting*" and claimed that looting behaviour was at the core of the saving and loans crisis in the U.S. and of the Chilean banking crisis of the late 1970's. Thus a weak legal

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[12] Mehran Bank Scandal: in which huge amounts of money were loaned to the Son of the President of Pakistan, against property of negligible market worth.

system that allows frauds to go unpunished should increase the probability of a banking crisis. The paper gives an example that looters (bankers) look for business partners who will sign contracts that appear to have high current value if filled, but that will not-and could not be honored. This clearly indicates that time and time again, widespread banking crises are attributed to mismanagement as well as biased lending, and poor supervision. According to their observations, the biggest problem was not that the supervisors didn't know or suspect, but that the bank owners were highly placed and belonged to the political elite, and could not be curtailed. This extreme mismanagement resulted in eventual overall bank failures especially in countries where banks ever state- owned and deficiencies at different banks were allowed to continue leading to bank failures and an eventual banking crisis.

Santomero (1997) argues that even in developed economies banks are subject to failure due to reckless fraudulent behavior of the bankers, especially those dealing with trading and treasury departments. The paper gives the example of the failure of the Barings bank, where one person's adventureism led to the failure of the entire bank.

Therefore it is clearly evident from the research conducted worldwide, that internal poor management occurs both in developing countries and developed countries. It can also be seen that these internal microeconomic factors can cause bank failures and in their severest form banking crisis.

2.2.3 Governmental mismanagement & corruption

In many developing countries the financial institutions are not independent and are entirely or partially owned by the Government. As a result of this, the agenda of the political Government permeates the activities of the banking system see (Claessens et al 1999). In fact Caprio and Honohan (2000) indicate that in a remarkably high proportion of cases of widespread bank failure, the underlying cause has been political interference in bank credit decisions, and the enforcement of prudential regulations, designed to restrain self-lending or recklessness. There are many ways in which governmental mismanagement or political interference have brought banking systems to their knees. Most egregiously, some corrupt leaders simply helped themselves to the resources of the banks as evidently in Philippines in the early and mid 1980s under the Marcos regime see (Claessens et al 1999). There are other less obvious examples where the Government leaned on Mostly stated-owned banks to make loans to priority sectors or borrowers. This act would not only directly undermine the bank's financial viability, but also erode the bank's incentive and ability to carry out loan appraisal or to build up credit appraisal skills. Often there was an implicit understanding that such loans would never be repaid. Sometimes the loans went to unpaid Government suppliers, drawing the banks into a web of non-payment and financial indiscipline leading to the eventual collapse of the banking system.

In fact Honohan (1997) further describes governmental mismanagement as the "Achilles' heel" of the banking and regulatory system. He points out that early response to emergent banking problems has been repeatedly inhibited by the political protection against closure, which unsound, imprudent or self-serving bankers utilised to their advantage. This leads to the deepening and increased severity of the banking crises. This paper has indicted several countries[13] where financial crisis is associated with Government interference in banking systems. In these countries it can be seen that the Government controls a large segment of the banking system and all major lending decisions. The proportion of lending is at the free discretion of the banks, that is, they are not subjected

[13] These countries include (Cameroon, Egypt, Hungry, Pakistan, Philippines and Poland).

to compulsory deposits or sectoral allocations, and therefore the political Government use the central bank as a tool to maintain have a degree of official control over the commercial banks' use of credit.

As Chamley and Honohan (1990) also report, the scale of Government implicit and explicit financial intermediaiton taxation, also indicates the level of Government interference in the banking sector. Honohan (1997) further adds that the political structure and relevant dimensions would dictate the concentration of political power in elite[14] groups and freedom of the press[15] etc. He elaborates his point by giving the example of the Philippines, where a large proportion of the loan losses of the two largest banks bailed out in late 1980s, was said to have benefited by President Marcos and his associates, directly or indirectly.

Djankov and Lang (1999) LaPorta, and Shlifer (1998) argue that enforcement of prudential regulation is especially likely to be complicated by political considerations, where there is a concentration of ownership and control of firms, as this typically entails concentration of political power. The research highlights cases of several Asian countries[16] in which individual families have control over the majority of corporations, with the use of pyramid structures, cross-shareholdings and other devices enhancing the control of even modest block shareholdings. There are also similar examples to be found especially in developing countries, where a handful of powerful families control large sections of banking systems and the economy, with family members at times well-placed in Government and other agencies overseeing the banking sector[17].

This is clearly evident in cases of countries like Indonesia as Maro Pangestu & Manggi Habir (2002) report .Banks are not autonomous, profit-seeking entities, but operate, to a greater or lesser extent, as a quasi-fiscal mechanism, differing from the budget chiefly in

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[14] If wealth is concentrate in a few hands, it more prone is the banking system to predation.
[15] A free press and informed public is more likely to inhibit political abuse of the banking system.
[16] A detailed study of over 3,000 quoted firms in (Hong Kong, Indonesia, Korea, Malaysia & Thailand) controlled by only a few families.
[17] Example of Venezuela (1992) where did not intervene because of an official's ownership share in bank: eventually causes a massive systemic banking crisis cost over $7 billion.

the degree to which the funds employed can circulate rather than being an out-and-out grant. The Report it said that Government-owned development banks are not solely tools of profit making but their lending has been designed to conceal or defer a fiscal problem by making a substandard loan to support a Government policy objective. In favourable times, such banking systems appear to be functioning without undue problems, but long-term low interest rate lending to inefficient state-owned companies or other favoured borrowers, results in bank failures. Even if a small proportion of these borrowings become non-performing loans, this gradual erosion of the real capital leads to the banks becoming insolvent in economic terms (Present value liabilities exceed recoverable value of assets). This would result in an injection of capital funds by the Government in these banks to support their balance sheet in a positive manner. Maro Pangestu & Manggi Habir (2002) also add that this is particularly seen in the case of the Indonesian Banking crisis, where the banks were asked to favour and lend huge amounts of capital to over ambitious projects, set up by the ruling elite. In the case, of Government owned these banks, and huge amounts of capital was lent to severely loss making government organisations to keep them afloat.

Ball and Feltenstein (2001) in their paper on bank failures in developing countries also point out that there are a variety of non-optimising bank practices that would never survive a competitive market, for example; specialised banking created essentially for political motives. These banks lend subsidised funds from the Government and foreign sources. The recipients of these loans are generally not evaluated for risk and return criteria. Most loans are made to politically connected industrial companies, even when there is little chance of repayment. In fact, as the paper indicates, the Ministry of Finance makes line item expenditures, which are deposited in the specialised banks. These deposits are then earmarked for loans to the favoured sectors serveing political agendas.

Bandiera et al. (1999)[18] gives weight to the similar phenomenon of credit allocation through specialised banks being routine commonplace in developing countries worldwide. Bandiera et al. (1999) states: "In developing countries, intervention in the

[18] Bandiera is speaking about Chile, Ghana, Indonesia, Korea, Malaysia, Mexico, Turkey and Zimbabwe.

financial sector goes considerably further than the regulation of interest rates and ocredit expansion. In some countries, banks are required to hold as much as one-half or more of their liabilities in the form of reserve or liquid assets (often deposits at the central bank) and another large part of the portfolio is dominated by directed credit. In some cases, the small size of the economy means that a Government requirement to provide financial support for a sector such as steel making is, meant in practice, lending to a single steel company, with the result that the banks view the risk as belonging to authorities" (Pg. 27).

Bandiera et al. (1999) points out that a key characteristic of such specialised commercial banking is that loans are not typically based on assessment of projected profitability or the probability of repayment. Explanations for this apparently non-optimal behaviour ranges from the political power of lenders, poor over sightedness on the part of bank lending officials and the lack of legal repercussions for those who default on the loans. In fact, the specialised banks and state-owned commercial banks act as a channel to direct loans towards specialised target areas based on political agendas.

Begg and Portes (1992) suggest a policy solution for developing countries to recognize the extent of the banks bad loans, and force them to write them off. Since these bad loans reflect an history of subsidisation of state owned enterprises by the State, the paper recommends that these non-performing loans should be recognised as a component of the budget deficit. In fact, recognition is little more than an accounting procedure if the State is the ultimate guarantor of the deposits.

Hardy and Patti (2001) have also reported that sectoral preferential treatment by banks lead to the banking crises in Pakistan where over 35 percent of the entire loan portfolio of banks was directed towards the textile sector. As a result it was observed that the state owned banks, were in some cases injected with capital funds because their net worth had become negative due to a high percentage of non-performing loans.

Sectoral directed lending through Governmental mismanagement and corruption is not only evident in developing countries but can also be seen in transition economies. As Perotti (1993) reports in his paper on bank lending in transition economies that an unchecked flow of finance to loss-making, state-owned enterprises, undermines incentives to control cost or achieve greater efficiency, especially where state run banks have acted as intermediaries and state owned enterprises have run up debts which are unplayable, leading to crisis. To deal with this, the banks need to impose financial discipline on state owned enterprises that will require the curbing or halting of the flow of credit to them.

It can be seen that financial liberalisation in developing as well as transition countries, has increased Government mismanagement and has resulted into corruption. As Galbis (1995) indicates, Government mismanagement of the liberalisation process tends to lead to high interest rates. Therefore the financial liberalisation process, in turn, may increase banking sector fragility because of increased opportunities for excessive risk-taking and fraud.

Demirguc-Kunt and Detragiache (1998) further argue that although banking failures have been reported more frequently following the financial liberalisation, it would often be misleading to conclude that reliance on market forces in preference to detailed Government direction of credit, was always the source of failures. Indeed, in many cases, long-standing underlying insolvency of the banking system has only been revealed as the banks emerged from the sheltered environment that allowed them to cross-subsidise loss making lines of business, which they had been encouraged or instructed to maintain at the behest of Government, or powerful politicians. Therefore cases of liberalization have only revealed the insolvency, rather than causing the crises itself. As Borish et al (1995) and Claessens (1996) also point out, the evolution of banking systems in transition has followed paths, showing that political regime change does radically alter the dimensions in which the economies function. This situation is especially prevalent in the case of developing countries. With new government comes a new agenda for financial

intermediation and credit allocation. On this basis of statistical analysis of expert ratings, Claessens (1996) suggested that radical change is healthier for the banking system than a gradual shift.

The Japanese banking crisis has revealed Government interference and political corruption. As Hiroshi Nakaso (2001) indicates, the banks' free discretion is undermined by compulsory sectoral allocations by the political Governments. This can be seen in the form of compulsory investment in Government securities or lending to specified borrowers. Sectoral allocations usually come in the form of minimum proportions of the asset portfolio to be held in loans of certain broad categories such as agriculture, particular geographical regains or ethic groups. Borrowing from the central bank often entails some degree of official control over the bank's issue.

As Caprio and Kingebiel (1996) conclude, that the primary cause of several banking sector insolvency during the past 15 years is considered to be deficient management, faulty supervision and regulation, government intervention and weak corporate governance. They also argue that the claim that bank insolvency in developing economies is different from that in market economies, and currently this assertion can be justified; banks have experienced massive initial losses as a result of the bad debts, most stemming from loans made to uncompetitive state-owned enterprises.

2.3 Cost of banking crisis

Theoretical studies[19] and empirical work both focusing on banking crises suggest that banking crises impose large costs on an economy. The actual costs of these crises cannot be easily quantified and also vary from crisis to crisis. As Caprio and Hoohan (1999), indicate that in recent decades, a 112 countries both-rich and poor, have experienced a systemic banking crisis requiring a major and expensive overhaul of their banking system. In some cases, the cost has amounted to as much as 50percent or more of their GDP.

As BIS (1996),Caprio & Klingebiel (1996)and Lingren et al (1996) indicate these banking crises result in great expenditure for examples as in the early 1980s, Argentina and Chile had to spend amounts equalling 55 percent and 42 percent respectively of their GDPs, on banking system bailouts. These crises have had an overbearing effect on these countries for many years. Although some of these costs are more in the nature of transfers than pure economic losses, the magnitude of the problem cannot really be doubted. It reflects a waste of valuable resources in countries where both the potential productivity of capital and the need for sound credit decisions, are great. Unfortunately, the costs of these crises are then borne by depositors and other creditors of failed banks, or more often by Governments through higher taxation costs.

Caprio and Klingebiel (2002) have recorded 112 episodes of systemic banking crises occurring in 93 countries and 51 borderline crises in 46 countries since the late 1970s. It was indicated that the Governments and ultimately the common public had to largely shoulder the direct costs of the banking system collapses. The fiscal costs arising from using public funds to support depositors and possibly bank stakeholders.

Honhan and Kinngebiel (2003) have analysed the costs of the banking crises by using a sample of 40 episodes where Governments spent on average 12.8percent of their national

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[19] The episodes of banking crisis and cost have dran from Baer and Klingbiel (1995), Beston and Kaufman (1995), Caprio and Hoohan (1999), Claessens (1999), Demirguc-Junt (1999) Honohan (2000)Kaufman (1994) Kingebiel (2000), Sheng (1996), World Bank (2001)

GDP to clean up their financial systems. In some cases the cost was much higher, Governments spending as much as 40-55percent of the GDP in the early 1980s crises in countries like Argentina and Chile. Similarly, the costs of the East Asian crisis of 1997-98 were 20-55percent of the GDP for the three worst affected countries. Furthermore, these expensive bailouts by Governments lead to the destabilisation of fiscal accounts, triggering high inflation and currency collapse, as well as adding dead-weight cost of taxation.

Kaminsky and Reinhart (1999) also report that the cumulative resolution of banking crises appears to a larger extent in emerging market economies than the developed ones. They illustrate this by giving as an example the Asian crisis were Indonesia and Thailand faced costs of approximately 50 – 40percent respectively of their annual GDP, whereas in the Nordic banking crisis of the early 1990s, the fiscal costs were kept down to 10percent or less of the annual GDP. Barth et al. (2000) supports the point of view that the higher cost of banking crises in developing countries is due to of the higher percentage of non-performing loans.

IMF (1998), Aziz et al. (2000) and Bordo et al. (2001) measure output loss of different countries by summing the differences in output growth rates between the pre-crisis trend and the actual rates during the crisis period. The research indicates the percentage deviation in the level of actual output at the point when the crisis ended, from where it would have been if the crisis had not occurred. The research gives further evidence and weight to the fact that the cost of a banking crisis is more severe in developing countries than in developed countries.

The cost of the banking crises can be illustrated not only as the extent of GDP percentage but also as Hoggarth, Reis and Saporta (2002) point out, a banking sector failure affects the economy as a whole or parts within it. For example the stakeholders in the field of the bank will be directly affected. These include shareholders, the value of whose equity holdings will decline or disappear, the depositors, who face the risk of

loosing all or part of their savings and the cost of portfolio reallocation other creditors of the banks who may not get repaid and finally the borrowers, who may be dependent on banks for funding and could face difficulties in finding alternative sources. In addition, taxpayers incur direct costs as a result of public sector crisis resolution. Bordo, Eichengreen, Klingebiel and Martinez-Peria (2001) also argue on similar lines that the costs of banking crises are often measured in terms of their effect on fiscal expenditure on any country's economy. Estimates of the fiscal resolution costs of banking crises tend to be bigger in lower income countries and those with a higher degree of banking Government intermediation A crisis in all or part of the banking sector may impose costs on the economy as a whole or parts within it. The 'stakeholders' in the failed bank will be directly affected initially as the value of their equity holdings will decline or even disappear. The depositors, who can be substantial in number, would also face the risk of loosing all, or part of their savings and the costs of portfolio reallocation. Creditors of the banks, which could include the Government, other financial institutions and large companies, might never be repaid. Finally the borrowers, who may be dependent on banks for funding, could face difficulties in finding alternative sources leading to their financial crisis and eventual closure. In addition, taxpayers may incur direct costs as a result of public sector crisis resolution as well as a loss in trust in the financial sector leading to 'flight of capital' for years to come.

Leland and Pyle (1977) and Fama (1985) point out that the costs of banking crises are higher than any other industry because other channels cannot easily replace bank credit, the intermediation function of banks being critical for borrowers. Collecting information on borrowers in relation to their overall lending profile and creditworthiness can be a lengthy process. This information enables banks to distinguish between the creditworthiness of good and bad customers. Bank failure leads to the loss on this accumulated information and imposes costs on the economy in so far as the information has to be re-acquired.

Sharpe (1990) and Rajan (1992) further add that this information may make it difficult for some borrowers to engage with a substitute bank if the original bank approached, is

unable to lend. In practice, bank credit is likely to vary from country to country and its availability or not will be affected by the nature and extent of crises, as in most countries, it is very difficult for individuals to obtain loans for personal, household or small business purposes from any other source. In the same way, the banking crises (if widespread) can affect banks' customers and the economy generally in relation to public trust and confidence in the whole financial system of the country.

As Diamond and Dybvig (1983) have also argued, for any customer, the bank's over draft facilities and committed back-up for credit, are his protection against liquidity pressure, as well as, access to instant investment such as demand deposits. In fact, more importantly, the payments mechanism will not function if customers do not have confidence to leave funds on deposit at banks or, crucially, banks lose confidence in each other. Therefore the real cost of the banking crisis is not only fiscal but also the loss of depositors' confidence in the banking sector for years to come.

As Freixas et al (2000) also points out, the banking crisis could lead to a complete breakdown in the payments mechanism and would bring severe costs due to trade being impaired. Luckily this is not allowed to happen and the Authority (Government) takes action before a complete loss of confidence occurs.

In the end it can be said that banking crisis have their own unique dimensions that are typically complex and differ from one another. The overall impact and cost of each banking crisis on the economy also depends on, amongst other things, manner and speed of the crisis resolution by the Authorities. For example, wrong and delayed policy decisions by regulators could increase moral hazard and harm output over an extended period. On the other hand, a rapid clear-cut policy, which curtails and clears out the bad loans, is expected to improve the performance of the economy over a longer run.

2.4 Credit risk

Today's commercial banks are not in a safe environment as they were a few decades ago. Due to the volatility of the world financial markets the element of risk has increased over the passage of time. In fact a bank or financial institution could be facing an increased form of risk if it is not careful. The last decade has seen dramatic losses in the banking industry globally and banking crises. Commercial banks all over world that had been performing well, suddenly announced large losses due to credit exposures that turned sour, interest rate positions taken, or derivative exposures that may or may not have been assumed to hedge balance sheet risk. As George E. Ruth (1996, pg. 63) states " Risk is an unavoidable part of banking, which involves the day-to-day uncertainties of attracting, lending and investing money." Therefore it is right to say that it is not possible to operate a bank without dealing with risk although banks have now developed new ways to safeguard themselves against risk.

Commercial banks are in the business of providing credit and other financial services and in turn assume various kinds of financial risks. Over the last decade our understanding of the position of commercial banks within the financial sector, both in the academic literature[1] and in the financial press,[2] has also increased. Suffice to say that in today's financial world, market participants seek the services of financial institutions because of their ability to provide market knowledge, transaction efficiency and funding capability. In performing these roles, they generally act as principals in the transaction. In this way they use their own balance sheet to facilitate the transaction and to absorb the risks which are associated with it.

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[1] There are reviews on the role of banks within the financial sector. See for example, Bhattacharya and Thakor (1993), Santomero (1984) and Allen and Santomero (1997).
[2]Several articles and surveys including Economist(1993), Salomon Brothers and Goldman Sachs Equity Research Reports on the banking sector.

When a loan is made, the risk that unforeseen events will arise is always present. This makes it difficult for the borrower to comply with the terms of the loan agreement. As Brain (2000) states, problem loans may begin with lender errors or incompetence, even wilful neglect: Problem loans originate with the credit manager's inaccurate assessment of the character of the borrower, misinterpretation of the figures on a spread sheet and final accounts, or simply the inability to refuse a loan request. These are only a few of the causes, which increase the potential of default, in the longer run, for the bank. Therefore tighter supervision of the credit managers has been introduced along with risk management techniques.

As Meenai A.S. (1984) Still, D. (1984) states, "in order to understand credit risk, we must firstly understand default". He describes several possible definitions of default eg: missing a payment obligation, breaking a commitment, entering a legal procedure or economic. In terms of banking law, a default occurs when a scheduled payment has not been made within a minimum period of three months of the due date. It can happen that if the lenders do not offer waivers to the borrower, such a situation can become more critical and often endangers a borrower's survival all together. On the other hand it is important for the credit managers to see if the borrower is simply not able to pay back any loan rendered to him. Offering him a waiver or extra credit could result in total loss of that extra credit also for the bank. Default has to be economic which could result from certain external factors being out of the control of the borrower, or it could result purely from the lack of proper strategy and incompetence of the borrower. It is also seen that borrowers who intend to default wilfully often take as much credit as possible at the very first instalment. That is why it is important for the credit managers to verify and assess their clients in detail before rendering loans to reduce the credit risk. Also it is important for them to see the value of the assets that are being offered as collateral, to ensure that they do not fall below the value of the outstanding debt at any stage as this could provide more of a reason to default. Therefore, to understand what default is, is very important in estimating the chances and occurrence of future default, for example, past credit history of the client etc. Most rating agencies consider that default occurs

when a contractual payment has been missed for at least three months. The various events of default do not generate an immediate loss but increase the likelihood of a potential default which could finally, result in overall bankruptcy.

However, a problem loan may surface even when a loan officer has done his best to evaluate and monitor the loan. As Israr Siddique (1992) argues, no loan officer can foresee several years of bad growing conditions or declining land values that presage a problem agricultural loan. Although problem loans can be extremely costly for the bank and should be minimised as much as possible, a balance must be struck between careful, prudent is, lending practices and making full use of the banks assets, the main business of any bank and financial institution being to create more capital by lending and re-lending the deposited amounts. Unnecessarily conservative lending practices are detrimental to any bank's profitability. Therefore it must be understood that the answer to problem loans is not, to stop making them. However, a competent credit manager should keep the number of problem loans at an acceptable level and minimise the bank's losses if loan quality does deteriorate. In order for him to do this is, he must have a clear understanding of the costs of problem loans, recognise their causes and continually monitor the loan portfolio. The reasons for a borrower defaulting, can normally be traced back to adverse economic or competitive developments, deterioration in product quality or poor marketing practices.

As Heffernan (1996) further adds, even the best banks have problem loans, but bank losses are usually negligible if bad loans are identified early, simply by knowing the warning signs and keeping a watch over all the loans, even after they have been rendered for a long time. It is seen as a common problem that once a loan application has been approved the loan has been given, credit managers tend to be preoccupied with new loan applications and do not foresee a problem with a loan that is likely to default in the near future. For example: a credit manager can work with the borrower to draw up a cash budget or restructure the debt. Once the bank is forced to liquidate collateral or becomes

embroiled in bankruptcy proceedings, the chances are that it will not be able to salvage the entire outstanding amount.

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5 C's

A pedagogical concept used in commercial lending training is known as "the five C's of credit. Beaulieu (1994) describes the 5'C's as a tool which the loan officers use to classify loan information and consider relationships among categories of information. The prediction is based on this knowledge structure and loan officers are able to recall more judgement-consistent than inconsistent information. The cognitive effect may have performance implications with respect to loan reviews because loan officers frequently perform follow-up work on loans they originated, and they must recall loan information during conversations with borrowers and at loan committee meetings. As Beaulieu (1991) further adds, post-approval information, consistent with loan approval may be easier to integrate into knowledge structures already centred on approval, and be simpler to recall subsequently, than negative information indicating deteriorating probabilities of repayment. Recognition of problem loans or work-out situations could be delayed. Kelly (1985) also adds that each client must be classified in terms of the degree of credit risk involved based on the 5 C's of credit.

Commercial loan officer's knowledge structures

Novice loan officers are generally taught to seek and organize information using a framework called the 5 C's of credit (Character, Capacity, Capital, Conditions and Collateral). This provides a common structure to their judgements of commercial loan applications. As Beaulieu (1994) stresses that all lending decisions made by the credit managers are based on this framework.. As Crigger (1975) also points out, it is not easy to reach a lending decision; a bank will want the customer to repay the loan without great cost to itself or hardship to the borrower. This means repayment will be within an agreed time and in an agreed way. The evaluation of potential borrowers should not be restricted

to credit analysis of the firm's risks. Nowadays banks use the credit scoring 5C's[20] to evaluate the potential borrower's credit, to enable them to get more information about the borrower, both internally and externally.

The following section describes the 5'C's of credit as being the foundation of loan officers' knowledge structures, based on both the academic literature[21] and financial press. The following are the most important aspects considered by bankers: character, capability, collateral, conditions and capital.

Character

In commercial lending, character is always referred to as the customer's willingness and determination to meet a loan obligation. Crigger (1975) defines character as follows: "Basically it means doing what is morally right; with both integrity and honestly although, it is easy to be honest and integrity in good times; when times are bad, character is tested". Therefore character is the single most important component of a client's make up. Credibility is the most important trait for any person who carries on any sort of business. As Saeed Ahmed (1998 pg. 32) states "Character is the single most important component of a client's make up". He continues with: "A business man with good character will make every effort possible to repay a loan and will work openly and co-corporate with the banker if his business experiences any financial difficulty. Conversely, a business man lacking in character will always assign a low priority to repaying his debts and be quick to renege on any loan commitment at the first sign of financial difficulty."

Barberian and Kingsmill (1992) and Mcleod (1992) also argue that the borrowers' representations, including accounting information, are influenced by their character; for example, borrowers of poor character may provide non-credible accounting information

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[20] The last 15 years development of computerized credit-scoring methods by scholars such as Beaver and Altman.

[21] Beaulieu (1994), Crigger (1975), Kelly (1985), McDonald and McKinley (1981), Ruth (1987), and Still (1984).

to obtain favorable debt contracts. Consequently, McDonald and McKinley (1981) further argue that lenders judge character by observing borrowers' present behavior and checking references about their past behavior. Lenders consolidate information obtained from their own observations, references and background checks to reach a consistent, overall judgement of character.

As Beaulieu (1996) concludes, character has the primary importance and appears at the center of each and every agreement because the borrower's character affects their presentation of, or responses to, all other information. Thus, social judgment is embedded in a knowledge structure that includes other types of judgements, mainly quantitative or financial[22].

Capability

The term refers to the borrower's ability to use the loan successfully. In order to access a customer's capability, a bank manager must look into his past record. As Clemens, (1986, pg. 248.) points out " The past performance of the company should be examined, covering both good and bad years". The lending decision will depend upon whether or not the bank manager is satisfied with his customer's ability to manage the business. An important stage in the decision making process is for the bank manager to be sure that the borrower has the ability to create enough income to pay back the loan and its interest.

Bonner and Libby (1995) have stated that the capability is also the borrower's ability to operate a business capable of repaying debt. Capacity is evaluated mainly through analysis of financial statements; other factors (e.g. management's experience) are also considered.

Cooper (1975)and Keelly (1985) both point out that loans are repaid from the cash management during the company's operating cycle; therefore it is essential for a company to generate sufficient cash to pay the debts. It is always easier to evaluate the

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[22] Loans officers interviewed by Beaulieu (1991) stated that it is necessary to fit character and other judgements together to obtain comprehensive perspectives on proposed loans.

capacity of an established company, since the credit managers of the bank can look into the past financial performance and reputation of the company. If the business has been successful over a long period of time and if its management represents a balanced set of liabilities, then the their prospects for repayment of a loan are quiet high. On the other hand, it is more difficult to evaluate the capacity of new business. Therefore the credit managers have to be more careful and look into other areas i.e. things like which sector of the economy they are competing with and the kind of financial base a company has initially. As Allen (02) further adds, for this very reason, commercial banks have developed extensive training programmes for new and experienced credit managers, because they are essential when you come to judge the financial capacity of a company.

Capital

The capital of the potential borrower is another important point of consideration in the bank manager's evaluation of his customer. As Ruth (1987) highlights that the most important step the banker has to take is in analyzing the capital structure of the company. Since this will show the source which financed the company's assets and highlight both the capital which has been provided by the company's owner and the loan capital which has been borrowed to finance the business. Crigger (1975) also defines capital as a "cushion, and the net worth of either an individual or company which, regardless of character and capacity, a company still needs".

As Clemens, (1986, pg.122) states "Where overdrafts are granted for normal trading purposes, a banker will be looking for working capital to increase as profits are made and retained in the business. However, the banker will not be happy with a balance sheet which consists of a large amount of external finance".

Weston & Brigham, (1979), highlights the importance of gearing ratios which illustrate the capital structure of the company. The paper states " Gearing ratios measure the funds supplied by owners as compared to financing provided by companies creditors" (pg16). In other words high gearing may make the lending decision more difficult, as the banker will not wish to see heavy financial obligations in the borrower's balance sheet, because

if the business fails, the banker will become one of the large number of creditors trying to get his money back. For this reason, the banker emphasises lending against security, to be on the safe side if unusual problems occur.

For this reason bankers are cautious when lending to small businesses and they ask the directors of these businesses to guarantee the loans personally. As Levin, (1987, pg. (32.) reports " Banks don't distinguish between personal and business wealth". Therefore the banker tries to use the personal wealth of the borrower against the risk of failure. This done to be sure that if an unusual risk happens to the business, the owner still has the ability to continue to make payments to the bank against the loan which has been provided to the business. This means that for small businesses with limited liability, liability means, to trade creditors rather, than to banks due to those personal guarantees by the proprietor.

Siddique (1992) argues that credit managers are often wary of a business that relies almost exclusively on borrowed funds to maintain its operations. Sufficient equity capital is particularly important in new, closely held companies, which often fail when the total amount is too small to finance the company's including any debt and day-to-day operations. Therefore it becomes important for the credit managers to also look into the personal wealth of the owners to see if they would be able to inject any cash if it was required at any stage.

Collateral

Collateral can be viewed as an alternative source of repayment. Collateral is vital because it can be pledged by a borrower as a way of setting aside weakness in any of the other C's. specially if it a new business. Still (1984) states that collateral is commonly known as "a second way out" and is generally viewed as vastly inferior to positive cash flow as a method of repayment. In fact he concludes that collateral should not be used alone to justify making a loan.

As McDonald and McKinley (1981) point out, a credit manager who is concerned with the financial condition of the business concerned may be very cautious in lending to a new business or a client. If the industry is not showing a lot of current liquidity, these companies could use their assets in the form of collateral. In these circumstances the credit manager should note that collateral itself does not repay the loans, therefore it should not, by itself, justify making a loan. Also Ruth (1987) adds that the main purpose of collateral is to provide the lender with a secondary source of repayment if the cash for repayment does not materialise in the normal operating cycle of business.

Conditions

Conditions are external variables such as the state of the economy and the type of industry in which the client is a part. As Beaulieu (1994) and Still (1984) both point out, it is important for the credit manager to keep an eye on all the external uncertainties before rendering any sort of loan. It is important for him to be well informed, he can do that by reading newspapers and or by contracting periodicals, business information services, general and specialised mercantile credit agencies, or any other resources which may be of use in to evaluating the conditions. Some banks have laid down special rules and regulations prohibiting them to render loans to companies in certain industries, where the risk is considered unacceptable or where specialised lending expertise is required. As Ruth (1987) also reports, on some occasions bank lending policy may require that an industry meet a much higher standard of creditworthiness. In fact, most banks now hire consultants, who specialise in one industry and keep the credit managers informed of all the latest developments. They are consulted before any loan in that particular industry is given. Crigger (1975) also adds that "The impact of external conditions on the future of any particular business must be continuously scrutinised, relative to the conditions prevailing in agriculture, commerce and industry".

Therefore, as Beaulieu (1994) concludes the five C's of credit serves three functions. Firstly, it ensures that loan officers acquire data in categories that are critical to the success or failure of commercial loans. Secondly, it helps them to develop their own

internal standards or reference points for client information in those categories. Thirdly, it forces Loan Officers to consider relationships among these categories. In other words a borrower's character influences their presentation of financial information, their responses to economic conditions and even the security of their pledges of collateral. Loans officers combine social judgements of character with judgements regarding the other C's of credit to obtain overall judgements of commercial loan applications[23].

2.5 Credit risk systems and subjective analysis

It can be said that ever since banks and financial institutions started lending they have been solely relying on subjective analysis or so-called banker "expertise" systems to assess the credit risk on corporate loans. Essentially, bankers used any information on the potential borrower's characteristics i.e: the borrower's character (reputation), capital (leverage), capacity (volatility of earnings), conditions (external prevailing factors) and collateral (guarantees, property etc.) the so –called 5C's of credit, in order to arrive at a largely subjective judgement. Sommerville and Traffer (1995) show that in context the of Institutional Investor's rating of LDC indebtedness (based on banker subjective ratings) bankers tend to be overly pessimistic about the credit risk of LDC's and multivariate credit-scoring systems tend to out-perform such expert systems. For this reason, most banks and financial institutions are gradually relying less and less on their subjective/expert systems, and more on an objectively based system.

2.5.1 Accounting based credit-scoring systems

Financial institutions and commercial banks using the univariate accounting system compare various key accounting ratios of potential borrowers with others in their sector. By using the multivariate models, the key accounting variables are combined and weighted to produce either a credit score or a probability of default measure. If the credit risk score or a probability of default measure attains a value above a critical benchmark, the loan applicant is either rejected or subjected to increased scrutiny.

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[23] In fact most forms applying for credit loans are small enough that the attitude and behavior of key managers/owners largely determines the firms operations.

In recent times there have been a number of articles on the development and tests of models. The principal source of these articles on credit risk measurement has been the Journal of Banking and Finance. The "Journal of Banking and Finance" has published a significant number of articles, including two special issues (Journal of Banking and Finance, 1984and1988) on the application of distress prediction models internationally. In the past twenty- five years, the banking sector has developed a few international models, see Altman and Narayanan (1997). Also there have been at least four methodological approaches to developing multivariate credit-scoring systems: (1) the linear probability model, (2) the logic model,and (3) the profit model, and (4) the discriminate analysis model. The most commonly used methods today are the discriminate analysis model followed by the logic model. Altman et al. (1977) developed the ZETA discriminate model. Stripped to its bare essentials, the most commonly applied form of discriminate analysis seeks to find a linear function of accounting and market variables that best distinguish between two loan borrower classification groups- repayment and non-repayment. This requires an analysis of set variables to maximise the between group variance, while minimising the within group variance, among these variables. Similarly, logic analysis uses a set of accounting variables to predict the probability of borrower default is assuming that the probability of default logistically distributed which is, the cumulative probability of default takes a logistic functional form and is, by definition, constrained to fall between 0 and 1.

Martin (1977) used both logit and discriminate analysis to predict bank failures in the 1975-76 period when 23 banks failed. Both models gave a similar classification in terms of identifying failures. West (1985) used the logic model (along with factor analysis) to measure the financial condition of institutions and to assign them a probability of being a problem bank. Interestingly, the factors identified by the logit model are similar to the CAMEL rating components used by bank examiners nowadays. Platt and Platt (1991) use the logic model to test whether industry relative accounting ratios, rather than simple firm specific accounting ratios, are better predictors of corporate bankruptcy. In general, industry relative accounting ratio models out- performed the unadjusted model. Lawrence

et al. (1992) used the logic model to predict the probability of default on mobile home loans. They found that by looking at the credit history of the borrowers, it was a far easier and more accurate way of predicting the default. Smith and Lawrence (1995) use a logic model to find the variables that offer the best prediction of a loan moving into default state by using the Markov model of default probabilities.

In this way, it can seen that the largest number of multivariate accounting based credit-scoring models have been on the discriminate analysis model. Altman et al. (1977) investigates the predicative performance of a seven variable discriminate analysis model. The Zeta Model was shown to improve upon Altman's (1968) earlier five variable model. Also, Scott (1981) compares a number of these empirical models with a theoretically sound approach. He concluded that the ZETA model closely approximates his theoretical bankruptcy construct. A large number of other mainly international applications of discriminate analysis credit related models are to be found in the Journal of Banking and Finance special issue (1984 & 1988).

2.5.2 Credit risk models

Over the past decade, commercial banks have devoted many resources to developing internal models to better quantify their financial risks and assign economic capital. Recent developments in the field of credit risk modelling[24], are evidenced by the public release of such models by a number of financial institutions; J.P.Morgan (1998) and Credit Suisse Financial Products (1997) for example. Credit Risk is defined as the degree of value fluctuations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counter parties. Recent proposals, such as the International Swap Dealers Association (ISDA, 1998) and the Institute of International Finance's Workshop Group on Capital Adequacy (IIF, 1998), argue that credit risk models should be used to formally determine risk-adjusted regulatory capital requirements.

2.5.3 Credit risk management

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[24] See Altman and Saunders (1997) for a survey of developments over the last twenty years.

As Santomero and Babbel (1997) describes, that an efficient credit management process in a bank can have additional "warning systems" which signal the deterioration of the situation of the borrower before the actual default. It develops a process by which all the possible avenues are looked into in order to reduce the probability of the potential credit risk and takes all steps necessary in case the default occurs. Banks therefore have to keep a close watch on their borrowers financial condition as well as the current value of underlying collateral, so that a possibility of default can be detected beforehand it can be detected beforehand. This is critical since the default of a number of important customers can generate large losses, which in turn can lead to insolvency. Credit risk is monitored by financial institutions using the limits systems where a ceiling of a pre-determined amount is set for every customer within a certain sector of industry. Each and every bank has special credit officers or credit committees, which determine minimal requirements for obtaining a credit and delegate all the rules and regulations to be observed which are to be observed by the borrowers. Banks have central reporting system, which report all outstanding loans and ensure that those amounts stay with in the credit limits.

Commercial banks are now beginning to rely on credit rating agencies like the *Moody's*[25], that measure the quality of risk. Banks utilise this information to ultimately quantify the probability and extent of default of its customers. Banks also look into the credit history of the customer and the sector of economy the customer comes from. Despite all the is informatio at the bank's diposal the credit managers are still not able to quantify and measure the extent of credit all over the world. All banks try their level best to protect themselves again credit risk by diversifying their credit in order to avoid simultaneous defaults, which could lead to insolvency.

As Santomero and Trester (97), and Berger and Udell (93) argue that however financial assets or activities where the nature of the embedded risk may be more complex and difficulty to transfer to third parties or might give an advantage to the competitors. In this case when the bank holds complex a proprietary assets that low, if non-existent,

[25] See Moody's (1996) and Santomero and Babbel (1997) for evidence of the relationship between credit rating and banking default.

secondary markets. Communication in such cases may be difficult or expensive than hedging the underlying risk. Also the bank because of their expected return accepts credit risk, which is the inherent lending activity of every bank. In this case the risk is fully absorbed, monitored and efficiently managed.

For commercial banks to survive, they need to manage credit risk. There is now a growing amount of literature covering the reasons for active credit risk management including Stulz (1984), Smith, Smithson and Wolford (1990) and Froot, Sharfstein (1993). Santomero (1995) lists several contributions to the areas with several distinct rationale offered for active credit risk management. These include managerial self-interest, the non-linearity of the tax structure, the costs of financial distress and the existence of capital market imperfections.

Santomero (1995) further states that the commercial sector has also suffered substantial losses in real estate as well as the petrochemicals industry. In order to prevent this in future, many banks are beginning to develop concentration reports, indicating industry composition of loan portfolio. Initially this process was quite unsatisfactory due a lack of standard industry index, but Moody's[26] has developed an industry grouping system of 34 industry groups. The system indicates the portfolio percentages by sector, as well as commitments to various industrial sectors. As Shahid (1998) adds, developing countries have seen a more prominent role of the State Bank, where it specifies clear rules and regulations stating the extent of loans to be given to different sectors of the economy.

The Financial Accounting Standards Board (FASB)[27] in USA has also tightened its principles on the credit portfolio management, where commercial banks are required to have a loan reserve (contra-asset) which accurately represents the diminution in market value from known or estimated credit losses. According to Kim and Santomero (1993), the accounts monitoring approach where the level of reserve account is re-assessed quarterly, given the evidence of loss exposure driven directly from credit quality report,

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[26] Moody's Investors Service (1999): Another Perspective on risk transference and Securtization.

and internal studies of loan migration through various quality ratings; for example how statistical properties of the time series of loan ratings can be used to obtain loans losses. Although accurately estimating loan losses from loan quality reports, it is a daunting task because of the limited information available to the bank on the future losses in loans quality over time. For balance sheet exposure to interest rate risk, the commercial banks follow the generally accepted accounting procedures (GAAP) established for bank assets, as well as the close correspondence of assets and liability structures in US & UK. Commercial banks tend not to rely on day to day market value reports, guidelines or limits, which are also the new IASB requirements. More traditionally on cash flow and book values, which asymmetry of the re-pricing of assets and liabilities, is measured in ratio or percentage mismatch in terms of a standard interval of one month or year. Most commercial banks have also started applying balance sheet simulation models, to investigate the effect in interest rate variation on reported earnings over a period of time, since most credit bank managers having recognised that the generally accepted accounting procedures (GAAP) are somewhat static[28] in todays dynamic and volatile banking industry.

As White, A (1995) points out, the probability of a credit default is one of the most difficult things to measure, despite credit lending having been the principal task for banks and other financial institutions. Therefore, almost all banks and financial institutions use some form of a credit risk management system which covers both the decision-making process prior to the credit actually being made, and also follows up all the credit commitments, including monitoring and reporting processes. A good credit management system follows each and every step of the credit process, from the moment the client makes a credit application to the credit managers who examine it, or the credit committee who reviews the proposal. Although the decision is made using financial data and expert analysis of the credit managing committee, the client and the industry do the follow up through periodic reporting reviews of the bank commitments.

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[27] See Altman (1993) for discussion of both the FASB standards and the other methods employed by commercial banks to evaluate the level of the reserve account.
[28] Simonson, Hampel and Coleman (1994) and Saunders (1996) have discussed the duration of gap its construction and its effectiveness.

2.6 Commercial lending techniques and factors, which influence the overall lending in banks: Previous studies with special reference to South Asian nationalised commercial banks

Studies on commercial bank lending and management related to South Asian nationalized commercial banks have been isolated and very few. Earliest analytical studies conducted by Hukku, (1956) describes the growth of the deposits of the scheduled nationalised commercial banks in India. It analyses in detail the overall growth of bank deposits and their regional distribution, and the composition and role of interest rates on the growth of deposits. Balasurbramaniam, (1957) has conducted a research study on the "Portfolio Behaviour of Indian Nationalised Commercial Banks". This study is of an exploratory nature and demonstrates the use of linear programming in the management of bank funds. An econometric model is designed to explain the portfolio behaviour of both the banking system and the individual banks. It also discusses the Government's agenda and is demonstrated through nationalised commercial banks."Nationalised Banks: The India Experience" by (Desai, 1960) is an investigation into the performance of the nationalised banks in the post-nationalisation period. This study focuses on branch expansion (geographical coverage), deposit mobilisation, flow of credit, earnings, expenditure, profitability, organisation and management.

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"Progress of Nationalised Commercial Banks" by Gupta, (1969) is a research work intended to analyse the role of the nationalised banks in the development of the country's economy. Gupta's study is confined to assessing the performance of the nationalized commercial banks in the light of the aims and objectives for which the major commercial banks were nationalised and how direction of credit lending after the nationalisation of the commercial banks. A commercial bank usually has access to three sources of funds: capital, deposit and borrowings, specifically when it sells shares, accepts deposits or

borrows money; it is thereby provided with funds that enable it to acquire earning assets in order to grant loans and to make investments. Capital funds may properly be regarded as the most basic source of funds whose principal function is to provide a buffer of safety to depositors and other creditors. An indication that capital stock is considered the basic and permanent source of a bank's operating funds is found in state and federal laws providing that any impairment of capital funds shall be stated in terms of (a percentage of) capital stock and surplus. These funds serve not only to absorb losses from the shrinking value of assets in times of depression but also, to augment the confidence of depositors and act as a basis for extension of credit in good times.

A study conducted by Aggarwal, (1973) under the title "Management of Nationalised Commercial Banks in India with reference to their social obligations" focuses attention on three main questions, viz (i) What does the society and the nation expect from the nationalised commercial banks? (ii) What steps are taken by the management of these banks to fulfil various social obligations? (iii) Has the management of these banks be improved for discharging various social obligations more successfully and satisfactorily? Thus, in this study, an evaluation has been made of the nationalised banks only in point of discharge of various social obligations on the basis of comparison with banks of other groups. This provides an insight into Government's management and policy decision making in nationalised commercial banks. It elaborates on the sources of funds, the uses of funds that are broadly determined by the nature of economy, the economic policies and a host of other factors. Commercial banks are service institutions that are chartered only if they are expected to fulfil the financial needs of their communities, the individual institution is also organised to provide an income to its shareholders. This income is derived principally from interest received on investments, on direct loans to business concerns, and on profits from security transactions. The nationalised commercial banks have other agendas because they are wholly or partly owned by the Government therefore decision making especially credit lending, is politically motivated thus shareholder income and profit maximisation is often compromised.

"Nationalised Banks and Agricultural Credit" by Joy Jacob (1980) is designed to bring out a spectacular view of the role of nationalised banks in agricultural lending. It also examines the pattern and extent of credit disbursement by the nationalised commercial banks over the years and the political Government role in canalisation of credit management in nationalised commercial bank.

Verma & Malhotra (1993) highlight the performance of nationalised banks and the application of the financial analysis technique, in discharging the various social obligations of the Government through nationalised commercial banks. They discuss financial analysis techniques in taking banking decisions pointing out in particular the agricultural credit by nationalised banks, including the role of the nationalised banks in the development of the country's economy and the policies implied by nationalised commercial banks to mobilise rural deposits by the evaluation of the lending policies

"Financial Analysis Techniques for Banking Decisions" by Nigam, (1993) is a post-doctoral research study, the central concern of which is financial analysis as applicable to banking. Nigam develops various techniques of financial analysis for estimating borrowers' profitability, cash flow, production, sales, inventory and some aspects of viability, before lending credit and the use of the 5'Cs by credit managers. The research work provides an interface between accounting and banking, and seeks to define the role which the banker has to play in an objective and orderly dispensation of credit, in the face of burgeoning demand on nationalised commercial banks.

As Zahid, Shahid N. (1995), and Kardar (1996) describe, nationalised commercial banks are at the heart of an important form of circulating medium, namely, demand deposits. The investment policy of a nationalised commercial has banks less to do with the quality, diversification and maturity of investments, but more to do with the fact that nationalised commercial banks tend to lend mostly to other state-owned companies or the sectors of economy where the Government focuses[29].

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[29] Both the studies for example of Pakistan Nationalised banks where over 35% of entire loans portfolio is located to the textile sector.

As Hardy & Patti (2001)[30] point out, the banking and financial service environment of countries where the nationalised commercial banks exist, is gradually being altered with innovation, opportunism, and Government intervention. The era of deregulation is broadening consumer options. The former position of the banking industry as a distinct line of business remains in the minds of many bankers. They continue to operate with the heritage of a tightly controlled marketing environment Therefore, nationalised commercial banks must now be privatised soon to maintain their market share with new local banks and foreign banks, by developing a consumer focus and improved lending strategies, to survive.

[30] The paper discusses in reference of the Pakistani Banking Sector and highlights the structural reforms carried out after banking crisis.

CHAPTER 3

Analysis of the Pakistani banking sector

3.1 Introduction

The last three decades have witnessed several economic policy changes in Pakistan with far reaching consequences for its financial sector: The 1970s faced a large-scale nationalised process encompassing trade, industry and the financial sector; The 1980s witnessed a beginning of the reversal in its financial sector; The 1990s saw the banking sector on the verge of collapse due to the breakdown of corporate governance and loss of financial discipline. Over the years there had been widespread political corruption and miss management in both lending and loan recovery by banks. As a result, the stock of non-performing loans (NPL) grew by almost 600 percent during this period, when the total amount of NPL of nationalised commercial banks (NCB's) constituted 53 percent of the entire loan portfolio in turn, constituted 45 percent of the total of GNP. This chapter examines the overall performance of the banking sector and the important events in history of the Pakistani Banking sector, which lead to the banking crisis.

This chapter divided into three major parts relating to the Pakistani banking sector. Firstly, it discusses in depth the macroeconomic environment and its impact on the Pakistani banking sector. Secondly, it highlights the important events in commercial bank inter-mediation following the creation of Pakistan and discusses its effect on the Pakistani banking sector. Thirdly, it describes the structure of the Pakistani banking sector and analyses the affect that non-performing loans had on the overall profitability and efficiency of the Pakistani commercial banking sector.

3.2 Macroeconomic overview

Since early 1990s the monetary and financial management in Pakistan has been in a transitional period from a predominantly administered system to one that is market oriented. It has achieved strong growth with low inflation on the one hand but has low savings and a large fiscal deficit on the other. The financial sector was unable to respond to the impressive and broad-based economic growth because of the lack of efficiency and stability of the financial sector. Although the macroeconomic factors were favourable, due to massive corruption, politically motivated loans were given with no intention of repayment, demonstrating the overall inefficiency of the banking sector.

3.2.1 Economic growth

During the 1990s the country witnessed real GDP growth rates lower than those of the 1980s. Growth rate was 6.1 percent (on average) during the 1980s, which fell to 4.4 percent in the 1990s (see Figure 2.1). Low growth rates often weaken the debt-servicing capacity of domestic borrowers, worsening the problem of loan defaults and increasing credit risk. This was exactly the case in Pakistan where non-performing loans lead to the banking crisis, grew tremendously during the last decade despite the process of financial reforms and liberalization. In addition to the aggregate growth rate, the sectoral performance of GDP is also very important for the financial sector. A decline in sectors where financial institutions' loans and investments are concentrated, has an adverse impact on the soundness of the financial system. In Pakistan, the large-scale manufacturing sector, mainly financed by banks' credit, slowed down during the last decade and non-performing loans increased. The sectoral decline deteriorated the quality of the financial institutions' portfolio and profitability margins, in addition to lowering their cash flows and reserves.

Figure 3.1

Growth in Real Sector

Source: State Bank of Pakistan

3.2.2 National savings & investment

Public and private savings are among the major sources of funds for the banking sector. During the 1990s, average national savings in Pakistan declined significantly (see Table 3.1). National savings, which were 14.8 percent of GDP during the 1980s declined overall during the period of the banking crisis during 1996-2000, to 13.8 percent during 1990s. Public savings also declined during this time from 1.8 percent of the GDP in 1980 to less 1 percent during 1996-2000. This significant reduction witnessed in public savings during the second half of the 1990s, was a direct result of the large amounts of non-performing loans leading to the reduction of consumer confidence.

3.2.3 Inflation

Inflation is one of the major factors affecting the performance of the financial system. High inflation reduces the demand for money, persuading people to prefer real assets over monetary assets. During the 1990s, inflation was very high, at around 10 percent on

average, compared to 7 percent during the previous decade (see table 3.1). Although inflation was low during the last couple of years of the 1990s, people remained reluctant to adjust their behavior accordingly, due to other economic and political factors.

3.2.4 Balance of payments

Current account deficit

A rise in the ratio of current account deficit to GDP is generally associated with large external inflows that are intermediated by the domestic financial system and enhance turnover of banking services. However, a large current account deficit also signals vulnerability to a currency crisis, with negative implications for the liquidity of the financial system, especially if this deficit is financed by short-term capital inflows. Financial crisis may occur if investors consider current account deficit to be unsustainably large. In Pakistan, current account deficit (CAD) remained high during the 1990s as compared to the 1980s, which made the financial sector vulnerable to external shocks. Banks also enjoyed a flow of foreign funds during this period, especially up to May 1998. After the nuclear detonation and freezing of foreign currency accounts, financial institutions faced liquidity problems. CAD declined in FY98, due to the imposition of a dual exchange rate regime to tightly manage payments and receipts of foreign exchange. Later decline in CAD largely reflects the restructuring of external debt, agreed with international financial and commercial institutions.

Foreign exchange reserves position

A low level of international reserves is seen, particularly by investors, as a major indicator of vulnerability. The domestic financial system also comes under pressure due to possible actions taken by the Central Bank to contain external outflows and preserve foreign exchange reserves. The reserves position in Pakistan seldom remained satisfactory. Foreign exchange reserves could finance around six weeks of imports, on average, during the last two decades. An inadequate level of reserves has a bearing on the business of banks who may face restrictions and constraints on forex based activities. A high external debt to GDP ratio indicates stress on the external sector of the economy.

Increasing need for payments on account of debt servicing, leaves a small amount with the domestic financial system for other transactions. External debt to GDP ratio also had an increasing trend in Pakistan. During the 1980s, this ratio was 34.7 percent, which increased to 49.4 percent in the 1990s. Another potential source of risk for the financial system is a higher proportion of portfolio investment in total foreign investment. In Pakistan this share increased from the 10.4 percent in 1980s to 24.6 percent in the 1990s. Similarly, the volatility in the exchange rate can also increase the risk for the financial system. Volatility in the exchange rate could cause difficulties for financial institutions by creating currency mismatches between banks assets and liabilities and by making decision processes difficult. The exchange rate in Pakistan remained highly volatile during the last decade. The level of variance of monthly exchange rate during the 1980s was 10.5, which increased to 95.5 during the 1990s, indicating an increase in volatility after implementation of financial reforms.

3.2.5 Fiscal position

A low tax to GDP ratio coupled with high budget deficit, forces the Government to take recourse to the banking system. High Government borrowing from the Central Bank could lead to inflationary pressures and affect the financial system. However, Government borrowing directly from the scheduled banks has a favorable implication for banks' asset quality and also for their profitability, if it is done on market-based rates of return. Increased borrowing may, however, crowd out the private sector credit. During the 1990s, both tax to GDP ratio and budget deficit were almost at the same level as during the 1980s. As rates of return on T-bills were liberalized during the 1990s, the banking sector of Pakistan benefited from this development (see table 3.1).

Table 3.1

Macroeconomic factors affecting the Pakistani financial sector

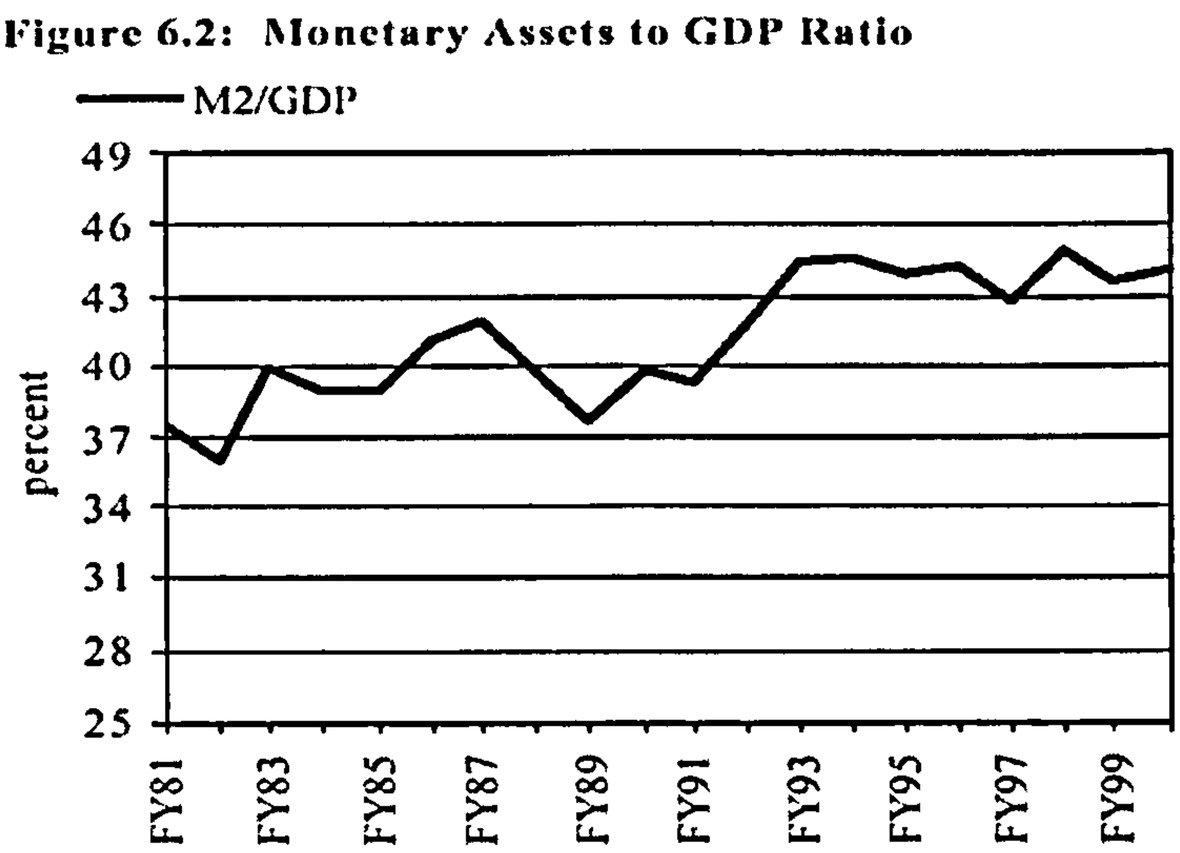
	1980	1990	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
Economic growth (%)													
Real GDP	6.1	4.4	4.6	5.1	8.2	2.3	4.5	5.3	5.5	1.7	3.5	4.2	3.9
Major crops	3.3	4.0	-0.1	5.7	15.5	-15.6	1.2	8.7	6.0	-1.3	8.3	0.0	15.1
I S manufacturing	7.8	3.5	4.7	5.4	7.9	4.1	4.1	1.7	3.1	-2.1	7.6	3.6	-0.2
W & R trade	7.2	3.5	3.5	5.3	7.3	2.9	2.8	4.7	6.1	0.7	-1.1	3.0	2.9
National Savings/Inflation (% of GDP)													
Public	1.8	1.5	2.8	0.7	4.3	1.6	2.5	1.9	1.5	1.00	0.1	0.9	0.3
Private	13.0	12.4	11.4	13.5	12.8	12.0	13.2	12.5	10.3	10.8	14.5	10.8	13.5
Total	14.0	15.2	17.5	17.4	26.2	17.8	18.1	17.2	13.8	12.2	14.5	6.2	9.4
Inflation	7.3	9.7	6.0	12.7	10.6	9.8	11.3	13.0	10.8	11.8	7.8	5.7	3.6
Money supply(M2 growth)	14.0	15.2	17.5	17.4	26.2	17.8	18.1	17.2	13.8	12.2	14.5	6.2	9.4
Fiscal sector													
Tax to GDP ratio	13.8	13.4	14.0	12.7	13.6	13.3	13.2	13.7	14.4	13.4	13.2	13.4	12.8
Budget deficit(% of GDP)	-7.0	-6.9	-6.5	-8.7	-7.4	-8.0	-5.9	-5.6	-6.5	-6.3	-7.7	-6.1	-6.4
External sector													
CAD (% of GDP)	-2.7	-3.9	-3.4	-3.0	-1.8	-6.4	-3.2	-3.5	-6.9	-5.6	-2.7	-3.8	-0.4
Liquid foreign exchange													
Reserves (billion US $)	0.8	1.2	0.4	0.4	0.5	0.8	1.2	2.6	1.6	1.0	1.3	1.2	1.5
Equivalent weeks of imports	7.3	6.2	2.9	2.4	2.9	4.2	7.1	13.2	7.2	4.5	6.7	6.6	7.6
External debts to GDP ratio	34.7	49.4	38.5	41.4	40.4	44.3	47.7	48.5	50.5	51.8	55.4	57.7	56.2
Portfolio investment/FPf(%)	10.4	24.6	2.2	-3.8	39.5	30.9	44.9	34.0	15.7	28.2	26.9	5.5	13.5
Evaluation	-8.3	-8.2	-3.2	-10.3	-3.3	-7.5	-11.3	-1.3	-11.7	-13.2	-12.0	-10.5	-1.2

Source: State Bank of Pakistan

3.2.6 Money supply

A higher M2/GDP ratio represents a more developed and efficient financial sector. Clearly, people will prefer to hold monetary assets only when they feel it is convenient to keep their wealth in monetary instruments with the underlying nature of liquidity, risk, return and efficiency in payments. Such types of instruments are offered by a well-developed financial sector. In Pakistan, M2/GDP ratio is not only low but also has remained stagnant for the last couple of decades. During the 1980s, monetary assets (on average) were around 40 percent of GDP while during the 1990s, about 44 percent (see figure 3.2).

Figure 3.2



Source: State Bank of Pakistan

3.2.7 Comparisons of financial development with peer countries

Pakistan has had one of the lowest rates of saving in Asia. While many East Asian countries save 25 to 30 percent of their GDP, saving rates in Pakistan, have rarely been over 15 percent (see tale 3.2). Public saving has been particularly low, averaging 2-3 percent of the GDP. Khan (1993) notes that the mobilization of domestic resources and

their efficient utilization are two of the most crucial tasks in revitalizing the economy of Pakistan. Historically, low saving formation and relatively higher targets of investment and economic growth, made it imperative to depend on external resources. Despite the heavy domestic borrowing from both private and public sectors, there still has remained an unmet resource gap that has necessitated the dependence on foreign capital. The (table 3.2) shows saving and investment in selected South Asian Countries. As noted above, saving in Pakistan is very low, indeed, among the lowest compared with neighbouring and developing countries. Moreover, the financial institutions have in general, remained inefficient leading to an overall lack of consumer confidence in the financial sector (see Looney 2000).

Table 3.2

Savings and investment /percentage of GDP

Country	Gross Domestic Investment					Gross Domestic Saving				
	60s	70s	80s	90s	95-99	60s	70s	80s	90s	95-99
Pakistan	12	16	18	19	19	5	9	7	12	16
India	17	17	21	23	25	14	16	17	23	22
Sri Lanka	14	19	34	22	25	9	16	11	15	14
Korea	11	25	32	37	37	15	15	25	37	37
Malaysia	14	22	30	34	41	27	27	25	33	36
Singapore	11	39	46	39	33	-3	18	38	45	----

Source: (IBRD,1982,1992a,1993c,1997a)

Financial development in peer countries

Many of the problems in the financial sector of Pakistan were common to other countries of comparable development and financial structure like India, Bangladesh, Sri Lanka, Philippines, Malaysia and Turkey. This section provides a short comparative evaluation of transformation in their macro-financial landscapes during the 1990s. Comparison is based on two points in that period – 1990 and 2000. Their macroeconomic environment

is discussed first, followed by a comparison of financial deepening and intermediation indicators.

Macroeconomic environment

At the beginning of the decade, except for Malaysia, inflation was a serious challenge for all countries of this group with Turkey having anomalously higher inflation of about 60 percent per annum (see Table 3.3). Fiscal deficit was high in South Asian Countries. The Philippines and Pakistan had severe problems of current account imbalances compared with other countries. Foreign exchange reserves positions were also not very encouraging in most of the countries. Only Malaysia and Turkey had high reserve positions among this group. At the end of the 1990s, the macroeconomic indicators of these countries gave a mixed picture of their economies. Except for Turkey, inflation in all other countries was under control. Current account balances were also at sustainable levels. However, fiscal deficits remained high and deteriorated over the decade for most of the countries, especially Turkey.

Table 3.3

Macroeconomic indicators of peer countries

	Pakistan	India	Bangladesh	Sir Lanka	Philippines	Malaysia	Turkey
1990							
GDP/per capita	351.6	389.1	194.4	472.7	720.7	2,478.80	2,682.20
Inflation	9.1	9.00	6.1	21.5	13.2	2.6	60.3
Fiscal Deficit*	-5.4	-7.6	n.a	-7.8	-3.5	-2.9	-3.0
Current Ac/Ba*	-4.2	-2.2	-1.9	-3.7	-6.1	-2.0	-1.7
Foreign Ex/Re**	0.3	1.2	0.6	0.4	0.9	9.3	6.0
Excha/rate (US$)	21.8	18.1	35.8	40.2	28.0	2.7	2,930.0
2000							
GDP/per capita	437.0	460.0	264.90	842.20	979.20	3,840.01	3,024.7
Inflation	4.4	4.0	2.3	6.2	4.4	1.5	54.9
Fiscal Deficit*	-5.9	-4.2	-	-6.9	-4.1	-3.2	-12.2
Current Ac/Ba**	-0.4	-0.7	-0.8	-6.5	12.2	16.0	-4.8
Foreign Ex/Re**	1.5	3.7	1.5	1.0	12.9	28.6	22.3
Excha/rate (US$)	58.0	46.8	54.0	82.6	50.0	3.8	673,385

Note: * % of GDP, ** Billion US$, (Source IFS year book 2001) & State bank of Pakistan.

Financial deepening and intermediation

As Looney (2000) reports that at the beginning of reforms in Pakistan, all countries in the group, except for Malaysia, had shallow financial sectors with a low M2 to GDP ratio. Pakistan had a level of financial depth close to that of India, but better than that of the Philippines, Turkey, Sri Lanka and Bangladesh (Table 3.4). However, even after a decade of far-reaching reforms, financial depth in terms of M2 to GDP ratio in Pakistan, improved only marginally from 39.2 percent in 1990 to 46.5 percent in 2000, and its relative position within the peer group worsened. One of the factors that limited the deepening of financial markets in Pakistan seems to have been the large size of informal financial and non-financial markets. This has yet to be addressed directly by the financial sector reforms. Currency to GDP ratio is indicative of the size of informal economy. Pakistan was the only country in 1990 that had this ratio at double-digit level (i.e., 14.7 percent). After a decade of reforms, the ratio has only gone down to 12.9 percent, still indicative of a fairly large informal economic sector. Interestingly, this ratio for India has gone up from 8.8 to 9.9 percent during this period, again indicating the presence of a large informal financial and non-financial sector in India. Comparison of money multiplier reveals a contrasting picture in terms of values, but similar in terms of deepening. Value of money multiplier for Pakistan, although marginally increased from 2.2 in 1990 to 3.2 in 2000, had remained the lowest vis-à-vis the other six countries, indicating the shallowest financial system.

In terms of one of the intermediation indicators of share of demand deposits to total deposits, Pakistan again stood out as the odd country with the highest share both in 1990 and 2000. Not only were these shares the highest in Pakistan, but also the difference from peer country average (excluding Pakistan) was huge. Preference for demand deposits over time deposits in Pakistan is extremely pronounced, although it has decreased from 61.3 percent in 1990 to 43.2 percent in 2000. While the above ratio describes a qualitative characteristic of mobilisation on the side of intermediation, share of credit to private sector indicates the crowding out phenomenon from the side of credit extension. This ratio is again on the lower side among peer countries, both in the beginning and at the end of the reform decade. However, a minor improvement was witnessed from 51.5 percent

in 1990 to 58.2 percent in 2000. Malaysia, in terms of this share, stands out as the best performer.

Table 3.4

Financial and efficiency indicators of peer countries

	Pakistan	India	Bangladesh	Sir Lanka	Philippines	Malaysia	Turkey
1990							
M2/GDP*	39.2	42.7	31.8	28.5	34.2	64.4	23.9
Currency/M2	37.6	20.7	12.8	24.1	16.8	14.6	12.1
Currency/GDP	14.7	8.8	4.1	6.9	5.7	9.4	2.9
Money multiplier	2.2	3	3.9	2.8	2.6	4.2	3.3
Demand deposits**	61.3	17.6	17.5	25.4	8.9	21.6	31.1
Time deposits*	38.7	82.4	82.5	74.6	91.1	78.4	68.9
Credit to Govt***	48.5	49.4	10.6	41.3	1.7	4.5	1.7
Credit pvt sec***	51.5	50.6	89.4	58.7	98.3	95.5	98.3
2000							
M2/GDP*	46.5	56.9	43.3	38.2	62.5	102.6	44.6
Currency/M2	27.8	17.5	14.2	13	9.3	6.4	5.6
Currency/GDP	12.9	9.9	6.2	5	5.8	6.6	2.5
Money multiplier	3.2	4.1	4.6	4.7	4.1	4.1	5.6
Demand deposits**	43.2	14.9	14.5	13.3	10.6	17.4	12
Time deposits*	56.8	85.1	85.5	86.7	89.4	82.6	88
Credit to Govt***	41.8	44.5	22.2	27.8	23.4	-2.2	52.7
Credit pvt sect***	58.2	55.5	77.8	72.2	76.6	102.2	47.3

Note: All figures are in percent. * M2 is money plus quasi money; ** percent of total deposits; *** percent of total credit

Source: State bank of Pakistan.

Table 3.5 summarizes the qualitative change during the decade in financial deepening and efficiencies in Pakistan in absolute terms as well as in relation to the group of peer countries

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Table 3.5

Financial Deepening and Efficiency in Pakistan vis-à-vis Peer Countries

	Qualitative change during the 1990s		Rank*	
	Absolute	**Relative to Group**	**1990**	**2000**
M2/GDP*	Improvement	Deterioration	3	4
Currency/M2	Improvement	No Change	7	7
Currency/GDP	Improvement	No Change	7	7
Money multiplier	Improvement	No Change	7	7
Demand deposits	Improvement	No Change	7	7
Time deposits	Improvement	No Change	7	7
Credit to Govt	Improvement	Improvement	6	5
Credit pvt sector	Improvement	Improvement	6	5

* 1 is for the best and 7 is for worst. **Source:** State bank of Pakistan.

Above evaluation shows that although the level of financial development in Pakistan is much lower in comparison to most of the peer group of countries, financial reforms nevertheless had a measurable, though small, improvement on financial deepening and intermediation. Needless to say not much remains to be done, but keeping the reform process going is necessary.

3.3 Evolution of banking

Government policy has been the key determinant in the growth of commercial banking. It is possible to identify three significant time periods in the Pakistani Banking sector which illustrate the evolution and changes in this sector since 1947.

3.3.1 Pre-nationalisation

Pakistan came into being on 14th August 1947. The areas that now constitute Pakistan were the less developed part of the county. The economy was based on agricultural grain which was provided to the vast Indian sub continent as well as small amounts being exported. It was a country without many financial resources or the know-how to expand rapidly. There were non-Indian foreign banks with the status of small branch offices, which were engaged solely in the export of crops from Pakistan. There were only two

Pakistani institutions i.e. Habib Bank and Australasia Bank. Historically the banks were run and management by Hindus. Therefore for a number of years after partition Pakistan lacked trained, qualified staff to run commercial banks, banking was not even considered a respectable profession and there was no training for bankers (see Israr Siddique 1992). The banks were thus run by unqualified staff who, during the time of the crises, did not possess prior knowledge or were unaware of standard banking practices. The majority of senior management in place today were recruited during the early 1970s.This aspect has been highlighted throughout this thesis, poor management being one of the principal reasons for the banking crises. This fact can be demonstrated as follows: that out of one hundred credit managers interviewed in 1999-2000 by the researcher, only 20 percent of them had any relevant educational background to become credit managers (see Chapter 5).

The State bank of Pakistan began functioning on July 2, 1948. The central bank lacked proper staff and did not have any kind of legislation against defaults to safeguard the interest of commercial banks and depositors, upon which sound banking practices could follow. It was only after the banking crises that the Central Bank was forced to bring in prudential regulations, which safeguarded the interest of depositors enabling criminal charges to be brought against corrupt bankers and fraudulent defaulters[1].

In these formative years of banking in Pakistan (1947-72), Governments intervened in the banking system in three ways. Firstly, a central bank, the State Bank of Pakistan (SBP), was established and given a multiplicity of functions: regulating the monetary and credit systems, fostering economic growth, undertaking money market operations and supporting the development of the capital market. Secondly, low cost financing was made available both through the commercial banks and through newly created specialised banks. For the former, this was made possible by the fact that almost 50 percent of the deposits mobilised during this period paid no interest to the holders. For the latter, concessional lines of credit allowed low interest rates on loans. Thirdly, the increase in the number of bank branches allowed a phenomenal rise in bank credit which saw an

[1] See Pakistan Banking Counil Annul Report (1998-99)

increase on average of 17 percent each year in commercial bank deposits by the mid 1960s (see Zahid, Shahid N. 1995). However, there were also negative aspects to these trends. Economic policy supported lending to specific industrial enclaves. The growth in volume was accompanied by a concentration of ownership of assets in the industrial and financial sectors, as well as in the loan portfolio to a small coterie of favoured clients. The growth in the loan portfolio placed a premium on liquidity, with banks frequently reverting to the SBP for additional credit. Also, since a substantial component of this credit was being directed towards the public sector, a considerable proportion of bank investments were also directed towards Government debt securities (see Looney, 2000).

The State Bank of Pakistan sponsored the setting up of an Industrial Finance Corporation. A food shortage compelled the Government to embark upon agricultural finance. All these measures, and the devaluation of the Pakistani Rupee on August 1, 1955, had a very favourable effect on the commodity market and the balance of payments position fom 1955-56.

Pakistan had entered into a phase of planned economic development in 1956; and naturally, further expansion in the banking and credit facilities was essential. Through there had been a remarkable expansion in the number of offices of Pakistani banks since independence, they remained heavily concentrated in large cities. Therefore, the State Bank had to accord priority to the establishment of branches in the interior of the country.

Development of agriculture largely depends on agricultural finance, but the scheduled banks were not very willing to undertake this risk venture. Therefore, the State Bank sponsored the establishment of the Agricultural Development Bank to attend exclusively to agricultural finance. Moreover, the State Bank of Pakistan Act also broadened the function of the State Bank in 1956, conferring the power to increase credit facilities for both agriculture and industry. All these measures had a positive effect on Pakistan's economy during 1956 – 58. Money supply had increased as the Government borrowed heavily against treasury bills from the State Bank; but the credit demand in the private sector did not rise so sharply due to rigorous restrictions on imports. During this period, a

new Pakistani bank was registered and scheduled as the National Commercial Bank Limited. The Government also established the Pakistan Industrial Credit and Investment Corporation – a new institution in the field of industrial finance (see Israr Siddique, 1992; Looney, 2000).

In 1958 when the Government liberalised imports and transferred the food grain trade to the private sector, the commodity market became firm, and demand for funds became very acute. This caused some stringency to the banks during the busy season. Therefore, the banks had to reduce their excess reserve and increase their indebtedness to the State Bank. The expansion in the banking and credit facilities was further enlarged when during 1959 – 60 two more Pakistani Banks, namely Eastern Mercantile Bank Limited and the United Bank Limited were established and scheduled (see Israr Siddique 1992).

By 1971, six of the fourteen scheduled commercial banks had run into financial problems. The performance of the commercial banks had fallen and the State Bank reported that of the fourteen commercial banks, none had a return on assets greater than 0.75 percent in 1971-2. By 1972, two of these banks had ceased to function and several others were in serious financial trouble. Ten of the banks had leverage multipliers exceeding fifty times, reflecting aggressive lending policies. Similarly, the banks had above average credit risk, ranging from 30 to 50 percent of their entire loan portfolio. Technically, a high credit risk should be associated with higher returns: however, given the low return on assets, it appears that assets growth was far greater than any commensurate trend in profitability (see appendix). Finally, only one private bank had a capital adequacy ratio greater than 5 per cent, and eight had ratios of less than 2 per cent. This suggested a high degree of capital risk or inadequate capitalisation for the existing level of lending. Since there were few trained bankers or economists, the decisions made and actions taken at the time, were for short-term gain, lacked vision and totally failed to foresee future implications (see Shahid, 1990).

This had three results. Firstly, lending rates probably did not adequately reflect the prevailing risk premiums in the market place and affected the spreads between lending

and borrowing rates. Secondly, loan recovery was poor and the rate of default high with a corresponding write-off of losses and lower earnings. Thirdly, volume growth did not adequately compensate for the reduced spreads in the long run. Hence, by 1971-2, the banking system was showing signs of fragility; however, the Government's response to this situation appeared to be dictated by motives other than an improvement in performance. No effort was made by the Nationalised banks to train their employees to better manage or ascertain the risk factor of their clients (see Easterly, 2001).

3.3.2 Nationalisation

The separation of East Pakistan and its repercussions in the form of Economic Depression and demonetisations of Currency in 1972 and rampant world-wide inflation caused a lot of difficulties in Pakistan. The Socialist Government of the Pakistan Peoples Party on 1st Jan, 1974, nationalised all Pakistani Commercial Banks. It was hoped that Pakistan's banking would enter a new era where credit facilities were not limited to a few important families or business groups. It was supposed to bring about an end to 'crony capitalism' and democratise the lending process. Unfortunately this did not happen and it had disastrous results for the economy as well as the banking industry. Inefficiency and corruption took over. Bankers became civil servants with nothing to lose and all to gain in the new set up. Thus nationalisation of commercial banking contributed to the banking crises (see Looney, 2000).

In 1974, the Government nationalised and consolidated the Pakistani financial system, ostensibly on the grounds of reversing socio-economic inequity and for improving the direction of economic development. Nationalisation had both structural and portfolio implications for the banks. The Pakistani private banks were consolidated into the 'big five' nationalised commercial banks (NCBs): Habib, National, Muslim Commercial, United, and Allied, whose 7,500 branches dominated the financial services industry until the early 1990s. They contributed to a phenomenal growth in banking liabilities and assets during the 1970s and 80s: between June 1975-90, the average annual growth in

demand and time liabilities for the NCBs was 55.5 per cent and asset growth was higher still (see Appendix).

The impact of the expansion on balance sheets of the NCBs was strongly affected by the regulatory and the administrative frameworks in which credit expansion took place. Nationalisation was the start of the Government's direct involvement in the mis-management and corruption of the banking sector. High profile banking jobs were awarded as political favours. Huge personal loans were rendered in the form of bribery to politicians and favoured friends who had no intention of returning the borrowed amounts. All this was in essence the making of the banking crises of the 1990s (see Lodhi, 1990).

In 1972, the National Credit Consultative Council (NCCC) was created to take charge of the annual credit plan. Credit was allocated to the commercial banks based on their past performance in mobilising deposits. These allocations then became the new credit ceilings for each bank. Since the onus was on historic performance, the policy was not only uncompetitive for banks but accommodated established borrowers at the expense of newer ones (see Mohammad, 1992). In 1974, the Government of Pakistan created the Pakistan Banking Council (PBC), which took over administrative authority for the NCBs.

The PBC co-existed with SBP, which remained the primary regulatory authority for the banking system. The main purpose served by the PBC was that of acting as the link between the Ministry of Finance and the overall banking system. It allowed the government to increase its borrowing through ad-hoc means and led to more confusion among banking circles, resulting in more corruption and eventually to the crises (see Ahmed 1996; Looney 2000).

The system of credit ceilings and quotas was complemented by high mandatory reserve requirements, which reached 35 percent in the 1980s. This amount was spent on non-developmental expenditures for example, political favours. The 'moral situation' created by the Government in terms of its borrowing needs, encouraged the NCBs to maintain reserve ratios well in excess of the requirements. Since a substantial part of their

investments were Government securities, with interest rate ceilings, banks controlled deposit rates to maintain growth at 2.9 percent during the 1978-82 period (see Klein, 1992).

These trends affected the ability of the financial system to generate resources for economic development. Negative real interest rates encouraged disintermediation from the formal to the informal financial sector, where rates of return were substantially higher. The term structure of (nominal) interest rates was made abnormal, due to the absence of competitive long-term rates, which mitigated against term finance. Even the impact of partial deregulation of interest rates, realised by the introduction of profit and loss sharing in the mid-1980s, was lost as a result of the competition reducing withdrawal of conventional interest-based deposit (see appendix). Indeed, the main impact of the 'Islamization' of the financial sector in Pakistan was that it encouraged new types of the financial intermediation (Positive), and also exposed the inefficacy of the loan recovery system (negative) and the inability to price term capital (negative) (see Shahid 1992;Easterly, 2001).

3.4 Structure & overview of the banking sector in Pakistan

During the 1990s, the financial performance of the five NCBs had declined substantially since nationalisation, due to continuous malpractice and corruption. The average return on assets had declined by 35 per cent since 1973, and the gains in productivity, achieved through improved asset utilisation, were at the expense of higher liquidity and capital risk. Additionally, Government borrowing requirements increased throughout this period with major negative investment portfolio effects for the NCBs. The official policy of supporting sick units, reduced loan quality and raised concerns over insolvency. This consistent lack of planning and poor decisions by the Governments lead to increased fragility of the banking sector and eventual collapse in the 1990s (see Looney, 2000). Investors also reacted negatively: the ratio of deposits to GDP began to decline in the late 1980s, and time deposits with the banking system declined in absolute terms in 1988-9. The only plus points were the improvements in interest rates and credit risk, which were

largely the result of greater prudence forced upon the NCBs. However by 1990, with a more or less similar market share, foreign banks were contributing over 35 per cent of their profits (see Table 2.3). The entry of the new Pakistani private banks also contributed to this trend, reversal of this policy was initiated in January 1991. Disinvestment and privatisation of nationalised commercial banks and the establishment of banks in the private sector, was being encouraged. Consequently, a large number of commercial and other banks have come into operation since 1991.

By 1995, there were twenty-two foreign banks operating in the country, complementing the seventeen private and six Government-owned banks. The structure and growth of the banking sector was as a direct result of the ongoing financial sector reforms, liberalization, denationalization, and privatization. The total number of Pakistani and foreign banks had increased significantly and by 1995 there were five nationalized, two de-nationalized, two provincial and nine newly established Pakistani banks. In addition, nineteen foreign commercial banks are presently operating in Pakistani main groups, banks and foreign banks (see State Bank Annual Report 96).

During the 1990s, the share in the total assets of commercial banks remained stable, although growth of advances declined for all three groups during the second half of the decade. This is understandable due to declining deposit mobilization by banks. In addition, a huge infected loan portfolio was the major predicament for banks, particularly state-owned banks. These bad loans not only severely damaged the profitability and capital base of this group but also constrained the growth of net advances. Loans and advances are followed by investment, having an average share of 29.2 percent in total assets; however, its share (average) declined in the last three years of the 1990s to 25.4 percent from 30.6 percent in the period 1990-97. On the liability side, deposits remained the single largest source (almost 87 percent) of funds of the banking industry in Pakistan. Being prime support for the banks, fluctuations in deposits had direct bearing upon the constitution of asset portfolio and thereby, on profitability of the banks. Although its

share in total liabilities remained stable over the period under review except for the slight fall in last the two years, growth of deposits declined significantly after 1996.

Table 3.6

Asset & liabilities of commercial banks/GDP of Pakistani banking sector											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Assets	49.7	49.6	53.1	56.0	56.1	54.6	55.8	54.5	54.5	52.6	51.5
Deposits	41.4	41.7	44.1	46.4	46.5	45.5	47.0	45.7	44.8	42.2	41.6
Non-Performing Loans	62.1	69.6	67.1	70.5	66.2	66.5	61.9	64.4	62.9	64.5	64.0
Percentage share of state-owned banks in banking sector											
Assets	92.2	89.1	83.7	80.1	78.4	76.7	72.3	68.7	70.5	71.8	70.6
Advances	92.1	90.0	84.1	83.4	79.3	76.1	73.0	67.0	67.6	69.2	68.1
Investments	93.0	89.8	85.4	82.1	80.2	78.8	74.1	69.9	71.1	74.6	73.7
Deposits	93.0	89.8	85.4	82.1	80.2	78.8	74.1	69.9	71.7	74.6	73.7
Capital	85.4	80.4	65.5	60.6	57.8	52.6	41.7	20.8	56.6	50.6	55.6
Non-performing Loans	95.0	95.8	92.6	94.4	95.8	94.1	92.5	91.7	90.9	88.9	88.1

Source: State Bank of Pakistan

Even those loans which had been non-performing for a number of years, were mentioned as assets to boost the balance sheet. In almost all five major public-owned banks, the actual net worth of the bank had become negative after writing off these massive non-performing loans. It was in 1998 that the Government was forced to take financial assistance from IMF and the World Bank to see it through these crises. Due to the fact that some of the commercial banks did not even have enough liquidity to meet their day-

to-day financial liabilities. Since the whole economy depended on the five major banks, the Government could not allow the closure of these financial institutions.

Therefore under the supervision and instructions of the World Bank & the IMF the loan recovery process at the Nationalized Commercial Banks was accelerated and an attempt made to cover for the shortfall in NPL provisioning. HBL had already taken steps in this regard by putting aside Rs.5.6 billion for doubtful debts for the year ended 1996 and retiring 1,079 employees under its early retirement-cum-voluntary "golden handshake" scheme. Approximately 6,500 employees opted for HBL's "golden handshakes". The bank expected to cut its staff by 25 percent by the year-end. Significant progress had also been made for the recovery of defaulted loans. According to the latest data available, NCBs and other public sector financial institutions had settled (under the payment incentive scheme ending on 5 September 1997) 34,417 cases of loan defaults involving which is still less than 6% than of the entire non-performing loans portfolio. These reforms, which are being carried out in accordance with the IMF and the World Bank are a perquisite to the financial help provided to bail out the public commercial banks from the crises. It was at this time that the Government was forced to take financial assistance from the IMF and the World Bank to see it through these crises, especially as some of the commercial banks did not even have enough liquidity to meet their day-to-day financial liabilities. Because the whole economy depended on the five major banks, the Government could not allow the closure of these financial institutions (see Hardy & Patti, 2001).

Most financial institutions as well as the State Bank were controlled by the Government, which retained a tight monetary and fiscal control over the entry to financial markets. The Government had used the State Bank to finance its large fiscal deficit and to provide politically motivated credit at subsidised rates, primarily using these financial institutions. Banks continued to direct funds to State-owned enterprises despite their inefficiency leading to the weakening of the financial and banking sector. The inefficiency of the banking sector was largely due to the inconsistent and unstable economic policies, which remained the same through repeated changes in the political Governments. Every new

Government, had its own agenda, which benefited but a few individuals. Because the overall size of the Pakistani economy was small in terms of the volume of the credit created, these large non-performing loans and the misallocation of credit resulted in long-term problems. This eventually lead to massive non-performing loans and the banking crisis (see Hardy & Patti 2001).

Additionally, the Government's banks had to clean up their loan portfolios to remain competitive with the better-managed private banks. The five public-owned commercial banks had to declare, for the first time, their non-performing loans, which were still appearing in balance sheets as assets. This highlighted the extent of the crises which, in some cases was over 55 percent of their entire loan portfolio and consisted of non-performing loans. These banks had never written off any loans from their financial books. These loan defaulters were effectively depriving the poor saver of their rightful share, which dangerously undermined the credibility of the financial institutions leading to the banking crisis. The banks were even unable to meet their daily expenses, highlighting the severity of the crisis.

Before 1997 the Pakistani banking sector functioned as a two-tier system, where commercial banks were used to cater for mostly short-term working capital requirement and personal loans. Non-Banking Financial Institutions (NBFI) used to cater for the medium and long term financing needs and, thus were not allowed to engage in any commercial banking activities, including trade and issuing cheques. NBFIs could only give large-scale industrial loans. However, early in September 1997, the State Bank of Pakistan allowed commercial banks to undertake long-term project lending and gradually NBFIs have been converting to commercial banks (see Shahid 1992;Easterly, 2001). Therefore, the present Pakistani Banking Sector is as follows.

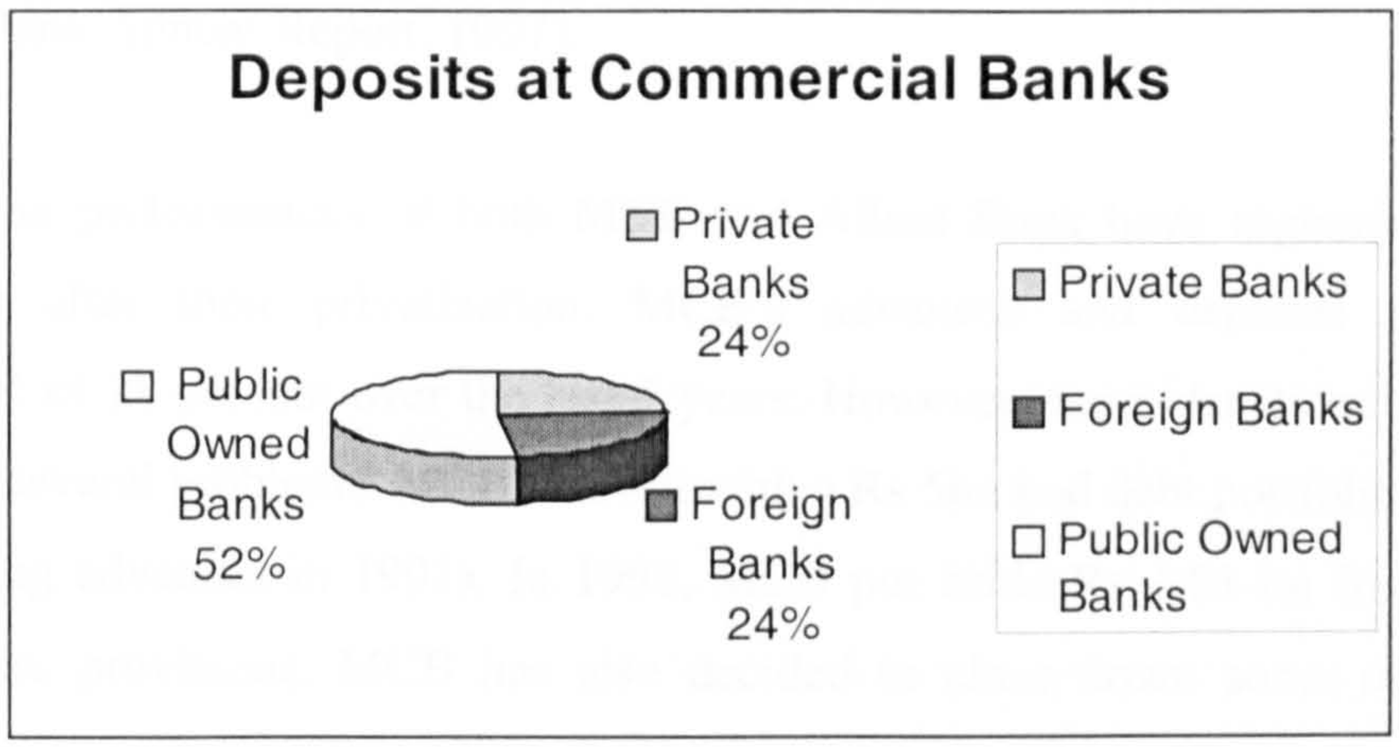
3.4.1 State-owned banks/nationalized commercial banks (NCBs)

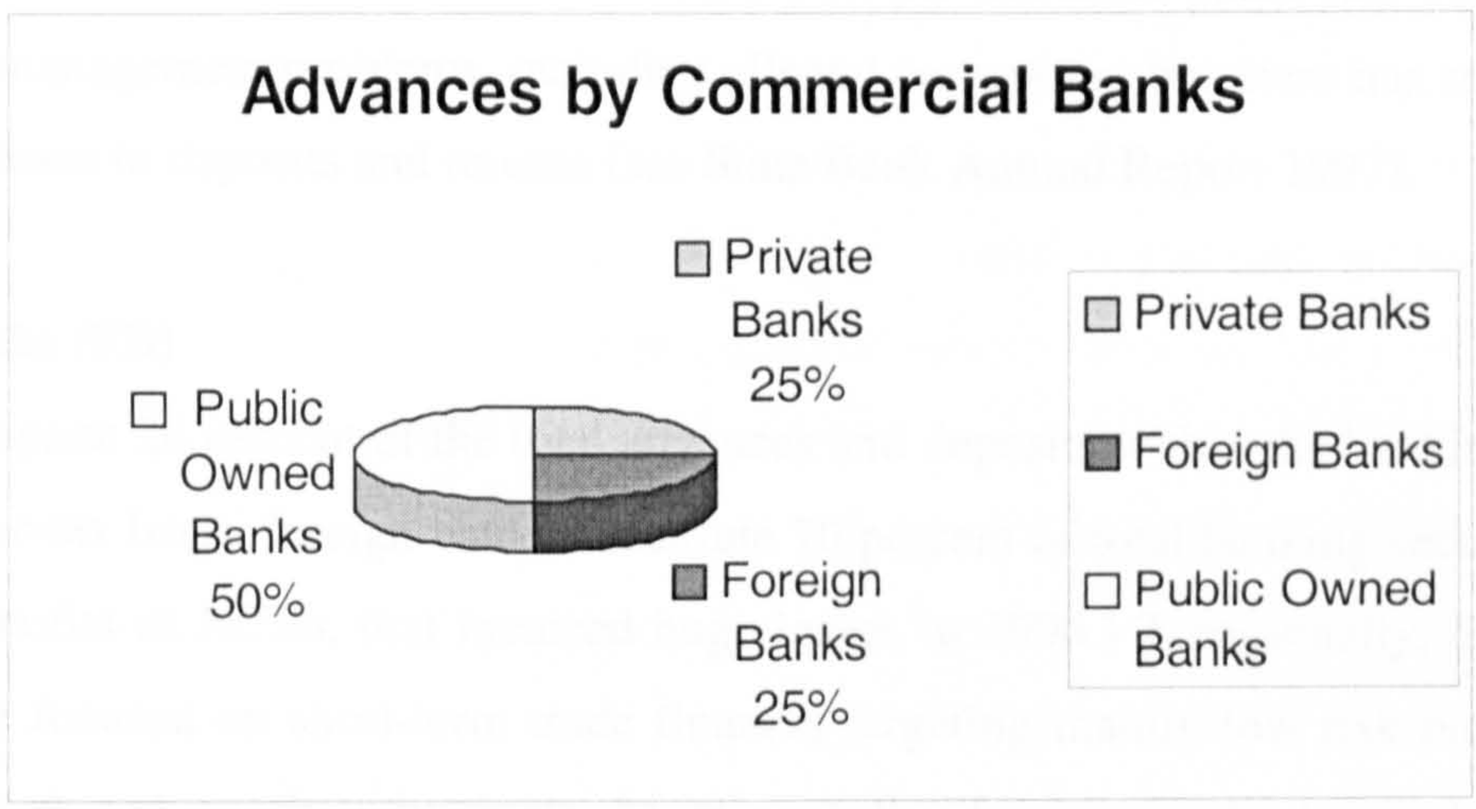
Being the largest group, performance of state-owned banks significantly affects overall indicators of the banking industry. However, its relative size declined continuously during the last decade, mainly due to the entry of new banks, especially domestic banks, into the private sector after 1992. With growing competition from the private sector, the state-owned banks were finding it difficult to maintain their market shares in terms of assets, deposits, advances and investment. In addition, political intervention, over-staffing, over-branching and inefficiencies in this group, led to the problems of large non-performing loans, high administrative expenses, huge losses and an eroding capital base.

Nationalised Commercial Banks are still the most influential and dominant players, controlling 52 percent of the entire banking sector deposits and 50 percent of the total advances as of 31st December 1996 (see State Bank, 1998). There are currently 3 NCBs remaining, following the privatisation of Allied Bank, Muslim Commercial Bank Limited (MCB) and Habib Credit Exchange Bank Limited in 1991, 1992 and 1997, respectively (see Lodhi, 1991).

The Nationalized Commercial Banks have the advantage of owning the most extensive branch network with deep penetration in both urban-oriented NEPBs and foreign banks. This extensive network has led to the NCBs having a large number of loss-making branches. Even though these branches provide convenience to the rural customers they are not viable profit-making entities for the Bank as a whole. The extensive network of branches provides the customer with the facility to deposit money and pay utility bills o his/her doorstep. NBCs are the mainstay of Pakistan's economy and the Government has tried to retain the common man's respect and trust in the them. This is particularly essential in a volatile economy, where several privately-owned banks and institutions have gone bankrupt during the last few years, most notably, the co-operatives scandal of the late 1980s (see Shahid, 1991).

Figure 3.3





Source: State Bank of Pakistan

3.4.2 Denationalised banks (DNB)

Allied Bank, Muslim Commercial Bank and Habib Credit and Exchange Bank Limited were the first 3 banks to be denationalized. These banks were denationalized using the process of open-bidding for their respective shares. ABL was privatized in 1991 in an employee buyout deal. The Government still owns 49 percent of its shares. MCB was privatized in 1992. A 51 percent stake of MCB was sold to the National Group (a group of industrialists headed by Mian Mansha) in two trenches 26 percent and 25 percent. The Government still retains a 24 percent stake in the Bank. HCEBL, a subsidiary of Habib Bank Limited, was privatized on 12 June 1997. A 70 percent stake of HCEBL was sold to

an UAE-based Al Nahyan consortium. The Government still owns a 20 percent stake in HCEBL (see State Bank Annual Report, 1997).

The post privatization performances of both MCB and Allied Bank have registered a strong performance after their privatization. MCB's advances and deposits have increased at a CAGR of 22 percent over the last 3 years. However, these denationalized banks also inherited several problems. MCB was left with a Rs 5bn bad debt portfolio (20 percent of outstanding advances in 1991). In 1996, MCB put aside Rs 1.81 bn for the shortfall in loans loss provisions. MCB has also decided to close down some of its unprofitable branches to reduce costs. Allied Bank's post-privatization phase has been marked by severe management problems, including alleged corruption, but there has still been a marked increase in deposits and returns (see State Bank Annual Report 1997).

3.4.3 Foreign banks (FB)

Foreign Banks comprise 24 percent of the total advances and deposits within the banking system. On an after-tax basis, foreign banks constitute 70 percent of total banking sector profit (excluding profits of NCBs, that incurred huge losses in 1996.) Traditionally, the foreign banks have focused on short-term trade finance, targeting mainly low risk blue chip clients and high net worth individuals. More recently, foreign banks have also expanded into retail banking, capital market operations, and consumer/retail banking. Foreign banks have been extremely successful in capturing a major market share of consumer banking business, especially that of credit cards. Head office support, in terms of an international network and technology, has enabled the foreign banks to become important players in the corporate and consumer-banking arena. One of the major constraints for foreign banks is the restriction placed on branch expansion by the State Bank of Pakistan. Because the number of branches is limited to 4, they are at a major disadvantage, compared to private and denationalized banks. This has deprived foreign banks of an extensive distribution network to tap smaller retail customers, but does mean comparatively low operating costs and more efficiency. Also the foreign banks have to attain special permission from the State Bank for long-term lending requiring them to maintain a minimum amount account for any depositor of Rs. 10,000, which is quiet

substantial for the average depositor. All restrictive regulations have limited the scope of foreign banks in Pakistan.

Given the turnaround possibilities in Nationalized Commercial Banks, it can be said that foreign banks are likely to face tough competition over the next few years. The international branch network, together with relatively low cost funds, will enable NCBs to directly compete with foreign banks. This competition is very healthy for the further evolution and development of the banking sector in Pakistan. However, there is also a possibility of liberalization and relaxation of restrictions on foreign banks.

3.4.4 Newly established private banks (NEPB)

The 1991 reforms facilitated the deepening of the financial sector by allowing private sector banks to operate in Pakistan. These banks are more customer focused and have recruited staff more qualified and skilled in every aspect of modern banking. As a result the private sector has shown a keen interest and new banks have opened -now collectively known as the New Established Private Banks (NEPB). From 1991, to December 1995, the number of new private banks increased from 10 to 25. Most NEPBs restrict operations to short-term, trade-related financing, with the exception of larger private banks such as Askari, Faysal and MCB, who have limited long-term exposure. The larger banks typically restrict themselves to funding requirements of big blue chip clients. This results in lower credit risk, at the expense of lower interest margins. The Newly Established Banks directly compete with foreign banks for retail clientele. Therefore it can be correctly said that small to medium-sized companies are a captive niche market for NEPBs. Foreign Banks have traditionally preferred to focus on the relatively safer blue chip class and are now gearing themselves to directly compete with NEPBs for small to medium-sized companies. Capitalization is an essential prerequisite to make use of the opportunities available at middle-market level. Hence, small banks with a relatively small capital base, are likely to face a tough time from the already established banks and an ever-increasing number of foreign banks.(see State Bank Annual Report 1997).

3.4.5 Specialized banks

Besides this growth, specialised credit and financial institutions have also developed over the years, and cater for the needs of specific sectors. National Investment Trust, Peoples Finance Corporation, Equity Participation Fund, National Development Finance Corporation, Banker's Equity Ltd and Small Business Finance Corporation etc. are all contributing their due share in the Country's economic life.

The role of specialized development financial institutions has been slowly diminishing in Pakistan. Total advances of scheduled banks (which include both commercial banks and specialized institutions such as IDBP and ADBP) increased at a CAGR of 16.4 percent during 1991-96, compared to 21.6 percent for commercial banks and only 4.9% for specialized banks. Total advances have declined from 24 percent by scheduled banks in 1991 to 16% in 1996. Thus, commercial banks are likely to be the primary beneficiaries of the less restrictive monetary and credit policy introduced in 1998. Therefore most specialized commercial banks like IDBP, PICIC & ABDP are now being converted to commercial banks and competing for business along with other banks (see State Bank Annual Report 97).

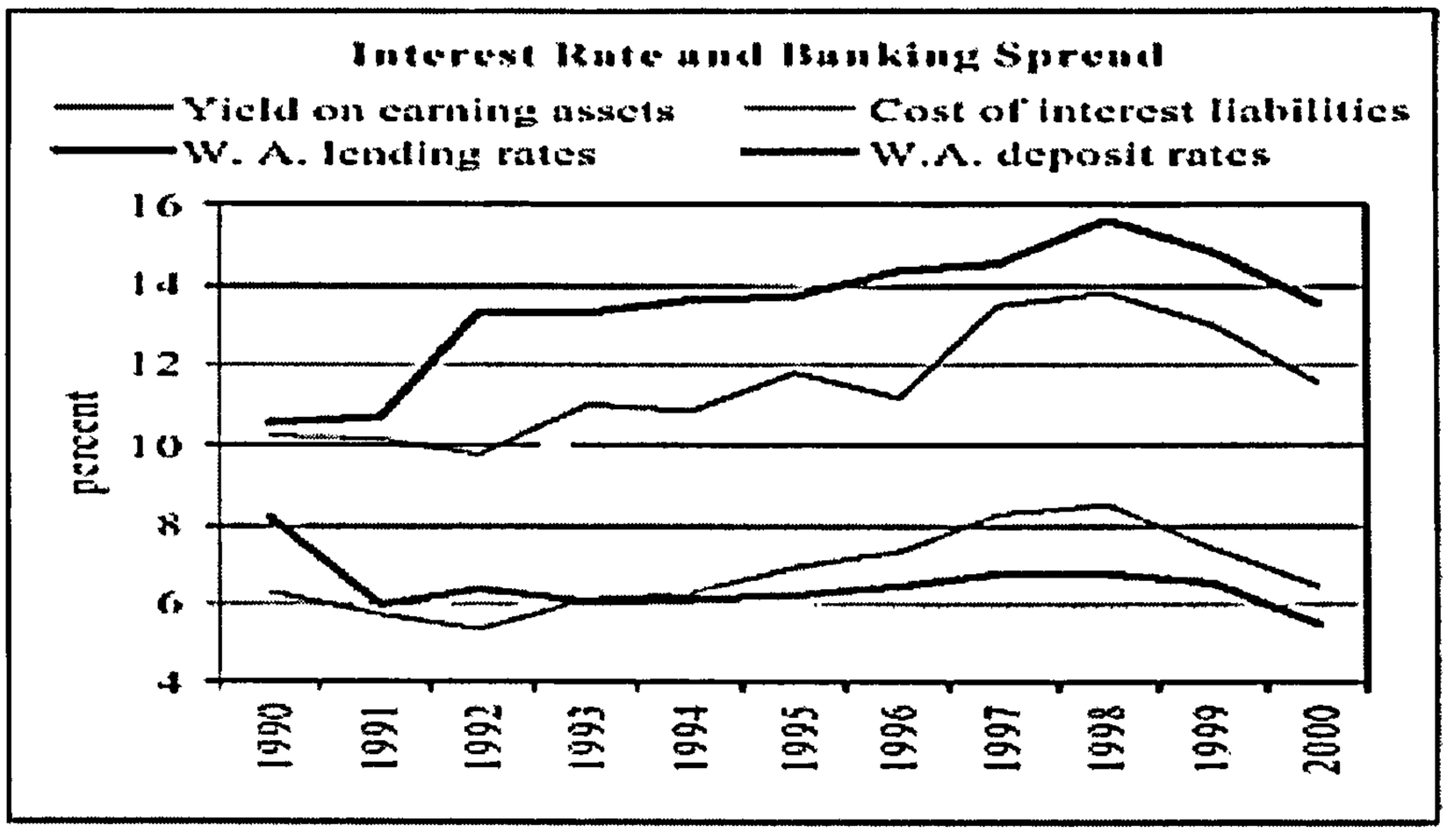
3.5 Banking sector efficiency indicators

Two indicators can measure the efficiency of the financial system: (1) interest rate spread; and (2) distribution of bank credit among various sectors. The trend in both of these indicators is discussed below.

3.5.1 Interest rate spread

The spread between lending and deposit rates (the banking spread) is the measure of the intermediation cost of banks, which has increased over time in the case of scheduled banks in Pakistan (see table 3.7). It is a good indicator since it highlights the volatility of interest rates within Pakistan for the last decade. It was 2.4 percentage points in FY90, which increased sharply to 7.9 and then to 8.1 percentage points in FYs 96 and FY00 respectively. Although during the 1990s lending rates increased significantly, the banks were unable to pass on their interest earnings to depositors to the same extent. The increase in spread between lending and deposit rates can be linked to high administrative costs, overstaffing, higher risk of business default, increasing volume of bad loans of financial institutions and, to a lesser extent, the volatility of interest rate.

Figure 3.4



Source: State Bank of Pakistan

3.5.2 Credit allocative efficiency

The share of concessional and mandatory credit in the private sector credit and diversification of asset portfolio, can assess the credit allocative efficiency. There are two dimensions of portfolio diversification: (1) by economic sectors i.e.: industry, agriculture, etc.; and (2) by different economic agents i.e.: Government, public sector enterprises, private sector, etc.

3.5.2..1 Concessional and Mandatory Credit

An increase in the share of concessionary and mandatory credit leads to an increase in the hidden cost of intermediation to banks. The mandatory credit discourages market forces to determine the allocation of resources while concessionary credit deprives the banking institutions of earning market rates of return. Thus in both cases, distortions in the market mechanism are created and efficiency is lost. A decline in the share of concessionary and mandatory credit, on the other hand, indicates improvement in the allocative efficiency of credit. It shows that the banks are giving more loans to those sectors which offer competitive rates of returns. The average share of concessionary and mandatory credit, in the total private sector, declined from 58.7 percent during 1980-85 to 35.7 percent during 1995-00 (see table 2.7). Although the performance of the banking system in Pakistan is admirable in this regard, share of concessional credit is still too high.

Table 3.7

Indicators of financial efficiency

Year	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY98	FY99	FY00
Banking Spread	2.4	4.8	6.9	7.2	7.5	7.5	7.9	8.8	8.3	8.1
Concessionary Credit as % of total Credit	44.2	45.5	44.8	47.5	45.9	43.9	40.8	34.4	33.4	31.4

Year	1980-85	1985-90	1990-95	1995-00
Banking Spread	4.7	2.7	6.8	8.2
Concessionary Credit as % of total Credit	58.7	48.9	45.5	35.7

Source: State Bank of Pakistan

3.5.2.2 Sectoral distribution of credit

Efficient allocation of credit also requires the diversification of the asset portfolio. Credit allocation to only a few sectors of the economy makes the financial sector vulnerable to the performances of those sectors. The share of the large-scale manufacturing sector, which was high in the pre-reform period, further increased during the later half of the 1990s (see table 2.8). We can also see that the textile sector comprises of more than 30 percent of the entire loan portfolio of every state-owned commercial bank. It is worth noting that the share of manufacturing in real GDP is less than that of agriculture, but its share in banks' credit is more than twice that of agriculture. The declining share of agriculture in banks' credit also has unfavorable implications for the health of the overall economy. This is largely due to: (1) inability of commercial banks to introduce new financial instruments for the agricultural sector, where credit risk management requires a different type of approach vis -à-vis industry and commerce. (2) Lack of commercialism and competitiveness on the part of agriculturists, which consist of big landlords and politicians. (3) Legal impediments such as a clear land title and difficulties in collateral enforcement since the loans rendered were unsecured loans. (4) The presence of sizable informal financial markets in the agricultural sector. From (table 3.8) we can also see that the construction sector seemed to be an underserved sector, as its credit share remained significantly lower than its share in GDP. Since construction sector includes loans and advances for buildings, roads, harbors and water channels etc., the declining share of credit may have adverse implications for the economy as a whole. Within the construction sector, it is difficult to specify the share of the housing industry, as it is merged with loans and advances for buildings.

Table 3.8

Sectoral allocation of credit among different sectors & their share in GDP

Percentage share in total credit of Commercial banks –5 years average				
	1980-85	**1985-90**	**1990-95**	**1995-00**
Agriculture	13.2	22.2	20.4	14.7
Mining & quarrying	1.4	1.0	1.2	1.9
Manufacturing	47.9	42.0	42.5	50.9
Textile	34.2	33.4	39.7	41.5
Chemical products	3.3	4.9	5.4	6.9
Construction	2.6	3.3	2.4	1.8
Electricity, gas & sanitary services	2.2	2.1	2.1	2.2
Commerce	21.4	20.7	19.4	14.9
Transport, storage & communication	1.8	1.3	2.9	4.5
Services	3.8	1.1	1.2	1.2
Others	5.8	6.3	8.0	8.0
Percentage Share of sectors in real GDP – 5 years				
Agriculture	28.9	26.3	25.0	25.8
Mining & quarrying	0.4	0.5	0.5	0.5
Manufacturing	16.0	17.2	18.1	16.8
Construction	4.3	4.2	4.1	3.7
Electricity, gas &sanitary services	2.3	2.8	3.6	4.2
Commerce	18.2	18.9	18.7	18.1
Transport ,storage & communications	9.9	9.8	10.0	10.0
Others	19.9	20.1	20.1	20.8

Source: State Bank of Pakistan

In fact, one of the sources of these massive, non-performing loans was the textile sector of Pakistan, which is the backbone of Pakistan's economy and accounts for more than 40 percent of Pakistan's total exports. It was in severe crisis from the early 90s and the

revival of the whole economy depended on it. Therefore, the textile sector was allowed to import cotton, irrespective of a possible default in repayment of the loans with which to do so, while the shuttle-less sector was exempted from Prudential Regulations for availing bank financing. Textile quota entitlement was treated as collateral against working capital finance. The purpose of these measures was to help both the agricultural and industrial sectors in Pakistan, which desperately needed financial assistance. Several rules and regulations were modified to accommodate the borrowers facing difficulty in repayment due to recession in the Country. Over 36 percent of the entire credit given by each of the five public-owned commercial banks was to the textile sector (see Kardar, 1995). All banks are in the process of rescheduling their loans to facilitate the recovery of the loans from all major creditors. There remains a large number of loan default as well as written-off loans, from the textile sector which is the major reason for the banking crisis (see table 2.8.). All this was due to years of improper planning and the overwhelming political and social influence and lobbying of organisations like APTMA (All Pakistan Textile Mills Association), which was one of the biggest contributors to the massive non-performing loans of these banks. Most politicians are themselves owners of Textile Mills or are heavily obliged to APTMA. Many retired Generals and Bureaucrats are employed by this organisation to lobby for them. All this makes it unduly influential and has played an important part in the banking crises (see Lodhi, 2000).

3.5.3 Capital adequacy

Capital adequacy focuses on the total amount of bank capital, which is vital in reducing the risk of insolvency and the potential cost of a bank's failure. In other words, this determines the robustness of financial institutions against shocks to their balance sheets. Because it is difficult to track capital adequacy ratios that take into account major financial risks (like credit risk, foreign exchange risk, interest rate risk and risks involved in off-balance sheet operations), due to data limitation we have used two basic indicators for capital adequacy: (1) capital to risk-weighted assets (CRWA) ratio; and (2) capital to liabilities (CL) ratio. In CRWA, which is the most commonly used indicator of capital adequacy, assets are calculated on the basis of risk weights determined under Basel

Accord for each balance sheet item. This ratio has only been available since 1997 when the SBP introduced the risk-based system for capital adequacy consistent with the BASEL Committee requirements. Table below, CRWA ratio was only 0.6 percent in 1997, considerably lower than the 8 percent benchmark set by the BASEL Committee and indicated severe solvency problems in that year. Although four out of eight banks in this group were below the criteria, the prime reason for this low ratio was huge losses suffered by two major banks of the group. As a result, in 1998 both the banks required capital support of Rs 30.7 billion from SBP, in addition to revaluation of fixed assets by Rs 13.9 billion, thereby raising the CRWA to 10.8percent. Unfortunately, growing non-performing loans continued to erode the capital base of one of these banks during 1999, thus leading to a gradual decline in this ratio. SBP had to again provide capital support of Rs 8 billion to that bank during 2000.Another measure of capital adequacy is the bank's capital to its liability ratio that shows the extent to which capital and reserves of a bank provide coverage to liabilities (primarily to depositors). Although there is no benchmark, a high CL ratio signals the strong position of a bank. As evident from figure 3.5 CL ratio was declining from the very beginning of the decade, indicating erosion of capital base. However, the crunch came in 1996 and became more severe in 1997, when CL ratio reached its lowest point. All the five Nationalized Commercial Banks (NCBs) suffered losses in 1996 (46 percent of GNP), while huge losses by two of these banks in 1997 were responsible for this sharp decline. Capital injection and revaluation of fixed assets in the next year explain the subsequent recovery in 1998. However, SBP again supported one of the NCBs through capital injection in 2000 that posted a loss in 1999. This resulted in the improvement in CL ratio in that year.

Table 3.9

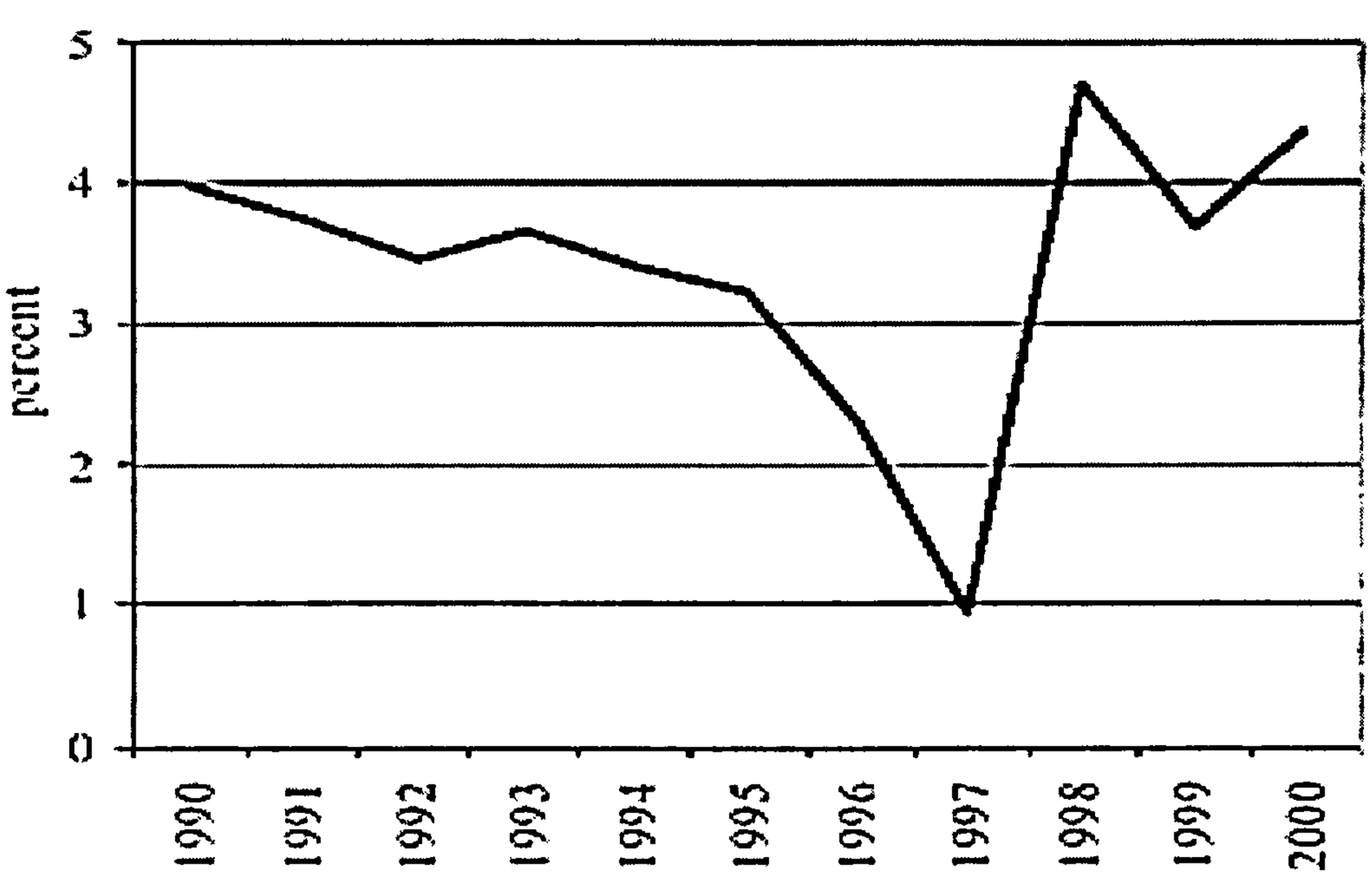
Capital adequacy indicators of state-owned banks

Year	1997	1998	1999	2000
Capital to Risk-weighted Assets	0.6	10.8	10.0	9.5
No. of banks below 8% CRWA	4	0	1	1

Percent

Source: State Bank of Pakistan.

Figure 3.5



Source: State Bank of Pakistan

3.5.4. Asset quality

The solvency risk of a financial institution often originates from the quality of its asset portfolio. Therefore, it is important to examine the asset quality by using indicators, such as earning assets to total assets, NPLs to advances, loan defaults to advances and recovery to default ratios (see Table 3.10) More specifically, a larger share of earning assets would lead to higher profitability at a given level of expenses. The earning asset to total assets ratio was declining continuously during the 1990s except during 1999. An increasing trend in this ratio signals deterioration in the quality of asset portfolios and consequently, in financial institutions' cash flows, net income and solvency. State-owned banks had the largest share in total non-performing loans of the banking sector, which was much greater than their share in assets or deposits (see table 2.10). Although this share declined in the latter part of the 1990s, this was mainly due to an increase in NPLs of private banks, rather than any improvement in state-owned bank loans provided by

NCBs on political grounds, mainly during the early and mid 1990s, that resulted in NPLs after a time lag. Furthermore, banks were reluctant to write off the 'historically' bad loans mainly due to the poor quality of underlying collateral, and in an attempt to avoid any possible legal complication due to lacunas in the respective judicial framework. This also contributed to the accumulation of bad loans in the asset portfolio of these banks. In addition, strict disclosure requirements put in place by SBP in 1997, forced banks to disclose the true classification of their loans, hitherto undeclared as NPLs. This disclosure resulted in a substantial rise in NPLs. However, a larger increase in advances and the almost stagnant value of NPLs at the 1999 level, led to a fall in this ratio during 2000. Nevertheless, the volume of NPLs severely constrained the earning capacity of these banks as depicted by the declining share of earning assets in total assets (see table 3.10). Cash recoveries to defaults ratio, however, witnessed some signs of improvement, mainly attributed to steps taken with regard to internal restructuring of these banks, to strengthen their loan recovery mechanism, accountability and recovery drive, initiated in October 1999 (see table 3.10).

Table 3.10

Asset quality indicators (percentage) of state owned commercial banks											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Earning assets to total assets	80.2	75.8	77.0	77.8	77.2	77.0	75.0	73.4	71.3	70.6	71.6
NPLs to Gross Advance	18.0	19.9	18.6	22.1	25.6	23.3	23.5	26.5	25.4	27.7	24.4
Loan Defaults to Gross Advances	10.7	10.8	11.4	11.2	12.8	12.2	13.2	21.9	18.9	16.0	14.8
Provisioning to Gross Advance	6.6	7.4	9.3	8.1	8.0	7.6	9.0	14.1	13.7	12.7	13.2
Cash Recoveries to total Default	12.0	6.8	6.5	5.3	8.2	8.6	9.1	9.5	6.3	8.0	8.4

Source: State Bank of Pakistan

3.5.5 Management soundness

A sound management is one of the most important pre-requisites for the strength and growth of any financial institution. Since indicators of management quality are primarily

specific to individual institutions, these cannot be easily aggregated across the sectors. In addition, it is difficult to draw any conclusion regarding management soundness on the basis of monetary indicators, as characteristics of a good management are rather qualitative in nature. Nevertheless, total expenses to total income, operating expense to total expenses, earnings and operating expense per employee and interest rate spread, are generally used to gauge management soundness. In particular, a high and increasing expense to income (EI) ratio indicates the operating inefficiency that could be due to a flaw in management. As shown, EI ratio for state-owned banks, which was already very high, increased further from 95.7 percent in 1990 to 96.8 percent in 2000. However, during 1996-99 this exceeded the 100 percent mark, primarily due to the provisioning against NPLs (see table 2.11). It is important to note that 1997 was the only year when operating expenses were greater than interest expenditures, mainly because of a 300 percent increase in provisioning against NPLs and, to some extent, Golden Hand Shake (GHS) schemes offered by three major nationalized banks. Interest rate spread could also be used as an important indictor of management efficiency, when seen in relation to profitability of the banks. This is because higher spread may be caused either by higher operating costs reflecting management inefficiencies, or by the banks' desire to earn more profit. It is important to note that this interest rate spread is not the simple difference between weighted average lending and deposit rates, rather it reflects the difference between effective returns on earning assets and interest expense on interest paying liabilities. This indicator covers all the interest earnings and interest paying activities of banks, whereas the spread between weighted average lending and deposit rates, ignores the interest earned on investment and interest cost of borrowing, etc. Interest rate spread, therefore, is a better indicator than the spread between weighted average lending and deposits rates. It was expected that the itrduction of new banks into the private sector would increase competition for state-owned and foreign banks, thereby compelling them to improve efficiency. However, the rising trend in this spread with low and further deteriorating profitability, indicated the growing inefficiencies of state-owned banks, which could also be retraced to higher operating expenses to total expenditure ratios. As discussed earlier, significantly large proportions of non-performing loans and provisioning there on (required by SBP as a part of the reform process), affected the

earning profile of these banks negatively, and resulted in a higher banking spread during the second half of the 1990s. More importantly, sizeable deduction of advance tax from the banking industry was another factor behind rising interest rate spread, as these advance taxes were non-earning assets and treated as expense in income statements.

Table 3.11

Management soundness indicators (percentage) of state owned commercial banks											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Total Expenses to Total Income	95.7	94.2	91.2	90.9	92.8	94.0	105.7	122.0	101.7	101.8	96.8
Operating Expense to total Expense	39.1	38.5	39.5	40.0	39.4	39.6	36.6	51.3	38.8	41.7	42.9
Interest rate spread	3.9	4.2	4.2	4.6	4.4	5.0	3.4	5.0	5.3	5.6	5.5
Operating Expense per Employee(million Rs.)	0.15	0.15	0.18	0.22	0.24	0.29	0.30	0.67	0.54	0.61	0.63
Earning per employee (millon Rs.)	0.4	0.4	0.5	0.6	0.7	0.8	0.8	1.2	1.4	1.4	1.5

Source: State Bank of Pakistan

3.5.6 Earnings and profitability

Strong earnings and profitability profiles of a bank reflect its ability to support present and future operations. More specifically, that determine the capacity to absorb losses by building an adequate capital base, finance its expansion and pay adequate dividends to its shareholders. Although there are various measures of earnings and profitability, the best and most widely used indicator is Return on Assets (ROA), which is supplemented by Return on Equity (ROE) and Net Interest Margin 4.1 as shown in table 3.12. The profitability of state-owned banks deteriorated, especially after the mid 1990s. This was the outcome of a fall in share of earning assets, a mounting burden of non-performing loans coupled with increased provisioning requirements and, to some extent, a cut in rates on Government securities. On the expenditure side, the rising share of borrowing in total liabilities (partly due to slow growth in deposits), caused expenses to rise faster than income and hence, reduced the profitability. In addition, banking had remained a heavily

taxed industry in Pakistan and high tax deduction also contributed towards low after -tax profit

Table 3.12

Earnings and profitability indicators (percentage)of state owned commercial banks											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Net profit to asset ratio	0.4	0.5	0.5	0.7	0.2	0.2	-0.3	-2.3	0.5	-0.7	0.1
Net profit to equity ratio	10.5	13.4	15.3	19.2	7.5	5.9	-14.8	-244	11.5	-19.8	2.8
Net interest margin	3.2	3.2	3.3	3.7	3.4	3.9	1.9	3.2	3.5	3.8	4.1
Total income to total assets	9.6	9.1	8.9	10.0	9.6	10.2	9.6	10.7	10.6	10.0	9.5

Source: State Bank of Pakistan

Figure 3.6

Source: State Bank of Pakistan

3.5.7 Pakistani banking sector international rating

Moody's Investors Services the international rating agency, as a consequence of Pakistani Sector Crisis, had assigned (E) rating in regards to the financial strength of the four public-owned Pakistani commercial banks (see table 3.13).

Table 3.13
Pakistani banking sector international rating

HBL, NBP, MCB, UBL: Moody's Rating History			
Date	**Class**	**Rating**	**Action**
21 Feb 2003	Bank Financial Strength	On Watch	Possible Upgrade
22 Dec 2000	Bank Financial Strength	E	Confirmed
27 May 1999	Bank Financial Strength	On Watch	Possible Upgrade
26 Oct 1998	Bank Financial Strength	E	Confirmed
4 Oct 1996	Bank Financial Strength	E	Assigned

Source: Moodys.com

3.6. Improvement of nationalized banks after the crisis

In Pakistan, the problem of inadequate financial intermediation during the early years was overcome by the creation of a nation-wide system of commercial bank branches. Banks were encouraged to mobilise deposits and lend to the corporate sector.

A Bank's ability depends on its effective policy for eliminating the default culture. It is imperative that banks eliminate this default culture if they are to survive. Although commercial banks or NCBs were created, they lacked qualified staff and no thought was given to the long-term direction of lending and success of the bank. For example, most of the lending was to a few industrial sectors i.e. textile, sugar and cement, leading to massive risks to the banks. Credit rendered by the banks was not allocated or utilised properly. They were not provided credit guidelines and proper bankruptcy and default laws were not present, which left the banks vulnerable and exposed to corruption and fraud.

Already there is a visible difference in the performance and efficiency of these NCBs because the Government is not able to influence them further. These NBCs have recruited more skilled and qualified bankers and it is hoped that in the next couple of years, will be in a position to compete with the private and foreign banks. As a result, there is an increased likelihood that many smaller private banks may be forced to either sell out to bigger banks or merge, to become more competitive. Habib Bank Limited and National Bank Limited have already lowered mark-up rates in line with the SBP's over all interest rate plans and are becoming more customer-oriented in their approach. Also most loss-making branches are expected to be closed and redundant workers offered " golden hand-shakes," or retirement plans. Although it will take at least 2-3 years before these large banking concerns are turned around, there has been a visible positive change brought in by the new management. The new management at present planning to devise a strategy to write-off the non-performing loans and to make them viable for privatization. An attempt is also been made to attract big multi-national foreign banks to take over these state owned banks and to run them more efficiently.

It is felt that with increasing competition, the smaller banks will have a much harder time than the larger banks, so they will either be forced to sell out or merge. Capitalization, product innovation, expenditure control and customer service will be key determinants of a bank's profitability. In an increasingly competitive environment, only larger banks will be able to cater to big blue-chip customers due to their higher equity and per party exposure limits. A small capital base will also restrict branch expansion of smaller banks, forcing them to focus on relatively smaller retail clients. Subsequent improvement on the performance of nationalized banks will further intensify the competition in the banking sector, making it more difficult for smaller banks to survive on their own. It will also lead to the end of nepotism, and favoritism in the appointment of bank employees. Jobs have gone traditionally to politically well connected people regardless of their capability, or training. Hence, we foresee a bright future for banking in Pakistan with a major merger/acquisition potential.

3.7 Impact of banking regulation and supervision after the banking crisis

A crucial set of reforms that started to have a significant impact on the banking industry was initiated in 1997 through the reform process. Impact of many of these is yet to be realized due to the medium to long-term nature of their objectives on one hand, and inherent complexities and dynamics of institutional reforms, on the other. These reforms encompass the institutional strengthening and restructuring of banks and supervisory authorities.

The regulatory and supervisory powers of the State Bank of Pakistan (SBP) were consolidated by dissolving the Pakistani Banking Council in May 1997. Disclosure standards for banks and NBFIs were revised by SBP in August 1997 to bring them to conformity with International Accounting Standards. Consequently a CAMELS framework was adopted by SBP to assess their performance on the basis of off-site surveillance and on-site inspection. Furthermore, SBP moved very quickly to implement the core principles of effective banking supervision, or the Basel core principles (see Appendix).

Implementation status of these principles is shown in Table 3.14. Banks were also asked to comply with three core principles of banking, in addition to applying the system of risk-weighted capital prescribed by the Basel Committee. Foreclosure standards of banks are now largely compliant in terms of having reliable financial statements and evaluation of asset quality: Three are largely compliant in managing market and all material risk, having adequacy of internal controls and MIS to identify concentration, and in knowing their customer rules. Two privatized banks are in compliance with all of the above core principles, as well as the private banks. Only three out of 39 banks had lower than 8 percent of capital to risk weighted assets ratio by the end of 2000 and currently, out of 80 financial institutions, ratings of some 50 banks/NBFIs have been completed.

Table 3.14

Basel core principles: implementation status

Status*	Core Principles
Compliant	1 2 4 7 10 16 17 18 19 21 22 23 24 25
Largely compliant	3 5 6 8 9 12 14 15
Materially non-compliant	11 13 20
Non-compliant	Nil

*Compliant – essential criteria met without any significant deficiencies; largely complaint – essential criteria met with minor shortcomings; Materiality non-complaint – sufficient short comings but substantive progress towards compliance. Non complainant – No substantive progress towards compliance

With the adoption of the CAMELS[2] framework by SBP in December 1997, and strengthening of its on-site inspection and off-site capabilities, SBP had become adept in finding the weaknesses of banks and NBFIs, as well as becoming proactive in taking concrete actions for their resolution. Capabilities of SBP in problem bank management have significantly improved since 1997. For example the board of directors and management of Bankers Equity Limited (BEL) were removed in August 1999 by SBP under section 41-A and 41-B of Banking Companies Ordinance 1962, after it was found guilty of mismanagement, concealment of information, falsification, writing-off of loans without adhering to the due process and failure to comply with the instructions of SBP etc.

Above examples elucidate the increasing quality of off-site surveillance by SBP supplemented with in-depth probing through on-site inspection. Human resource quality of SBP inspectors has been considerably improved through extensive training. With the creation of a subsidiary – State Bank of Pakistan Banking Services Corporation (SBPBSC) –SBP will be able to concentrate more on its core functions of banking

[2] Specifically, it presents CAMELS framework that is commonly used for analysing the health of individual institutions. CAMELS' framework looks at six major aspects of a financial institution: capital adequacy, asset quality, management soundness, earnings, liquidity, and sensitivity to market risk.

supervision and regulation, monetary policy and research and the foreign exchange and debt management. The capacity of SBP is likely to further improve in the near future with regard to its core functions.

3.8 Conclusion

The Pakistani economy and culture is in transformation from an agro-based rural structure to an industrialised and urban economy. The massive industrialisation was neither planned nor given direction. This in turn results in massive failures and losses leading to non-performing loans (see State Bank Report 1999).

The rural agricultural economy lacked a proper financial infrastructure and the people themselves did not have the knowledge of or access to, the commercial banks. It will therefore take several years before the people of Pakistan will have the financial sense to use the banks as a tool for their day-to-day activities. Pakistan's low literacy rate has also slowed down this process to a large extent. As compared to other South-Asian countries, Pakistan has the lowest literacy rate. Even when there are banks available the banking culture is not developed and savings and deposits are very low. Even people who borrow money from banks do not consider it their moral duty to spend it wisely and return it (see Ashfaq 1995).

According to State Bank of Pakistan assessment (2004) for Pakistan to support and sustain its huge population of 140 million, existing savings and investment ratios need to be doubled by 2010, mainly through the exploration of its indigenous potential. Pakistan's low saving and investment ratios have their roots in some unique factors and structural inefficiencies in the financial sector. The overall banking sector has been plagued by events like nationalisation of the entire banking sector in the 1970s. Also in 1990s the banking sector was on verge of collapse due to the breakdown of governance and loss of financial discipline. The performance of the state-owned banks has greatly suffered due to inefficiency of the bank management. Bankers lack expertise in determining clients more likely to repay the loans. In fact they tend to carry favours with important people by granting them loans that are risky at best.

As a result of the banking crisis, the Government needed help from the IMF & the World Bank. It also moved ahead with significant reforms, including increasing the authority and stability of the State Bank of Pakistan, introducing banking courts to impose financial discipline, pursuing loan defaulters, revising financial disclosure requirements and removing credit ceilings that hinder the development of a market-based banking system. These reforms were created as a key development of the financial institutions. Recovering overdue loans was essential for the strengthening and stability of the Pakistani banking sector. Firstly, to ensure a positive response from the banking system, credit guidelines (eventually to become quantitative credit controls) were established and secondly, to ensure a positive response from the corporate sector, funds were provided at rates below those that would have prevailed (see Ul Haque, Nadeem 1997).

CHAPTER 4

Methodology

4.1 Introduction

The chapter discusses the methodology used for assessing and analyzing the causes of non-performing bank loans in five major Pakistani public-owned banks. The primary data collected for this research is through questionnaires[1] from the credit managers who gave these non-performing bank loans. The questionnaire-based methodology[2] has not been used previously in studies banking crises and non-performing bank loans. Therefore this research could become cornerstone of further academic research into the causes of non-performing bank loans in other developing countries using this methodology.

The chapter is divided into six sections. The second section explains the justification of methodology pertaining to the choice of industry and subject. The third section explores reasons for adopting quantitative methodology. The fourth section discusses in detail the surveys, including their choice of sample pilot tests and design of the questionnaires, their validity and methods used for their analysis. The fifth section explains the financial data collected and the method for its analysis. The sixth section gives the concluding remarks.

4.2 Justification of methodology/choice of industry and subject

In the last decade, the banking industry in Pakistan has gone through several fundamental changes. This industry has suffered a lot as a result of a high percentage of non-performing bank loans. The five public owned banks that are the biggest players in this industry have been virtually destroyed by corruption leading to a high proportion of bad debts[3]. Since the banking crisis occurred during the 1996 – 1998 period, no research has

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[1] All the completed questionnaires are available on request.

[2] Survey methodology used on financial managers (Beaulieu 1994, 1996, Royal & Altauser 2002; Royal 2000 & 2000; Patic Andersoon 2003)

[3] See Chapter 2

been done to find out the extent of the crisis and the reasons behind it. The analysis of the Pakistani banking sector in previous chapter highlights the fact that the macroeconomic conditions of Pakistan were stable and consistent throughout the 1990s. Therefore it has been widely believed that the banking crisis in Pakistan has less to do with external economic conditions or world-wide recession and more to do with corruption, poor bank management of the banks, as well as the political governments of that time. This fact was further established when pilot questionnaires were carried out. Therefore questions regarding the macroeconomic factors affecting the banking crisis were omitted from the final questionnaire. In this thesis, quantitative methodology[4] has been used to find the reasons for the high proportion of non-performing loans in public owned Pakistani commercial banks.

Similar studies carried out by Royal (2000, 2002) in the investment banking industry used surveys and questionnaires across different levels of the organization to determine key indicators and performance drivers. In the same way, other researchers such as Collins (2001), Turner & Crawford (1998), Watson Wyatt Worldwide Research (2002) and Bassi et al (2001) have used surveys and interviews to provide evidence for their findings on the positive relationship between the sophisticated use of human capital and the future financial performance of the firm. Beaulieu (1991, 1994, 1998) has also used questionnaire methodology with loan officers in relation to their commercial lending. Most of these studies have also used different statistical methods on data collected using surveys and questionnaires, in order to analyze the efficiency and performance of financial managers.

None of these studies have examined causes of bank failures and banking crisis using the survey based methodology. In the context of this study, survey based methodology through which personal, face-to-face interview techniques[5] were considered to be the most appropriate and helpful, taking into account the personal and socio-cultural traits of

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[4] See Bryman, (1989)
[5] See Beaulieu (1991,1994, 1996), Royal (200, 2002), Nabi (1995); Geddes (2002); Lee, R.M. (1992); May.T. (1997).

the respondents, all of whom were credit managers of the five major public owned Pakistani Commercial Banks. This methodology was chosen to ensure that respondents were able to answer in person, thereby providing first hand and accurate information on the reasons behind the Pakistani banking crisis. Therefore this research is unique as it looks in detail at credit managers who played the pivotal role in the whole credit lending process. The main research focus of this was the collection of primary data from the credit managers as well as the borrowers of five public owned Pakistani commercial banks. Initially the researcher wanted to use the questionnaire methodology to question both the credit managers, who gave the non-performing bank loans as well as the borrowers (companies) who had defaulted on these loans. A series of questionnaires were designed for both the credit managers and the borrowers of the five public owned Pakistani commercial banks[6]. Every attempt was made by the researcher to contact individuals/companies who had defaulted on these loans. Since the research was to be carried out on State-Owned Pakistani Commercial Banks, the researcher also wanted to include the interviews of a few influential politicians who were behind the alleged corruption of these non-performing bank loans. Unfortunately it was made clear by the banks that names of individuals/companies would not be disclosed under any circumstances. Also the researcher was warned that repeated questions regarding disclosures of such names would jeopardize the whole research. The questionnaire designed by the researcher for borrowers had only 1 percent positive response[7]. In fact the researcher was reminded that the whole research, as well as his personal safety, would be at stake if he followed this particular line of questioning. For this very reason the only choice of research in regards to finding out reasons behind banking crises could be through the credit managers who were the actual signatures to the non-performing loans

The research design issues were addressed by using the mixed methodology approach provided by Tashakori and Teddlie (1998) which indicated that in order to pursue the study in the most efficient way two different methodologies could be used to answer the same research question. Similarly the methodology used is divided into two sections. The

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[6] See Appendix

[7] Only 1 person out of 100 gave a positive response to borrowers questionnaire. The questionnaire given to the borrowers is available on request.

first section is based upon questionnaires and surveys to collect first hand data[8] to find the reasons for the high proportion of non-performing loans. The methodology focuses on interviews and questionnaires carried out by the researcher directly with the credit managers who authorized these non-performing loans. Quantitative methodology and standardized statistical methods[9] are used as the main tool of this research because they are comparable, objective and as reliable as possible. This gives the whole thesis a very unique dimension and contributes to literature on non-performing loans worldwide. The second section is based upon secondary data analysis of financial statements[10] during the period 1996-1998. During this period there was a very high percentage of non-performing loans resulting in a deep financial crisis in the five major public owned Pakistani commercial banks.

4.3 Quantitative methodology

As Payne (1997) said "quantitative methodologies concern on pre-existence concepts or categories whose meaning are thought to be universally accepted." The researcher who concentrates usually decides the meaning of it entirely on the body of theorizing. The unit of analysis is usually considered as an individual but this could also be an organization (like in this case a bank). The principle respondents in this research are the credit managers who represent the functioning and whole character of these organizations. In other words they represent the integral part, which encompasses the concentration on analytical properties of organization. The study is focused on a few properties of many organizations with or without regard to context and interactions between such properties, they are assumed to apply to all population's numbers. This positivistic methodological individualistic approach assumes that those individuals, who are a part of an organization, depict characteristics of the organization, itself therefore demonstrating the nature of the organizations themselves.

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[8] (See Lee, R.M. 1992; de Vaus, 1996, May, T. 1997; Oppenheim, 1992)
[9] (See Ford, Olson 1978; Fraser R. Donald 1998; Ron Jones 1997)

[10] (see Berger Young 1997; Livine 1996; Bath, Caprio & Livine 2000)

Guba and Lincoln (1994) argue that "four paradigms are currently competing or, have until recently, for acceptance as the paradigm of choice in informing and guiding inquiry; especially qualitative inquiry; positivism, post-positivism, critical theory and related ideological positions, and constructivism". (p. 105).

Item	Positivism	Postpositivism	Critical Theory	Constructivism
Ontology	'real' and apprehensible reality	real but only probabilistically appreh. reality	virtual reality shaped by values	Local and specific constructed realities
Epistemology	Dualist/objectivist findings are true	objectivist findings probably true	subjectivist value mediated findings	subjectivist created findings
Methodology	Verification of hypotheses, Numbers support Support the truth	falsification of hypotheses	falsification of hypotheses	hermeneutics dialectics

(Guba and Lincoln, 1994)

Following positivist principles this research is based on the following assumptions:

It is assumed that an objective social reality exists independent of our personal interpretations these can also be termed as *ontological assumptions.*

The assumption that the researcher is independent is a foregone conclusion. The objects of research, in this case, are the credit managers who were surveyed and the five public owned banks who are regarded as independent entities. This assumption can be called ontological assumption.

This hypothesis has used empirical test as well as more details to lend support to it. These can be called methodological assumptions. A series of positivist principles was valuable to this study. The first was that the "society is a system of social phenomena that are casually linked together" (see Bilton 1997). The second view was that "hypothesis could be tested through rigorous collection of quantitative data" (Bilton 1997). In this case the aim was to test the hypothesis using the mix methodology[11] approach using quantitative and qualitative collection methods. The benefit of data collection methods by positivism as it presupposes the *"reality"* is that it captures data through the use of instruments such as questionnaires[12] this is perceived as objective and valid.

Quantitative methods are built around deductive logic, which proposes building a hypothesis on empirical data already provided and involves reasoning from generalities to specifics. Deduction always begins with generalization, possibly empirically based on assumption and attempts to fill in the detailed implications of such generalizations (see Bryman, 1989). In the same way it has been assumed that the main reason for the high proportion of bad debts in the five Pakistani Public owned banks are corruption, personal interest, political influence and lack of banking know how. As Trusted (1979) defined, an hypothesis as an empirical generalization based on observation of facts, thus providing evidence to support the hypothesis[13]. This could later be turned into descriptions, explanations and in the end further predictions. Quantitative methodology was ideally suited for collecting, comparing and analyzing the data. The methodology follows a multi-method approach focusing on descriptive and exploratory research.

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[11] See Tashakori and Teddlie (1998).
[12] See Blaxter, Huges & Tight,(2001)
[13] See Chapter 1

4.4 Survey

4.4.1 Choice of sample

In order to answer the research question[14] and to meet its objectives, it is advised to undertake an in-depth quantitative study that focuses on a small sample selected purposively. This would provide the researcher with an information-rich case study in which the research question can be explored (Saunders, Lewis, Thornhill 2000). Senior bank managers' lending attributes have been analyzed using questionnaire-based methodology[15]. Questionnaire based methodology has been used to analyze the efficiency of financial managers as well as borrowers (see Royal & Altauser 2002; Royal 2000 & 2000; Patic Andersoon 2003). Beaulieu (1991, 1994, 1998) has also used questionnaire methodology with loan officers in relation to their commercial lending. Since this research looks into the reasons behind the Pakistani banking crisis, it was considered essential that the survey would only be collected from the credit managers who play a pivotal role in the whole credit lending process. Therefore the credit managers who were actually responsible in giving these loans where the obvious choice for the sample, since the research question focusing on a sample were the respondents are selected because they are particularly informative (see Neuman 1997 and Kervin 1992). Saunders, Lewis, Thornhill (2000) define components of purposive sampling as homogeneous sampling which focus one particular group in which all the sample members are similar, allowing the group to be studied in depth. This appears appropriate for this research into the credit managers of the five major public owned Pakistani commercial banks, since all credit managers have a clear uniformity in relation to their duties as credit managers.

Although each bank had more than 900 branches and 12,000 employees throughout Pakistan, only a handful of people and branches had the authority to make credit-related decisions and actually give credit. The structure of each bank was sub-divided into 6 zonal offices, which had a corporate section that dealt with credit related decisions. In

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[14] See Chapter 1

each of these corporate offices, there was a team of 5 or 6 credit managers who jointly approved all the credit. The credit limit of these managers ranged from 10,000 rupees to 10,000,000 rupees. These are basically middle and upper level managers (vice presidents) – those who initiate the lending process and all decisions relating to credit lending originated from them. Therefore the credit managers formed the target population of the surveys since only their point of view could determine the causes of non-performing bank loans in Pakistan and satisfy the hypothesis[16]. Therefore questionnaires were specifically designed to get feedback from the credit managers of the five leading Pakistani-public owned commercial banks.

Originally, most credit managers were reluctant to disclose much information but after being assured that their names would not be disclosed, and that it was all for academic purposes, they became more talkative and informative. Access was provided to financial accounts but a firm line was drawn to protect the confidentiality of the bank and their clients. It was not possible to collect any account information other than the annual published financial accounts. It was surprising that some of these banks had not published financial accounts especially since as the Government ran them and the regulations applying to other financial institutions were not so strictly followed by them. In the past five years, after the partial denationalizing of two of the five banks, accounts had been regularly published in line with all other financial institutions. The fact that before 1992 accounts were not even regularly published, exemplifies the extent of irregularities and mal-practices, which have taken place after the nationalized of these banks. Each audited report had to be personally collected from the auditors, as some had not been published yet. This secondary data (for example Income Statement, Balance Sheet and Profit & Loss Accounts) methodology used for the research is based upon the financial accounts of the company (see Dopuch Revsine, L, 1973; Gill and Johnson, 2000; Waters, 2001; Sekeran Uma 1992).

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[15] See Andersson (2000); Finkelstein & Hambrick (1996); Maines, (1995)
[16] See Chapter 1

4.4.2 The pilot questionnaires/survey

The pilot questionnaire enables the questionnaire to be initially evaluated for its design, format, and clarity in content, relevant to the research question and structure. The pilot survey helps in assessing the reliability and validity of the questions. As Mitchell (1996) indicated, as well as allowing suggestions to be made to the structure of the questionnaire, the pilot survey helps to establish content validity. As indicated by Proctor(2000),it is more beneficial for a researcher to receive comments and responses to questionnaires before a large distribution takes place. This is because it would be impossible to exactly predict how respondents would interpret the questions. Similarly, other studies[17] using survey-based methodology on finance managers have initially used test questionnaire as a beneficial tool for assessing the validity of their research. Keeping in mind that the sample size of the number of respondents would be small[18], it was very important to have a "test questionnaires" first. Guidance was taken from prominent bankers[19] in the Pakistani banking sector while designing and structuring the questionnaires. For most questionnaires, the minimum number of pilots is ten (see Fink, 1995), as issuing them provides the researcher with added insight into the questionnaire's design and validity.

A list of over fifty questionnaires[20] was prepared and tested on twenty percent of the respondents in order to get their feedback. The researcher personally met respondents for the purpose of filling in the test questionnaires and interviewing them. To start with every aspect[21] that could affect the banking crisis[22] was considered and questions were included in the pilot questionnaire. The pilot study showed that according to the credit managers, macroeconomic factors[23] did not affect the banking crises[24] in any way. Therefore,

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[17] See Collins (2001), Royal (2000), Schuster (1986) Crawford (1998).
[18] (the total number of credit managers in the five banks were one hundred in total)
[19] List of Names of Senior Economist, State Bank Officials, Financial Analyst, Senior Bankers
[20] The original test questionnaires are available on request.
[21] Macro & micro-economic factors, Government's inconsistent policies & corruption
[22] See Gorton, 1988; Caprio and Klingebiel, 1996; Lindgren, Garcia, and Shal, 1996; and Kaminsky and Reinhart, 1996 studies which discuss the factors which influence banking crisis.
[23] Macro-economic factors affecting banking crisis for example savings, investment, GDP, inflation, balance of payments etc. (see Gorton, 1988; Caprio and Klingebiel, 1996; Lindgren, Garcia, and Shal, 1996; and Kaminsky and Reinhart, 1996).

[24] See Chapter 2 (inflation, interest rates, GDP growth, investment & savings)

several questions relevant to the different macroeconomic factors influencing the banking crisis were not included in the final questionnaire. Also highly technical questions relating to risk management[25] were found not to be applicable because the respondents had no knowledge of them. Therefore several technical questioners[26] were also omitted from the final questionnaire. The pilot study indicated that the wording of some of the questions, and in some cases, their sequencing, required modification to reduce response error and also promote and facilitate productive participation by respondents. It was also observed during the pilot questionnaire that the credit manager would prefer filling out a questionnaire with specific options, which he could select or rank in order of preference, rather than giving written explanations. The questionnaire was designed and modified accordingly, hence confirming the validity of the research investigation.

4.4.3 Questionnaire design & analysis

The questionnaire was framed in two stages. A draft[27] was worked out covering all the factors[28] that could affect the banking crisis[29] as discussed in previous chapters,[30] were considered. The draft incorporated all the questions relating to the hypotheses as well as reasons for the high percentage of non-performing bank loans. The draft constituted questions in the following categories:

1. Demographic questions

Questioners were included on: the credit manager's age, sex, martial status, basic and professional education, experience as a credit manager, number of training courses attended and credit limit etc. The purpose was to determine if the above factors influenced the lending behavior of the credit managers. Similar questionnaire methodology based on demographic representation and analysis, has been used in survey work by Royal (2000, 2002), and Collins (2001).

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[25] (Risk Management Techniques like VAR, GAAP, Portfolio Management)
[26] For example: Which Risk Management Techniques do you use to analyze risk?
[27] Initial draft of test questionnaires carried is also available on request.
[28] Macro & micro-economic factors, Government's inconsistent policies & corruption
[29] See Gorton, 1988; Caprio and Klingebiel, 1996; Lindgren, Garcia, and Shal, 1996; and Kaminsky and Reinhart, 1996 studies which discuss the factors which influence banking crisis.

2. Extent of non-performing loans & reasons

Questions were included on: The extent of non-performing loans at their branch level as well as the entire bank, the factors which lead to the high percentage of non-performing loans; specific questions on macro economic factors and government interference. These factors influencing the banking crisis have been highlighted in research studies such as Gorton (1988); Caprio and Klingebiel (1996); Lindgren, Garcia, and Shal (1996); and Kaminsky and Reinhart (1996).

3. Lending habits

Questions on: the lending habits of the credit managers, if they prefer to give secured or unsecured loans, the credit management techniques which are used by credit managers to give loans, their awareness of risk management techniques and their application etc. These questions have been highlighted in credit management-related studies such as Santomero (1999, 2000), Bessis (1998), Coyle (2000).

The final questionnaire developed by the researcher was particularly for the credit managers of the five public owned Pakistani commercial banks keeping in mind the response to the test questionnaire[31]. For preparing the questionnaires, help was also given by several prominent Pakistani bankers[32] who were not dealing with credit themselves at that time but had been credit managers before and were then very senior bankers. To make sure that the questionnaires could be quantifiably analyzed, a few statisticians[33]were also consulted who had used similar quantitative methods and techniques for social science research. Their advice led to the questionnaire being more structured and suitable for statistical analysis. Most importantly, the feed back from the test questionnaire provided the insight into relevant questions. It was decided to use a structured questionnaire[34] which was divided into three sections and would encompass all the research objectives. As Khan and Cannell (1957) have suggested, the questionnaire

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[30] See Chapter 2 & 3.
[31] Test Questionnaire was carried out on 20% of the entire population.
[32] Senior Economist, State Bank Officials, Financial Analyst, Senior Bankers
[33] Quaid-e-Azam University Dept of Statistics (Dr. Riwan,Dr. Pervaiz, Dr. Mustaq)
[34] See Anderson, C.R. and Paine,(1975); Maines (1995); Keasey & Watson (1986)

must serve two purposes: I) it must translate research objectives into specific questions whose answers will provide the necessary data for evaluation. II) It must also aid the researcher in motivating respondents, so that the necessary information is obtained. The questionnaires were all designed and carried out keeping in mind the above principles as well as the research objectives.

It was the intention to question ten credit managers from each bank. The researcher realized that a sample size of fifty would be too small to derive any kind of statistical result. This conclusion led to an increase in the number of respondents to one hundred (since the total number of credit managers in the five banks was one hundred). Hence the entire population[35] was questioned, even though the exact number of respondents varies from each bank the final total was as follows.

Name of the bank	**The number of credit managers questioned**
Habib Bank Limited	25
Muslim Commercial Bank	21
National Bank of Pakistan	19
Allied Bank Limited	18
United Bank Limited	17
Total Number of Credit Managers Questioned	100

The format of the questionnaires[36] was extremely important. The credit managers, for whom the questionnaire was designed, were extremely busy people and were always pressed for time. The time they could spare for it was limited, their lack of exposure to academic research making them wary. Since they had to volunteer the information questions had to be simple, precise and logical. They also had to be self-explanatory and

[35] All 100 filled questionnaires from each and every credit manager are available on request.
[36] See Anderson, C.R. and Paine,(1975); Maines (1995); Keasey & Watson (1986) Royal (2000)

not too detailed or about events too far in the past. Each question had to be separate from the other, easy to understand, totally unambiguous and relevant to this research. While conducting the pilot questionnaires, it was observed and suggested that the credit managers should not be asked too intrusive, potentially sensitive questions such as actual names of borrowers who defaulted or names of senior bankers and politicians who influenced them directly to give these non-performing loans. It was strongly indicated that explicit questionnaires, which required mentioning names, would jeopardize the jobs of the respondents and would adversely affect the response rate. While designing the questioner, it was also kept in mind that an average questionnaire would take approximately 35-45 minutes to complete. All the interviews were conducted in English. The survey questions[37]were standardized and the positivist principle[38] of minimizing the researcher influence, adhered to.

The questionnaires[39] are divided into three different sections (A, B, & C).

Questionnaire A, concentrates on demographic[40] and basic information[41] on the credit managers. The questionnaire begins with the respondent filling out his/her name, the name of the bank and branch as well as their age. The respondents were then given three options to choose from which were in relation to their education, years of experience, credit limit as well as the percentage extent of non-performing loans in their branch.

Questionnaire B addresses the reasons for non-performing loans in these banks. The respondents are asked to choose the most suitable among different options given. Some questions have 3-5 options while others have only a Yes/No option. Also there are four questions which the respondent is asked to rank in order of their preferences.

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[37] See Appendix
[38] See Oppenheim, 1992
[39] See Rodgers 1998; Royal 2000, Anderson 2003 (have used structured questionnaire methodology to analyze bank managers decision making and efficiency).
[40] For example: Age, martial status, salary, basic education, profession education years of experience of credit manager etc.
[41] For example Basic education, profession education, credit limit, years of experience of credit manager etc.

Questioner C is designed as a more open-ended questionnaire, which analyses the attributes and lending habits of the credit managers of the five major public owned Pakistani Commercial Banks.

4.4.4 Validity of questionnaires

For the primary data, initially the credit management system of each bank was examined. Only a handful of people and branches had the authority to make credit-related decisions and actually give credit and the total of credit managers was one hundred. These credit managers were located in the 6 zonal offices, which had a corporate section that dealt with credit- related decisions. In each of these corporate offices there was a team of 5 or 6 credit managers who jointly approved all the credit. The really big corporate loans were only approved from the Head Office, which was situated in Karachi. Research and interviews were concentrated on Karachi, but before that, all regional corporate offices of the five nationalized commercial banks were visited and the questionnaires filled out and signed by each and every credit manager. Meetings with the Vice-Presidents of the five major commercial banks were arranged and in-depth discussions about the causes of the high ratio of non-performing loans took place. Meeting these busy and high profile bankers was not an easy task. If a particular individual was unavailable, persistently pursuing him or her led to an appointment. Every person connected to dealing with credit was interviewed and the questionnaire filled out and duly signed for authenticity[42].

Credit Managers of the five commercial banks in all the major cities of Pakistan were interviewed including the zonal offices and Head Office in Karachi. The essential strategy in carrying out these questionnaires[43] was to establish a sound relationship of mutual confidence, co-operation and a friendly environment, which would encourage respondents to provide true information. A short and relaxed conversation before the actual questions began was of great assistance in breaking down a respondent's initial

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[42] A logbook with Name, Address and Signatures of each and every credit manager survey is available as evidence.

[43] See Nabi (1995); Geddes (2002); Lee, R.M. (1992); May, T. (1997)

hesitation and encouraged them to talk. The researcher met with respondents at least twice, in some on two or three occasions. This was done to enable the researcher to discuss all aspects of the questionnaires in detail with them. To start with most, respondents were reluctant to disclose much information. Having given a guarantee of confidentiality and anonymity an assurance that the research would only used for academic purpose, their names not being disclosed, they became more talkative and informative. They did however strictly refuse to given names of individuals/companies who had defaulted on these loans or individuals[44] who had pressurized them to give non-performing loans.

Most of them were hesitant to fill out questionnaires themselves. Furthermore it was found that the credit managers did not seem inclined to give long written explanations – partly because they were very busy people and also because culturally they were not used to and were rather wary of being asked to write anything down. They had no objections to being questioned, although in this case it meant reading over the answers and signing the questionnaire. The researcher read out specific questions, filled out the answers in the questionnaires and asked respondents to read it over and sign it[45]. This left no room for vague answers and also overcame the problem of hand written replies that would be difficult to read later. The interview could thus be made more accurate and structured. The information received was computer codeable so that each questionnaire was recorded as soon as it was filled.

It was observed during the pilot questionnaire that the credit manager would prefer filling out a questionnaire with specific options, which they could select or rank in order of preferences, rather than giving written explanations. For this reason quantitative methodology was ideally suited for the population, since specific questions were asked and vague replies could not be accepted. This required the researcher's personal interaction and careful probing with each credit manager. Even then, it was virtually

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[44] Individuals include Top-level management of these banks as well as senior politicians.
[45] A logbook with Name, Address and Signatures of each and every credit manager survey is available as evidence.

impossible to check the authenticity of information. The triangulation process[46] of checking every piece of information was used. Cross checks, on information provided by one credit manager, with another of their colleagues was used. Confidentially and to some extent secrecy were assured to them so that the credit managers could be more honest and open while answering the questioners. A guarantee was also given that the information would be used only for academic purposes. A written non-disclosure agreement[47] was signed with each of the interviewed credit managers. This helped to provide candid, accurate and unbiased information. As a further precaution, the auditors of the five banks were asked to verify that the information provided was consistent with their findings.

4.4.5 Methods used for analyzing the questionnaires

The population size of this research was limited to 100, analysis of the entire data being undertaken fairly quickly and without much difficulty. Appropriate statistical analysis[48] was applied to the data to provide evidence to support the hypothesis, as it was easily understood and explained and supported the research findings.[49] Excel and Mini-tab (software) were used for analysis of numerical data for the purpose of graphic presentation, illustration of this can be seen in the next chapter.

The statistical analysis of Questionnaire A is divided into three parts. The first part of the statistical analysis is a demographic and descriptive analysis of the respondents. The second part is the Correlation Equation Analysis of Questionnaire A, which shows the relationship between the performance of different variables[50] and whether they have influenced the performance of the bank. The third part of the analysis of Questioner A, is the application of Regression Equation using independent and dependent variables. For example, if the years of experience of a credit manager is considered more important in

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[46] (See Black, T.R. 1993; Bryman, 1989)
[47] Copy of Disclosure Agreement is available
[48] (See Sekran Uma 1992; Silverman 1997; Cordin J 1990)
[49] (see for example Gopal K.Kangi 1998; Lyndall G.Steed 1998; Frank Owen 1997)
[50] For example if is any correlation between years of experience as credit manager and the percentage extent of non-performing given.

relation to granting loans in comparison to the number of training courses done by the credit manager?

The analysis of questionnaire B is divided into two parts, the first three questions are analyzed using the chi-square test[51], descriptive statistical methods are used to analyze the results of the rest of the questions.

The questionnaire C is statistically analyzed using the Yule's coefficient of association to measure the degree of association of credit managers in relation to giving secured or unsecured loans.

4.5 Financial data analysis

The second section comprises the financial analysis of the overall performance of the five major public owned Pakistani commercial banks. The nature of the study is "analytical and descriptive" and the type of research is "applied research", as this study was on existing organizations which are the five major public owned banks of Pakistan namely, HBL, MCB, NBP, ABL and UBL. The purpose of this part of the analysis was to determine the extent of non-performing bank loans leading to the banking crisis of the five public owned commercial banks. It shows the affects of the non-performing loans on the over-all profitability of banks. The main emphasis is to ascertain the extent of non-performing loans and to use financial variables to find out how they have affected the performance and lending of these banks. The financial years of 1996 – 1998 are analyzed, because during this period, there was a very high percentage of non-performing bank loans resulting in a deep financial crisis in the five major public owned Pakistani commercial banks.

4.5.1 Collection of financial data

The data obtained for this section is from the audited financial accounts of the five banks in the form of Balance Sheet, Profit & Loss Accounts and overall financial performance indicators provided by these banks in their annual accounts.

Access was provided to their financial accounts but a firm line was drawn to protect the confidentiality of the bank and their clients. It was not possible to collect any accounting information other than the annual published financial accounts. It was surprising that some of these banks had not even published their annual accounts. Since the Government owned and controlled these banks, they did not strictly follow the regulations applying to other financial institutions. The fact that before 1992 financial accounts were not even regularly published, exemplifies the extent of irregularities and mal-practices which had taken place after the nationalization of these banks. Each audited report had to be personally collected from the auditors, as some had yet to published.

4.5.2 Methods used for the analysis of financial data

In the secondary data (for example Balance Sheet & Profit & Loss Accounts) of the five major public owned Pakistani commercial banks the findings were analyzed using financial tools like growth analysis, financial ratios and index numbers[52].

The first part of the financial analysis is based on the balance sheet and profit & loss items such as

- Share capital and Reserves
- Assets
- Deposits
- Advances
- Investments
- Pre-tax Profits
- Profit after tax
- Secured and Unsecured loans
- Provision for non-performing loans
- Written off loans

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[51] Since questions are relation to the percentage extent of non-performing loans
[52] see Dopuch, Revsine. L, 1973;Gill and Johnson,2000; Waters, 2001.

The second part of the financial analysis was conducted to identify and determine the extent of non-performing loans in the five public-owned major commercial banks and their overall performance. The financial ratios applied were: net profit margin, return on total assets (ROA), return on equity (ROE), debt to equity, price earning ratio (P/E ratio), earning per share and base year collection method.

4.6 Conclusion

This chapter has discussed how we have used the survey methodology to investigate the causes for the high percentage of non-performing loans in the Pakistani banking sector. This methodology has not been used before in order to analyze the causes of non-performing loans and banking crises. The methodology focuses on interviews and questionnaires carried out by the researcher directly with the credit managers, who authorized these non-performing loans. The questionnaires are designed to analyze the lending attributes of the credit managers as well as investigate the reasons for the high percentage of non-performing loans leading to the banking crisis. Quantitative methodology and standardized statistical methods[53] are used as the main tool of this research as they are comparable, objective and as reliable as possible. This gives the whole thesis a very unique dimension contributing to literature on non-performing loans worldwide.

[53] (See Ford, Olson 1978; Fraser R. Donald 1998; Ron Jones 1997)

Chapter 5

Analysis of the survey findings

5.1 Introduction

The aim of this chapter is to compare and analyse the reasons behind the high percentage of non-performing bank loans in five Pakistani public owned commercial banks. The data collected is through three different questionnaires[1] (A,B, & C) carried out among the credit managers of these banks.

The chapter consists of *three* sections. The *first* section focuses on the analysis of the findings of questionnaire "A". The *second* and *third* sections contain the analysis of the findings from questionnaires "B" and "C" respectively.

The *first* section analyses the demographic characteristics of the credit managers using questionnaire "A". It statistically compares factors relating to the bank's non-performing loans as well as personal characteristics of the credit managers relating to their banks. It also examines the relationship between the credit managers' personal characteristics within the bank with the non-performing bank loans, the credit limit assigned to the credit managers and non-performing loans recovered using correlation equation. The *second* section analyses the findings of questionnaire "B" which directly addresses the reasons for the non-performing bank loans of the five public-owned commercial banks. The analysis of questionnaire "B" uses descriptive statistical methods to evaluate and highlight the results. The *third* section statistically analyses questionnaire "C" using the Yule's coefficient of association to measure the degree of association of credit managers in relation to the giving of secured or unsecured loans. The aim of this part of it is to investigate the credit lending attributes of the credit managers of the five public owned Pakistani commercial banks. The final section summarises the main findings.

[1] The sample size of the entire three questionnaires is 100, which is the entire population.

5.2 Analysis of questionnaire A

5.2.1 Demographic questions

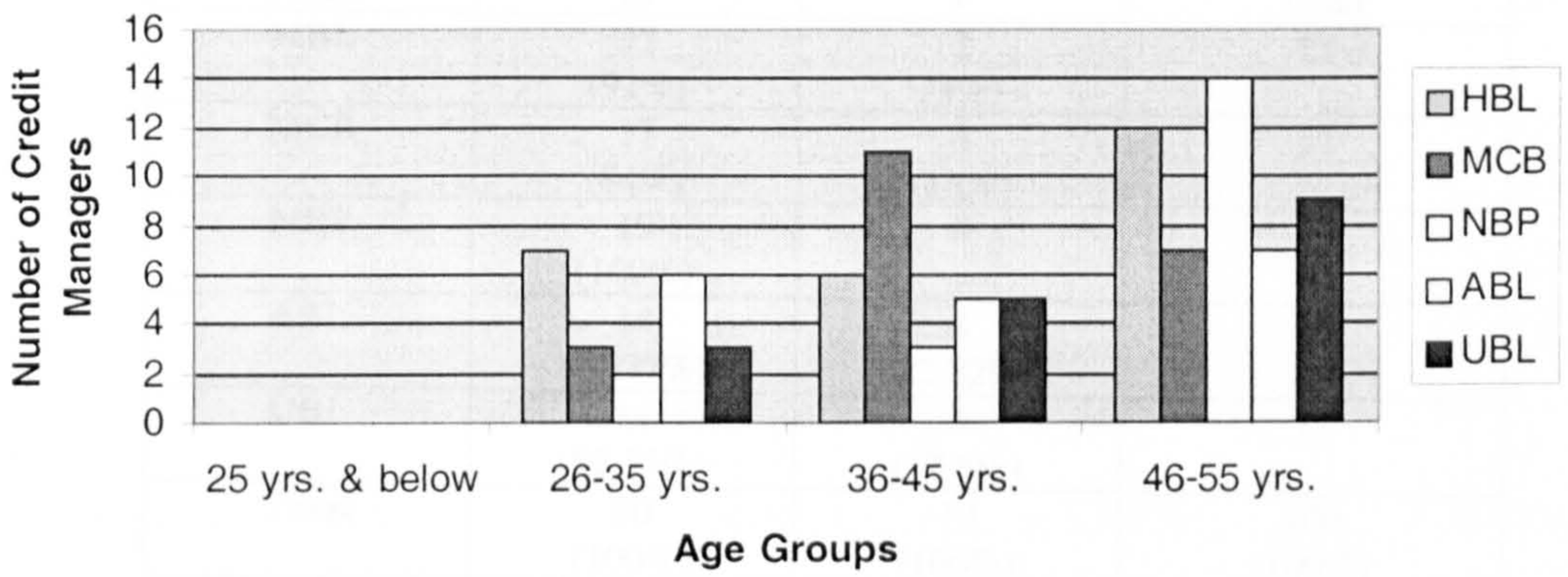
This section analysis the demographic characteristics of the credit managers. Questions included are: the credit manager's age, gender, martial status, their basic education before joining the bank, professional education before joining the bank, length of service within their bank, experience as a credit manager, the number of relevant training courses attended, their monthly salary as credit managers and the communication facilities at their disposal as credit managers. The purpose was to compare the demographic profile of credit managers in the five public owned Pakistani commercial bank.

Table 5.1

Age group of Credit Managers

Banks	Age				
	25 yrs. & below	26-35 yrs.	36-45 yrs.	46-55 yrs.	Total
HBL	0	7 (26%)	6 (24%)	12 (48%)	25
MCB	0	3 (14.28%)	11 (52.38%)	7 (33.33%)	21
NBP	0	2 (10.51%)	3 (15.78%)	14 (73.68%)	19
ABL	0	6 (33.32%)	5 (27.77%)	7 (38.88%)	18
UBL	0	3 (17.64%)	5 (29.41%)	9 (52.94%)	17
Total	0 (100%)	21 (100%)	30 (100%)	49 (100%)	100 (100%)

Figure 5.1



Interpretation: The above diagram shows the demographic age distribution of the credit manager of all the five commercial banks. It can clearly be seen that there is no credit manager under the age of 25. Almost 50 percent of all the credit managers fall within the age group of 46-55 clearly showing that the credit managers are employees with the most experience. It can also be seen that the National Bank of Pakistan has the highest number of credit managers falling between the age of 46-55 whereas MCB has the least number of credit managers falling into this group.

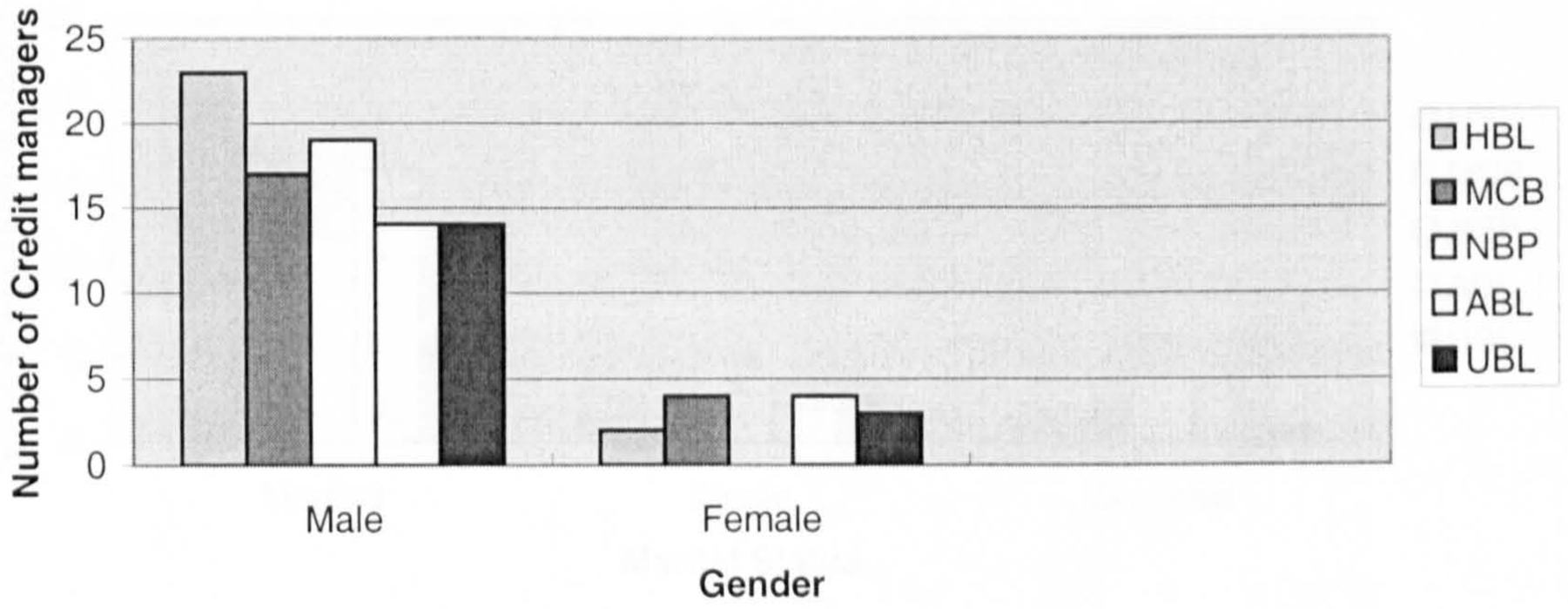
Table 5.2

Gender of Credit Managers

	Sex		
Banks	**M**	**F**	**Total**
HBL	23 (92%)	2 (8%)	25
MCB	17 (81%)	4 (19%)	21
NBP	19 (100%)	0	19
ABL	14 (77.77%)	4 (22.22%)	18
UBL	14 (82.35%)	3 (17.6%)	17
Total	90 (100%)	10 (100%)	100 (100%)

Figure 5.2

Comparison of Gender of Credit Managers

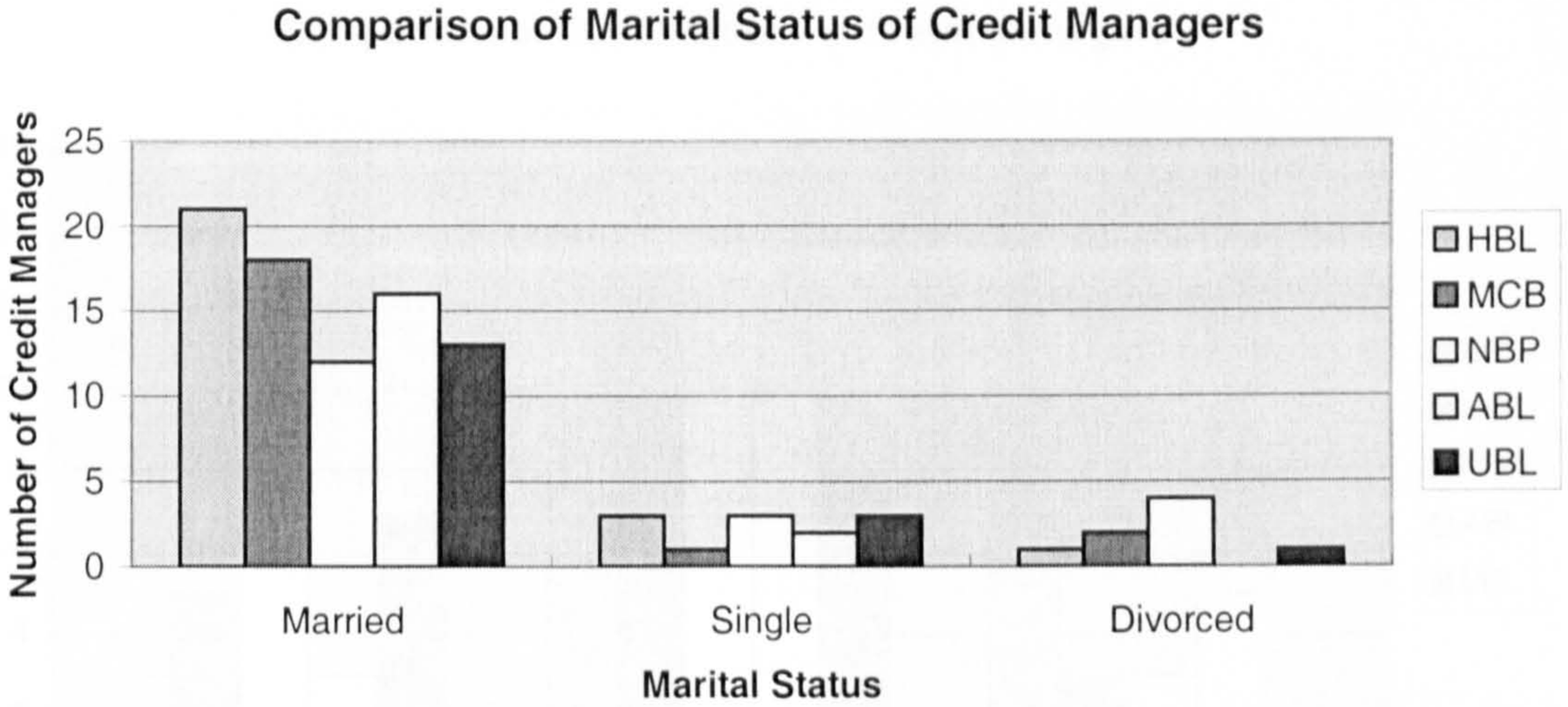


Interpretation: The above diagram shows the demographic gender distribution of the credit manager of all the five commercial banks. It can be clearly seen that only ten percent of the entire credit managers interviewed were women. This trend clearly shows that there are very few women working as credit managers in Pakistan. The highest percentage of women credit managers lies with ABL, which has 22 percent whereas NBP has no female credit manager.

Table 5.3
Marital status of Credit Managers

Marital Status				
Banks	Married	Single	Divorced	Total
HBL	21 (84%)	3 (27%)	1 (4%)	25
MCB	18 (85.71%)	1 (4.76%)	2 (9.52%)	21
NBP	12 (63.15%)	3 (15.7%)	4 (21%)	19
ABL	16 (88.88%)	2 (11.11%)	0	18
UBL	13 (76.47%)	3 (17.60%)	1 (5.88%)	17
Total	80 (100%)	12 (100%)	8 (100%)	100 (100%)

Figure 5.3

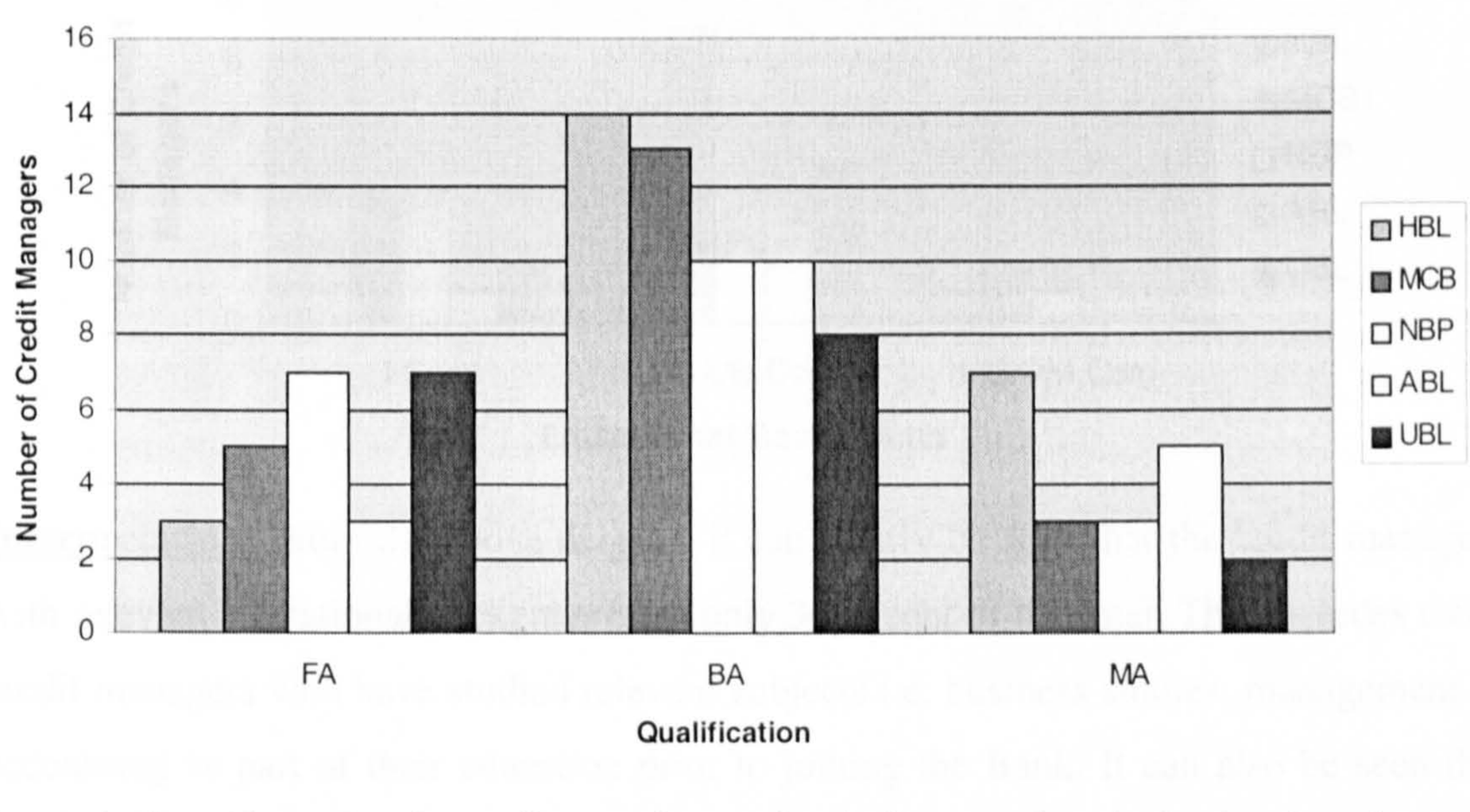


Interpretation: The above diagram shows the demographic marital status of credit managers of the five commercial banks. It can clearly be seen that eighty percent of the entire credit managers interviewed were married. This trend clearly shows a strong Pakistani cultural and social setup where there is less divorce and very few single above the age of thirty. HBL has the highest percentage 84 percent of married credit managers whereas NBP has the lowest percentage 63.15 percent, with the highest percentage of both single 15.7 percent and divorced credit managers 21percent.

Table 5.4
Basic qualifications of Credit Managers

Basic Qualifications				
Banks	FA	BA	MA	Total
HBL	3 (12%)	14 (56%)	7 (28%)	25
MCB	5 (23.80%)	13 (61.90%)	3 (14.21%)	21
NBP	7 (36.86%)	10 (52.63%)	3 (15.78%)	19
ABL	3 (16.66%)	10 (55.55%)	5 (27.77%)	18
UBL	7 (41.17%)	8 (47.05%)	2 (11.7%)	17
Total	25 (100%)	55 (100%)	20 (100%)	100

Figure 5.4



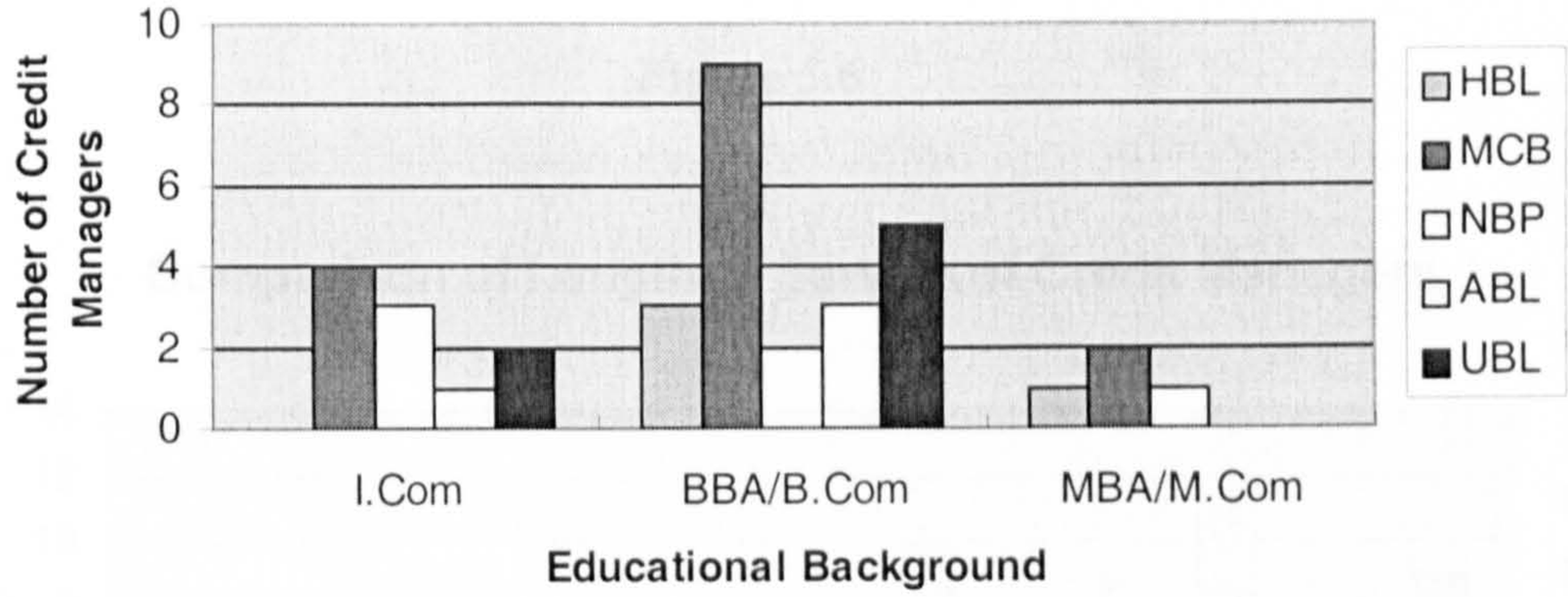
Interpretation: From the above diagram it can clearly be seen that the basic education or entry-level educational qualification of most credit managers at the five commercial banks was BA whereas 25precent of credit managers held only by FA degree. Only 20percent of credit managers had a master's degree when they joined their respective banks. This trend clearly shows a lack of education of credit managers at these five commercial banks.

Table 5.5
Relevant educational background of Credit Managers

Educational Background				
Banks	I. Com	BBA/B.Com	MBA/M. Com	Total
HBL	0	3 (12%)	1 (4%)	4 (25%)
MCB	4 (19%)	9 (42.8%)	2 (9.527%)	15 (21%)
NBP	3 (15.78%)	2 (10.51%)	1 (5.26%)	6 (19%)
ABL	1 (5.55%)	3 (16.66%)	0 (27.77%)	4 (18%)
UBL	2 (11.76%)	5 (29.41%)	0 (29.41%)	7 (17%)
Total	10 (100%)	22 (100%)	4 (100%)	100 (100%)

Figure 5.5

Comparison of Relevant Educational Background of Credit Managers



Interpretation: From the above diagram it can clearly be seen that the credit managers with relevant educational background are only 36percent of the total. This includes those credit managers who have studied relevant subjects i.e. business studies, management or accounting as part of their education prior to joining the Bank. It can also be seen that ABL and UBL has no credit manager with a MBA[2]. The highest percentage of credit managers with relevant background is MCB. Therefore, it can clearly be seen that the credit managers of all the five commercial banks had very little business or accounting

[2] This lack relevant educational is even further highlighted later on in this chapter when credit managers them selves admit that their knowledge and lack of proper training hinders their ability to asses loans properly leading to a high proportion non-performing loans.

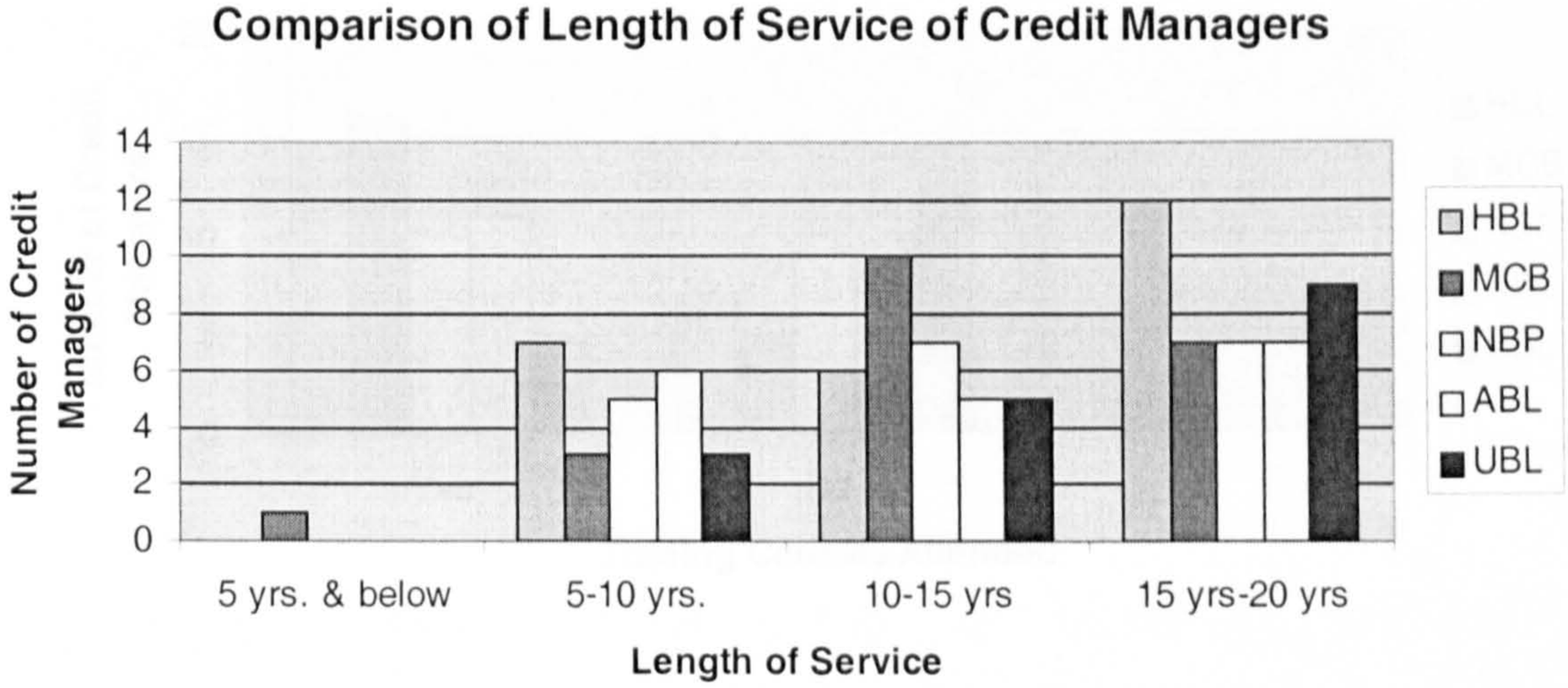
related knowledge, which is essential for evaluating client's financial statements when giving loans.

Table 5.6

Length of service in present organization of Credit Managers

	Length of Service				
Banks	**5 yr. & below**	**5-10 yr.**	**10-15 yr.**	**15 yr. - 20 yr.**	**Total**
HBL	0	7 (28%)	6 (24%)	12 (48%)	25
MCB	1 (4.76%)	3 (14.28%)	10 (47.6%)	7 (33.33%)	27
NBP	0	5 (26.31%)	7 (36.85%)	7 (36.85%)	19
ABL	0	6 (33.33%)	5 (27.77%)	7 (38.88%)	18
UBL	0	3 (17.64%)	5 (29.41%)	9 (52.84%)	17
Total	1 (100%)	24 (100%)	33 (100%)	42 (100%)	100 (100%)

Figure 5.6



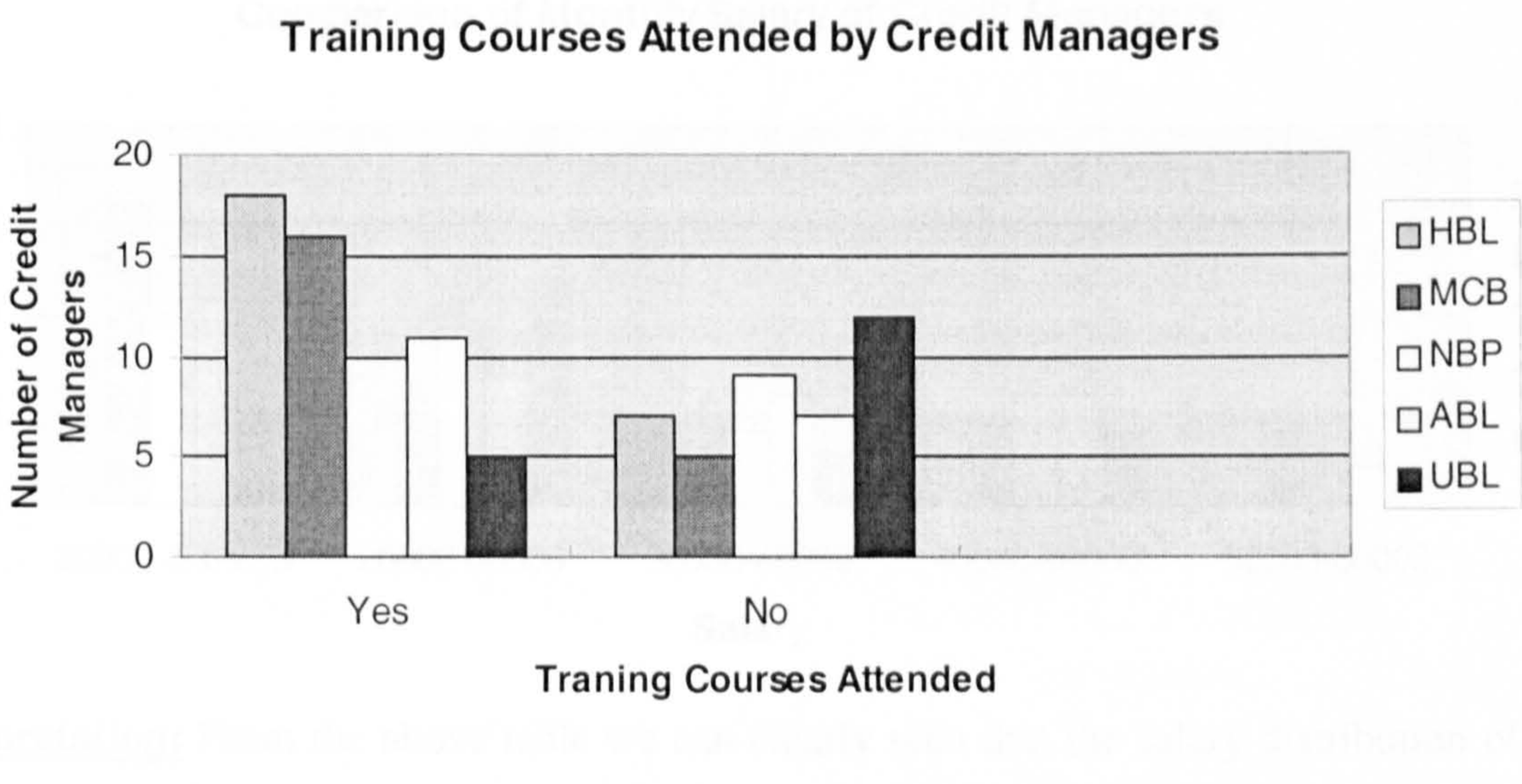
Interpretation: The above diagram shows the length of service of credit managers of all the five commercial banks within their respective banks. It can clearly be seen that there is only 1 credit manager who has served less than 5 years in his bank. Whereas. 42 percent of all the credit managers have served in their bank for more than 15 years. It can

also be seen that UBL has 52.84 percent of their credit managers, who having 15 years or more of service in the bank followed by HBL, ABL, NBP and MCB.

Table 5.7
Training courses attended by Credit Managers

	Training Courses attended		
Banks	Yes	No	Total
HBL	18 (72%)	7 (28%)	25
MCB	16 (76.2%)	5 (23.8%)	21
NBP	10 (52.63%)	9 (47.36%)	19
ABL	11 (61.10%)	7 (38.86%)	18
UBL	5 (29.41%)	12 (70.58%)	17
Total	60 (100%)	40 (100%)	100 (100%)

Figure 5.7



Interpretation: From the above diagram it can be clearly seen that only 60 percent of the credit managers in the five commercial banks have had any kind of relevant training courses. It can also be seen that MCB has the highest percentage 76.2 percent of credit managers who have had relevant trainings. In comparison to that only 29.41 percent of

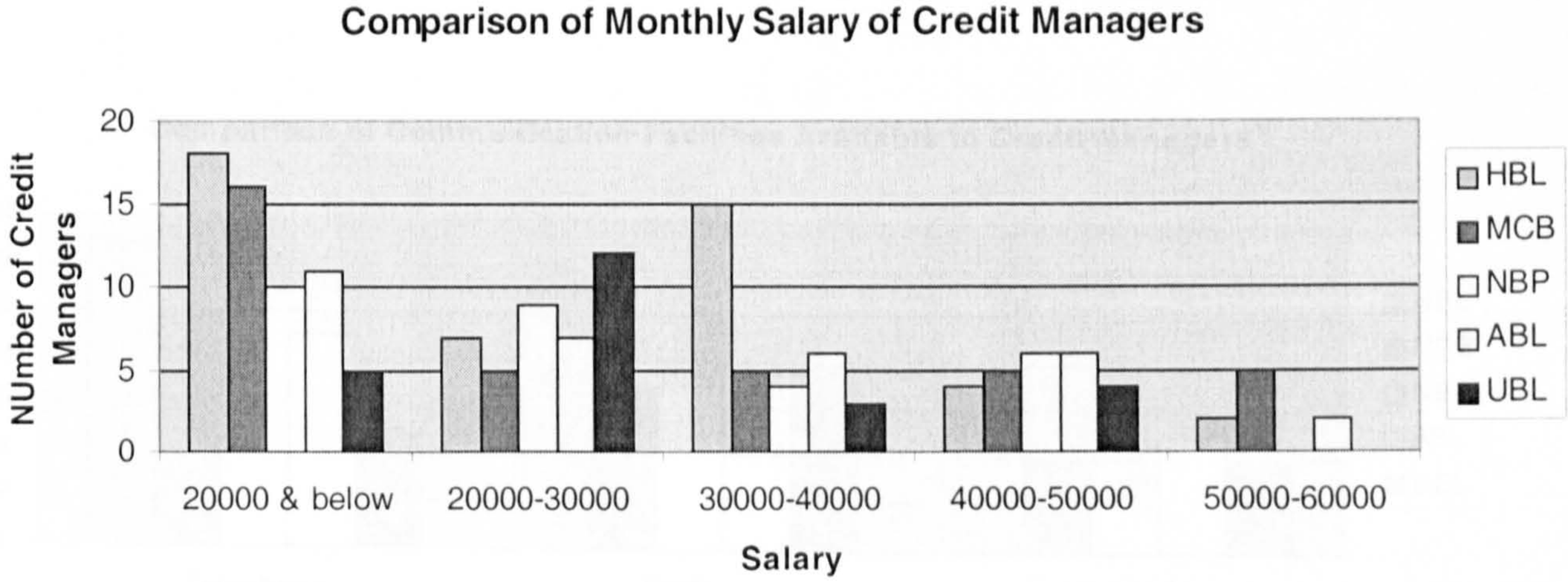
UBL's credit managers have had any sort of relevant training to enhance their abilities as credit managers.

Table 5.8

Monthly salary of Credit Managers

	Salary					
Banks	20000 & below	20000 –30000	30000-40000	40000-50000	50000- 60000	Total
HBL	0	4 (16%)	15 (60%)	4 (16%)	2 (8%)	25
MCB	0	6 (28.57%)	5 (23.80%)	5 (23.80%)	5 (23.80%)	21
NBP	2 (10.52%)	7 (36.84%)	4 (21.05%)	6 (31.57%)	0	19
ABL	0	4 (22.22%)	6 (33.33%)	6 (33.33%)	2 (11.11%)	18
UBL	3 (17.64%)	7 (41.17%)	3 (17.64%)	4 (23.52%)	0	17
Total	5 (100%)	28 (100%)	33 (100%)	25 (100%)	9 (100%)	100 (100%)

Figure 5. 8



Interpretation: From the above table we can clearly seen that the salary distribution of credit managers of the five commercial banks. This shows that very few credit managers who hold the decision-making power to give loans of millions of Pakistani rupees, are being paid not more than 50,000 rupees. In fact only 9 percent of the entire credit managers interviewed were being paid more than 50,000 rupees. . Indeed NBP and UBL have no credit manager who is being paid more than 50,000 rupees. It can also be seen that 33 percent of the credit managers are being paid between 30,000-40,000 rupees and

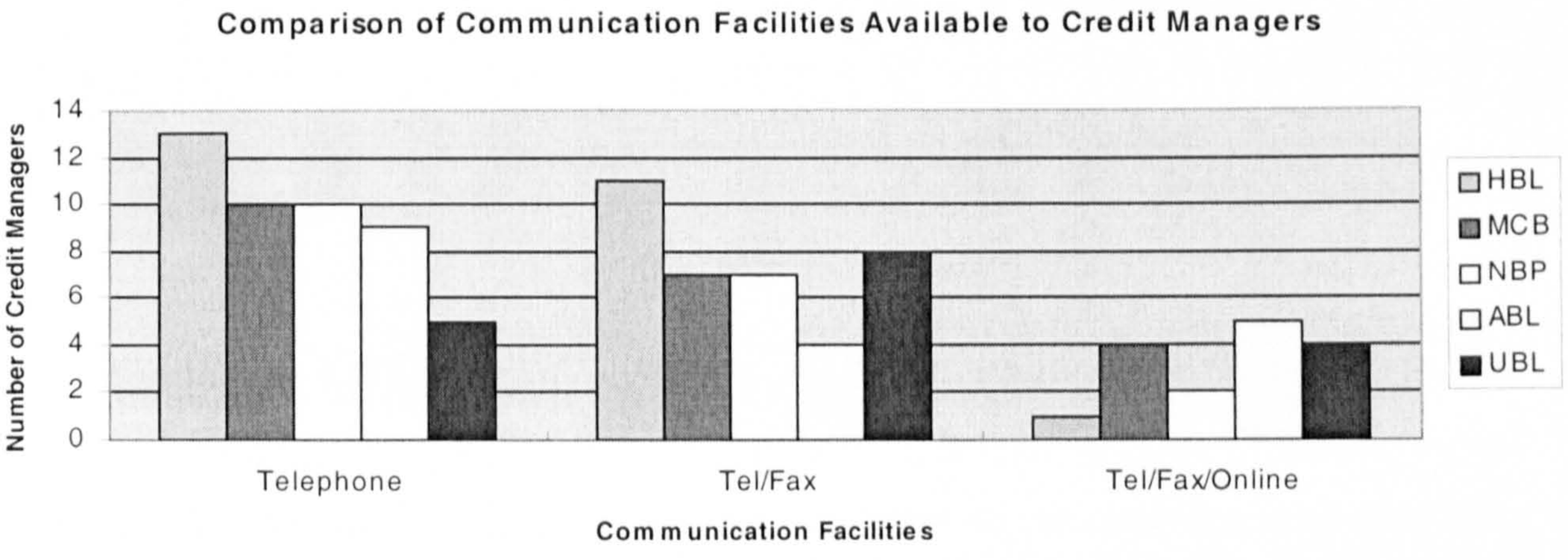
only 25 percent of them are paid 40,000-50,000 rupees, which clearly illustrates how low the credit managers are paid[3].

Table 5.9

Communication facilities at disposal of Credit Managers

Communication Facilities				
Banks	Telephone	Tel/Fax	Tel/Fax/Online	Total
HBL	13 (52%)	11 (44%)	1 (4%)	25
MCB	10 (47.61%)	7 (33.33%)	4 (19%)	21
NBP	10 (52.63%)	7 (36.81%)	2 (10.52%)	19
ABL	9 (50%)	4 (22.22%)	5 (27.77%)	18
UBL	5 (29.41%)	8 (47%)	4 (23.52%)	17
Total	47 (100%)	37 (100%)	16 (100%)	100 (100%)

Figure 5.9



Interpretation: The above diagram is clearly shows the communication facilities being provided to credit managers of the five commercial banks. It can be seen that 47percent of all the credit managers have only telephone facilities available to them. Only 16 percent of the credit managers have all the modern facilities (Tel/Fax/Internet) at their disposal. It can

[3] This fact has also been highlighted by credit managers in the interviews conducted and is discussed later in this chapter as major of reason behind corruption and personal interest of credit managers.

also see that ABL has the largest percentage 27.77percent of credit managers who have all the modern facilities available to them, in comparison to HBL who has only 4 percent of their credit managers having all the modern facilities. This clearly shows that the communication facilities provided to the credit managers within the Pakistani public -owned commercial banks, are very basic and limited.

5.2.2 Statistical comparison

The aim of this section is to statistically compare and analyse factors relating to the non-performing bank loans in the bank. The personal characteristics of the credit managers in relation to the bank decisions will also be studied. The relevant factors are: the extent of non-performing bank loans, the extent of recovery of the non-performing bank loans, the credit limit assigned to the credit managers, the length of service within their bank and the experience as credit managers. Statistically, comparisons are made by using arithmetic mean standard deviation and co-efficient of variance.

Table 5.10

	Credit limit for credit managers		
	X	S	CV
HBL	268	280	104.29%
NBP	421	390	92.63%
MCB	195	175	90%
UBL	382	384.40	100.62%
ABL	189	171.10	90.52%

(In thousands)

Note:

X = Arithmetic Mean of the Credit Limit Available to Credit Managers
S = Standard Deviation of the Credit Limit Available to Credit Managers
CV = Co-efficient of Variance of the Credit Limit Available to Credit Managers

As it can be seen from the table, the National Bank of Pakistan (NBP) has the highest average amount of rupees available at every credit managers' disposal. If decisions were made keeping the arithmetic mean mind, it would be assumed that throughout the National Bank of Pakistan , credit managers are in a position to approve credit worth 421,000 rupees. In fact that would be incorrect, hence is supported and supplemented by measures of dispersion. On the basis of Standard Deviation and Co-efficient of Variance, Muslim Commercial Bank (MCB) credit managers are the most consistent throughout the bank where limits of credit approval by credit managers is concerned, in comparison with all the other banks. Since the variation seen between different amounts of credit limits

available to their credit managers is the least. It can be seen that Allied Bank Limited (ABL) is the second best where the variation of credit limits assigned to credit managers is concerned, followed by National Bank of Pakistan, United Bank Limited and Habib Bank Limited with the highest dispersion and co-efficient of variance.

To conclude we can say that on the whole the levels of dispersions are very high among all banks leading to inequality and resentment among credit managers. Although recently privatised banks, which include MCB and ABL, have the least dispersion. Therefore the table clearly shows that some credit managers are authorised very little credit limit while some have been given very large limits. Since only a few credit managers in every bank are responsible for giving the majority of credit therefore the probability of corruption[4] and personal interest rises.

Table 5.11

	Experience as credit manager		
	X	S	CV
HBL	2.88	1.92	66.67%
NBP	2.95	2.15	72.88%
MCB	2	1.90	95%
UBL	4.24	1.99	46.93%
ABL	3.11	1.84	59.16%

Note:

X = Arithmetic Mean of the Years of Experience of the Credit Managers
S = Standard Deviation of the Years of Experience of the Credit Managers
CV = Co-efficient of Variance of the Years of Experience of the Credit Managers

As it can be seen from the table, that United Bank Limited (UBL) has the highest average years of experience as a credit manager. As far as the arithmetic mean, it is unable to give a complete picture of the whole data. Hence is supported and

[4] This fact has also been highlighted by credit managers in the interviews conducted and is discussed later in this chapter as major of reason behind corruption and personal interest of credit managers. Only a few credit manager's have all the decision making power of giving loans in the entire bank.

supplemented by measures of dispersion. On the basis of Standard Deviation and/or Co-efficient of Variance, that UBL has the least dispersion where years of experience of credit managers is concerned. Allied Bank Limited (ABL) is the second best where the number of years of experience as a credit manager is concerned followed by Habib Bank Limited, National Bank of Pakistan and then Muslim Commercial Bank having the highest dispersion and co-efficient of variance. From the findings it can be seen that, although the credit managers at United Bank Limited had the highest number of years of experience between them but they also had the highest rate of default[5] among all the five public owned banks.

Therefore it cannot be concluded that credit managers at UBL, although having the most experience, but they had either their personal interests in mind or had their decisions influenced by external political pressures [6], leading to an unusually high proportion of non-performing loans. In comparison, the credit managers at Muslim Commercial Bank had comparatively less experience but since its privatisation in 1993-94 had the least number non-performing loan[7].

Table 5.12

	Number of courses attended		
	X	S	CV
HBL	2.0	1.58	79%
NBP	3.16	1.68	53.16%
MCB	1.95	1.53	78.46%
UBL	3.05	1.80	59%
ABL	3.56	1.72	48.31%

Note:

X = Arithmetic Mean of the Number of Courses Attended by Credit Managers
S = Standard Deviation of the Number of Courses Attended by Credit Managers
CV = Co-efficient of Variance of the Number of Courses Attended by Credit Managers

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[5] UBL has the highest percentage of non-performing loans among all banks as indicated in Chapter 3 and can also be seen from the bank's balance sheets, which are available on request.

[6] Credit managers of UBL during their interviews have also indicated these reasons and the results can be seen in the later part of this chapter.

[7] MCB has the lowest percentage of non-performing loans among all banks as indicated in Chapter 3 and also can be seen from the bank's balance sheets, which are available on request.

As it can be seen from the table above that Allied Bank Limited (ABL) has the highest average number of courses attended by their credit managers. As arithmetic mean is in itself is unable to give a complete picture of the whole data, it is supported and supplemented by measures of dispersion. On the basis of Standard Deviation and/or Co-efficient of Variance, that ABL is the most consistent of the public owned banks, since the variation seen between the number of courses attended by different credit managers is also the least. United Bank Limited (UBL) is the second best where the number of courses attended by credit managers is concerned, followed by National Bank of Pakistan, Muslim Commercial Bank and Habib Bank Limited. From this it can be seen that, although the number of courses attended by UBL credit managers is, only second to Allied Bank Limited, the extent of default is the highest[8] at UBL.

Therefore it can be concluded that credit managers at UBL were better trained, in comparison to other banks but due to personal interest, corruption and external political pressures[9] an unusually high proportion of defaulted loans occurred. In comparison it can also be seen that although credit managers at MCB had comparatively less experience and had attended fewer courses, since its privatisation in 1993-94, the extent of non-performing loans were much less[10].

Table 5.13

	Years of service in the bank		
	X	S	CV
HBL	10.60	4.46	42.07%
NBP	10.53	4.04	38.37%
MCB	10.95	3.39	30.95%
UBL	14.35	7.56	52.68%
ABL	10.28	4.36	42.41%

[8]UBL has the highest percentage of non-performing loans among all banks as indicated in Chapter 3 and can also be seen from the bank's balance sheets, which are available on request.

[9] Credit managers of UBL during their interviews have also indicated these reasons and the results can be seen in the later part of this chapter.

[10] MCB has the lowest percentage of non-performing loans among all banks as indicated in Chapter 3 and also can be seen from the bank's balance sheets, which are available on request.

Note:
X = Arithmetic Mean of the Year of Service in the bank by Credit Managers
S = Standard Deviation of the Year of Service in the bank by Credit Managers
CV = Co-efficient of Variance of the Year of Service in the bank by Credit Managers

As can be seen from the table above, United Bank of Limited (UBL) has the highest average number of years of service from credit managers. Again an arithmetic mean is unable to give a complete picture of the whole data, hence is supported and supplemented by measures of dispersion. On this basis of Standard Deviation and Co-efficient of Variance, it can be seen that Muslim Commercial Bank (MCB) is the most consistent of the banks, since the variation between the years of service among different credit managers is the least. National Bank of Pakistan is the second best followed by Habib Bank Limited, Allied Bank Limited and then UBL which has the highest dispersion and co-efficient of variance. Hence we can conclude that dispersions of the year of service within the bank are directly proportional to the non-performing bank loans, since UBL has the highest dispersion as well as highest percentage on non-performing loans.

Table 5.14

	Non-performing loans		
	X	S	CV
HBL	6.08	3.49	57.40%
NBP	5.37	2.75	51.21%
MCB	5.80	3.21	55.51%
UBL	7.82	5.29	67.64%
ABL	6.45	2.91	45.10%

Note:
X = Arithmetic Mean of the Number of Non-performing loans
S = Standard Deviation of the Number of Non-performing loans
CV = Co-efficient of Variance of the Number of Non-performing loans

From the above table it can be seen that according to the credit managers questioned, five Pakistani public-owned commercial banks have a very proportion of non-performing

loans in their loan portfolios. The highest extent of non-performing loans in their loans portfolio is in United Bank Limited (UBL), which has about 67.64% of their entire loans portfolio as doubtful or non-performing loans. Habib Bank Limited has the second highest percentage of non-performing loans 57.40 percent followed by 55.51 percent of Muslim Commercial Bank, 51.21 percent of National Bank of Pakistan and 45.1 percent of Allied Bank Limited respectively[11].

Table 5.15

	Non-performing loans recovered		
	X	S	CV
HBL	5.60	3.33	59.46%
NBP	6.84	3.42	50%
MCB	5.95	2.59	43.52%
UBL	7.11	5.89	82.84%
ABL	6.38	2.87	44.98%

Note:
X = Arithmetic Mean of the Number of Non-performing loans recovered by the banks
S = Standard Deviation of the Number of Non-performing loans recovered by the banks
CV = Co-efficient of Variance of the Number of Non-performing loans recovered by the banks

As can be seen from the table above, that United Bank Limited (UBL) has made the best recovery of their non-performing loans. On the other hand after using the measures of dispersion, it can be clearly seen that Muslim Commercial Bank (MCB) has made the best recovery of their non-performing loans[12]. This is closely followed by Allied Bank Limited then National Bank of Pakistan, Habib Bank Limited and United Bank Limited. UBL in fact has the highest arithmetic mean but also has the highest dispersion and

[11] The figures can be verified from the financial statement of the five Pakistani public owned commercial banks which are available on request.
[12] The non-performing loan recovery of each bank has indicated in Chapter 3 and also can be seen from the bank's balance sheets, which are available on request.

therefore has managed to recover the least amount from its doubtful loans[13]. Here it can be seen that both the privatised banks MCB and ABL have had the highest recovery rate since they have been more efficient in pressurising their defaulters to repay the loans. While in comparison other banks, which are still under government's control, have recovered fewer loans, since defaulters and external political parties would easily influence them parties thus slowing down and reducing their extent of recovery[14].

[13] UBL has the highest percentage of non-performing loans and the lowest recover of defaulted loans this has been indicated in chapter 3 as well as from its balance sheet & P &L accounts, which are available on request.

[14] Credit managers of banks during their interviews have also indicated these reasons for a low recovery of non-performing loans and the results can be seen in the later part of this chapter.

5.2.3 Correlation analysis of questionnaire A

The aim is to examine the relationship between the credit managers' personal characteristics and non-performing bank loans, recovered bank loans and credit limit assigned to credit managers respectively. For the purpose of analysis the full sample of one hundred respondent, to questionnaire "A" has been utilised with critical value 5 percent and 98 degrees of freedom.

Table 5.16

Correlation analysis of questionnaire A

Hypothesis	Variables	Correlation Coefficient (r)	Calculated (T)[15] Value is	Conclusion
H1	Year of Service & Non-Performing Loans	0.2702	2.8	Reject
H2	Courses Attended & Non-Performing Loans	0.10489	1.04	Accept
H3	Years of Experience as credit manager & Non-Performing Loans	0.2458	2.59	Reject
H4	Year of Service & Credit Limit	0.0843	0.841	Accept
H5	Courses Attended & Credit Limit	0.0577	0.573	Accept
H6	Years of Experience as credit manager & Credit Limit	0.0945	0.943	Accept
H7	Year of Service & Recovered Loans	0.3157	3.47	Reject
H8	Courses Attended & Recovered Loans	0.1375	1.387	Accept
H9	Years of Experience as manager & Recovered Loans	0.2775	2.98	Reject

Note: Critical Value at 5% (98 Dof) = 1.98 ,

Interpretation:
From the above table we can conclude the following analysis:

Ho(1): There is no correlation between years of service of credit managers and non-performing loans i.e. $r = 0$.

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[15] $T = \frac{\quad}{\sqrt{\quad}}$

Conclusion: Since the calculated **(T) Value = 2.88** falls outside the region of acceptance, we will therefore *reject the hypothesis* since we can clearly see that there is correlation between the years of service of credit managers and non-performing loans.

Ho(2): There is no correlation between courses attended by credit managers and non-performing loans i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 1.04** falls within the region of acceptance, we will therefore *accept the hypothesis.* Hence we can see clearly that there is no correlation between the courses attended by credit managers and non-performing loans.

Ho(3): There is no correlation between years of experience as credit manager and non-performing loans i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 2.59** falls outside the region of acceptance, we will therefore *Reject the hypothesis.* Hence we can see there is correlation between years of experience as credit manager and non-performing loans.

Ho(4): There is no correlation between year of service of credit managers and credit limit i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 0.841** falls within the region of acceptance, we will therefore *accept the hypothesis.* We can see that there is no correlation between the years of service of credit managers and credit limit assigned to the credit managers.

Ho(5): There is no correlation between courses attended by credit managers and credit limit i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 0.573** falls within the region of acceptance, we will therefore *accept the hypothesis*. Since we can clearly see that there is no correlation between courses attended by credit managers and credit limit assigned to the credit managers.

Ho(6): There is no correlation between years of experience as credit manager and credit limit i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 0.943** falls within the region of acceptance, we will therefore *accept the hypothesis.* We can see that there is correlation between the years of experience as credit managers and credit limit assigned to the credit managers.

Ho(7): There is no correlation between year of service of credit managers and recovered loans i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 3.47** falls outside the region of acceptance, we will therefore *Reject the hypothesis.* Hence we can see that there is correlation between the years of service of credit managers and recovered loans.

Ho(8): There is no correlation between courses attended by credit managers and recovered loans i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 0.05** falls within the region of acceptance, we will therefore *accept the hypothesis.* We can see that there is no correlation between the courses attended by credit managers and recovered loans.

Ho(9): There is no correlation between experience as credit manager and recovered loans i.e. r = 0.

Conclusion: Since the calculated **(T) Value = 2.98** falls within the region of acceptance, we will therefore *Reject the hypothesis.* Hence we can clearly see that there is correlation between the years of experience as credit managers and recovered loans.

Summary:

From the table 5.16 and interpretation we can summarise that while assigning the credit limit to credit managers, their experience as credit manager and years of service within the bank, as well the number of training courses attended were ignored. We see that there is clearly no correlation between the YOS, CA and YOE with credit limit and therefore

the hypothesis of no correlation is accepted. Therefore it can be assumed that credit limits were assigned based on either personal contacts or favouritism[16] and not on merit and experience. We can also see that courses attended (CA) has no correlation with any of the other variables this illustrates that within the five Pakistani commercial banks there are very few refresher courses within the bank and they are not given any importance[17].

On the other hand we can see that years of service within the bank (YOS) and years of experience as a credit manager (YOE) have significant correlation with non-performing bank loans (NPL) and non-performing bank loans recovered (RL). This is consistent to all the logical and theoretical explanations, since we would assume the credit managers with more years of service as well as more experience, would be able to recover more non-performing loans from the defaulters and therefore the relationship would be positive.

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[16] Credit managers throughout the research have highlighted this favoritism since some credit managers were assigned very large credit limits while others had no or very little credit limit. In fact credit managers repeatedly in their discussions have also pointed this out.

[17] We can also see from the earlier analysis that only 60% of the credit managers of the five Pakistani public owned commercial have attended a refresher course during their time of service within the banks where the average years of service is between 15-20 years.

5.3 Analysis of questionnaire B

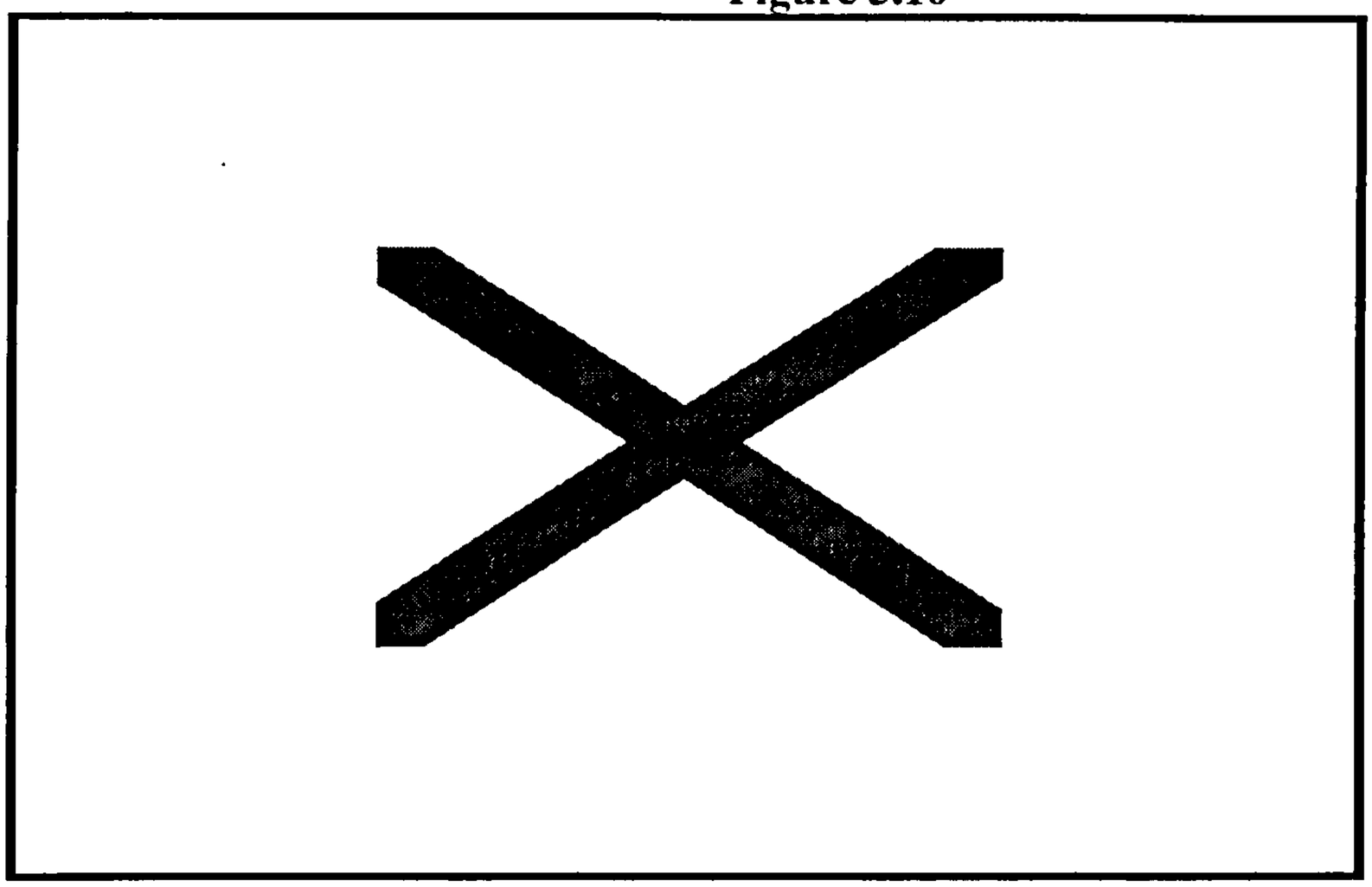
The aim of this section is to analyse the findings of questionnaire "B" which directly addresses the reasons for non-performing bank loans of the five public owned commercial banks. The analysis of questionnaire "B" is carried out from the full sample of 100 credit managers. The respondents are asked to choose the most suitable option among different options given. Some questions have 3-5 options while some questions have only a Yes/No option. Also there are four questions in which the respondent is asked to rank in order of their preference. The analysis of questionnaire "B" uses descriptive statistical methods to analyse and highlight the results.

Q1 To what extent have non-performing loans affected the performance of your bank?

Table: 5.17

Performance of the bank in relation to non-performing bank loans				
Banks	**High**	**Medium**	**Low**	**TOTAL**
HBL	12	10	3	25
MCB	10	8	3	21
NBP	12	5	2	19
ABL	11	6	1	18
UBL	13	3	1	17
TOTAL	58 (100%)	32 (100%)	10 (100%)	100 (100%)

Figure 5.10



Interpretation: The above table shows that 58 percent of the credit managers of Pakistani commercial banks believe that non-performing bank loans have affected the performance of their bank. In fact only 10 percent of the credit managers actually believe that non-performing loans have not affected the performance of their bank. This clearly shows that credit managers believe that non-performing bank loans have greatly affected the performance of their bank.

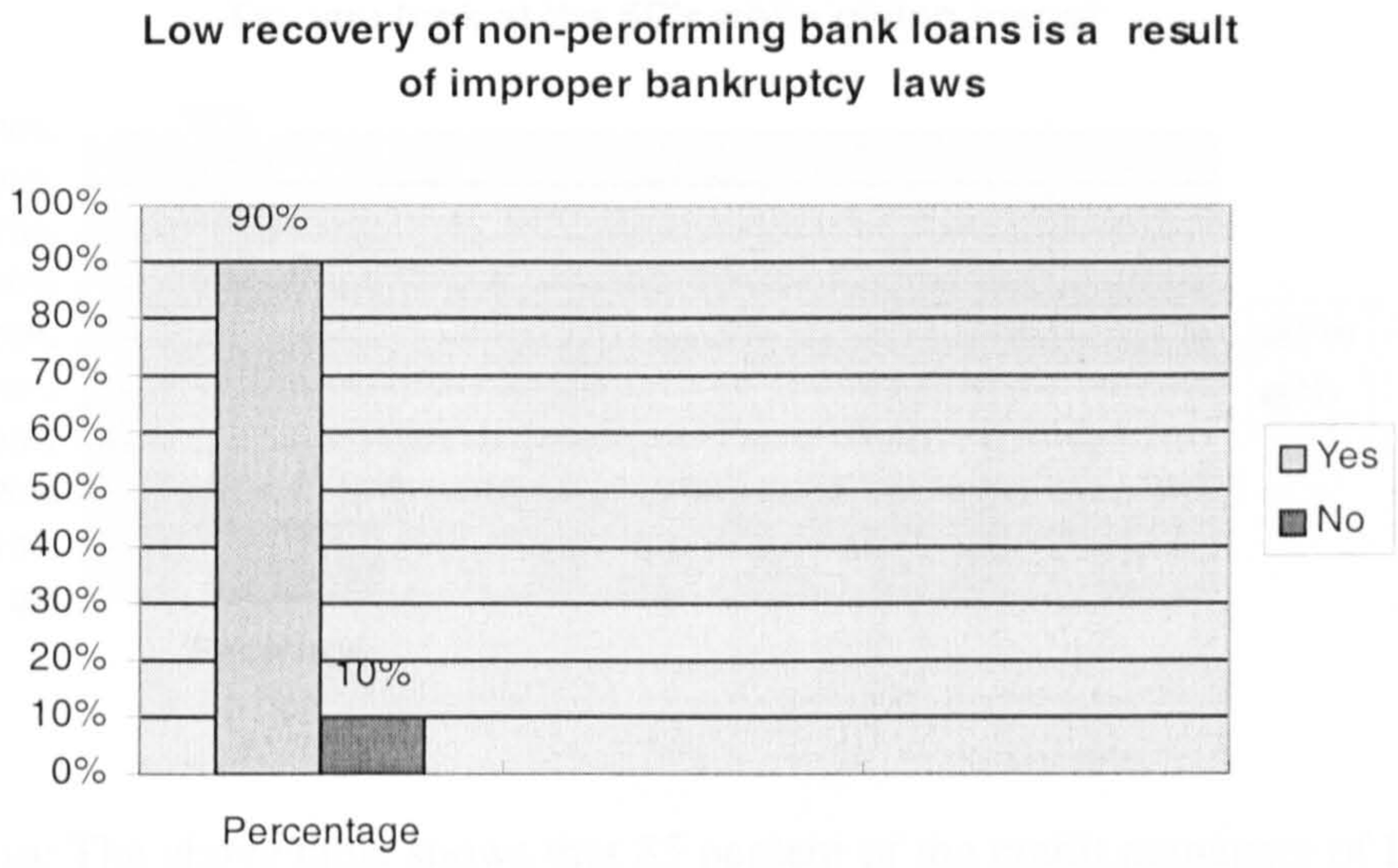
Q2 Do you think that the reason for very low recovery of non-performing bank loans is a result of improper bankruptcy laws?

Table: 5.18

Low recovery of non-performing bank loans is a result of improper bankruptcy laws

	Frequency	Percentage	Rank Order
Yes	90	90%	1
No	10	10%	2
Total	100	100%	

Figure 5.11



Interpretation: The above table shows that 90 percent of the credit managers of Pakistani commercial banks indicate that one of the main reasons for the very low recovery of defaulted loans is a result of improper banking laws in Pakistan. Accordingly, the credit managers Pakistani banking laws are unable to protect the interests of the banks that lend money therefore encouraging borrowers to borrow large amounts of money and not repay them.

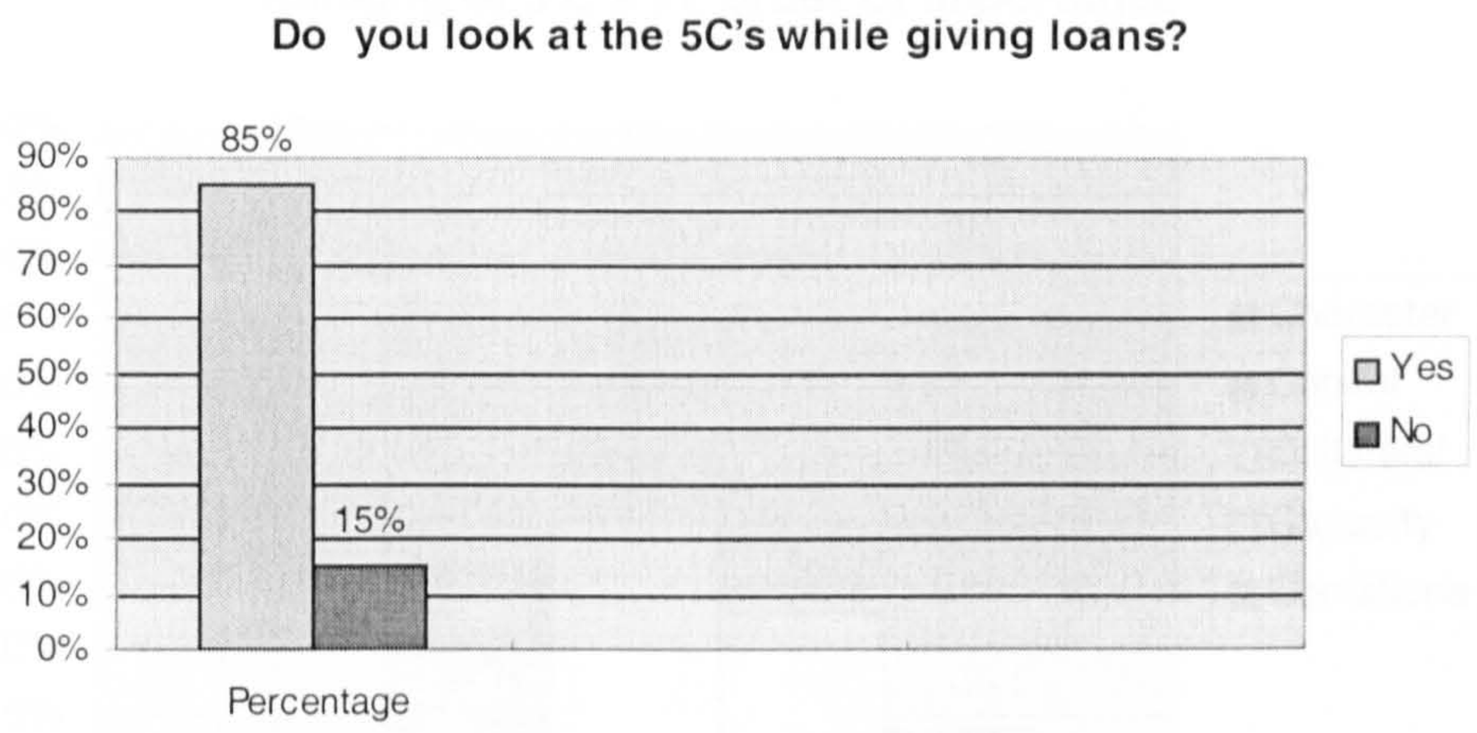
Q3 Do you look at all the 5 C's while you are giving loans?

Table: 5.19

Do you look at all the 5 C's while you are giving loans?

	Frequency	Percentage	Rank Order
Yes	85	85%	1
No	15	15%	2
Total	100	100%	

Figure 5.12



Interpretation: The above table shows that 85 percent of the credit managers of Pakistani commercial banks look into all the five Cs while giving loans. While 15 percent look at only one of the 5Cs and disregard the majority of them while giving loans.

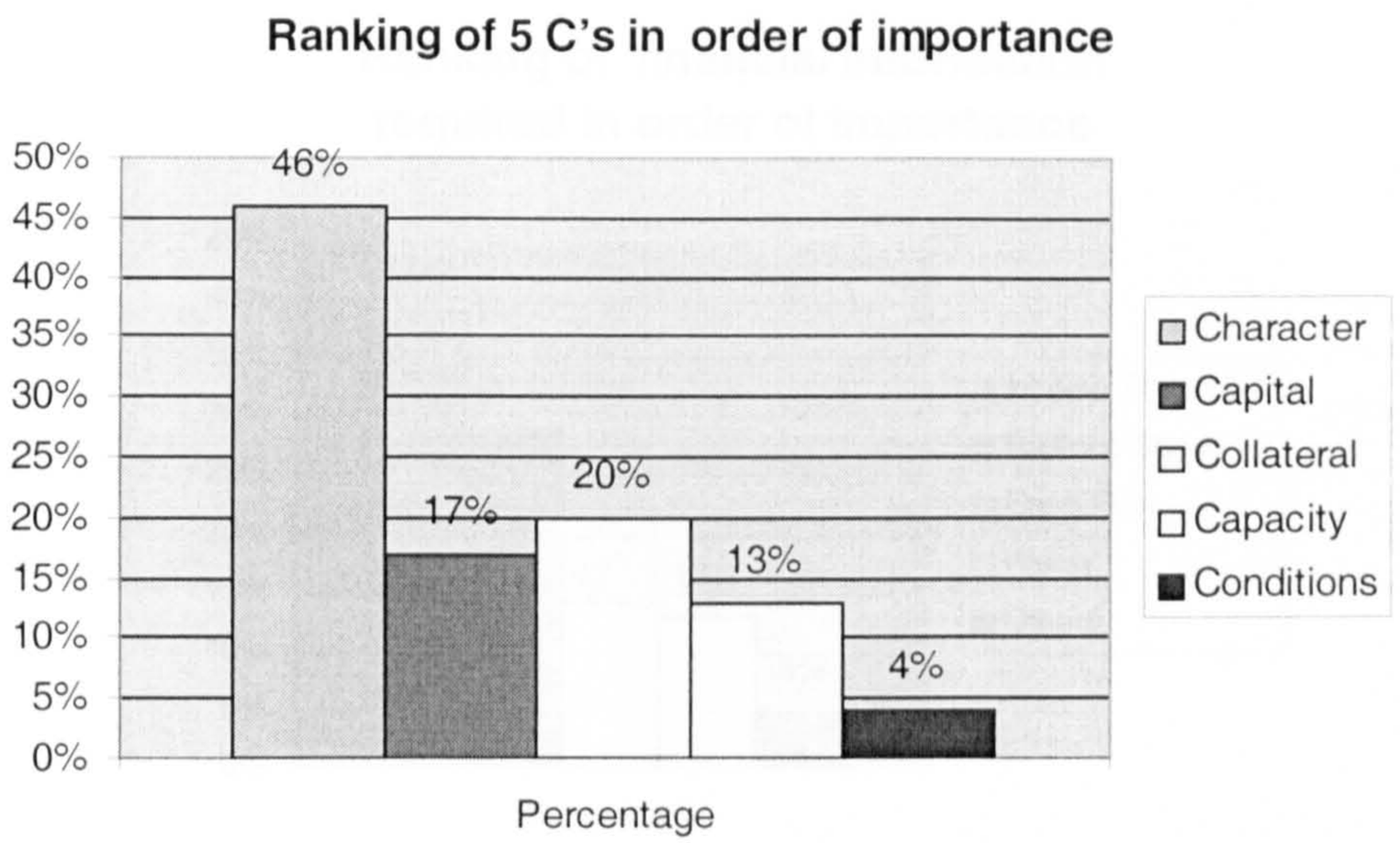
Q4 Please rank the 5 C's in order of their importance?

Table: 5. 20

Ranking the 5 C's in order of their importance

Options	Frequency	Percentage	Rank Order
Character	46	46%	1
Capital	17	17%	3
Collateral	20	20%	2
Capacity	13	13%	4
Conditions	4	4%	5
Total	100	100%	

Figure 5.13



Interpretation: It can be seen that the first preference of 46 percent of the credit managers is character of the borrower while giving commercial loans. On the other hand the business conditions or external environment of the borrower has been given the least preference 4 percent. The borrower capital and collateral have been given 17 percent and 20 percent preference respectively, while giving loans. Therefore the first three preferences of credit managers of HBL are character, collateral and capital.

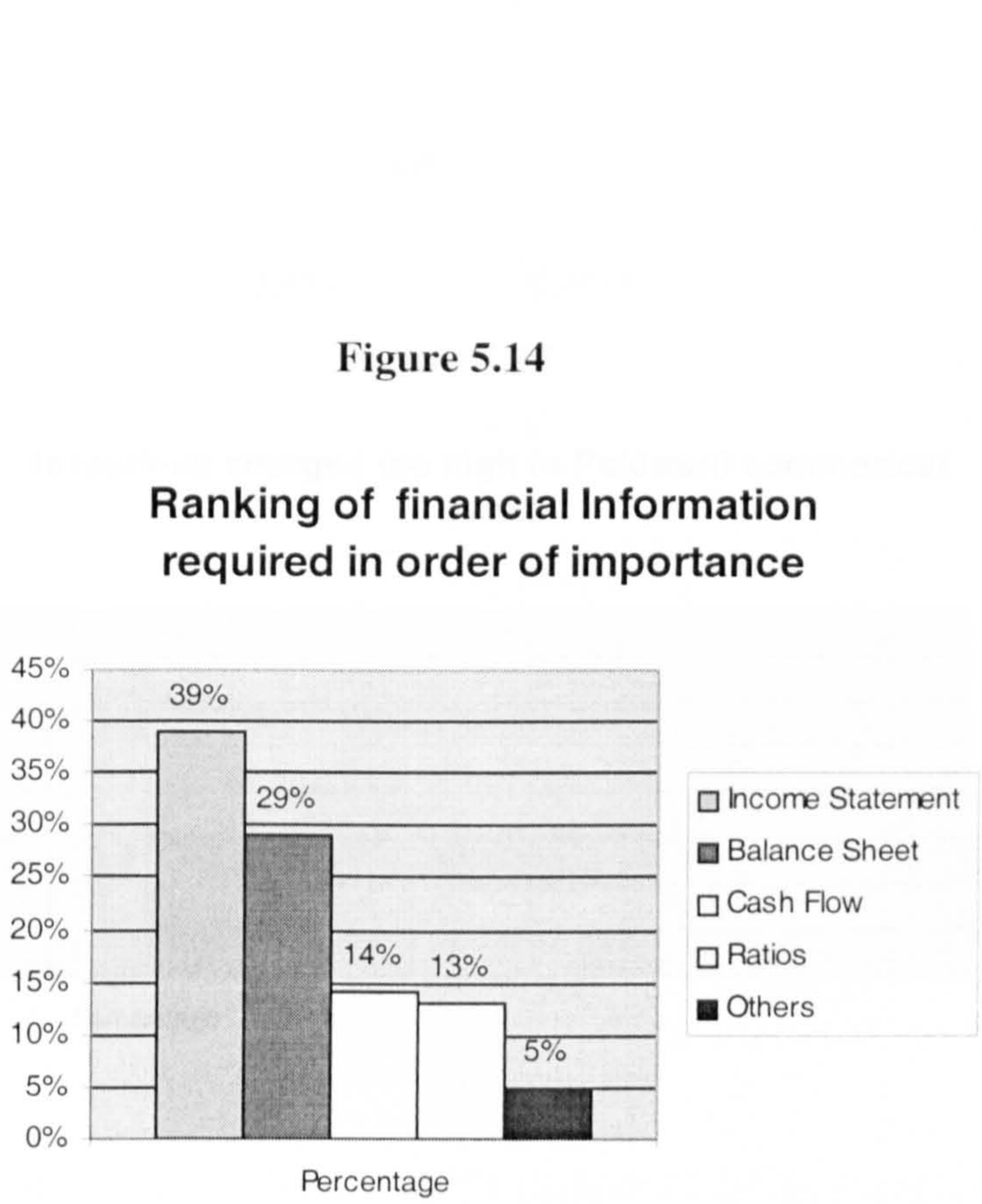
Q5 What forms of financial statements are you looking for while giving a loan? Please rank in order of importance.

Table: 5.21

Ranking of financial information required in order of importance

Options	Frequency	Percentage	Rank Order
Income Statement	39	39%	1
Balance Sheet	29	29%	2
Cash Flow	14	14%	3
Ratios	13	13%	4
Others	5	5%	5
Total	100	100%	

Figure 5.14



Interpretation: It can be seen that 39 percent of the credit managers' first preference is for the income statement of the borrower while giving commercial loans. The balance sheet of the borrower has been preferred by 29 percent of the credit managers followed by cash flow statement with 14 percent preference. Therefore the first preference of credit managers is income statement followed by the balance sheet and cash flow statement of the borrower.

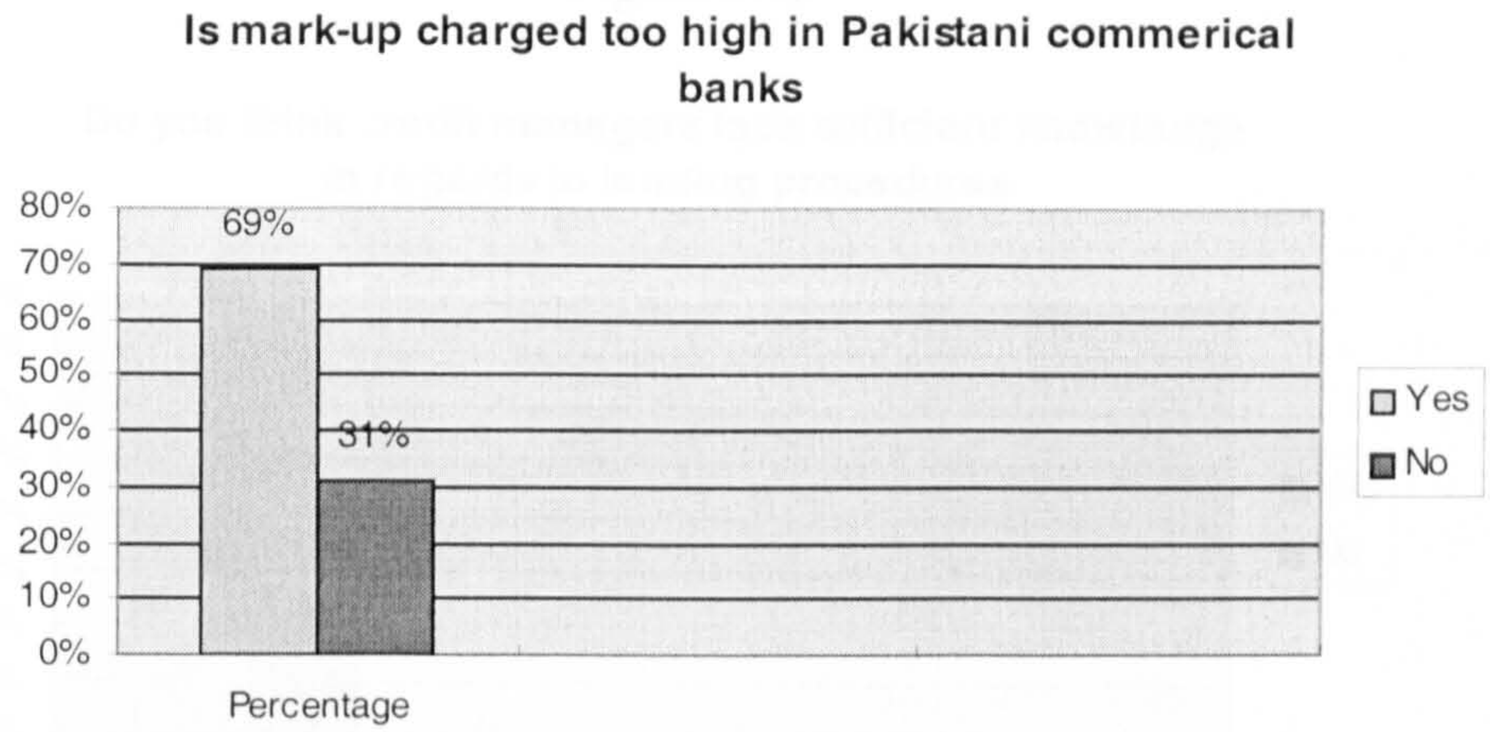
Q6 Do you think that the mark-up charged by your commercial bank is too high, resulting in a high percentage of non-performing loans?

Table: 5.22

Is mark-up charged in commercial banks too high?

	Frequency	Percentage	Rank Order
Yes	69	69%	1
No	31	31%	2
Total	100	100	

Figure 5.15



Interpretation: The above table shows that 69 percent of the credit managers believe that Pakistani commercial banks charge their clients a very high percentage mark-up, which results in a high percentage of non-performing loans. While 31 percent of the credit managers feel that the percentage mark-up is not very high.

Q7 Do you think that Pakistani Bankers lack sufficient knowledge with regards to the lending procedure, resulting in a high percentage of non-performing loans?

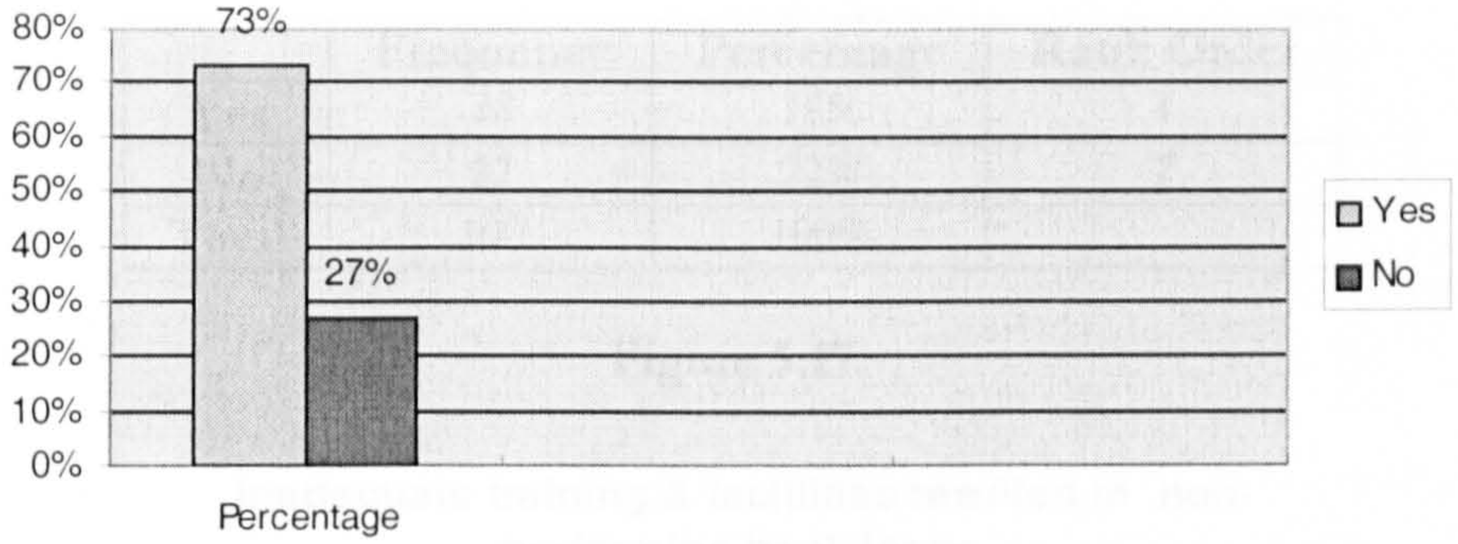
Table: 5.23

Pakistani bankers lack sufficient knowledge with regards to the lending procedure?

	Frequency	Percentage	Rank Order
Yes	73	73%	1
No	27	27%	2
Total	100	100%	

Figure 5.16

Do you think credit managers lack sufficient knowledge in regards to lending procedures



Interpretation: The above table shows that 73 percent of credit managers believe that they have insufficient knowledge in regards to lending procedures as well as comprehending[18] financial statements which results in a high percentage of non-performing loans. Whereas only 27 percent of the credit managers indicate that they have sufficient knowledge in relation to the lending procedures as well as an understanding of the financial statements.

[18] The fact has been highlighted in the earlier part of this chapter where we can see that only 36% of the credit managers have studied any s relevant subjects before joining the bank.

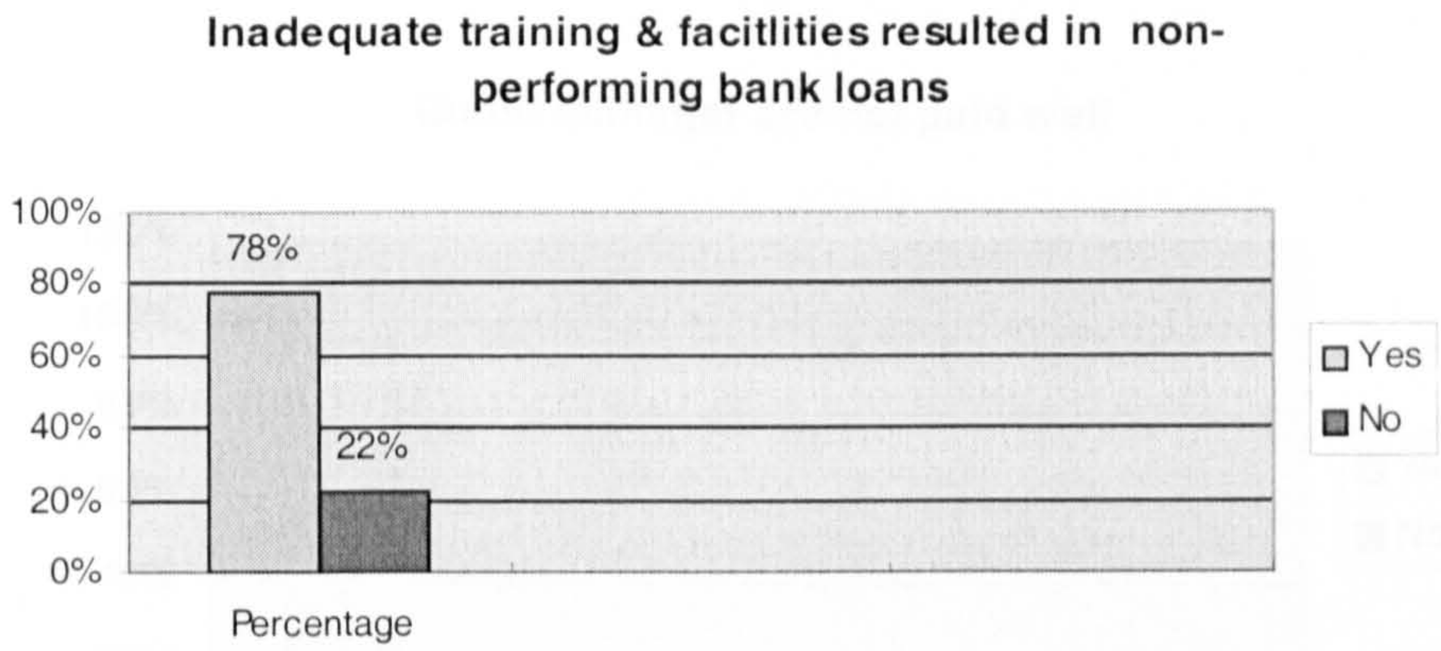
Q8 Do you think that the high default in five public owned Pakistani commercial banks are a result of inadequate training as well as facilities provided to credit managers?

Table: 5.24

Inadequate training as well as facilities resulted in non-performing bank loans

	Frequency	Percentage	Rank Order
Yes	78	78%	1
No	22	22%	2
Total	100	100%	

Figure 5.17



Interpretation: The table above shows that 78 percent of credit managers in Pakistani public- owned commercial banks believe that they do not have proper training[19] nor are they provided with modern communication facilities[20] , essential for assessing and giving large amounts of loans. Only 22 percent of the credit managers feel that modern training and good facilities are being provided to them.

[19] Only 60% of all credit managers questioned had any sort training given to them, this can be seen from the analysis the first questionnaire.

[20] Only 14% of all credit managers questioned have telephone/fax/internet facility available to them, this can be seen from the analysis of the first questionnaire.

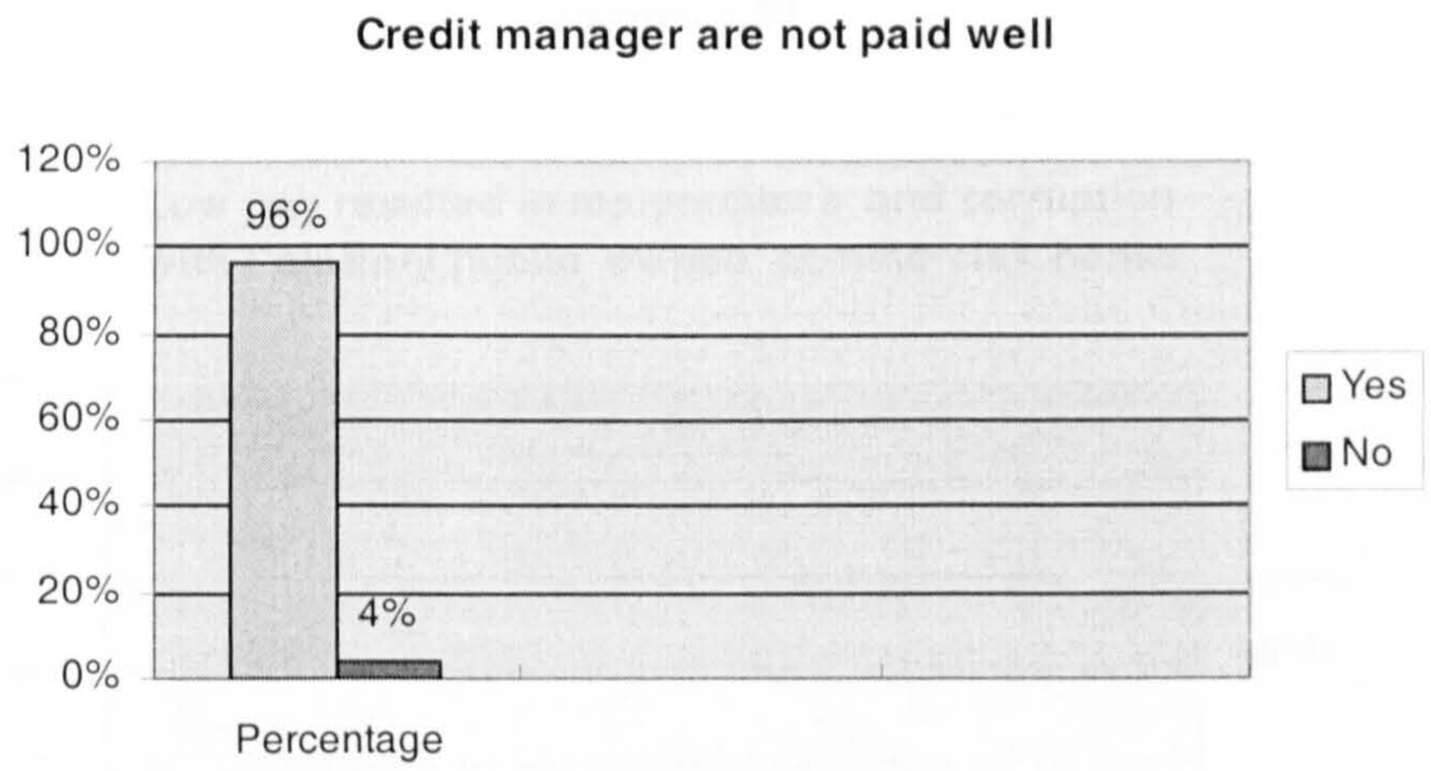
Q9 Do you think that Credit Managers in Pakistani Public owned banks are not well paid?

Table: 5.25

Credit Managers are not well paid?

	Frequency	Percentage	Rank Order
Yes	96	96%	1
No	4	4%	2
Total	100	100%	

Figure 5.18



Interpretation: The table shows that an overwhelming 96 percent of credit managers in Pakistani commercial banks are not satisfied with their pay structure and indicate that they are not well paid [21]. Only 4 percent of the entire credit managers of public owned Pakistani commercial banks are satisfied with their pay structure. This clearly shows that the majority of credit managers responsible for giving loans worth millions of rupees believe that they are not well paid. This dissatisfaction is one of the main reasons that lead to corruption and personal malpractice among credit mangers.

[21] The pay structure analyzed during the first part of this chapter clearly indicated that only 9% of the credit manager earns more than 50,000 RS or more.

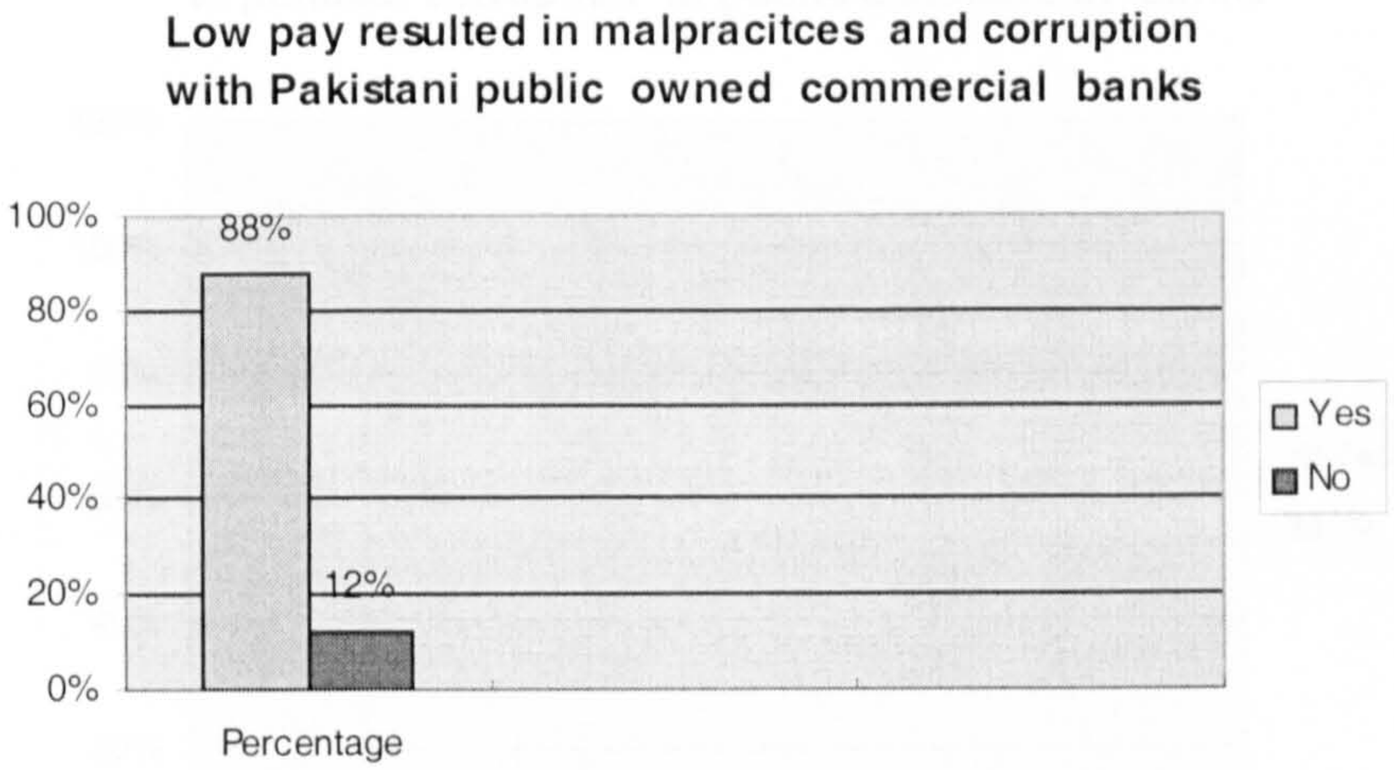
Q10 Do you think that less pay has led to malpractice and corruption within of Pakistani Public owned commercial banks?

Table: 5.26

Low pay has led to malpractice and corruption within of Pakistani public owned commercial banks

	Frequency	Percentage	Rank Order
Yes	88	88%	1
No	12	12%	2
Total	100	100%	

Figure 5.19



Interpretation: The table shows that an overwhelming 88 percent of credit managers in Pakistani public owned commercial banks indicate that low pay has resulted to wide spread malpractice and corruption[22] in all Pakistani public owned commercial banks. Only 12 percent of the entire credit managers of Pakistani public owned commercial banks feel that low pay is not the reason, leading to malpractice and corruption.

[22] The pay structure clearly indicated that only 9% of the credit manager earns more than 50,000 RS or more. Whereas from credit limited analyzed during the first part of this chapter shows that credit managers have decision-making power to giving loans worth millions of Pakistani RS.

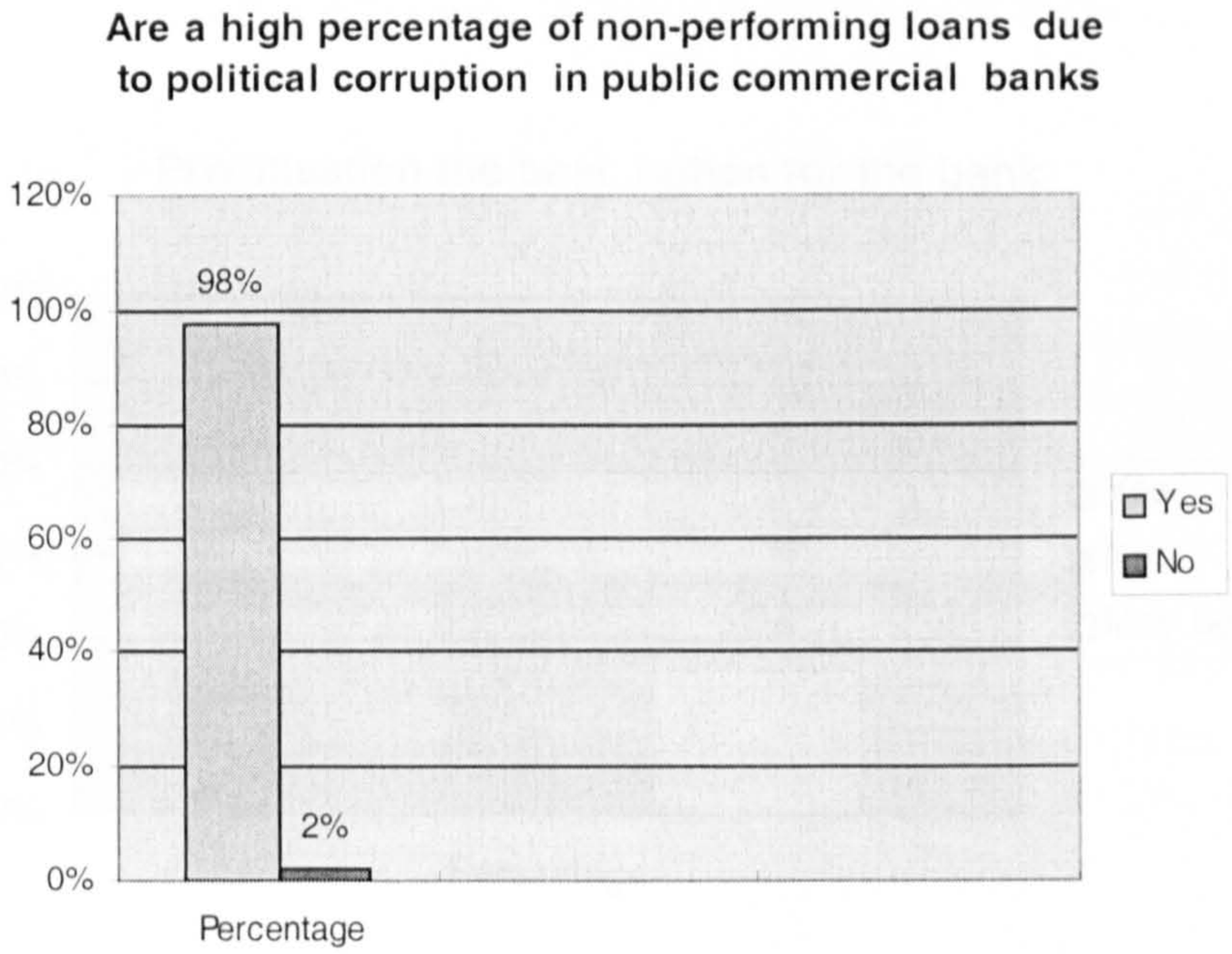
Q11 Do you think that a high percentage of non-performing loans are due to a high level of political corruption in Public owned commercial banks?

Table: 5.27

High percentage of non-performing loans are due to a high level of political corruption in public owned commercial banks

	Frequency	Percentage	Rank Order
Yes	98	98%	1
No	2	2%	2
Total	100	100	

Figure 5.20



Interpretation: The table shows that an overwhelming 98 percent of credit managers of Pakistani public owned commercial banks blame political corruption as one of the main reasons for a high percentage of non-performing loans. Only 2 percent believe that political corruption is not the reason for a high percentage on non-performing loans in public- owned Pakistani commercial banks. This clearly shows that according to the

credit managers, the single biggest factor that has resulted in the high percentage of non-performing loans, is government mismanagement and political corruption.

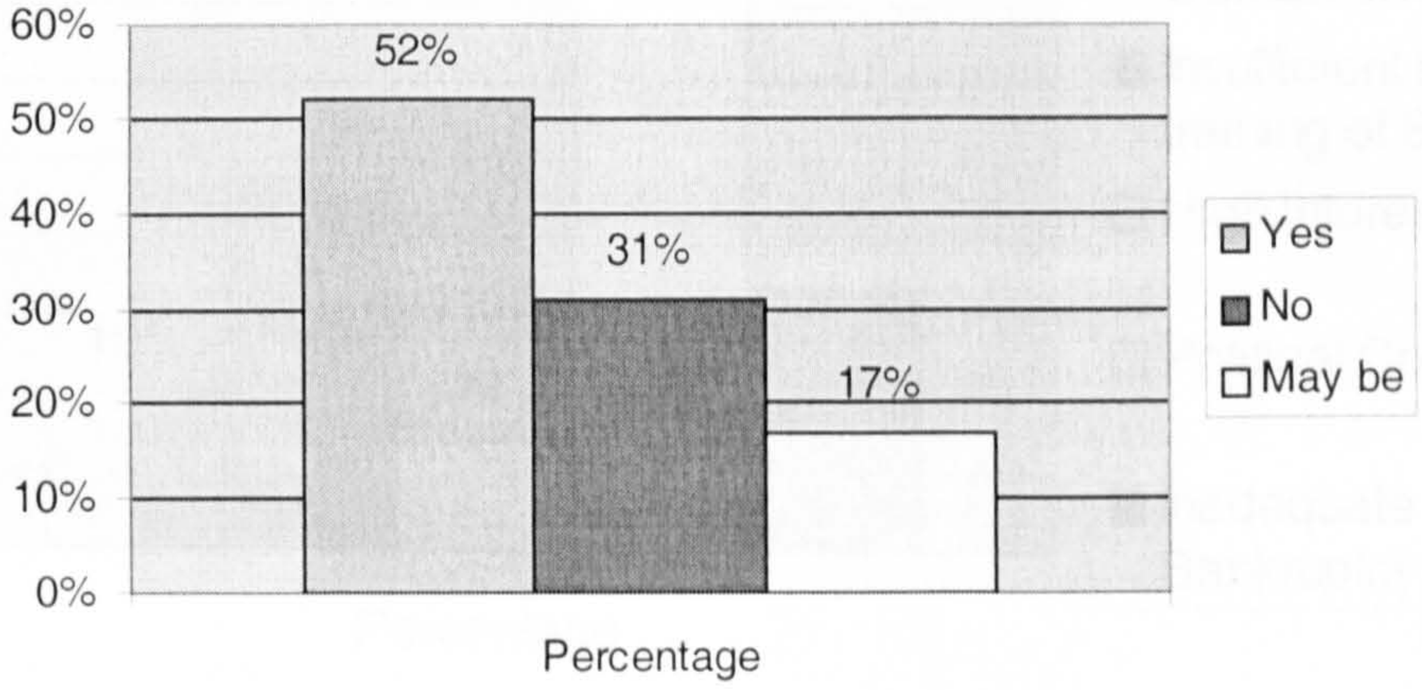
Q12 Do you think privatisation of the pubic owned commercial banks is the best option?

Table: 5.28

Privatisation is the best option for the bank

	Frequency	Percentage	Rank Order
Yes	52	52%	1
No	31	31%	2
May be	17	17%	3
Total	100	100%	

Figure 5.21



Interpretation: The table shows that 52 percent of credit managers of Pakistani commercial banks indicate that the privatization would be very good for the banks. Where as 31 percent, think that it would be harmful for the banks and 12 percent are not sure if they would prefer privatisation or not.

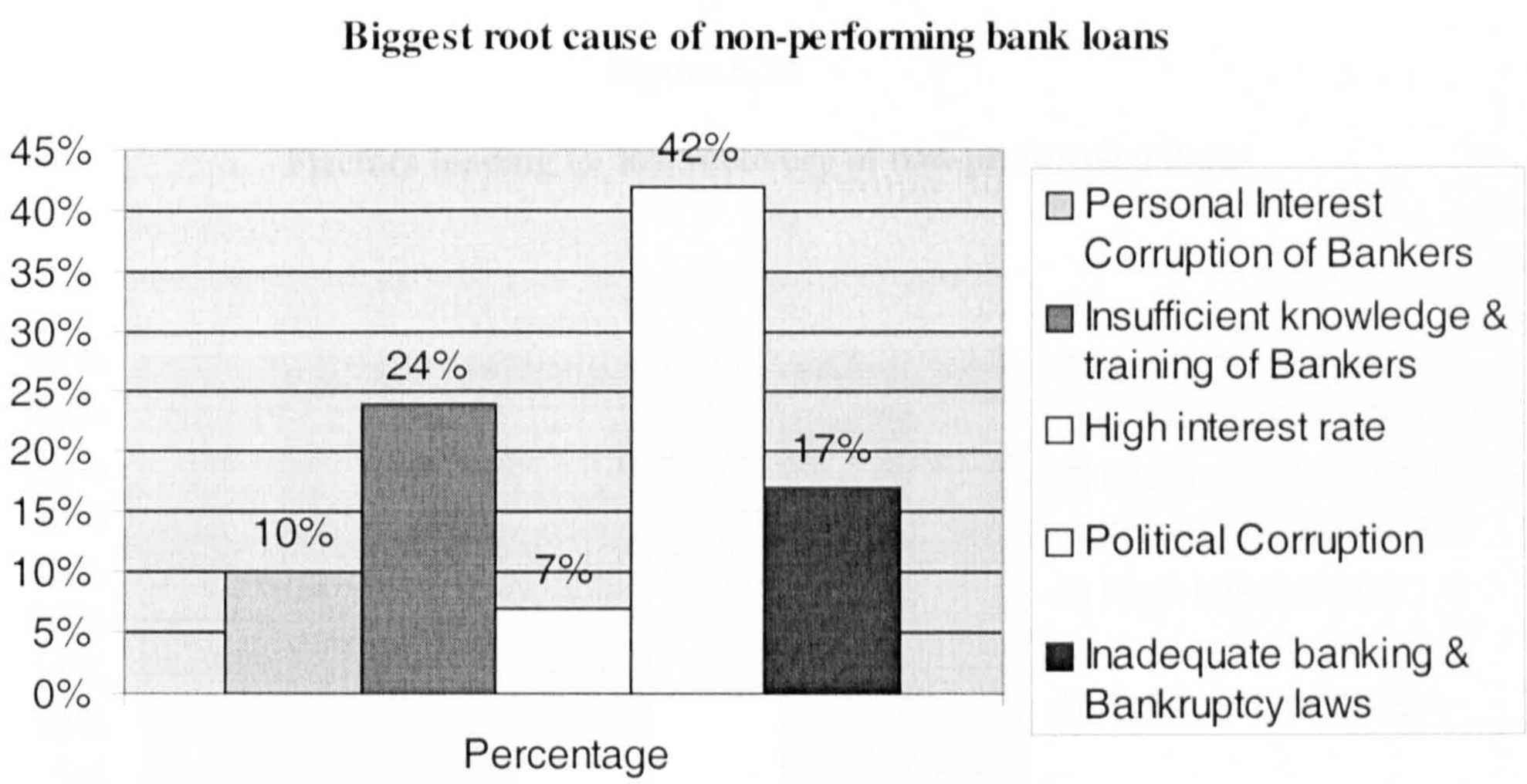
Q 13 Which in your opinion is the biggest root cause of the high extent of non-performing loans in Pakistani public- owned commercial banks? Please rank in order of importance.

Table: 5.29

Biggest root cause non-performing bank loans

Options	Frequency	Percentage	Rank Order
Personal Interest Corruption of Bankers	10	10%	4
Insufficient knowledge & training of Bankers	24	24%	2
High interest rate	7	7%	5
Political Corruption	42	42%	1
Inadequate banking & Bankruptcy laws	17	17%	3
Total	100	100%	

Figure 5.22



Interpretation: The table shows that 42 percent of credit managers believe that political corruption is the single biggest factor, which has led to a large extent of non-performing loans in their banks. While 24 percent have indicated insufficient knowledge and training of bankers as the second biggest reason for non-performing loans. Hence as a result there

is increased pressure on the present Pakistani government from the IMF[23] to give greater autonomy and eventual privatisation to all the public owned commercial banks.

Question 14 Which in your opinion is the biggest factor which has lead to a low debt recovery in public owned commercial banks? Please rank in order of importance

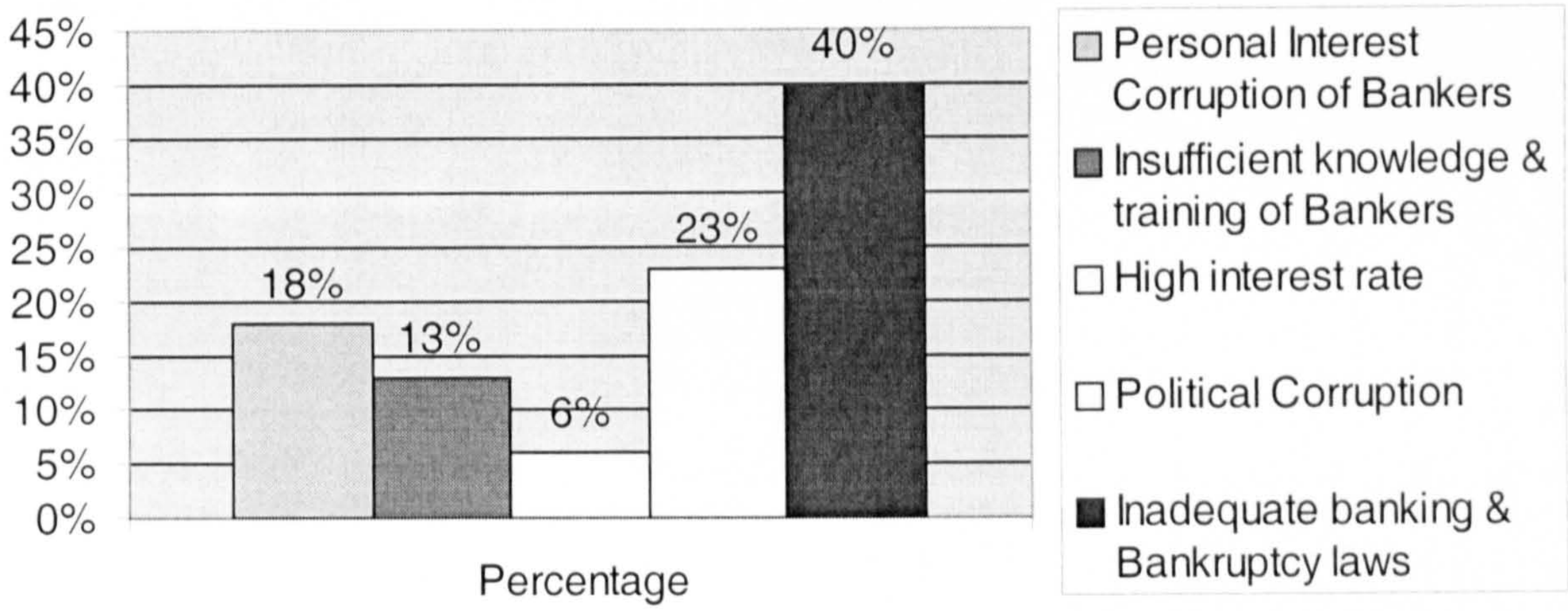
Table: 5.30

Factors leading to a low recovery of non-performing loans

Options	Frequency	Percentage	Rank Order
Personal Interest Corruption of Bankers	18	18%	3
Insufficient knowledge & training of Bankers	13	13%	4
High interest rate	6	6%	5
Political Corruption	23	23%	2
Inadequate banking & Bankruptcy laws	40	40%	1
Total	100	100%	

Figure 5.23

Factors leading to low recovery of non-performing loans



Interpretation: The table shows that 40 percent of credit managers regard inadequate banking laws as the single biggest factor that has led to low debt recovery in public owned commercial banks. While 23 percent believe that political corruption and governmental mismanagement is the second biggest factor resulting in a low recovery of

[23] The IMF had given over one billion dollars to bail out the five public owned Pakistani commercial banks. IMF has given the money on condition that the government would provide greater autonomy to these banks and eventually privatize them.

non-performing loans. Personal interest and corruption of the bankers is the third highest reason (18 percent) for non-performing loans. Hence as result the present Pakistani government is planning to introduce new prudential regulations that safeguard the rights of the lenders. Also, the Government of Pakistan is planning to provide greater autonomy and eventually privatise the public owned commercial banks under the supervision of the IMF[24].

[24] One of the principle conditions to the IMF bail out was introduce prudential regulations, which safeguard the right of the lenders.

5.4 Analysis of qestionnaire C

The aim of this part of the analysis is to investigate the credit lending attributes of the credit managers of the five public owned Pakistani public owned commercial banks. These lending attributes of the credit managers analysis examines issues such as like if their preference to give secured or unsecured loans, the credit management techniques which are used by credit managers to give loans, their awareness of risk management techniques and their application. For this reason, Questionnaire C is designed as a more open-ended questionnaire, which analyses the lending attributes of the credit managers of the five major public-owned Pakistani Commercial Banks. It uses the Yule's co-efficient to measure the degree of association of the decision making progress with the lending attributes of giving secured loans by the credit managers of the five Pakistani public owned commercial banks.

Yule's coefficient of association:

We use Yule's relative measure of association (independent of units of measurement) known as coefficient of association, which measures the intensity of association between the attributes. It is denoted by Q and shown as:

$$Q = \frac{(AB)(\alpha\beta) - (A\beta)(\alpha B)}{(AB)(\alpha\beta) + (A\beta)(\alpha B)}$$

Where Q always lies between -1 and +1 i.e. $-1 \leq Q \leq +1$

Attribute	B	β	Total
A	(AB)	(Aβ)	A
α	(αB)	(αβ)	α
Total	B	β	N

In the table, A and B are positive attributes & α and β are negative attributes.

(A) = number of individuals possessing the attribute (quality) A

(B) = number of individuals possessing the attribute (quality) B

(α) = number of individuals not possessing the attribute (quality) A

(β) = number of individuals not possessing the attribute (quality) B

(AB) = number of individuals possessing the attributes A & B

(Aβ) = number of individuals possessing the quality A but not B

(αB) = number of individuals possessing the quality B but not A

(αβ) = number of individuals possessing neither the quality A nor B

N = Total number of individuals under consideration.

Where

(A) , (B) , (AB) are known as positive frequencies

(α) , (β) , (αβ) are known as negative frequencies

(Aβ) , (αB) are known as contrary frequencies

(AB), (αβ) , (Aβ) , (αB) are known as ultimate frequencies

Q1 Do you prefer to give secured or unsecured loans?

Table: 5.31

Peference to give secured or unsecured loans

Options	Frequency	Percentage
Secured Loans	75	75%
Unsecured Loans	25	25%
Total	100	100%

Interpretation: The table shows that 75 percent of credit managers of Pakistani public owned commercial banks prefer giving secured loans. As compared to that 25 percent credit managers prefer giving unsecured loans. Therefore we can see that even after the banking crisis which was due to a very high percentage of non-performing loans, still 25 percent of the credit managers prefer giving unsecured loans.

Q2 What kind of credit facilities does your bank provide?

Table: 5.32

Kind of credit facilities bank provide

	A1	A2	A3
S	51	9	15
S1	21	3	1

	A1	A2+A3
S	51	24
S1	21	4

Note: S = Secured Loans
S1 = Unsecured Loans

A1 = All kinds of Loans
A2 = 2 kinds of Loans

A3 = 1 kind of Loan

$$Q = 204 - 504 / 204 + 504 = \mathbf{-0.423}$$

From the table we can interpret that the value of Q = - 0.423 (which is the measure of association). The value of Q shows a negative association between the kinds of loans given and the habit of credit managers giving secured loans. In other words, the kinds of loans given were not on the basis of being secured or unsecured. In fact we can conclude credit managers made credit-lending decisions without considering whether loans were secured or unsecured loans. This unprofessional attribute/habit towards credit lending resulted in a high percentage of non-performing loans. This proves the hypothesis that mal-practices, corruption and personal interest of the credit managers was one of the most important causes of a high percentage of non-performing loans in Pakistani public owned commercial banks.

Q3 What kind of information (5 C's) do you look for from the borrowers, which helps in making your lending decision?

Table: 5.33

Information (5 C's) required from the borrowers, which helps in making your lending decisions

	B1	*B2*	*B3*
S	*39*	*15*	*20*
S1	*12*	*17*	*7*

	B1	*B2+B3*
S	*39*	*35*
S1	*12*	*14*

Note: S = Secured Loans
S1 = Unsecured Loans

B1 = 5 C's
B2 = 2 C's
B3 = 1C's

$$Q = 546 - 420 / 546 + 420 = \mathbf{0.130}$$

The tables above indicate that the value of Q = 0.130 (which is the measure of association) shows a very week association between the loan giving criteria (5C's) and the habit of credit managers giving secured loans. The very weak positive association illustrates that the credit managers in most cases ignored the criteria of the loan applicant while giving any kind of loan. This particular scenario can only take place where there is personal interest and corruption involved resulting in a high percentage of non-performing loans.

Q 4 What kinds of security or collateral do you prefer while considering a loan?

Table: 5.34

Preference of security or collateral while considering a loan

	D1	*D2*	*D3*
S	*27*	*23*	*24*
S1	*7*	*12*	*7*

	D2	*D1+D3*
S	*27*	*47*
S1	*7*	*19*

Note: S = Secured Loans
S1 = Unsecured Loans

D1 = All forms of collateral
D2 = Fixed assets & liquid assets

D3 = only fixed assets

$$Q = 513 - 329 / 513 + 329 = \mathbf{0.218}$$

The tables above show the value of Q= 0.218 (which is the measure of association) showing a weak positive association between the different kinds of collateral accepted by credit managers and their habit of giving secured loans. In this way we can see that the credit managers have, in most cases, ignored the collateral base of the loan applicant while giving loans. Therefore we can conclude that credit managers did not fulfill all the formalities regarding borrowers' collateral. As a result, the borrowers borrowed huge amounts of money without any collateral with no intention of returning the loans, resulting in a high percentage of non-performing loans.

Chapter 5

5.5 Conclusions

In this chapter we have analyzed the findings of the three questionnaires (A, B, & C) carried out to find the reasons behind the non-performing bank loans in public owned Pakistani commercial banks. The main findings of each questionnaire are stated separately below:

5.5.1 Conclusions from questionnaire "A"

The conclusions of the findings from the analysis of Questionnaire "A" are subdivided into five main parts, which are:

Firstly, most of the credit managers of the five public owned Pakistani commercial banks had an average of 15 years service within the bank and over 10 years of experience working as credit managers. We can also see from the demographic analysis of questionnaire "A" that only 36 percent of all credit managers questioned, had received any relevant education before joining the bank and also during their years of service within the bank, only 40 percent of them were given relevant training. Therefore we can conclude that the credit managers who were responsible for assessing and giving huge amount of loans were neither qualified to assess these loans and nor were given any further training to enhance their abilities. As a result, we can conclude that the credit managers lacked the knowledge required for assessing loans and this inability was a major reason for the failure of the bank loans.

Secondly, we can see from our analysis of questionnaire "A" that only 9 percent of the credit managers were paid more than 50,000 rupees, clearly indicating the low pay scale of credit managers in the Pakistani banking sector, who were responsible for giving loans worth millions of rupees. We also saw that only 16 percent of credit managers were provided with modern communication facilities.[25] From this we can conclude that the

[25] Communication: telephone/fax/internet and online banking facilities

credit managers of the five public owned commercial banks in Pakistan were lowly paid and this resulted in increased corruption and personal interest.

Thirdly, we can see from the statistical analysis of questionnaire "A" that credit limit assigned to the credit manager are authorized very little credit limit while some have been given very large limits. Where only a few credit managers in every bank are responsible for giving the majority of credit, the probability of corruption[26] and personal interest rises. This was clearly evident by the high level of dispersions within banks while analyzing credit limits assigned to different credit managers.

Fourthly, it was also seen from the statistical analysis of questionnaire "A" that UBL had the highest percentage of non-performing bank loans and lowest percentage of non-performing loans recovered. It was also seen that credit managers of the UBL had the highest number of years of service within the bank and the most number of years of experienced as credit managers amongst all the five public owned Pakistani commercial banks. It was also reported that UBL had the highest percentage of non-performing loans followed by HBL and MCB respectively. Furthermore, it was observed that since the privatization of MCB and ABL after the crises, they have had the highest percentage of non-performing loans recovered, proving that defaulters were able to influence non-privatized banks more, thus slowing down their loans recovery.

The last part of the analysis of questionnaire "A" examined the relationship between the credit managers' personal characteristics relating to their banks with the non-performing bank loans (NPL), credit limit assigned to the credit managers (CL) and non-performing loans recovered (RL). It was found that the years of service within the bank (YOS) and years of experience as credit manager (YOE) have significant correlation with non-performing bank loans (NPL) and non-performing bank loans recovered (RL). It was also found that both credit limit assigned to the credit managers (CL) and courses attended

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[26] This fact has also been highlighted by credit managers in the interviews conducted and is discussed later in this chapter as major of reason behind corruption and personal interest of credit managers. Only a few credit manager's have all the decision making power of giving loans in the entire bank.

(CA) had no correlation between years of service within the bank, courses attended by credit managers and years of experience as a credit manager.

5.5.2 Conclusions from Questionnaire "B"

The evidence from analysis of questionnaire "B" suggests that the principle causes of the high proportion of non-performing bank loans were as follows:

1. Personal Interest
2. Insufficient training for the bankers
3. Political Corruption
4. Inadequate banking and bankruptcy laws

Personal interest and corruption of bankers

The credit managers in the five public owned banks identified one of the main causes for the large proportion of non-performing bank loans, as the personal interest of the bankers. It is the individual banker who has to make a judgement about whom to give credit to and his expert analysis must be free from all personal interest or gain. Most bankers named this as the foremost reason and the root of all non-performing loans. Over 90percent of the credit managers questioned were not satisfied with the salary structure in their banks. According to them, very low salaries were the reason behind the corruption and self-interest of the credit managers. Due to these circumstances, bankers had granted loans to individuals that served their personal interests. They intentionally ignored the 5 "Cs" principles to give loans to non-viable projects.

Insufficient knowledge and training of bankers

Another reason which led to a high percentage of non-performing bank loans, was the lack of prior knowledge and training of credit managers in these banks. Only 36percent of the credit managers questioned had relevant educational background. In fact 73percent of them admitted that they had insufficient knowledge of banking and were simply unaware of the tools utilized by modern bankers to give credit. Their shocking inability to comprehend the balance sheets and other financial statements reduced their ability

considerably to distinguish between viable and non-viable projects. Only 60percent of credit managers have taken part in some kind of refresher course or in-house training in the last 20 years.

Political corruption and government mismanagement

It was found that several substantial loans were politically motivated. Loans were given to people in the form of political favours and rewards for their loyalty without much consideration. The credit managers were unable to raise any objections on weak loan applications. According to the credit managers, politicians had borrowed easy loans to finance their political motives and personal projects. The survey shows 90percent of the credit managers surveyed, believe political influence is the single biggest reason behind the high proportion of non-performing bank loans in these five public owned banks.

Inadequate banking and bankruptcy laws

According to the credit managers surveyed, until very recently, Pakistani banking bankruptcy laws and by-laws inadequately supported the banking system. In fact it was virtually impossible for a financial institution to take a defaulter to court and get a quick verdict against them. Throughout Pakistan's banking history, very few bankruptcy cases have been registered, since the decision on these cases would take several years with very few restrictions and penalties being imposed on the defaulters. Over 70percent of the total number of credit managers surveyed believe that one of the principle causes of non-performing bank loans and very low recovery, rates was inadequate banking laws.

5.5.3 Conclusions from questionnaire "C"

Questionnaire "C" was used to investigate the credit lending attributes of credit managers of the five public commercial banks. The conclusion of the findings showed that over 75percent of the credit managers preferred giving secured loans whereas 25percent of credit manager still preferred giving unsecured loans. The analysis clearly showed that there was a negative association between the kinds of loans given by the credit managers and the practice of credit managers giving loans proving that credit managers were in

habit of giving loans without considering whether or not the loans would be secured. The weak association between the information (5C's) required by the credit managers and habit of giving secured loans, clearly indicates that credit managers only gave superficial importance to the information needed from the borrowers while assessing loans. Lastly, it was also seen that there was a weak positive association between the different kinds of collateral accepted by credit managers and their habit of giving secured loans. This showed that the credit managers did not fulfill all the formalities regarding borrower's collateral. As a result the borrowers borrowed huge amounts of money without giving any collateral and with no intention of repaying the loans, thus leading to a high percentage of non-performing loans.

Chapter 6

Application of the ordered probit model

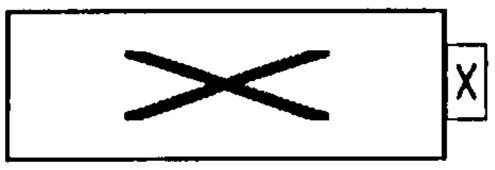
6.1 Introduction

The objective of this chapter is to provide a formal statistical analysis of the survey. The survey has been carried out in the form of three questionnaires. Questionnaire "A" results are in an order form and therefore suited for application to the order probit model. The ordered probit model has not been used previously in studies relating to the banking crises and non-performing bank loans. All questions in the questionnaire involve more than two possible outcomes and are ordinal because it ranks the observations but does not indicate the numerical difference between observations. Specifically, the observed depended variable takes on the values of 1, 2 and 3 (where $1 < 2 < 3$) however, the specified difference between the observations is arbitrary and this makes the ordinary least squares (OLS) estimator inappropriate because it would treat the dependent variable as cardinal data. The multinomial probit (or logit) model is also inappropriate because although it distinguishes the values of the dependent variable it fails to recognize the ranking of the observations. Hence, we employ the ordered probit model that is appropriate for our study because it recognizes the ordinal nature of the data but does not treat it as cardinal variable.

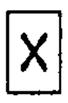
The chapter is divided into seven sections. The second section explains the ordered probit model specification. The third section discusses the previous empirical literature on the application and interpretation of the ordered probit model. The fourth section explains the variable descriptions and expected signs of the co-efficient. The fifth and sixth sections report the results of the ordered probit model for non-performing loans and non-performing loans recovered as dependent variables respectively. The last section gives the concluding remarks.

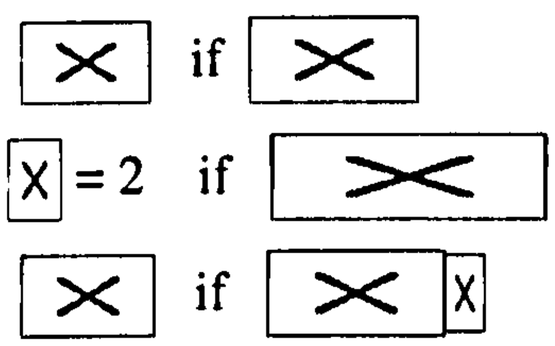
6.2 Specification of the model

The ordered probit model assumes the following latent variable from (see Greene 2000, pp 875-879):



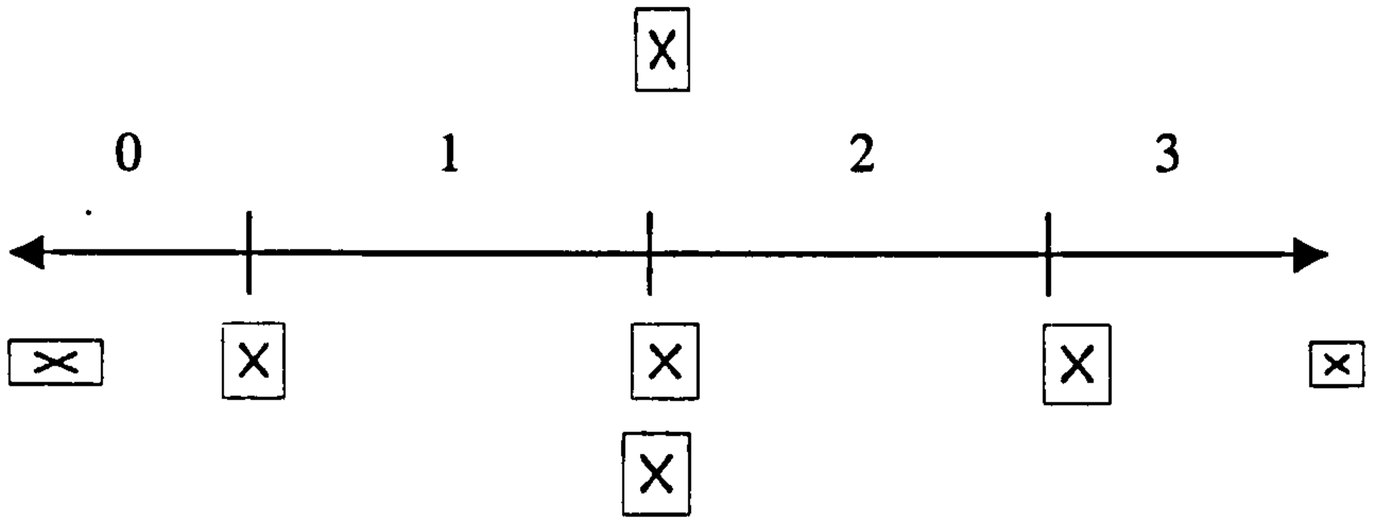
(6.1)

Where are the explanatory variables,  is the stochastic error term, and is the unobserved dependent variable that is related to the observed dependent variable, , (assuming three categories) as follows:



(6.2)

Where the and are unknown parameters to be estimated with the . The figure below illustrates the correspondence between the latent, continuous variable and



The probit form of this model assumes that the error, [X], is distributed as a standard normal random variable. With the normal distribution we can specify the probabilities that the observed dependent variable takes any of the three values as follows:

Pr([X] = 1 [redacted] - [redacted] (6.3)

Pr([redacted] [X] - [redacted] - [X] - [redacted]

Pr([redacted] [X] - [redacted]

Where [redacted] is the probability that ([X] [redacted]. For the ordered probit model the cumulative normal distribution function (cdf) employed in calculating the probabilities is the cumulative normal distribution of [X]. For more information on this model specification, see, for example, Greene (2000, pg. 875-879).

During the analysis we interpret the coefficient as follows: When [X] is positive (negative) this means that as [X] increases there is a greater (lower) probability that the dependent variable will fall in the category [redacted] Thus, although we do not know whether the probability of [X] failing the category [X] increases, decreases or remains unchanged, there is a sense that the sign of [X] indicates the general direction of change for [X] in response to an increase in [X]. We use this general rule to provide guidance on whether the estimated signs of coefficients concur with our theoretical expectations.

[X]

6.3 Review of empirical studies

Although the ordered probit model has not been used in studies related to the banking crisis, examples of the use of the ordered probit model in the literature occur in several areas. The research areas where the ordered probit model has been used extensively include bond rating, tastes tests, opinion surveys, the assignments of military personnel to

job classification by skill level, voting outcomes on certain programs, the level of insurance coverage taken by customer and employment surveys.

Earlier literature suggests that the ordered probit model was used by Aitchison and Silvey (1957) and Asford (1959), and generalized to non-normal disturbances by Gurand, Lee, Dahm (1960) and Zavoina and McElvey, (1975). These studies have used the ordered probit model in analyzing the responses in the field of biological sciences. Maddala (1983) applied the model to the level of education measured by three categories: less than high school, high school, and college education. The dependent variable is discrete, and is naturally ordered since college education always follows high school. Heuristically, ordered probit analysis is a generalization of the linear regression model to cases where the dependent variable is discrete. The ordered probit is perhaps the only specification that can easily capture the impact of explanatory variables on price changes while also accounting for price discreteness and irregular trade times.

The ordered probit model may be interpreted as a means of capturing and summarizing relations among price derived from first principles only in the most simplistic and stylized of contexts, under very specific and, therefore often counterfactual assumptions about agent's preferences, information sets, alternative investment possibilities, sources of uncertainty and their parametric form, timing, allowable volume and types trades. In particular the ordered probit model can shed light on how price changes to specific economic variables[1].

In one of the most significant studies Hausman and Lo (1992) have used the ordered probit analysis for transaction stock prices. It estimates the conditional distribution of trade-to-trade price changes. This approach recognizes that transaction price changes occur in discreet increments, typically eighths of a dollar, and occur at irregular-spaced time intervals. Unlike existing models of discrete transaction prices, ordered probit can

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[1] Just a few recent examples of the growing literature are Amihud and Mendleson (1980), Admati and Pfleiderer (1988, 1989), Easley and O'Hara (1987), Garman (1976), Glosten and Milgrom (1985), Grundy and McNichols (1989).

quantify the effects of other economic variables like volume, past price changes, and the time between trades on price changes. Using 1988 transactions data for over 100 randomly chosen US stocks, the paper estimates the ordered probit model via maximum likelihood and uses the parameter estimates to measure several transaction-related quantities, such as the price impact of trades of a given size, the tendency towards price reversals from one transaction to the next and the empirical significance of price discreteness. In its empirical application of the ordered probit model, Hausman defines [X] to be the price change of –3 or less, [X] to be a price to change of +4 ticks or more, [X] and [X] to be price changes of –3 ticks to +3 ticks, respectively. The analysis also computes the maximum likelihood of estimators numerically using the algorithm proposed by Berdt, Hall Hall, Hall and Hausman (1974), as well as robustness of the model using several different sets of starting values of each stock. The results using the ordered probit framework allows comparison of the price impact of trading over many different market scenarios, such as trading 'with' versus 'against' the market, trading in 'up' and 'down' markets, etc. The results give further insight on how price variation cross-sectionally can be gained from the cross-sectional regression, where the four price impact measures the Box-Cox parameter estimates are each regressed on the following four variables: market value, the initial price level, median dollar volume and median time-between-trades. The results show the adjusted [X] is negative, a symptom of the impression with which the [X] are estimated but the two percentage price impact regressions seem to have a higher explanatory power, with adjusted [X] of 37.6 percent and 22.1 percent respectively. These two regressions have identical sign patterns, implying that percentage price impact is larger for smaller stocks lower-priced stocks, and higher-volume stocks and stocks that trade less frequently.

Poon (2001) has employed pool time-aeries cross-sectional data of 265 firms from 15 countries, to analyze empirically the controversy surrounding unsolicited credit ratings. The objective of the research is to study the factors that determine long-term issuer credit ratings (LTRs) (i.e., rating determinants), and examine whether S&P assigns different degrees of importance to sample factors when deciding on the rating of firms with

solicited and unsolicited ratings. The paper also examines whether sample-selection bias (self-selection or selectivity bias) exists in LTRs (i.e., whether sample selection bias affects LTRs). Using the ordered probit analysis the dependent variable is LTR's assigned by S&P as of January 1998, 1999, and 2000, which are reported in S&P's Global Ratings Handbook in February 1998, 1999 and 2000, respectively (S&P's 1998a 1999, 2000a). The averages of financial ratios/variables in 1995, 1996 and 1997 are used as the independent variables to explain January 1998's ratings. Similarly, ratings as of January 1999 (January 2000) explained by the averages of the financial ratios/variables in 1996, 1997, 1998 and 1999). Key financial variables representing profitability, interest coverage, capital structure, and financial flexibility are selected to explain LTRs. LTRs range from AAA to D and they are coded as six ordinal values in ordered probit model, where AA or above = 6, A = 5, BBB = 4, BB = 3, B = 2, and CCC or below =1. The paper gives results on modeling S&P's issuer credit ratings. It reports that sovereign credit risk is an important factor in determining LTR, and the sovereign rating appears to be positively related to LTR. The results also suggest that S&P's issuer credit ratings only return on assets is the only financial ratio positively significant in determining S&P issuer ratings. A higher degree of importance is given to profitability as compared to short-term financial flexibility when deciding on ratings of Japanese issuers as compared to non-Japanese issuers.

Moriones et al (2001) have used the ordered probit model to analyze the impact of quality management practices on human resources management. The paper uses survey methodology on a sample of 1000 Spanish manufacturing plants. These are distinguished by the fact that the dependent variables are ordered qualitative categorical variables (WORKORG and HRM are discrete variables that take integer values between 0 and 6 and 0 and 11, respectively). The decision to choose this approximation model as opposed to discriminate analysis or standard regression model is based on the greater robustness of this type of model in withstanding the violation of the assumption of normality[2].

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[2] Maddala (1983) Limited-dependent and Qualitative variables in Econometrics, Cambridge University Press Cambridge, 1983.

Parikh (1999) has used the ordered probit model to examine both the significance of the impact of farmers' perceptions regarding new technology for adoption decision and how perceptions themselves are influenced to adopt new technology in Ethiopia. The papers uses survey methodology and identifies variables relevant to farmers' perceptions and are modeled using the ordered probit methodology. This approach was useful to modeling the two-way relationship between perception and adoption. The decision to adopt a modern variety is based on the perception that farmers have about the new variety. A farmer's perception may be determined by his/her experience of growing a new variety, extension visits, his/her knowledge about modern variety and other conditions. Perception may be with respect to straw quality, grain yield and/or marketability of a new variety. These measures are ordinal and as a result the perception variable is treated as ordered.

Tsuji and Choe (2003) empirically analyze the factors which determine the success of regional information policies. Based upon the field research of 36 local governments in Japan using survey methodology, they examine how each factor contributes to successful implementation of regional information policy, by using the ordered probit analysis. Since the local governments are ordered to the pre-determined definitions of developed, progressing and undeveloped, data is classified using the data sets firstly 0 in case of "underdeveloped", 1 for "progressing" or 2 for "developed" according to the field research on the performance of regional information policy of each local government. The results of the ordered probit estimation capture the factors which characterized the local governments and showed only two factors[3] (TOP & ADMIN). These are significant statistically whereas one factor[4] (DEVELOP) is shown to be on slightly significant with a 15 percent level of significance. Thus the paper concludes that ordered probit analysis show human factors are important for promoting information policy.

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[3] The factors are: (1) "TOP" which describes how the leaders in the regions take the initiative in planning and promoting regional information policy. (2) "ADMIN", which indicates how enthusiastically the administrators of local government promote a regional information policy.

[4] Another factor (DEVELOP) is the index of Tele-communication system developed under a regional information policy in each region.

Harris et al (2002) has used the ordered probit model to compare the differences in the use of different consultation and communication procedures by family businesses in Great Britain. The paper tests if those firms that consult directly with staff, as opposed to those that consult through Joint Consultative Committees or Trade Unions, have higher productivity and/or other measures of performance. Concurrently the paper uses survey methodology, it also tests whether there are separate 'family business' effects, or whether it is general establishment size that matters by estimating separate models for family-owned and non-family-owned establishments. The paper identifies the variables and reports the results of estimating (weighted) ordered probit models for the family owned and non-family-owned sub-groups separately. As well as estimate separate equations for the two sub-groups, it also estimates a pooled model that includes both the sets of plants with variables set out. Thus allowing to test (through the inclusion of a dummy-variable for the family ownership) whether family-owned plants experienced lower financial performance.

6.4 Variables and expected signs

In applying the ordered probit model to particular issues of the market microstructure, it is essential to first consider how to interpret its parameter estimates from an economic perspective. Since ordered probit may be viewed as a generalization of a linear regression model to situations with a discrete dependent variable, interpreting its parameter estimates is much like interpreting the co-efficient of linear regression: this depends critically on the underlying economic motivation for including and excluding the specific repressors.

In this study we have applied the ordered probit model to questionnaire "A" since the data collected from the questionnaire was in ordered form. In questionnaire "A" respondents were then given three options to choose from and they are coded[5] as ordinal values in ordered-probit models as 1, 2 and 3, where 1 is lowest value and 3 is highest value[6]. Since the data collected from questionnaires "B" and "C" are not in ordered form, application of the ordered probit model to these questionnaires is not possible.

Here non-performing bank loans (NPL) and non-performing bank loans recovered (RL) are considered as dependent variables and therefore used as T-response Variables. The corresponding independent X-variables are: (1) basic education (BE); (2) professional education (PE); (3) years of service (YOS); (4) number of courses attended by credit managers (CA); (5) years of experience as credit manager (YOE); (6) credit limit of credit managers (CL); (7) communication facilities provided to credit manager's (CF); The variables with their expected signs are presented in Table 6.1 for ease of interpretation.

Table 6.1

Expected signs for explanatory variables

Variables	**Descriptions**	**Non-Performing loans (NPL)**	**Non-performing loans recovered (RL)**
BE	Basic Education	Negative	Positive
PE	Professional Education	Negative	Positive
YOS	Years of service in the bank	Negative	Positive
CA	Courses Attended	Negative	Positive
YOE	Years of experience as credit manager	Negative	Positive
CL	Credit Limit	Positive	Positive
CF	Communication Facilities	Negative	Positive

1. From the above table we can see that the variable "basic education" (BE) of the credit managers, is identified as a factor that would affect the extent of non-performing bank loans given by a credit manager. The standard expected relationship with the extent of non-performing loans (NPL) would be negative, assuming that lending decisions are

[5] The original and coded results of questionnaire "A" in spreadsheet form are available on request.
[6] For example: number of training courses attended within the bank by credit managers (CA): none =1, 2 or more = 2, 5 or more = 3.

not influenced by external factors[7]. Since a credit manager with higher basic education would also be in a better position to analyze loans and give the least number of non-performing loans. In the same way a credit manager with higher basic education would be able to recover more non-performing loans (RL) from the defaulters and therefore the standard expected relationship would be positive.

2. "Professional education" (PE) of the credit managers is identified as an important factor that would affect the extent of non-performing bank loans (NPL) given by a credit manager. The standard expected relationship with the extent of non-performing loans would be negative, assuming that lending decisions are not influenced by external factors. Since a credit manager with a higher professional education would also be in a better position to analyze loans and give the least number of non-performing loans. In the same way a credit manager with higher professional education would be able to recover more non-performing loans (RL) from the defaulter and therefore the standard expected relationship would be positive.

3. "Years of service within the bank" (YOS) by the credit managers is identified as a factor that would affect the extent of non-performing bank loans (NPL) given by a credit manager. The standard expected relationship with the extent of non-performing loans would be negative, assuming that lending decisions are not influenced by external factors. Since a credit manager with more years of service within the bank would also be in a better position to analyze loans and give the fewer number of non-performing loans. In the same way a credit manager with more years of service within a bank would be able to recover more non-performing loans (RL) from the defaulters and therefore the standard expected relationship would be positive.

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[7] External Factors include personal interest, political corruption, govt. interference and mismanagement by giving political motivated loans.

4. "Number of courses attended" (CA) by credit managers would affect the extent of non-performing loans given by the credit managers. The standard expected relationship with the extent of non-performing loans (NPL) would be negative, assuming that lending decisions are not influenced by external factors. Since the credit manager who has attended more courses related to the assessment of loans would be in a better position to analyze loan applications and therefore would give fewer non-performing loans. In the same way, normally a credit manager who has attended more courses related to banking would be in better position to deal with the defaulters and recover a higher percentage of non-performing loans.

5. "Years of experience" (YOE) as credit manager is identified as another factor that would affect the extent of non-performing bank loans (NPL) given by a credit manager. The standard expected relationship with the extent of non-performing loans would be negative, assuming that lending decisions are not influenced by external factors thus a credit manager with more years of experience as a credit manager would be in a better position to analyze loan applications and give the least number of non-performing loans. In the same way the credit manager with more years of experience would be able to recover more non-performing loans (RL) from the defaulters and therefore, the standard expected relationship would be positive.

6. "Credit limit" (CL) assigned to the credit managers would affect the extent of non-performing loans given by the credit manager. It is expected that its relationship with the extent of non-performing loans would be positive since a credit manager with a larger credit limit is likely to give more non-performing loans. In the same way its relationship with the non-performing loans recovered would be positive. Since more non-performing loans would arise from the credit manager with the higher credit limit, it is expected that its recovered loans would also be higher.

7. "Communication facilities"[8] (CF) provided to the credit manager is another variable that would affect the extent of non-performing loans given by the credit manager. The

[8] Communication Facilities include: Telephone, fax, internet/online banking

standard expected relationship with the extent of non-performing loans would be negative, assuming that lending decisions are not influenced by external factors. A credit manager who has better communication facilities at his disposal would be able to assess loans in a more efficient manner and therefore would give fewer non-performing loans. In the same way the standard expected relationship with non-performing loans recovered (RL) would be positive since a credit manager having better communication at his disposal would be in a better position to pursue the defaulters and recover more non-performing loans. Whereas when credit managers' decision making is influenced by external factors like personal interest and political corruption, the excepted signs of both NPL and RL are reversed.

6.5 Empirical results for non performing bank loans

The ordered probit model is estimated using the maximum likelihood method (ML). Most of the studies relating to the application of the ordered probit model have analyzed the results by only interpreting the signs of coefficients, the z-statistic and [×] values. In this study we also include a number of other diagnostic tests.

The dependent variable is non-performing loans (NPL) and the number of respondents is one hundred, which is the entire population[9]. The reported fit measures are the Pseudo [×] for explanatory power, AIC[10] and SBIC[11]. (LR)(V) [12], is the likelihood ratio statistic for the joint null hypothesis that all slope coefficients are zero. We also report redundant likelihood ratio (LR Redundant)[13] statistic test for the deletion of variables from model 1 to obtain the parsimonious specification. The Jaque-Bera[14] test is used to test for normality in the residuals. Also standard errors are estimated using the (Huber/White)[15] variance covariance matrix. All results were estimated using E-Views 3.11 where an intercept is not separately identified from limit points.

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[9] All 100 filled questionnaires from each and every credit manager are available on request.
[10] Akaike Information Criterion (AIC) is used in model selection for non-tested alternatives.
[11] Schwarz Criterion (SBIC) is an alternative to AIC that imposes larger penalty for additional coefficients.
[12] This is this analog of the F – statistic in linear regression models and tests the overall significance of the model. The number in parentheses is the degrees of freedom, which is the number of restrictions under test.

[13] LR redundant variable test allows to test for statistical significant of subset of your included variables. More formally, the test is for whether subsets of variables in an equation all have zero coefficients and might be deleted from the equation. The LR redundant variable test is an asymptotic test, distributed as a ([×]) with degrees of freedom equal to the number of excluded variables.
[14] If the standard residuals are normally distributed the test statistic should not be significant i.e. the value is less than [×](2) = 5.991 and the probability is greater than 0.050.
[15] Note: the Huber/White (QML) standard errors are not robust to heteroskedasticity in dependent variable models. They are robust to certain misspecifications of the underlying distribution of T.

Table 6.2

Ordered probit model for non-performing bank loans

	Model 1			Model 2		
Variables	**Coefficients**	**z-statistic**	**Probability**	**Coefficients**	**z-statistic**	**Probability**
BE	0.118	0.405	0.686			
PE	0.022	0.173	0.862			
YOS	0.357	1.579	0.114	0.319	2.134	0.033
CA	0.104	0.525	0.600			
YOE	0.421	2.422	0.0154	0.402	2.770	0.0056
CL	-0.029	-0.163	0.870			
CF	-0.553	-3.481	0.0005	-0.539	-3.320	0.0009
Limit Points						
X	0.310	0..282	0.7775	-0.202	-0.470	0.638
X	1.441	1.295	0.1952	0.925	2.116	0.034
Fit	**(Test)Statistic**	**Probability**		**(Test)Statistic**	**Probability**	
Psedudo-R2	0.111			0.109		
AIC	2.121			2.046		
SBIC	2.355			2.176		
LR (7 df)	24.290	0.0010		23.786 (3 df)	0.000027	
LR (Redundant)	NA			0.504	0.973	
Misspec	**(Test)Statistic**	**Probability**		**(Test)Statistic**	**Probability**	
JB(Residual test)	3.774	0.152		3.765	0.152	

Table 6.2 reports the ordered probit for the determinants of the non-performing bank loans of Pakistani public-owned commercial banks. The explanatory variable names are listed in the left-hand column along with the estimated limited points X and X diagnostic statistics. The second, third and fourth columns give the coefficients, z-statistics and their probabilities respectively for the most general specification. In model 1, only three variables are statistically significant at the 5 percent level (with z-statistics exceeding 2 in magnitude);[16] communication facilities (CF), years of experience as credit manager (YOE), and years of service (YOS). All the other variables feature z-statistics that are below unity in magnitude and are deleted from the model. The exclusion of the insignificant variables from model 1 gives model 2.

The three variables retained in model 2 (CF, YOE and YOS) remain significant (with z-statistic exceeding 2 in magnitude). Further, the model is statistically significant

[16] All the results have applied (Huber/White) standard errors & covariance

according to LR statistic [which is 23.786 and is greater than the 5percent critical value, [X] (3) = 7.815 – its probability value of 0.000027 is less than 0.050]. The lower SBIC of model 2 (2.176) compared to model 1 is (2.355) suggests that model 2 is an improved specification. The likelihood ratio statistic LR (Redundant variable) = (0.504) suggests that the removal of the insignificant variables is valid [X]the test statistic value of 0.504 is less than the 5percent critical value [X](4) = (9.488) and the probability (0.973) is greater than (0.050)[X]. Also there is no evidence for non-normally distributed residuals according to the Jarque-Bera test JB (Residual Test) – the statistics of (3.774 and 3.765) are less than the 5 percent critical value of [X](2) = 5.991 and the probabilities (0.151 and 0.152) are greater than 0.050. Thus, both models provide valid inference. The pseudo [X]indicate that the models 1 & 2 have 11.1 percent and 10.9 percent explanatory powers[17] respectively.

The sign of the coefficient of (CF) is negative, which is consistent with standard theoretical expectations. The signs of the coefficients on (YOE) and (YOS) are contrary to the standard theoretical expectations but are consistent with the research findings[18] of the earlier chapters which report that the credit managers' decision making was greatly influenced by external factors. According to our findings throughout this research, the credit managers have pointed out that factors like personal interest and political corruption were the foremost factors influencing credit lending in these banks.

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[17] The pseudo [X](or likelihood ratio index) is defined as: pseudo [X]= 1 – (InL/In[X]) where INL and In[X]are the maximized values of the model's likelihood function including all variables and only incorporating an intercept, respectively – see Greene (2000, p831). Clearly, if all the slope coefficients are zero then InL equals In[X] and the pseudo [X]is zero. Perfect fit can only be obtained if InL is zero (the log of the likelihood functions attaining the maximum value of one).

[18] Over 90% of credit managers believe that political corruption and personal interest caused non-performing loans. For example that UBL credit managers have the highest (YOS) & (YOE) among all the 5 banks but the extent of non-performing loans is also the highest.

6.6 Empirical results for recovered non performing bank loans

The dependent variable is recovered non-performing loans (RL) and the number of respondents is one hundred, which is the entire population. In questionnaire "A" respondents were given four options to choose from and they are coded[19] as ordinal values in ordered-probit models as 0, 1, 2 and 3, where 0 is lowest value and 3 is highest value[20]. Therefore we have X, X and X as the limit points for empirical analysis of recovered bank loans. All the other statistics are explained in section 6.5.

Table 6.3

Ordered probit model for recovered non-performing bank loans

	Model 1			Model 2			Model 3		
Variables	**Coefficients**	**z-statistic**	**Prob**	**Coefficients**	**z-statistic**	**Prob**	**Coefficients**	**z-statistic**	**Prob**
BE	-0.627	-2.734	0.0063	-0.637	-3.223	0.0013	-0.732	-4.074	0 0000
PE	0.211	1.66	0.096	0.213	1.684	0.0921			
YOS	-0.008	-0.044	0.965						
CA	0.031	0.140	0.8886						
YOE	0.294	1.668	0.0953	0.296	1.736	0.0826			
CL	-0.254	-1.494	0.1351	-0.242	-1.472	0.1409			
CF	0.054	0.329	0.742						
Limit Points									
X	-2.331	-2.485	0.0129	-2.464	-4.088	0.0000	-2.799	-6.804	0.0000
X	-0.142	-0.156	0.875	-0.280	-0.485	0.628	-0.716	-2.034	0.042
X	0.983	1.1005	0.271	0.848	1.473	0.1408	0.399	1.008	0.314
Fit	**(Test)Statistic**	**Probability**		**(Test)Statistic**	**Probability**		**(Test)Statistic**	**Probability**	
Psedudo-R2	0.109			0.108			0.0825		
AIC	2.003			1.945			1.936		
SBIC	2.264			2.127			2.040		
LR (7 df)	21.970	0.0026		21.807 (4 df)	0.0002		16.679 (1 df)	0.00004	
LR (Redundant)	NA			0.163	0.983		5.292	0.507	
Misspec	**(Test)Statistic**	**Probability**		**(Test)Statistic**	**Probability**		**(Test)Statistic**	**Probability**	
JB(Residual test)	1.644	0.440		1.42	0.49		1.0929	0.57	

Table 6.3 reports the ordered probit regression results for the determinants of the recovery of non-performing banks loans of Pakistan public-owned commercial banks.

[19] The original and coded results of questionnaire A in spreadsheet form are available on request.

The explanatory variable names are listed in the left-hand column along with the estimated limited points [X], [X] and [X] and diagnostic statistics. The second and third columns give the coefficients, z-statistics and their probabilities respectively for the most general specification. In model 1, only one variable is statistically significant at the 5 percent level (with z-statistics exceeding 2 in magnitude), which is: basic education (BE). We have also included the variables credit limit (CL), professional education (PE) and years of experience as credit manager (YOE), since they are significant at 10 percent level of significance.

The exclusion of the insignificant variable terms from model 1 gives model 2. The lower SBIC of model 2 (2.127) compared to model 1 (2.264) suggests that the former represents an improved specification. Further, the model is statistically significant according to LR statistic [which is 21.807 and is greater than 5 percent critical value, [X] (4) = 9.488 – the probability value is 0.0002, is less than 0.050] .The likelihood LR (Redundant) = (0.163) suggests that the removal of these variables is valid [X]the test statistic is less than the 5 percent critical value is [X](3) = (7.815) and the probability value is (0.983) is greater than (0.050) [X]. We can also observe from model 2 that (BE) is the most significant at variable and is accepted at 1 percent and 5 percent level of significance, while (PE) and (YOE) are significant at 10 percent level of significance and therefore cannot be ignored.

To further improve the specification, model 3 is constructed with only one variable (BE) significant of 5 percent level (with z-statistic exceeding 2 in magnitude. Further, the model is statistically significant according to LR statistic [which is 16.679 and is greater than 5 percent critical value, [X] (1) = -4.073 – the probability value is 0.0000, is less than 0.050] . The lower SBIC (2.040) shows even further improved specification from model 2. Here likelihood LR (Redundant) 5.292 and probability value 0.506 suggests that the removal of these variables is valid and still falls within the accepted

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[20] For example: extent of non-performing loans recovered (RL): 0% = 0, 2% = 1, 6% = 2, 10% = 3.

level χ^2(6) = (12.592) and the probability (0.506) is greater than (0.050)χ^2. Also there is no evidence for non-normally distributed residual according to Jarque-Bera test JB (Residual Test) – the statistics of all three models are (1.644, 1.42 and 1.093) are less than the critical value of χ^2(2) = 5.991, and their probability values are (0.439, 0.49 and 0.57) greater than 0.050. Thus, all the three models provide valid inference. The pseudo R^2 indicates that model 1, 2 & 3 have 10.9 percent, 10.8 percent and 8.25 percent explanatory powers respectively.

The sign of the coefficient of (BE) is negative; this is contrary to the standard theoretical expectations but is consistent with the research findings[21] of the earlier chapters, which report that credit managers' decision making was greatly influenced by external factors. According to our findings throughout this research, the credit managers have pointed out that factors like personal interest and political corruption were the foremost factors influencing credit lending in these banks. We can also see that (PE) and (YOE) are significant at 10 percent level of significance and therefore cannot be ignored. Their sign of the coefficient of (PE) and (YOE) are also positive, which is consistent with standard theoretical expectations.

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[21] Over 90% of credit managers believe that political corruption and personal interest caused non-performing loans. For example that UBL credit managers had the second highest (BE) among all the 5 banks but the extent of non-performing loans was also the highest.

6.7 Conclusion

Applying the ordered probit model we have found three distinct variables that significantly influence the non-performing bank loans and three variables which influence the recovery of non-performing bank loans.

We have found that communication facilities provided to the credit managers (CF) have strongly influenced the extent of non-performing bank loans and its coefficient sign are consistent with the standard theoretical expectations. This shows that the credit managers are less likely to give non-performing bank loans if they are provided with modern communication facilities. We have also found that non-performing bank loans are also strongly influenced by the credit managers' years of service within the banks (YOS) and years of experience as the credit manager (YOE). Although their coefficient signs are contrary to the standard theoretical expectations, they are consistent with the findings throughout the research[22] especially if we compare these findings with those from questionnaire "B"[23] where over 90 percent of the credit mangers have sited personal interest, personal corruption and political motivated loans as main reasons for non-performing bank loans. Therefore by applying the ordered probit model on non-performing bank loans we have been able to determine (CF) (YOS) & (YOE) as the variables which have influenced the extent of non-performing bank loans in the five public-owned Pakistani commercial banks.

Regarding the recovery of non-performing bank loans, we have found that basic education (BE) of the credit managers is the only variable which has strongly influenced the extent of recovery of non-performing bank loans in public-owned Pakistani commercial banks. A credit manager with a higher basic education would be in a better position to analyze loans and recover more non-performing loans from the defaulters. Although (BE) sign of the coefficient is negative, contrary to the standard theoretical

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[22] In chapter 5 it can be seen for example that UBL credit managers (YOS) & (YOE) is the highest among all the 5 banks but the extent of non-performing loans is also the highest.

[23] Analysis of Questionnaire "B" is in Chapter 5.

expectations, it is consistent with the research findings[24] of the earlier chapters, which report that credit managers' decision making was greatly influenced by external factors. We have seen that other variables like professional education of credit managers (PE) and years of experience as credit manager (YOE) have also influenced the recovery of non-performing loans, although their effects are not as strong as that of basic education.

[24] Over 90% of credit managers believe that political corruption and personal interest caused non-performing loans. For example that UBL credit managers had the second highest (BE) among all the 5 banks but the extent of non-performing loans was also the highest.

Chapter 7

Conclusions and Recommendations

The aim of this thesis has been to investigate the causes of the banking crisis in Pakistan, with particular emphasis on the causes of non-performing bank loans in the five major public owned commercial banks. An in-depth and comprehensive study of the evolution of the banking sector together with an analysis of the factors leading to the crisis has been carried out. This thesis gives a unique insight as it focuses on the possible causes of the crisis at a microeconomic rather than a macroeconomic level. Primary data has been collected a using questionnaire based methodology that has never been employed in this field before. The result is an understanding of the reasons behind this phenomenon from a novel perspective that could stimulate further research using this methodology.

Major findings of the thesis

Firstly, our findings from the analysis of the Pakistani banking sector clearly show that five public sector banks have traditionally been dominant in the banking sector of Pakistan. In the early 1990s these banks were holding more than 90 percent of the banking assets of which over 50 percent were of non-performing banks loans (NPL). It was also seen that Pakistan had one of lowest savings and investment ratio among its peer countries. The inefficiency of the banking sector was highlighted in our findings, showing an increase in interest spread between lending and deposit, as well as unequal distribution of credit among different sectors. In fact over 30 percent of the loans were only given to the textile sector due to lack of prudent banking regulations and structural inefficiencies in the banking sector. We also found that five state owned banks had a very high expenses to income ratio, operating expense to total expenses ratio, earnings and operating expense per employee ratios indicating the operating inefficiency due to a mounting burden of non-performing bank loans. Overall it was found that the banking sector has been riddled with the problems of poor quality management, political influence and the resultant portfolio of high level of NPLs that formed the lion share of industry's loans.

Secondly, most of the credit managers of the five public owned Pakistani commercial banks had on average of 15 years of service within the bank and over 10 years of experience working as credit manager but only 36% of them had received any relevant education before joining the bank. Also only 60% of them were ever given relevant training throughout their service. In fact 73% of credit managers admitted that they had insufficient knowledge of banking and were simply unaware of the tools utilized by modern bankers to give credit.

Thirdly, credit managers identified personal interest of the bankers, as one of the main causes for the large proportion of non-performing bank loans. Over 90% of the credit managers questioned were not satisfied with their salary structure in their banks. We also found that only 9% of the credit managers were paid more than 50,000 rupees, clearly indicating the low pay scale of credit managers in the Pakistani banking sector. The findings also show that only 16% of credit managers were provided with modern communication facilities.

Fourthly, we found high level of dispersions within banks regarding assigning credit limits assigned to different credit managers, since some credit managers were authorised very little credit limit others were given very large limits.

Fifthly, it was found that UBL had highest percentage of non-performing bank loans and lowest percentage of non-performing loans recovered. The findings also show that the highest number of years of service of the credit managers within the bank and the most number of years of experienced as credit managers were also with UBL among all with five public owned Pakistani commercial banks. Furthermore it was also reported that since the privatisation of MCB and ABL their performance in relation to recovery of non-performing bank loans has been considerably better than non-privatised commercial banks.

Sixthly, we found that the years of service within the bank (YOS) and years of experience as credit manager (YOE) have significant correlation with non-performing bank loans

(NPL) and non-performing bank loans recovered (RL). It was also found that both credit limit assigned to the credit managers (CL) and courses attended (CA) had no correlation between years of service within the bank, course attended by credit managers and years of experience as credit manager.

Seventhly, the findings show that an overwhelming 90% of the credit managers surveyed believe political influence as the single biggest reason behind the high proportion of non-performing bank loans in these five Pakistani public owned commercial banks.

Eighthly, it was found that over 70% percent of total numbers of credit managers surveyed believe that one of the principle causes of non-performing bank loans and of their low recovery was due to inadequate banking laws.

Ninthly, the findings showed that over 75% of the credit managers preferred giving secured loans whereas 25% of credit manager still preferred giving unsecured loans. It was seen that there was weak association between the information (5C's) required by the credit managers and habit of giving secured loans. It was also seen that there was a weak positive association between the different kinds of collateral accepted by credit managers and their habit of giving secured loans.

Tenthly, after applying the ordered probit model we were able to determine communication facilities provided to the credit managers, years of service within the bank, and the years of experience as credit manager, as the variables which have strongly influenced the extent of non-performing bank loans in the five public owned Pakistani commercial banks. It was also found that basic education (BE), professional education (PE) as well as the years of experience as credit manager (YOE) as the variables which have influenced the extent of recovery of non-performing bank loans in public owned Pakistani commercial banks.

Implications for policies and bank management:

Our findings have a number of important implications both for government policies and for bank management.

Firstly, a more vigorous strategy is required to deal with the mounting burden of non-performing loans especially historic loans in a comprehensive and transparent manner. The objectives of the strategy should be: to improve the coverage and the reporting of NPLs; to proactively manage the existing stock of NPLs; to stem flow of new NPLs; and to improve the policy and regulatory environment. This will help banks in reducing their operating costs and ultimately the spread between lending and deposits rates. Another way is separate the management of bad debts from the originating bank. This argument for "carving out" the bad loans is that the originating bank may be less objective and may even continue lending to delinquent debtors. Furthermore, a bank preoccupied with managing bad debts may become very risk-averse, with little time or inclination for new lending. It is easier to give separate transparent goals if different people are charged with the ongoing banking operations and the resolutions of bad loans. Moving bad assets off the balance sheet would also facilitate finding another bank to buy the troubled bank without complicated guarantee arrangements covering NPLs.

Secondly, prudential regulations have to be established by Sate Bank Pakistan (SBP), disseminated widely and act as the ground rules and guidelines for financial industry. Mostly these regulations should be pertaining to capital adequacy, quality of assets, classification and provisioning of loan losses, liquidity requirements, risk concentration and management. If banks are not allowed to fail, it is essential that corrective action to be taken while the bank still have an adequate cushion of capital. This is particularly important since low or negative capital will tempt bank managers to try desperate remedies such as offering very high interest on deposits to fund high – risk borrowers. The Basle Committee has strongly endorsed the need for supervisors to take timely corrective action when banks fail to meet the capital adequacy ratios or other prudential requirements. Yet one of the commonest complaints about bank supervisors is that they intervene too late in the problem banks. This has led many observers to suggest that interventions should be guided by rules rather that left to the discretion of supervisors.

Thirdly, once the regulations are put in place the SBP should continuously monitor and supervise the banks. This would be done through an integrated approach of no-site surveillance and market information. Supervision techniques should be aligned with best practices of the central banks in the world and the CAMELs rating system is used to assess the health of the banks. A banking desk responsible, which monitors continuously and reviews the available date and flags early warning in cases where prompt corrective actions are required. This would enable the SBP to make sure that remedial action implemented and failure of bank does not lead to uncertainty in the entire banking sector.

Fourthly, the incentive structure faced by regulatory agencies, consumers and banks have to be aligned to the maximum extent feasible. Mark-to-market valuation of assets, forced scale value of collateral's, greater and regular disclosure of financial information, mandatory credit ratings of the banks are some of the tools, which can be used for this purpose. Consultation between regulators and regulated institutions ensures consistency between external regulations and internal risk procedures. The SBP should develop a regular consultative mechanism whereby the views and comments of the Pakistan Banking Association are sough and incorporated in the draft policies, circulars and regulations.

Fifthly, privatisation of nationalised commercial banks (NCBs) is largely motivated by this particular consideration because these banks have ill-defined incentive structure and are not subject to the normal disciplinary pressures of the market. It was found throughout the research that management of NCBs have faced pressures to make loans on political consideration. Interference by the ministers and bureaucrats in the operations of such banks and the unwitting encouragement of bad banking practices can itself become a powerful ingredient in bank distress. Hence there is a need to speed up the undergoing restructuring process of Nationalized Commercial Banks (NCBs) to make them viable for privatisation. This will help in insulating these banks from undue interference and political pressures in credit and investment decisions making.

Sixthly, intervention arrangements in the event of compliance failures ought to be credible and biting as they provide a deterrent against errant behaviour by the bank managers' owners and directors. Any form of corruption and personal interest from the bank's management must be dealt with exemplary punishment to deter them exploiting their positions. Managers should clearly lose their "fit and proper" status in cases of localised bank failure reflecting individual or bank-specific errors. In the case of fraud they should be more harshly treated. The replacement of the bank's head and perhaps the deputies, may be necessary to restore confidence; but this may not apply to the next level of senior management. In any case, managers can be replaced only if there are enough capable and honest people to put in place of departed managers. It is also recommended the initially appointing on short-term contracts tough mangers skilled in restructuring companies (to close subsidiaries, shrink operations and cut costs) and later appointing more conventional bankers to operate the banks.

On the other hand the salaries of all bank staff and management should be reviewed and pay scales should set which are competitive with other professions. Furthermore all human resource recruitment at all levels should be done purely on merit.

Seventhly the accountability arrangements applied to the State Bank of Pakistan have to strengthen to minimize the potential dangers arising from political corruption and interference. Greater disclosure and transparency needs to be introduced and international accounting standards must strictly follow in consonance with international practices.

Eighthly, although after the banking crisis, legal and judicial reforms have been facilitated by financial contract dispute resolution, implementation of courts judgements is still ineffective, partly due to remaining weakness in the law and its enforcement. Enabling financial institutions to foreclose on collateral without the intervention of courts should further strengthen the law. Providing required resources of the state to implement out-of-court foreclosure could facilitate financial institutions. Simultaneously, providing courts with adequate resources to affect loan recovery could facilitate the implementation of court judgement.

Ninthly, the bank's management should carry out refresher and training courses at every level of the banks' management. Special emphasis should be given to providing extensive training on loan evaluation to credit managers, as well as by introducing more sophisticated loan appraisal methods and credit risk management systems. Furthermore, by strengthening the role of credit information bureau and credit rating agencies and improving the quality of project evaluation by qualified consultants before disbursing of large amount of loans would facilitate the overall credit management procedures, whereby all the lending decisions are being made on purely commercial basis.

Areas for future research:

Although this research goes a long way in explaining the whole banking crisis and its relation to non-performing bank loans from the prospective of lenders, still very little has been written from the borrowers' point of view. Therefore further research into major borrowers would provide even further insight of the causes of the non-performing bank loans.

The thesis has given more stress in analyzing the microeconomic factors influencing banking crisis. Hence there is further room for research into the macroeconomic factors as well as external political conditions prevailing at the time of the banking crisis. Since this would provide additional insight into Pakistani banking crisis.

Furthermore, this research has provided a new methodology for analyzing the causes of non-performing bank loans and banking crises. Therefore the research could become cornerstone of further academic research into the causes of non-performing bank loans in other developing countries using this methodology. The use of questionnaire-based methodology and the application of the order probit model to causes of banking crisis is unique and it is hoped that researchers in future would adopt this methodology since it provides fresh insight into the causes of banking crises.

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APPENDIX

Questioners A

Name : **Organization :**
Branch : **Post held :**
Sex: **Age:**
Salary:

Marital Status	*Single*	*Married*	*Divorced*
Basic Education *(Before joining the Organization)*	☐ *FA*	☐ *BA*	☐ *MA*
Professional Qualifications *(Before joining the Organization)*	☐ *I. Com*	*B. C*☐	*MB*☐
Years of Service *(In the Organization)*	☐ *5 Years*	*10 Y*☐*rs*	*15 Y*☐*rs or more*
Number of Training & Refresher Courses attended *(During Service)*	☐ *None*	☐ *2 or more*	☐*5 or more*
Years of Experience as Credit Manager	☐ *2 Years*	*4 Ye*☐	*6 Years or mo*☐
Credit Limit available at Personal Disposal *(Rupees)*	☐ *100,000*	*500,0*☐*0*	*10,0*☐*00*
Extent of non-performing loans	☐ *2%*	☐ *6%*	☐ *10% or more*
Extent of Bad loans Recovery	☐ *5%*	☐ *10%*	☐ *15% or more*
Extent of Communication *(At Branch level)*	*Tele*☐*one*	*Tel/F*☐	*On L*☐*e Computer*

Questionnaire B

Q1 To what extent have non-performing loans affected the performance of your bank?

High	❑
Medium	❑
Low	❑

Q2 Do you think that the reason for very low recovery of non-performing loans is a result of improper bankruptcy laws?

Yes	❑
No	❑

Q3 Do you look at all the 5 C's when you give loans?

Yes	❑
No	❑

Q4 Please rank them in order of importance?

Character	_____
Capital	_____
Collateral	_____
Capacity	_____
Conditions	_____

Q5 What forms of financial statements are you looking for giving while a loan? Please rank in order of importance.

Income Statement	_____
Balance Sheet	_____
Cash Flow	_____
Ratios	_____
Others	_____

Q6 Do you think that the mark-up charge by your commercial bank is too high, resulting in a high percentage of non-performing loans?

Yes	❑
No	❑

Q7 Do you think that Pakistani Bankers lack sufficient knowledge in regards to the lending procedure, resulting in a high percentage of non-performing loans?

Yes ❑
No ❑

Q8 Do you think that the high default in five public owned Pakistani commercial banks are a result of inadequate training as well as facilities provided to credit mangers?

Yes ❑
No ❑

Q9 Do you think that credit managers in Pakistani Public owned banks are not paid well?

Yes ❑
No ❑

Q10 Do you think that less pay has led to malpractice and corruption within corruption of Pakistani Public owned commercial banks?

Yes ❑
No ❑

Q11 Do you think that a high percentage of non-performing loans are due to high level political corruption in Public owned commercial banks?

Yes ❑
No ❑

Q12 Do you think privatisation of public owned commercial banks is the best option?

Yes ❑
No ❑
May be ❑

Q 13 Which in your option is the biggest root cause of the high extent of non-performing loans in Pakistani public owned commercial banks? Please rank in order?

Personal Interest Corruption of Bankers ❑
High interest rate ❑
Insufficient knowledge & training of Bankers ❑
Political Corruption ❑
Inadequate banking & Bankruptcy laws ❑

Q14 Which in your option is the biggest factor which has lead to a low debt recovery in public owned Pakistani commercial banks? Please rank in order of importance.

Personal Interest Corruption of Bankers	❑
High interest rate	❑
Insufficient knowledge & training of Bankers	❑
Political Corruption	❑
Inadequate banking & Bankruptcy laws	❑