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DEPARTMENT OF BANKING AND FINANCE

GRADUATION PROJECT (BANK 410)

THE ROOTS OF BANKING CRISES IN THE WORLD AND CRISES PERIOD IN TRNC

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ABSTRACT

Banking sector plays an important role for the world economy. So it is very crucial to understand banks and its' strengths to the economy. Because any unexpected event in the banking sector may easily affect the depositors and stability of the economy.

The purpose of this study was to explore factor behind the banking crises in the world and define the banking crises period in TRNC. Roots of banking crises were explained by dividing into macro and micro factors.

The Turkish Republic of Northern Cyprus (TRNC) is a small island state situated in the Eastern Mediterranean with its 200 000 inhabitants and in the crises period it created 60.000 unpaid depositors in TRNC.

The questionnaire was prepared to understand the behaviour of depositors in the crises period and Microsoft excel was used to evaluate the results of questionnaire.

In conclusion, depositors were not well informed about the position of banks and there was loose regulation system in TRNC.

Keywords: TRNC, BANKING CRISES, MICROSOFT EXCEL

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To my mother and father…

BEGINNING

1.1 INTRODUCTION

This section explains the broad problem area, the actual problem statement, the purpose of this study and aims of this study.

1.2 THE BROAD PROBLEM AREA

Banking crises have become commonplace during the past two decades, but the range of experience in terms of the nature of crisis, causes and effects, varies widely across countries and at different periods in time.(ŞAFAKLI , 2003)

Over time governments have learned the importance of sustaining sound banking systems and developed regulations to improve their performance. Yet banking problems still persist. In fact, according to one count, there have been 113 systemic banking crises (defined as much or all of bank capital being exhausted) in 93 countries since the late 1970s, and an additional 50 smaller (non-systemic) banking crises in 44 countries.3 Moreover, these banking crises are not limited to low-income countries. Since 1980, about three-quarters of IMF member countries have experienced significant banking sector problems and subsequent restructurings, often involving government financial assistance.

Banking crises are a serious concern and can be extremely costly—not only in terms of the direct cost to governments and taxpayers, but also in terms of foregone growth. According to one study, governments spent an average of about 13% of GDP restoring financial systems after banking crises. In many cases, the costs were substantially

greater. So, it is critically important to strengthen banking systems in an effort to avoid—or at least reduce the likelihood of—banking crises. (FORBES, 2004)

It is very important to understand financial strength of banking sector in the world. Any crises or panic in the banking sector influence directly to the economy and cost of these crises might be substantially greater.

1.3 PROBLEM STATEMENT

The banking crisis of the Turkish Republic of Northern Cyprus (TRNC), which occurred at the beginning of the year 2000, has resulted in the liquidation of ten banks and ended up with economic losses of approximately 200 trillion TL, almost equivalent to 50% of GNP for 1999. (SAFAKLI, 2003)

In this study, you will find the answer of why do banks face crises and how did banks in TRNC go into crises.

1.4 PURPOSE OF THIS STUDY

The purpose of this study is to define the main factors of bank crises in the world and understand the reasons of bank failures in TRNC.

1.5 AIMS

- To explore the banking sector and understand the place of banks in the economy.
- To understand the factors behind the banking crises.
- To identify the banking crises in TRNC.
- To recommend depositors on what type actions they have to take to protect themselves.

1.6 CONCLUSION

In this section broad problem statement and problem statement are studied. Aim of this study is explained and a brief Summary of project was given.

SECTION 2

LITERATURE REVIEW

2.1 INTRODUCTION

Banking sector plays an important role for the world economy. So it is very crucial to understand banks and its' strengths to the economy. Because any unexpected event in the banking sector may easily affect the depositors and stability of the economy.

This section introduces the history of banking sector and the factors behind the banking crises in the world.

2.2 SHORT HISTORY OF BANKING

In the old days there was no paper money. The accepted token of exchange was precious metal minted into coins by the Church and the Crown. Because there was only a limited amount of gold and silver available, the economic life of the nation had certain regularity.

An even greater restriction existed throughout Christendom. This was a prohibition against usury, or charging interest. The Church held it to be a grave sin and the code was upheld by the civil powers. There were harsh penalties for those who broke the law.

The regulation of usury was to prevent the separation of money from reality. Money is not a good, it is a measure. It is fraud to pretend otherwise, and constitutes theft. Usury

is making money from lending money; it is making money from nothing. This is exactly what is happening today on a colossal scale.

Several important things arose from the prohibition of usury in medieval Christendom. Firstly Jews, who had taken to wandering around Europe in the Middle Ages, began to specialize in money-lending and other practices which were forbidden to Christians. Exploited Christians, both peasants and aristocracy, found themselves being bled dry by usurers, which is why there were sporadic uprisings, imprisonments and expulsions of Jews throughout Europe. It is one reason why King Edward I expelled these perfidious people from England in 1290. Oliver Cromwell allowed them back when the moral authority of the Church was undermined and the King was beheaded in 1649.

Secondly, gold coins, jewels and other valuables were deposited with people who held strongboxes. This was usually with goldsmiths and money-lenders that, more often than not, were one and the same. These loan-sharks and scriveners realized that, without much chance of being found out, they could charge people for looking after their deposits and then use those deposits – which did not belong to them – to make loans to other people at interest. They soon became rich and powerful.

Gold coins are heavy and awkward to carry around so the custom arose whereby the money-lenders would issue credit notes to depositors who began to trade these notes between themselves in commercial transactions. ***Paper money*** had come into existence.

A new form of usury developed as the swindling money-lenders realized the immoral benefits that could be obtained from such a situation. It became apparent to these thieves that they could go one step further than dishonestly using other people's money for financial advantage at no cost to themselves. They could invent money from

absolutely nothing. They could issue credit notes with nothing to back them up and put them into circulation as interest-bearing debts. No-one would be any the wiser. They calculated that they could safely issue notes for up to ten times more than the gold deposits they held, because the depositors would never ask for their deposits back all at the same time.

The principle of modern banking was thus established: invent money from nothing, put it into circulation as "running cash notes" that have to be paid back with real wealth that is produced from our labour, sit back and become unbelievably wealthy and powerful men: hidden rulers of nations.

In England this deceitful system was officially sanctioned in 1694. The usurper of the throne, William of Orange, had overthrown the legitimate King James II with the financial backing and plotting of powerful Jewish financiers in Amsterdam. In return he gave the sovereignty of England to a group of financiers by means of a Charter allowing them to call themselves the Bank of England. The Charter made no mention of issuing the nation's money, but within minutes of signing the new Bank officials were discussing the form of their "running cash notes." The same system was adopted in every country by a process of Masonic revolution and manipulation.

2.2.1 FREEMASONRY AND COMMUNISM

Socialist theorists and ideologues have never attacked the essential mechanism of capitalism. Although the injustices of the capitalist system have been attacked in volume after volume, and rightly so, they have never even hinted at the usury upon which the whole system is built and from which all the other injustices stem.

Perhaps this is because so many Communist leaders are Jewish. Most of the 'Russian Revolutionists' of 1917 were actually Jews from the lower east side of New York City. Two hundred and seventy-five of them were conveyed to Russia aboard the S.S. *Christiana*, led by Trotsky and financed by Kuhns, Loebs, Schiffs and Warburgs. This cosy circle of Jews and Freemasons financed both sides of the Great War.

Marx and Engels, two more Jews, wrote the Communist Manifesto on behalf of a secret society calling themselves 'The League of Just Men.' This secret society was an arm of the Illuminati, whose power and influence was the catalyst of the French Revolution. One of the founding members of the Illuminati was the House of Rothschild, the Jewish banking house which practically invented supra-nationalism for personal profit.

2.2.2 THE SITUATION TODAY

Nowadays banking has become extremely sophisticated but the hidden and usurious mechanism behind it remains the same. After a big enquiry, hushed up as much as possible, the Bank of England was nationalised in 1946. In theory control of the Bank of England should then have passed from a group of private individuals to the British Government, but this is still not the case. Nationalisation only added a thin veneer of respectability.

The British Treasury, in conjunction with the Bank of England's advisers to the Government, determine how much paper money and coin will be issued each year. This has to accord with the wealth of the nation for that year. But because banknotes and coins only account for a tiny percentage of financial transactions, it makes no difference to the bankers at all. Most financial transactions are carried out with abstract figures on

a computer screen that have no relationship to real wealth. Everything has to be paid for at interest though – even when it doesn't exist!

The Government still has to pay interest on old and new loans from the Bank. Only a few years ago it was announced that the interest debt on a loan taken during the Napoleonic War had just been paid off! This is where much of our tax money goes.

2.2.3 THE NEXT STAGE

The next stage of development for international finance is to get rid of cash altogether. Then the token accountability of the bankers will disappear along with the cash. Their intention is that everyone will have to use credit/debit cards for every type of commercial transaction.

Electronic technology, when used this way, and when it is not merely widespread but compulsory, will give them complete control of every man, woman and child in the world. If you cannot buy or sell – food, petrol, clothes – without a card you are completely at their mercy. If you lose the card or it doesn't work for some reason you will suffer until issued with a replacement. If you make a protest against some particular injustice they could invalidate your card. The next time you go to the supermarket your card may not work. You won't officially exist!

Who benefits from such a scheme? The politicians or the bankers? To ask the question is to answer it. The Bank of England is the real, but hidden, government of the country. The Government and the politicians are merely puppets controlled by the Bank – or, more accurately, the international banking families. None of our cowardly politicians dare stand up to these hidden and unelected rulers of the world, so powerful have they become. Two American presidents, possibly three, were assassinated for attempting to

do so. It is far easier for them to submit to the system and enjoy a rich life than expose the real tyrants: tyrants who cause high taxes, unemployment, war, famine and misery for the rest of us. But these despots of the New World Order forget that Truth is more powerful than they could ever become. And Truth brings Justice!

(http://www.heretical.com/miscellx/usury.html)

2.3 IDENTIFYING BANKING CRISES

A banking crisis refers to a situation, in which bank runs and widespread failures induce banks to suspend the convertibility of their liabilities, or which compels the government to intervene in the banking system on a large scale. (IMF,1998)

Most discussions of banking crises begin, not unreasonably,with an examination of the special characteristics of the financial institutions that have failed. Often, we find that the bankrupt institutions were poorly managed and, in some instances, even vehicles for outright fraud. It is typically possible, with the benefit of hindsight, to point toward specific failures of the regulatory system that permitted the mistakes or malfeasance that were the proximate cause of the failures. From inquests of this sort, valuable lessons can be drawn about the design of regulatory mechanisms for prevention, or at the very least *early detection, of dangerousor malfeasant behavior by managers of individual* banks.This is a sensible and necessary line of investigation. There can be no doubt that many bank failures are due in large part to bad decisions by bankers that are possible to

understand after the fact, and that may even be predictable and thus preventable by competent bank supervision and regulation.

However, particularly when trying to understand a major crisis in which a substantial fraction of the banking system is endangered, this focus on the characteristics of institutions that happened to fail is incomplete and potentially misleading. The question arises whether observed shortcomings of the failed banks actually explain the crisis, or merely which banks failed as a result of the crisis. A metaphor may be useful here. 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, strengthening weak links in the chain only works if one succeeds in identifying the weakest link before it snaps, and even then will accomplish nothing more than causing the chain to break at another link if the tension on the chain is sufficiently high.

In our metaphor, the individual links in the chain represent the specific institutions that comprise the domestic financial system. Their strength is determined by their investment and funding decisions, which can be influenced by supervisory and regulatory structures. Tension is placed on the chain by economy-wide factors including, in particular,macroeconomic developments. When macroeconomic force place great strain on the banking system, the weakest banks are the ones most likely to fail, but it is the macroeconomic tension, as much as the weakness of individual banks, that causes the failures.As with a chain, the quality of the institutional and regulatory regime and macroeconomic factors clearly interact: to the extent that regulation and supervision strengthen each bank in the system, they permit the system to with stand larger macroeconomic stresses without falling into crisis. But institutional arrangements

and supervisorysystems that eliminate the risk of bank failure and financial crisis do not exist in any region, certainly not in LatinAmerica, and would probably counter-productive if theydid. Thus,no matter how well regulated and supervised, banking systems are likely to remain vulnerable to macroeconomic shocks. The question therefore arises how policy should respond to this vulnerability. (GAVIN and HAUSMAN ,1998)

2.4 IS BANKING SPECIAL

Many observers have long considered banks special both because they are "fragile" and thus likely to break and because they are an integral part of the payments system through providing deposits, which constitute a large part of a country's money supply, and, in some countries, operating the clearing system for checks and electronic funds. The latter functions make them the primary channel through which the central bank transmits monetary policy. Thus, some people fear that large-scale and even individual large institution failures could have major adverse effects on the financial system and possibly beyond to the domestic and even international.

Macro economy that would be greater than those created by the failure of other business firms. Bank failures might start a domino or snowball effect, knocking down other banks and nonbanking firms in their path. Some have used this fear to justify special public policies toward banks to reduce both the probability and cost of failures. Indeed, arguments for considering banks special date back to Adam Smith.

Analysts view banks as fragile because they have;

(1) Low cash-to-asset ratios,

(2) Low capital-to-asset ratios, and

(3) High demand-to-total-deposit ratios.

Under these conditions, sudden large-scale withdrawals of deposits could force them to have to sell opaque and less-liquid earning assets at firesale losses that would exceed their capital and drive them into insolvency. Thus, their greater fragility might lead to greater breakage. But many items are fragile—fine glass, fine china, and even economists' egos, for example. Yet they do not necessarily break more often than less fragile items, but they receive more careful handling. Evidently, banks did too, at least in the United States and most developed countries before the introduction of special public policies to counteract the fragility. The market—shareholders, depositors, loan customers—appreciated the fragility and handled banks with greater care than other, less fragile firms. In the United States, for instance, the annual bank failure rate from 1870 to 1913, before the introduction of the initial bank safety net in the form of the lender-of-last-resort facilities of the Federal Reserve in 1914, was lower than either the failure rate for nonbanks in the same period or for banks from 1914 to 1994. This low rate occurred despite legal and regulatory restrictions that prohibited banks from reducing risk as much as they may have wished through geographic and product-line diversification. Indeed, the U.S. banking structure appears to have been designed almost to maximize failures. But the annual variance of the failure rate was substantially higher for banks than for nonbanks. Thus, in the few years when bank failures were numerous, they were very numerous. Moreover, the large-scale failures were consistent with the best known symptom of systemic risk: individual bank failures igniting an exploding series of further bank failures.

This pattern served to reinforce the public perception of bank failures as serious economic disasters. This perception rested at least partially on fear of the unknown. The public knows far less about the operation of banks and other firms that deal in intangibles than about the operation of firms that deal in tangibles such as steel, automobiles, or computers. For most, mystery shrouds the operation of banks and most other financial institutions; many cannot distinguish between factual and fictional descriptions. The failure of banks and financial institutions remains a favourite topic for both writers of fiction and scriptwriters for movies, particularly those who seek to portray scenes of widespread fear and suffering. Although the lumpiness of bank failures suggests systemic risk, it does not by itself constitute proof. The evidence from many countries strongly suggests that bank failures follow problems in the overall or regional macro economy rather than either igniting them or resulting from a shock wave set in motion by the failure of a single bank or a small number of banks, although wide-scale bank failures do exacerbate problems in the real sector. When many banks fail concurrently, the empirical evidence suggests that the failures occur among banks whose balance sheets are all exposed to the same credit and interest-rate risks that is, bank runs tend to be firm-specific or informational, rather than industry-wide.

Bank fragility reveals itself and bank failures occur most frequently when the macro economy experiences rapid inflation and, in particular, bubble in asset prices and interest rates. Because activities on both sides of the bank balance sheet effectively involve forward contracts priced on the basis of predictions of prices, income, employment, and interest rates, unexpected adverse changes in these variables have caused banks to suffer large losses from loan defaults and high costs of deposits. However, at least in the United States before the safety net, such losses were too small to drive more than a small percentage of banks into insolvency and even more rarely

any even reasonably large and diversified bank into insolvency. When the appropriate economic incentives exist, at least large marginal depositors can differentiate financially healthy from financially sick banks and exert discipline on the latter. At the same time, banks can signal the state of their financial health to depositors and other customers by rearranging their asset and liability portfolios and changing their capital ratios. Unlike actual runs, the threat of runs exerts powerful market discipline (Kaufman 1988).

2.5 WHY ARE THERE SO MANY BANKING CRISES

2.5.1 MICRO FACTORS

- **Banks are leveraged**
- **Banks are illiquid**
- **Bank runs**
- **Bad banking**
- **Poor supervision and regulation**
- **Fraud and looting**
- **Connected lending**

2.5.2 MACRO FACTORS

- **Terms of trade drop**
- **Recession**
- **Asset bubble**
- **Capital flight**

2.5.1.1 BANKS ARE LEVERAGED

The incentive problems that make banks "special" ultimately stem from the fact that they are leveraged; when managing their investments they are putting other people's money at risk. In addition, the nature of banks' liabilities renders normal mechanisms for controlling the implied incentive problems ineffective. Bank leverage has two important implications. First, capital is the "cushion" that stands between adverse shocks and bankruptcy, and because that cushion is relatively thin for banks, relatively small shocks can drive a bank to insolvency. Capital is, then, a crucial buffer stock for banks and, as with other buffer stocks, the amount of capital that should be held depends upon the volatility of the environment in which the bank is embedded. Thus, in volatile regions such as Latin America, the problems generated by leverage may be larger than would be the case in more stable regions. Second, leverage, combined with limited shareholder liability, generates incentives for bank managers – acting rationally on behalf of shareholders - to hold an excessively risky portfolio. This arises from the fact that shareholders receive the entire benefit of good outcomes, while debtors pay the price of outcomes sufficiently bad to drive the bank to insolvency.

Banks are not, of course, unique in being leveraged. Non financial firms are leveraged as well, and are therefore subject to similar conflicts of interest between shareholders and debt-holders. Creditors generally address the problem by: (i) demanding higher interest rates when lending to firms that engage in riskier activities, (ii) attempting to control subsequent risk-taking by negotiating and enforcing loan covenants and other contractual restrictions, (iii) standing ready to assert control over the firm's assets in the

event of bankruptcy. While not unique to banks, the problems created by leverage are more serious for them for two reasons. First, banks are much more leveraged than is the typical nonfinancial firm. The value of a bank's equity typically totals about a tenth the value of its debt, making banks an order of magnitude more leveraged than the typical nonfinancial enterprise. Second, bank depositors are in a poor position to perform the functions of corporate governance that are typically performed by creditors of a nonfinancial corporation. (GAVIN and HAUSMANN, 1998)

2.5.1.2 BANK ARE ILLIQUID

- **Definition of liquidity risk**: risk that asset owner unable to recover full value of asset when sale desired (or for borrower, that credit is not rolled over)
- **Alternative definition**: risk of being unable to satisfy claims without impairment of financial or reputational capital.
- **Defining liquidity mathematically**: $L1=Pi/P^*$; $L2=\sum_{i=0.n} Pi/P^*$, $L3=E(P)/P^*$ where P^* is full value price and Pi is realised price.
- **Bank liquidity**: ability of institution to meet obligations under normal business conditions

Liquidity risk and banking crises

- Bank assets illiquid and liabilities are short term,

- Short term liabilities conceptually a means of disciplining bank managers via threat of runs.
- But depositors' monitoring of projects is likely to be prone to errors, hence banks vulnerable to over discipline. (Runs on solvent banks) leading to socially wasteful liquidation of projects.
- Possibility for runs to affect other banks, via balance sheet similarities under uncertainty or counterparty exposures. (DAVIS, 2003)

WHY DO BANKS FACE ILLIQUDITY

In most economies, banks perform an explicit transformation of maturities, taking relatively short-term deposit liabilities and holding longer-term loan assets. In Latin America, bank lending tends to be relatively short term, but the banking system is nonetheless illiquid. First, while Latin American bank lending tends to be short-term, loans are nevertheless longer-term than are deposits. More importantly, even though loans are written as short-term contracts, they are in fact longer-term commitments because enterprises count on the loans being rolled over, and use the resources to finance activities that cannot abruptly be terminated, except at high cost. If loans are not rolled over firms will be forced into actions that undermine their own profitability, and perhaps that of their business partners, thus resulting in a decline in the quality of banks' loans. Thus, whatever the stated maturity of its loan portfolio, the banking system is illiquid in the sense that an attempt to rapidly liquidate its portfolio would sharply reduce the value of its assets. To prevent such shocks from disrupting the flow of credit

upon which the real economy depends, banks hold buffer stocks of liquid reserves which allow them partially to insulate lending from shocks to deposits and other funding sources. But if banks face an unusually high demand for liquidity in money markets, their reserves might not be enough to cover this excessive demand. (GAVIN and HAUSMANN, 1998)

When depositors at one bank start a run, why do depositors at other banks often follow suit?

Banks' ability to handle unusually large withdrawals depends on what proportion of their assets is liquid and the quality of their illiquid assets. If a depositor believes that other depositors at her bank plan to withdraw their funds, she may start worrying about her own money. She knows that if withdrawals are large enough, the bank could fail. In this case, an amount less than the initial deposit will be left for her if she waits too long, so she may decide to withdraw her deposits immediately. If all depositors share her beliefs, a run could start and that bank could fail regardless of the condition of its assets. A run on one bank may lead depositors at other banks to form similar beliefs about the behaviour of other depositors and to start a run on their banks. In this case, failures could spread among both solvent and insolvent banks because runs on a large number of banks could lead depositors to lose confidence in the banking system as a whole.

Alternatively, depositors might have some information about the quality of their bank's assets. If the assets turn sour—for example, during a period of unfavourable economic conditions— these depositors might start a run on the bank. Subsequently, depositors at other banks may start runs if they think their banks have assets similar to those of the first bank. Thus, panics can be triggered when depositors, in the light of new information, revise their beliefs about the quality of their banks' assets. In this case we might expect informed depositors to start runs mainly on troubled banks. Then, as they

got more information about which banks were solvent, we would expect them to move their money from failing banks to healthy ones. Therefore, this type of run appears to be less costly for society. On the whole, it could even be beneficial, since monitoring bank performance helps to distinguish between good and bad banks. However, accurate monitoring relies on depositors' having perfect information about their banks' condition—but information about the economic condition of banks is almost never perfect. In times of financial distress, depositors are particularly sensitive to any kind of news and may start runs on some liquidity-constrained but otherwise healthy banks, thereby causing them to fail. Usually, economists view these as opposing theories of why runs occur, but real world episodes probably contain features of both. So have bank failures involved contagion and why or why not?

2.5.1.3 BANK RUNS

Contagion panics mean that: bank runs spread quickly among people .Banks temporarily suspended the convertibility of deposits into cash. In other words, depositors could not withdraw their money from the bank. A suspension would typically start at banks which have liquidity problems, then spread to healthy banks. During 1930-33, more than 9000 banks failed in the United States, but none failed in Canada. And unlike in the United States, panics were not widespread in Canada. Stephen Williamson has argued that this difference in failures and panics was partly due to the structure of the banking systems in the two countries. Because of branching restrictions, the U.S. system consisted of a large number of relatively small banks. In fact, in 1890, there were more than 7000 banks in the United States. At the same time, Canada had a branch banking system without geographic restrictions—about 40 chartered banks with

about 400 branches. Williamson argues that the ability of bigger banks to diversify in Canada was one of the factors that prevented widespread crises there in the early 1930s.

Several researchers have questioned the widespread existence of contagion effects. Instead, they argue that panics are the result of bad economic times that cause weak banks to become insolvent. They think it unlikely that depositors' loss of confidence in banks or the banking system can, by itself, cause a financial crisis. They argue that depositors who withdraw funds generally transfer them to another bank that is considered safe, in which case the total deposits of the banking system are not affected (http://www.stern.nyu.edu/globalmacro/Banking/crises_runs.htm)

A simple model of the inter-bank market can help to illustrate our point. Let us denote the total demand for bank reserves by the following equation:

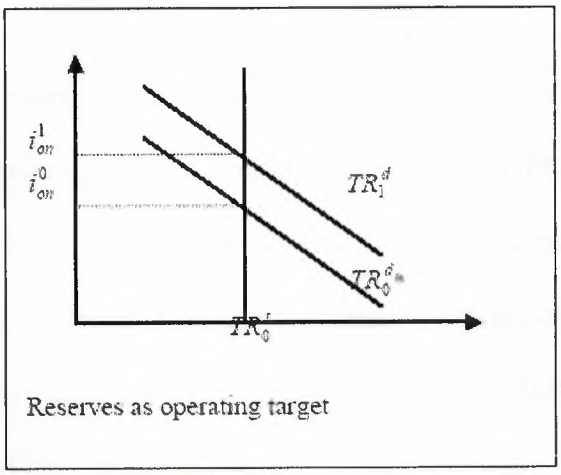
$$TR^{d} = A_0 - A_1(i_{on} - i_d)$$

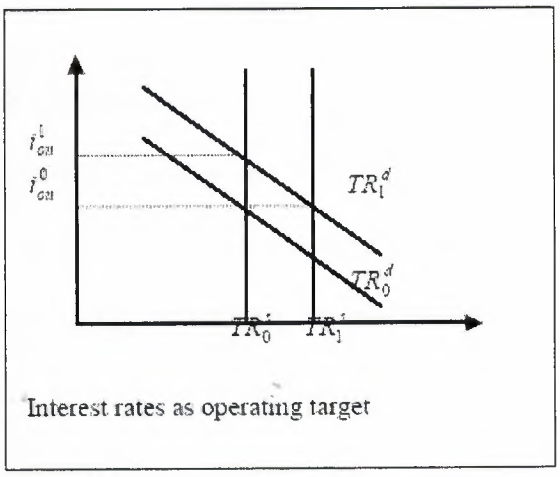
Where 0 *A* and 1 *A* are positive coefficients; *on İ* denotes overnight interest rate and *d İ* denotes the central bank discount rate. The demand curve for reserves has a negative slope because high interest rates increase the cost of borrowing and induce the banks to reduce their demand for reserves. The central bank has the position as the monopoly supplier of bank reserves through open market operations and discount window.

We depict the demand and supply of bank reserves in the figures below. Supply of Reserves *s TR* is a vertical line, while demand of reserves *d TR* is a negative-slope curve. The intersection of the two curves is the original market equilibrium. During a crisis, banks need to raise funds to cover their losses or deposit withdrawals. The

demand curve shifts from *d TR*0 towards *d TR*1. If bank reserves are the operating target of central bank, the total supply of bank reserves is kept constant. To clear the inter-bank market, the short-term interest rate has to rise to the point where the new demand curve intersects the supply curve. So, if the central bank keeps the reserves constant when there is need for liquidity in the money market, we will observe an increase in the short-term interest rate. If the central bank wants to target the short-term interest rate, maybe out of the fear that the high interest rate will worsen the banking problems, then the central bank has to increase the supply of bank reserves to satisfy the need of market. The total supply of bank reserves has to move from *s TR*0 outwards to *s TR*1 in order to keep the interest rate constant. In other words, to contain the sharp increase in interest rate caused by the banks' requirement for additional reserves, the central bank has to inject liquidity in the money market through open market operations or discount window lending.

GRAPH 2.1





In addition, the supply of inter-bank funds is likely to fall. This is because in a period where banks are conceivably exposed to financial turmoil, financial institutions will prefer governments bonds that are more safe and liquid than risky lending to other financial institutions .This further increases the excess demand for inter-bank funds. At

the onset of a crisis, depositors rush to the banks and draw out their deposits from the deposit money banks. Meanwhile, deposit money banks have to resort to the monetary authorities for liquidity support. For deposit money banks as a whole, the ratio of total credit from the monetary authority to the total deposits must be increasing. Real short-term interest rates will increase, unless the central bank is willing to inject enough liquidity into the money market to prevent the interest rates from rising. We define the *central bank funds to bank deposits ratio* as loans from the monetary authorities to deposit money banks divided by the total deposits of nonbanks with deposit money banks. The index of money market pressure is calculated as a weighted average of two components: changes in central bank funds to bank deposits ratio and changes in the money market rate. We weigh the components by dividing each by its own standard deviation, so that the two components have equal conditional volatility. The index can be formulated in the following way:

$$\mathrm{IMP} = \Delta\gamma / \sigma(\Delta\gamma) + \Delta r / \sigma(\Delta r)$$

where γ denotes the central bank funds to bank deposits ratio, defined as total credit support from the monetary authority divided by total deposits of the banking system; r denotes the money market rate in real terms; Δ denotes difference operator; $\sigma(\gamma)\Delta$ and $\sigma(r)\Delta$ denote the standard deviations of the two components respectively. Banking crises are identified as periods where the index exceeds a predetermined threshold. (HAGEN, 2003)

2.5.1.4 BAD BANKING:

Banking crises often have their roots in poor bank operations: poor lending practices, excessive risk taking, poor governance, lack of internal controls, focus on market share rather than profitability, and currency and maturity mismatches in the banks themselves or among their borrowers. These conditions are aggravated if bank owners have little at stake in the banks—that is, do not have enough capital invested in the banks—and if bank managers carry little personal responsibility for the risks they take.

In some emerging countries these conditions may be worsened when bank ownership is very narrow and when banks are run as personal "piggy banks" or pyramid schemes of industrial groups or families. In these conditions, connected lending, insider operations, and outright fraud may go on with impunity. Similarly, state banks may be run as quasi-fiscal agencies based on political criteria with disregard for commercial principles, which undermines their solvency and the soundness of other better-run banks.

Bad banking can only persist in the absence of proper regulation and supervision, and of adequate market discipline.

- Weak supervisory frameworks may include allowing for concentrated lending, portfolio mismatches, inadequate loan valuation that overstate bank profits and capital, incompetent management, etc. Supervision may also lack authority, and have an insufficient number of skilled staff who may be poorly motivated and compensated.

- Poor transparency, limited financial disclosure, and poor accounting and auditing practices mean that the market—that is, bank creditors—will not have sufficient information to exert discipline on bank owners

- Market forces are further impeded by weak frameworks for dealing with problem banks, including weak legal, judicial and institutional frameworks for dealing with failing banks and companies. Expectations of depositor and creditor bailouts may overpower any policy to the contrary.(INGVES,2003)

2.5.1.5 BANK REGULATION

One of the most common causes of banking crises throughout time has been a lack of strong prudential regulations or in cases where sound regulations exist, a lack of adequate supervision ensuring the regulations are enforced. It is critically important that banks have well-defined and comprehensive guidelines establishing the framework and principles under which they operate. There is an old saying among CEOs of commercial banks; *"if you, as the head of a bank, have someone working for you, you should watch them. If they're making money for you, you should watch them closely. If they're making very good money, you should watch them closer still. And if they're making absolutely fantastic money, you should fire them, because they must be [taking] excessive risk."*

Foremost is that our banking system plays a central role in allocating resources, pooling capital, and funding and fostering economic growth. That role has not changed as our financial system has become more complex and diverse. We also have learned that leveraged banking systems can be both an initiator and a conduit of painful financial and real economic instability. We must keep both of these historical lessons in mind in any evaluation of banking regulation for they explain the tension between our appreciation for the central role that banks play in our prosperity and our concern about banks' potential effects on economic stability.

Over the years, that tension has been reflected primarily in "safety and soundness" regulation, the supplement to banking supervision. Banking supervision is intended to be flexible and to be carried out case by case; it is designed to limit--not eliminate--the risk of failure. Over the past fifteen or so years, supervision has focused on ensuring that bank management has in place policies and procedures that will contain such risk and that management adheres to those policies and procedures. Supervision has become increasingly less invasive and increasingly more systems- and policy-oriented. These changes have been induced by evolving technology, increased complexity, and lessons learned from significant banking crises, not to mention constructive criticism from the banking community.

Regulations, on the other hand, prescribe and proscribe what must be done and what may not be done in specific areas, and most reflect past events. Many regulations are thus backward-looking, adopted in response to specific problems but often remaining after the problems are resolved. However, public comments, changing market realities, and our internal programs help us to identify regulations that no longer serve public policy objectives. We then update or remove those regulations. In other cases, market changes and innovations often require changes in regulations, or even new regulations, to ensure that policy objectives continue to be achieved. (2005, GREENSPAN)

Banks must be regulated. Because if the riskiness of banks' assets could be measured precisely, the most direct way to address the incentive problems that face banks would be to charge bank specific deposit insurance premia that are precisely calibrated to the riskiness of a bank's investments. However, because information about portfolio quality is largely private to the bank, this is infeasible, and indirect measures are required. In particular:

- Regulators establish and enforce ground rules for bank portfolio choice, including rules about the permissible degree of loan concentration along various dimensions, restrictions on the types of instruments that banks may hold as investments, restrictions on international activities, and the like.
- Regulators establish minimum standards for bank capitalization and liquidity, monitor banks, and enforce compliance with the standards.
- Regulators play the role of debtors in a private bankruptcy, asserting control over the assets of the bank in the event of bankruptcy.

By limiting leverage and ensuring that shareholders have something to lose when risky loans go bad, minimum capital standards limit the magnitude of the incentive problem that faces bank managers. They are, therefore, the first and arguably most important line of supervisory defence in the attempt to discourage excessively risky behaviour by bankers. (GAVIN and HAUSMANN, 1998)

Last two decades, Basel agreement has been played an important role in banking regulation in the world.

What is the Basel Committee?

A committee of central banks and bank supervisors/regulators from the major Industrialised countries that meets every three months at the Bank for International Settlements in Basel.

What is the significance of its papers?

They provide broad policy guidelines that each country's supervisors can use to determine the supervisory policies they apply. Some papers, such as the Capital Accord

and the Core Principles, are drafted in the expectation that they will be followed more closely by supervisors world-wide. (JANUARY 2001)

Theoretical and Historical Background of Basel Capital Standards

In 1988 the Basel Committee on Banking Supervision completed the Basel Capital Accord after years of deliberations that followed the Latin American sovereign defaults of 1982. The Basel Accord was established with two fundamental objectives: to strengthen the soundness and stability of the international banking system and to obtain "a high degree of consistency in its application to banks in different countries with a view to diminishing an existing source of competitive inequality among international banks" (Basel Committee on Banking Supervision 1988). To that end, the accord requires that banks meet a minimum capital ratio that must be equal to at least 8 percent of total risk-weighted assets.

The Basel Committee on Banking Supervision concentrated on capital standards for two reasons: first, because Congress instructed banking regulators to work with regulators from other countries to make sure that banks had adequate capital bases (Kapstein 1991, Oatley and Nabors 1998); second, because capital serves as a buffer that protects bank deposits—or the deposit insurance fund—in case of losses on the asset side.

Basel I

The original Basel Accord (Basel I) was the wrong response to a real problem—the conflict between deposit insurance systems and the national regulation of capital standards—and, most likely, has made the global financial system less, not more, stable. Nor has it levelled the playing field. Since the 1970s, there have been more than 100

episodes of systemic banking crises in 93 countries, with the frequency and severity of the crises increasing in the last 15 years To the extent Basel I has contributed to those crises, it turned out to be a project with very costly unintended consequences. First, among the shortcomings of the Accord, one must include the use of arbitrary risk categories and arbitrary weights that bear no relation to default rates, which incorrectly assumes that all assets within one category are equally risky or that one type of asset is, for instance, 100 percent riskier than another. Second, the risk assessment methodology is flawed in that it assumes that a portfolio's total risk is equal to the sum of the risks of the individual assets in the portfolio. No account is taken of portfolio effects that can greatly reduce the overall risk of a portfolio, or the size of the portfolio, which can greatly influence its total risk profile. Third, the accord gives preferential treatment to government securities. That means that banks need not hold any capital against those securities, if issued by OECD countries, or less capital than against loans to corporate borrowers, if issued by non-OECD countries. But as the sovereign defaults of Russia in the summer of 1998 and Argentina in early 2002 show, government debt is not a risk-free investment. Nor is a loan to many developing countries safer than a loan to a "Blue Chip" company.

Finally, the existence of risk categories that create a divergence between economic risks and measures of regulatory capital has led to widespread regulatory capital arbitrage—that is, the assumption of greater economic risks without an increase in regulatory capital requirements. In sum, Basel I, already adopted by more than 100 countries, failed to achieve its main goal and may have made the international financial system less, not more, stable. Indeed, it is widely acknowledged that assigning a 20 percent weight to short-term bank lending (as opposed to the 100 percent that lending to most private nonbank institutions carries) led to an increase in lending to Asian banks, which

in turn contributed to the Asian crisis of 1997–98. Sixty percent of the $380 billion in international bank lending to Asia at the end of 1997 had a maturity of one year or less Basel I was also not successful in establishing a level playing field because it dealt only with capital standards and not with other differentiating factors such as legal and accounting systems and, more important, the size of the explicit (or implicit) government safety net, among banks.

For those reasons, the Basel Committee has been working to produce a new accord "to align regulatory capital requirements more closely with underlying risks and to provide banks and their supervisors with several options for the assessment of capital adequacy." The result is Basel II, a work still in progress expected to be finalized by the end of 2003 and fully implemented by the end of 2006. (2003, JACOBO)

Basel II

Basel II is based on three mutually reinforcing pillars: capital requirements, supervisory review, and market discipline.

Three pillars of the new Accord

- First pillar: minimum capital requirement
- Second pillar: supervisory review process
- Third pillar: market discipline

Risk-based capital requirements, however, continue to be the major focus. In particular, Basel II will add a new charge for operational risk and allow some banks to use their internal risk-measurement models to determine capital costs. Under the advanced Internal Ratings-Based (IRB) approach, banks supply their estimates of the probability of default, exposure at default, loss given default, and maturity to come up

with the risk weight associated with a particular asset. That option, however, could turn into a regulatory nightmare, even in industrialized countries for at least three reasons. First, although banks are in a better position than regulators to estimate their risk exposure, giving them that option presents them with obvious conflicts of interest when the government acts as the ultimate guarantor of deposits.

U.S. bank regulators went a long way toward addressing some of those issues when they announced in February 2003 that only the 10 largest banks in the United States will be regulated under the Basel II framework and will be required to use the advanced IRB approach to measure their capital requirements and the Advanced Measurement Approach (AMA) to measure operational risk capital charges. The rest of the banking institutions will continue to be covered under Basel I and current U.S. bank regulations. In doing so, however, regulators seem to have accepted some of the criticisms raised against Basel II—namely, that the benefits for the majority of banking institutions do not outweigh the costs of complying with a new regulatory framework that is far more complex than the one currently in place.

The issue of complexity is one that remains. William McDonough, former president of the Federal Reserve Bank of New York and until recently the chairman of the Basel Committee on Banking Supervision, has characterized the complexity of Basel II as a natural reflection of the advancement and innovations in the financial marketplace and the need for a more risk-sensitive framework. To be sure, the financial marketplace is far more complex than it was 15 years ago when Basel I was being framed and banking organizations are also more complex in their activities and in the ways in which they manage their risks. That, however, is not a justification for making the *rules* under which those large complex banking organizations operate equally complex.

Furthermore, Basel II's overly prescriptive approach could end up stifling market-based innovation in risk-management practices, which are still in their early stages of development. That has been a concern that both former Federal Reserve Board Governor Laurence Meyer, who is very supportive of Basel II, and current Comptroller of the Currency John Hawke Jr. have expressed. With regard to operational risk—another thorny issue that has yet to be resolved—it makes more sense to treat operational risk under Pillar II of the new framework, Supervisory Review, than under Pillar I, Capital Adequacy Standards. The type of events for which a separate capital charge for operational risk would be necessary (for example, an out-of-control rogue trader) are events that have a very low probability of occurring but a high cost when they do occur.

Consequently, a capital charge, no matter how high, may not be enough to cover losses resulting from those events. Furthermore, coming up with a reasonable estimate of the probability of such an event occurring and the expected losses if it does occur is very difficult, if not impossible. Higher probability, lower-cost events tend to be provided against with general loss reserves because those losses are usually small. In this case, setting up a separate capital charge for operational risk could create some distortions. Basel II is also a very vague proposal that gives national regulator a lot of discretion, in particular with regard to the validation of banks' internal systems and the disclosures necessary to use those systems for the determination of capital charges. That vagueness creates uncertainty among market participants and regulators alike, which most certainly does not contribute to providing financial stability. It will make it easier, however, for regulators to engage in regulatory forbearance and be subject to corruption. Finally, when we put all of the pieces together, how well will the new

proposal work? Nobody knows and those in charge of the process probably do not want to think about the possibility that it may not work very well (2003, JACOBO).

As a consequence, in most other countries the reaction to banking crises has been on the contrary, to reinforce banking regulation and in particular solvency regulations. This started at the international level where the Basel Committee of Banking Supervision enacted in 1988 a regulation requiring a minimum capital level of 8% of risk weighted assets for international active banks of the G10 countries. The different weights were supposed to reflect the credit risk of the corresponding assets. This regulation was later amended to incorporate interest rate risk and market risk with the Basel II.

If we try to asses the possible future of banking supervision. The traditional approach to banking supervision was very paternalistic. Banks were protected from competition through entry restrictions, price controls, in exchange for accepting to follow the detailed prescription of supervisors. This approach is not viable anymore, for several reasons. First of all, globalisation and deregulation have made competition very fierce, in particular by non-banks, i.e. firms that are not regulated. Also, the increased complexity of financial markets and banking activities implies that supervisors are not any more in a position to monitor closely the activities of all banks. This feature is illustrated by the failure of the Basel Committee to impose the standardised approach to market risks. Instead, the Committee was obliged to accept that large banks use their own internal models. It is expected that in the future few banks will follow the standardised approach, since they will probably prefer to use one of the models developed by the large banks.(2002, ROCHET)

2.5.1.6 FRAUD AND LOOTING

The widespread fraud and looting can be an important determinant of severe banking crises. Looting strives when legal and political institutions are weak. In particular, diligent supervision and corporate transparency are important determinants of an overall institutional environment, and the effectiveness of supervision technology may interact with macroeconomic environment.

2.5.1.6 1 Bank and Banking Related Fraud

Cheque Fraud

Check fraud accounts for yearly losses of at least $815 million, more than twelve times the $65 million taken in bank robberies annually.

Kiting

Cheque kiting is when in-transit or non-existent cash is recorded in more than one bank account. The crime usually occurs when a bank pays on an unfunded deposit.

For example, a bum check is deposited into an account. Before the cash is collected by the bank, a check is written against the same account and deposited into a second account, or cashed. The increased use of wire transfers allows this type of scheme to be perpetrated very quickly.

Uninsured Deposits At least two companies solicit uninsured deposits on the Internet. Netware International advertises itself as a "Constitutional" bank and FocusInternational.com, Ltd., is a West Indies company seeking deposits for an unidentified bank.

They seek depositors by offering high rates of interest, or promising offshore secrecy. Neither company is authorized, supervised, or regulated by any U.S. State or Federal bank or financial institutions regulator. Deposits in these companies do not have the protection of the Federal Deposit Insurance Corporation or any other state or federal deposit insurance.

Credit Card Theft and Fraud

One con, while in jail serving a state prison term for credit-card theft, actually perpetrated yet another credit card scam over a seven month period, using a technique that allowed him to hide the fact that he was calling from jail.

He would start off by calling the county-run nursing home saying he was a Bell Atlantic technician and that he needed the person to dial a special code to test the lines. When the person pressed the requested numbers, he would be connected to an outside line that he used to call businesses.

When he called the businesses, he would tell them he was a credit-card representative and that he needed customers' names and phone numbers to verify recent transactions. With that information he then called the cardholders and posed as a credit company employee, saying he needed personal information to check for fraud.

With this personal information and the credit-card numbers, he then requested and received more credit cards with which he made about $25,000 worth of purchases of such things as sports memorabilia, flowers, and gift certificates. He also bought calling cards so he could continue the scam.

Some of the items were given to other inmates in exchange for helping with the fraud while other items were shipped to friends to be held for him until he got out of jail.

Duplication of Card Information

Credit card "double scan" machines can copy info from the magnetic strip of your card and create a new duplicate card for which your account will be billed for any purchases. Try to keep your card in sight when possible to avoid this problem.

While card issuers have fraud detection software which picks up unusual spending patterns, smaller purchase "skimming" can be subtle and prolonged, compared to the flurry of spending when a card is stolen outright.

- Keep a record of your account numbers, their expiration dates, and the phone number and address of each company in a secure place.
- Void incorrect receipts and destroy carbons.
- Save receipts to compare with billing statements.
- Open bills promptly and report any questionable charges promptly and also in writing to the card issuer.

If you realize they've been lost or stolen, immediately call the issuer. Many companies have toll-free numbers and 24-hour service to deal with such emergencies.

By law, once you report the loss or theft, you have no further responsibility for unauthorized charges. In any event, your maximum liability under federal law is $50 per

card. If you suspect fraud, you may be asked to sign a statement under oath that you did not make the purchases in question.

Booster Checks

A booster check is a non-sufficient fund (NSF) check used to make a payment to a credit card account. One group used "booster checks" to "bust out" legitimate credit cards. They used credit card "convenience checks" issued by the banks and credit card companies to inflate their credit card limits; or to "bust out" the credit card to double or triple the established line of credit.

Because banking laws require financial institutions to immediately post credit payments even before the check has been cleared, they would use the window of time between the posting of the credit card payment and the discovery of the bad check to go on a spending spree and purchase, among other things, large amounts of gold coins from legitimate coin vendors.

They would also go to store owners who knowingly aided the bust out scheme, who would "swipe" the credit cards through point-of-sale credit card terminals located at their businesses. While these transactions would appear to be legitimate, no merchandise would actually be exchanged.

Because it takes only seconds for a credit card company to transfer funds to a store owner's bank account, a collusive merchant is able to immediately dispense funds from the busted out credit card. The merchants in this case allegedly issued kickback checks to the card holder for the amount of the transaction, and they would then receive a kickback from the card holder which would amount to a small percentage of the transaction.

The Secret Service estimates the total loss in this one case is between $10 million and $15 million.

Falsification of Loan Applications

While scheming to defraud for banks and a credit union, one con opened checking and savings accounts using a false name and a fraudulently obtained new social security number. He then applied for seven loans for the stated purpose of financing the purchase of motor vehicles.

He also submitted false documents concerning his employment and income, including fake tax returns. By producing fictitious records including motor vehicle appraisals, insurance documents and invoices he obtained approximately $380,000 in loans for the purchase of a 1976 Rolls-Royce Silver Shadow, a 1978 Ferrari model 308 GTS convertible, a 1992 Mercedes-Benz model 300SE, a 1995 Mercedes-Benz model SL320 and a 1994 Mercedes-Benz model 500SL.

He also applied for and was issued multiple credit cards and charge cards. In just seven months he ran up charges leading to losses of at least $460,000.

For example, he used an American Express account to pay $27,000 towards the purchase of an item of jewellery, used an MasterCard to place a $5,000 down payment towards the purchase of a 1955 Mercedes-Benz 300SL Gull wing with a purchase price of $203,000 and a 1964 Ferrari 250GT Lusso convertible with a purchase price of $153,000, and then used the American Express account to pay $320,000 towards the purchase of these two antique automobiles. He also used various VISA and MasterCard accounts to obtain substantial cash advances and used the American Express account to

pay $93,600 towards the purchase of a Patek Philippe Moon Phase watch with a purchase price of $95,600.

Laxity of Enforcement

One of the problems with enforcing bank fraud laws is that it is often relegated to a low priority, or ignored altogether, because the activity can span several jurisdictions, involve many unidentified subjects, is non-violent and usually there are few leads.

Normally, the typical bank robber nets $700 and is caught within 24 hours, yet the average check scam involves losses of more than $2,000, the perpetrators are seldom caught, and there are more than one hundred times as many cases as bank robberies. Out of 10,000 cases the losses exceeded $60 million dollars.

Many bank fraud suspects are able to elude arrest by furnishing false identification when cashing stolen, forged, or counterfeited checks. One effort to stop this crime is the "Check Print" program which requires non-bank customers to provide a thumb print, using a clear solution, on the negotiated check for identification purposes. With this positive identification, it has been much easier to identify, arrest, and successfully prosecute bank fraud scams.

Check Security Features

Check manufacturers help deter check fraud by making checks difficult to copy, alter, or counterfeit. Some useful security measures include:

Watermarks. Watermarks are made by applying different degrees of pressure during the paper manufacturing process. Most watermarks make subtle designs on the front and

back of the checks. These marks are not easily visible and can be seen only when they are held up to light at a 45-degree angle. This offers protection from counterfeiting, because copiers and scanners generally cannot copy watermarks accurately.

Copy Void Pantograph. Pantographs are patented designs in the background pattern of checks. When photocopied, the pattern changes and the word "VOID" appears, making the copy nonnegotiable.

Chemical Voids Chemical voids involve treating check paper in a manner that is not detectable until eradicator chemicals contact the paper. When the chemicals are applied, the treatment causes the word "VOID" to appear, making the item non-negotiable.

High Resolution Micro printing. High-resolution micro printing is very small printing, typically used for the signature line of a check or around the border, in what appears to be a line or pattern to the naked eye. When magnified, the line or pattern contains a series of words that run together or become totally illegible if the check has been photocopied or desktop scanned.

Three-dimensional Reflective Holostripe. A holostripe is a metallic stripe that contains one or more holograms, similar to those on credit cards. Those items are difficult to forge, scan, or reproduce, because they are produced by a sophisticated, laser-based etching process.

Security Inks Security inks react with common eradication chemicals. These inks reduce a forger's ability to modify the printed dollar amount or alter the designated payee, because when solvents are applied, a chemical reaction with the security ink distorts the appearance of the check.

Cooperation between Check Manufacturers and Financial Institutions

Participating financial institutions can report all checking accounts "closed for cause" to a central database, called ChexSystems. This program prevents people, who have outstanding checks due to retailers, from opening new accounts.

You can use this information before opening new accounts to spot repeat offenders and you can also use MICR information from a check presented with the applicant's driver's license number to check the SCAN file for any previous fraudulent account activity.

2.5.1.7 Connected lending

Connected lending has played an important role in the generation of banking crises because it allows the personal interests of bank insiders (owners or directors) to intrude on almost all aspects of bank operations, damaging bank profitability and efficiency. While these intrusions are also present in some industrial countries, the frequency and severity of the problem are generally regarded as being greater in developing countries. "Connected lending" refers to loans extended to banks' owners or managers and to their related businesses. It is a more common practice among universal banks and development banks. The risks are primarily ones of lack of objectivity (sometimes even fraud) in credit assessment and undue concentration of credit risk. The failure of a few large related borrowers, or a collapse of a particular sector of the economy, can wipe out a bank's capital. De Juan (1996) argues that, because the bank will be unlikely to deal with connected borrowers on an arm's-length basis and because the borrower's access to liquidity will be guaranteed, information flows from the borrower to the creditor will suffer and incentives both to appoint top-quality management in such a company and to identify (and make provision for) bad loans will be low. In his view, such practices contributed to the Spanish banking crisis of the 1980s. Lindgren et al. (1996) and Sheng

(1996) likewise cite connected lending as a key bank governance problem and one that has contributed to banking problems in Argentina, Bangladesh, Brazil, Chile, Indonesia, Malaysia, Spain and

Thailand. (Goldstein and Turner, 1996)

2.5.2 MACRO FACTORS

It is hard to think of a major banking crisis in which a macroeconomic shock of some sort was not at least part of the story. Such shocks can take various forms and affect bank solvency in a number of ways. A major recession, decline in the terms of trade, or other adverse shock to national wealth will reduce the profitability of bank borrowers; some will find themselves unable to service their bank debt, and what had been good loans will turn out to be bad. Funding shocks may demand a sudden contraction of bank balance sheets, with adverse implications for the health of borrowers and, therefore, of banks. (GAVIN and HAUSMANN, 1998)

Macroeconomic shocks to asset quality: One does not have to search far to find examples of adverse shocks to domestic income that, by reducing the debt servicing capacity of domestic bank borrowers, have adversely affected bank assets and contributed to bank crisis. The sharp decline in oil prices of the middle 1980s had a severe impact on banking systems in both Texas and Venezuela, as well as other oil-exporting regions. Substantial declines in the terms of trade also preceded banking crises in several industrial economies, including Norway, Finland (which was also adversely affected by the collapse of trade with the Soviet Union), and Spain, although

not in Japan or Sweden. And in fact most banking crises are preceded by a generalized deterioration of the macroeconomic environment. (GAVIN and RICARDO, 1998)

Terms of trade

One external source is the relatively large fluctuations in the terms of trade. When banks' customers suddenly find that the terms of trade have turned sharply against them, their ability to service existing loans is likely to be impaired. Caprio and Klingebiel (1996a) report that 75% of the developing countries in their sample which experienced banking crises suffered a terms-of-trade decline of at least 10% prior to the crisis (with an average fall of 17%). Kaminsky and Reinhart (1995) likewise identify terms-of-trade deterioration as one of the stylised facts preceding banking crises in small industrial countries and in emerging markets. Hausmann and Gavin (1996) estimate that the standard deviation of changes in the terms of trade in Latin American emerging markets (at roughly 15% per year) is about twice as high (on average) as in industrial countries over the past 20 years. Volatility in the terms of trade is particularly pronounced for countries with high export concentration (e.g. Venezuela, Ecuador); small economies, usually less diversified than larger ones, typically face unusually large fluctuations in their terms of trade (as well as in other sources of volatility). Other things being equal, countries with relatively low export diversification are more susceptible to banking crises. **(Goldstein and Turner, 1996)**

Capital flow

Volatility in international interest rates, and the induced effect on private capital flows, is another important external factor. Not only do fluctuations in international interest rates affect (either directly or indirectly) the cost of borrowing for emerging markets,

but they also alter (at the margin) the relative attractiveness of investing in emerging markets. Indeed, empirical evidence suggests that movements in international interest rates can explain between one-half and two-thirds of the surge in private capital inflows to developing countries in the 1990s incompletely sterilised capital inflows boost bank deposits and tempt banks to increase lending even at the expense of lower credit quality. This plants the seeds of trouble when the boom collapses. And when capital flows out unexpectedly as a result of a loss of confidence, there is a danger that a sudden withdrawal of bank deposits will force a "fire sale" of bank assets. Because creditor-country interest rates are driven by economic forces in those countries themselves, some of the volatility in private capital flows facing emerging markets is beyond their control.

Inflation effect

On the domestic side, both growth and inflation rates are often highly volatile. Assessing credit risk becomes harder when growth and inflation rates fluctuate widely. For example, a company's credit history under hyperinflation may not be a good guide to its performance in a more stable environment. One of the more robust conclusions of the empirical literature on early-warning signals of financial crises is that sharp contractions in economic activity increase the probability of banking (and balance-of-payments) crises.

Inadequate preparation for financial liberalisation

Such reforms inevitably present banks with new risks which, without the proper precautions, can increase the danger of a banking crisis. When interest rates are liberalised, banks may lose the protection they previously enjoyed from a regulated term structure of interest rates which kept short-term rates below long-term rates. More generally, the volatility in interest rates tends to rise, at least during the transition.33 Rapid rates of credit expansion have often paradoxically coincided with high real interest rates in the wake of financial liberalisation. Lifting restrictions on bank lending often releases pent-up demand for credit in the liberalised sectors (e.g. real estate, securities activities).Lowering reserve requirements permits banks to accommodate increased loan demand – as does the inflow of foreign capital, often attracted by reforming economies. Yet bank credit managers reared in an earlier controlled financial environment may not have the expertise needed to evaluate new sources of credit and market risk. At the same time, the entry of new competitors (foreign and domestic) may well increase the pressures on banks to engage in riskier activities. Easier access to offshore markets may also allow banks to evade domestic restrictions on riskier activities. One example of this is the use of customised derivative contracts in offshore markets to circumvent restrictions on net open positions in foreign exchange. Unless the supervisory and regulatory framework is strengthened before the liberalisation of financial markets, bank supervisors may have neither the resources nor the training needed to adequately monitor and evaluate these new activities. Some or all of these risks associated with inadequate

Weaknesses in the accounting, disclosure and legal framework

Banks do not operate in a vacuum. To the extent that the institutional structure in which banks carry out their business is weak, their performance will be adversely affected. While there are significant differences across emerging economies, most analysts regard existing accounting systems, disclosure practices and legal frameworks as hindering the operation of market discipline and the exercise of effective banking supervision; these weaknesses also often work to the detriment of bank profitability. Neither private investors nor bank supervisors will be able to monitor and to discipline errant banks without accurate, current, comprehensive and transparent information on their creditworthiness, as well as on the creditworthiness of their customers. In many countries, the accounting conventions for classifying bank assets as impaired or non-performing are not tight enough to prevent banks from making bad loans look good by lending more money to troubled borrowers ("ever greening")

Distinguishing healthy from unhealthy banks is often hindered by the absence of financial statements on the consolidated exposure of banks, by the lack of uniform reporting requirements for banks within a country, by differences in accounting standards across countries, by the lack of published key financial data on individual banks, by the absence of serious penalties for submitting inaccurate reports to supervisors or the public and by the paucity of private credit ratings for banks in the larger emerging economies. For example, the Basle Committee's recent survey indicated that 20% of countries still do not consolidate financial and prudential information on banks' global operations.

Exchange rate regimes

The exchange rate regime can affect vulnerability to speculative attack, the way in which the real value of impaired bank assets is adjusted downwards and the ability of the central bank to act as lender of last resort to illiquid but solvent banks. A poor track record on inflation and the lack of any obvious alternative to the exchange rate as a nominal anchor led many emerging economies to adopt exchange-rate-based stabilisation plans in the 1970s and 1980s. These plans were often successful in cutting inflation but were also accompanied by significant real exchange rate appreciation. In some cases, heavy market pressure forced a return to greater exchange rate flexibility, often entailing massive devaluation. Gavin and Hausmann (1996) find that unsustainable exchange rate pegs have contributed more to the relatively high volatility of growth rates in Latin American developing countries over the past two decades than any other factor. Also, as noted earlier, sharp appreciation of the real exchange rate has been shown to be a useful leading indicator of banking crises. Fixed exchange rate regimes have also been criticised for increasing the fragility of the banking system to external adverse shocks. Gavin and Hausmann (1996), for example, argue that, under fixed rates, an adverse shock will lead to a balance-of-payments deficit, a decline in the Money supply and higher domestic interest rates. The reduced availability and higher cost of credit will put pressure on banks and their customers and add to any problems associated with the effect of the shock itself on the quality of bank assets. Under flexible rates, by contrast, the shock will be associated with a depreciation of the nominal exchange rate and a rise in the domestic price level, which will serve to reduce the real value of bank assets and bank liabilities to a level more consistent with bank solvency.

Adverse macroeconomic shocks may also directly affect bank balance sheets through induced effects on asset prices. A particularly important example of banks' exposure to

asset prices is real estate: while banks typically do not speculate directly in the land or real estate markets, they do make loans to construction companies whose ability to repay is threatened if the real estate market takes a dive. And bad real estate loans, associated with poor real estate markets, have in fact been an important feature in many bank crises. If banks do hold marketable assets in their portfolio, they will be exposed to fluctuations in market prices. This was an important factor in the failures of several Argentine bancos *mayoristas* in early 1995. Those banks owned large quantities of Brady bonds, and the capital losses that those bonds suffered during the sell off that followed the Mexican devaluation were fatal for the banks. Similarly, Japanese bank portfolios have been adversely affected by the collapse of land and equity prices that has taken place in the 1990s. As banks become more involved in taking market positions through proprietary trading operations and the use of derivatives, their exposure to asset-price risk is likely to increase. But more often, the effect on banks of asset-price shocks is more indirect. For example, during the years leading up to the Chilean banking crisis, banks were permitted to borrow in foreign currency, but prohibited from taking the exchange-risk, so that lending funded by international borrowing was required to be denominated in foreign currency. This was supposed to transfer the currency risk from banks to the nonfinancial firms to which banks made loans, but after the unexpected devaluation many firms found themselves unable to repay their loans in full and on time. Thus, the exchange-rate risk that faced nonfinancial firms was, in fact, to a substantial extent borne by the banking system in the form of credit risk.)

It is intuitively obvious that a decline in national income or wealth will lead to a reduction in the quality of bank portfolios. Less obvious is the fact that a large

macroeconomic disturbance can harm banks' portfolios even when the country as a whole benefits from the shock, if the disturbance has large distributional effects. The reason is that bank loans extended to sectors adversely affected by the disturbance are likely to fall into arrears, while the increased income that accrues to sectors that receive a windfall from the shock is not captured by the banks, which mainly own debt rather than equity claims on firms. For example, the major macroeconomic reforms initiated in Venezuela in early 1989 included import liberalization and substantial realignments of relative prices that led to insolvencies in some productive sectors, with adverse effects on the quality of commercial bank balance sheets. In short, macroeconomic disturbance of almost any sort can adversely affect bank balance sheets, and if large enough, threaten the solvency of large parts of the banking system. In addition to recession, other factors have importantly undermined the ability of bank debtors to service their debts. In the Chilean crisis of 1982-83, firms were undermined by a long period of exchange-rate overvaluation and high interest rates, themselves the result of the disinflation strategy adopted by the country. In Argentina, too, the 1980 financial panic was preceded by a period of highly unstable macroeconomic and financial policy, during which an increasingly overvalued peso put pressure on producers of tradable, triggering a period of "distress borrowing" that put upward pressure on interest rates and downward pressure on the quality of banks' assets.In Uruguay and Colombia, too, the crises of the early 1980s were precipitated by a prolonged period of currency overvaluation and a generalized economic downturn in the aftermath of adverse external shocks. It is important to recognize that the policy regime in place at the time of a macroeconomic shock will affect the probability that the shock is transformed into a banking crisis. Here we highlight as a particularly important example the role of alternative exchange-rate regimes.

Consider an adverse external shock that reduces the capacity of domestic borrowers to service their debts to the banking system. If the shock is large and the banking system fragile, banks will be unable to write the debts down to realistic levels without themselves becoming insolvent, because they are unable at the same time to reduce the real value of their liabilities. But if nothing is done, depositors may begin to flee from the now precariously situated banks, creating a highly destabilizing situation threatening to both the banking system and the exchange rate regime. Some kind of a restructuring of bank assets and liabilities is clearly required; with the real value of assets having fallen, either bank creditors (in practice, depositors) must take a hit or taxpayers must pay for a recapitalization of the banking system. Under fixed exchange rates, depositors are protected: with the price level largely determined by the domestic exchange rate, the external shock will have no direct effect on the real value of bank liabilities, which will exceed bank assets until an explicit restructuring is arranged. Under flexible exchange rates, however, the adverse external shock is likely to lead to a depreciation of the exchange rate, automatically writing down the real value of banking system assets to levels that can realistically be expected to be paid, and at the same time writing down the real value of bank liabilities so that banks are not thereby broken.

Of course, depositors will demand higher deposit interest rates as compensation for the exchange-rate risk, but this is arguably as it should be: better to put the aggregate risk on bank deposits where it can be priced and allocated than to offload it to taxpayers where it cannot be. But the main point is that in a fragile financial system, external shocks are more likely to create a banking crisis under fixed than under floating exchange rates.

A case in point is the impact of the collapse in oil prices of the middle 1980s on the banking systems of Venezuela and Texas. In Texas, the collapse led to a crisis in the banking and the savings and loan industries, while in Venezuela a crisis did not result. Whatever the weaknesses that may have been present in the supervision of depository institutions in Texas, it seems highly implausible to argue that the absence of crisis in Venezuela was due to a supervisory framework superior to the one that was in place in Texas. Instead, a key reason for the absence of crisis in Venezuela was the fact that the oil shock was followed by a maxi-devaluation that effectively wrote down the real value of bank assets to levels that could - in the new and less prosperous circumstances - actually be paid, while simultaneously writing down the real value of deposits and other bank liabilities in the manner required to maintain bank solvency. (GAVIN and HAUSMANN, 1998)

Macroeconomic shocks to bank funding: Macroeconomic shocks can also affect the demand for deposits and other bank liabilities, and therefore the ability of banks to fund their lending portfolio. The two most important funding sources for banks in Latin America are deposits and, in some countries and time periods, foreign borrowing. Both the demand for deposits and the availability of international capital are notoriously volatile in Latin America. Deposit demand may contract because of an increase in expected depreciation, perhaps associated with an unsustainable balance of payments or real exchange rate. This was an important factor in the Swedish crisis of 1991, which was preceded in 1990 by a decline in deposits of roughly 5 percent of GDP. Expectations of inflation and devaluation may also be driven by worrisome fiscal developments, leading, again, to a decline in deposit demand and a rise in interest rates, as in the case of Venezuela in 1993. A sudden fiscal expansion may also crowd out

private-sector borrowers, leading to a private sector "credit crunch" even if total bank credit does not decline. Whatever the cause, a sharp decline in deposit demand or in the ability of domestic banks to borrow abroad will severely reduce the domestic banking system's liquidity. To restore their liquidity, banks will be forced to sell assets if possible, or more likely to reduce the size of their loan portfolio by failing to renew credits as they come due. But, as discussed above, such a sudden withdrawal of credit is likely to be extremely destabilizing for the nonfinancial private sector, and may lead to a severe business contraction, with highly adverse effects on the quality of bank loan portfolios.

Recent developments in Argentina provide a good example of the consequences of a severe liquidity shock. The Mexican devaluation of December 1994 led to a sharp increase in the perceived riskiness of Argentine assets, and in particular of the country's monetary liabilities. These fears were compounded by the failure of some small wholesale banks, which raised questions about the stability of the domestic banking system. These factors led to a sharp decline in domestic money demand; from the beginning of the Mexican crisis to the end of March 1995, Argentine bank deposits fell by nearly 8 billion pesos, a decline of nearly one-fifth. At the same time Argentine commercial banks, like other Argentine borrowers, lost access to international financial markets, which were essentially paralyzed during the first half of 1995. The result was a sharp decline in commercial bank credit to the nonfinancial public, which has contributed greatly to the deep recession now being experienced by the country.

Macroeconomic policy played an important role in limiting the impact of the "liquidity shock" on the domestic banking system and the economy more generally. While severe,

the contraction of credit to the Argentine nonfinancial sector was reduced substantially because the central bank was, within the limits of the convertibility law, able to provide some credit to the banking system during the crisis, and more importantly was able to permit the commercial banks to utilize their own reserves by relaxing the relatively high reserve requirements that had been in place going into the crisis The relaxation of reserve requirements made roughly $3.4 billion of liquidity available to the banking system when it needed it most, greatly reducing the macroeconomic and financial impact of the "liquidity shock". This highlights the importance of an active policy toward bank liquidity in responding to aggregate liquidity shocks.

The Argentine "liquidity shock" originated in an external shock that created concerns about the viability of domestic policy and financial institutions. Such a shock can also result from monetary policy choices. The ongoing Mexican stabilization is an illuminating example. During the first five months of 1995, Mexican bank deposits rose roughly 14 percent, representing a decline of roughly 12 percent in real terms. At the same time, banks' net foreign liabilities fell by nearly a third in real terms, further contributing to a sharp reduction in their lending capacity. Unlike in Argentina, bank reserves could provide no buffer, because at the beginning of the crisis they were only about 2.5 percent of deposits. As a result, domestic credit became very tight: bank lending to the private sector grew by only about 17 percent in nominal terms, and fell by roughly 10 percent in real terms.

While bank credit has been growing slowly, Mexican banks have been forced by financial market conditions to charge high interest rates to their borrowers. The net result has been a sharp swing in the net resource transfer between the banking system

and the nonfinancial private sector. After being the recipient of large net transfers during the several years leading up to the crisis, the private sector has had to make large transfers to the banks in its aftermath. These transfers were small in the first three months of the year, as credit growth roughly matched domestic interest rates, but they rose dramatically in April and May, when credit growth slowed and domestic interest rates remained high. In those months, we estimate that the non-bank private sector was asked to transfer financial resources to the banks in the amount of more than NP25 billion per month, or 300 billion per year, representing some 15-20 percent of GDP. Of course, transfers so large cannot be sustained for long, which explains the need for the various schemes for the rescheduling and restructuring of domestic private debt that are now being sponsored and supported by the government. In the absence of such schemes, the inability of bank borrowers to make the transfers that banks need to pay their depositors would generate bank insolvencies, runs, and a breakdown of the financial system. Here we point out that the magnitude of the crisis that must be dealt with through these programs is importantly influenced by the macroeconomic strategy adopted by the government, in particular, by the very tight credit policies that were dictated by an apparent desire to bring the exchange rate to around 6 pesos to the dollar. That policy was motivated, in turn, by a strong and understandable desire to contain the inflationary implications of the financial crisis.

Macroeconomic sources of financial vulnerability – the role of credit booms

Until now, we have been considering situations in which the banking system and the economy more generally, is taken by surprise by some macroeconomic shock that undermines the viability of financial institutions and creates a crisis. But

surprises are not themselves a complete explanation for banking crises. We also need to understand why some banking systems are weak enough to be damaged by macroeconomic shocks, and others strong enough to survive them. As we have emphasized repeatedly, crises result from the interaction of shocks and vulnerability; here we explore macroeconomic determinants of bank vulnerability. What exactly do we mean by vulnerability? A vulnerable bank is one in which relatively small shocks to income, asset quality or liquidity either makes the bank insolvent or sufficiently illiquid that its ability to honour short-term financial commitments is brought into doubt. Vulnerability is thus present when the bank's "buffer stocks" of capital and liquidity are small in relation to the riskiness of its assets and its funding sources. A decision to engage in riskier lending or investment activities will thus increase vulnerability unless there is at the same time a commensurate increase in the bank's capital base. An increasing proportion of doubtful or bad loans will also increase vulnerability by reducing the capital available to cover further losses. As we have emphasized, such loan losses are often temporarily invisible to both bankers and supervisors, in which case the latent vulnerability will not become apparent until an external shock forces bad loans to the surface, but it is nevertheless present. Many features of the institutional and regulatory environment can contribute to the vulnerability of the banking system. Here we focus on the role of macroeconomic forces and in particular on the lending booms which, we will argue, can foster financial vulnerability by contributing to an endogenous decline in the quality of banks' assets. What defines on lending booms? The empirical link between such booms and financial crises is very strong. The attached charts illustrate that nearly every financial crisis in the countries in question was preceded by a period of rapid growth in banking-system credit, measured as a proportion of domestic GDP. This was the case in Argentina

(1981), Chile (1981-82), Colombia (1982-83), Mexico (1995), Uruguay (1982), Norway (1987), Finland (1991-92), Japan (199218), and Sweden (1991).This has not gone unnoticed in recent discussions of banking crises, and those discussions have provided some explanations for why lending booms may precede crisis. In this section we review some of those explanations, and an alternative that is, in our view, more convincing and that has somewhat different policy implications. Briefly, we consider the following stories:

"Rope for their own hanging": *Liberalization, bad banking, and crisis.* This story focuses on the fact that liberalization often permits bankers to engage in businesses from which they were previously restricted, and argues that they are likely to make big mistakes simply because they are unskilled.

Competition, bank "franchise value", *and attitudes toward risk.* This story emphasizes that bank liberalization is typically associated with an increase in competitive pressures, which puts downward pressure on the expected future profitability of being in the banking business. By reducing the value of the equity that would be lost in a bankruptcy, this exacerbates the underlying incentive problems, discussed above, that encourage bank managers to take excessive risks in their lending.

"One bad apple spoils the bunch": *Destructive competition in the market for deposits.* This story focuses on perverse incentives that may be created when deposit interest rates are deregulated. The suggestion is that competition in the market for deposits may force prudent borrowers to adopt the risky strategies of less prudent borrowers.

"Good times are bad times for learning": *Lending booms, information, and collapse.* This story emphasizes information, rather than incentive problems in the link between lending booms and financial vulnerability, arguing that when credit is abundant and the economy booming, banks have a difficult time sorting good risks from bad. Bad loans therefore tend to accumulate during lending booms, and result in crisis when the boom is interrupted by an adverse macroeconomic shock.

"Rope for their own hanging": It is frequently argued that bankers in recently liberalized financial systems are likely to take make excessively risky loans and incur large loan losses simply because they are unpractised in the new lines of business in which they are operating. This argument is particularly common in the cases of recently privatized banks, as in Mexico in the late 1980s, but it applies in principle to any market in which the regulatory environment has recently been relaxed in ways that permit bankers to take risks from which they were previously sheltered by legal restrictions. The lending boom, and accompanying decline in banks' portfolio quality, are in this story viewed as resulting from the youthful exuberance of an adolescent industry - like the teenage years, a dangerous but, one can hope, temporary period. We have two main problems with this story. First, it seems to rely not only upon a lack of skills, but also on a degree of irrationality in the actions of private bankers. It may well be that recently privatized banks, which had been primarily in the business of taking deposits and buying government paper, have relatively unrefined skills in commercial risk assessment. But if bank managers are rational, they would take this lack of skill into account in their lending decisions. Understanding the need to hone skills and develop institutional expertise, unpractised but unskilled bankers would presumably expand their balance sheet cautiously, band not engage in the sort of lending boom that

generally precedes a financial crisis. Second, the fact is that the regulatory and business environment that faces bankers is in almost continual change, as new technology, ideas, and policies change the opportunities and constraints facing bankers. Advocates of this story as an explanation for banking crises need to explain why other market developments and regulatory reforms did not lead to lending booms or banking crisis.

"Competition, 'franchise value', and risk-taking": This story emphasizes that in many episodes of financial-system liberalization, the liberalization was accompanied by an increase in competition in the banking sector. In some cases, the increase in competition was a cause of the liberalization; as institutions grew in unregulated sectors at the expense of highly regulated banks, regulators responded by relaxing restrictions on banks. The competition was also a direct consequence of the reforms themselves, which in many cases eliminated a *de facto* cartelization of the industry and allowed other institutions to compete with banks, and banks to compete with other banks in ways that had not previously been permitted. The increased competition lowered the 'franchise value' of a bank; that is, the expected stream of future profits from banking. This effectively reduced the equity at stake in domestic banks - not, perhaps, by standard accounting or regulatory definitions, but in the economically meaningful sense of the value that shareholders would lose in the event that a bad roll of the dice leads to bankruptcy. In so doing, the increased competition raised the incentive for bankers, for reasons discussed in detail above, to adopt excessively risky investment strategies.

This story has the advantage of focusing on well-understood incentive problems that face rational bank managers. It makes good logical sense. Our doubts about the story are factual. First, while deregulation generates increased competition, it also provides opportunities for bankers to enter profitable new activities. The impact of liberalization

on bank profitability is, therefore, not obviously negative. The empirical question can be settled by looking at bank equity prices: if liberalization actually reduced the 'franchise value' of banks, the reduction should have been reflected in banks' stock market valuation. In fact, bank stocks do not appear to have been particularly depressed during many of the lending booms that preceded banking crises in Latin America and the industrial economies, whether they followed a major liberalization or not, casting doubt on the 'franchise value' hypothesis.

"One bad apple spoils the bunch": This story focuses on a different aspect of financial liberalization, the deregulation of deposit interest rates. When deposit interest rates are freed, banks are linked to one another through the competition for deposits. Unfortunately, this may not be a competition in which the fittest survive, but rather one in which bad behaviour drives out the good. Suppose there exists a "bad" bank, whose managers are more prone to make risky investments, perhaps because the bank is insufficiently capitalized, its managers are particularly risk loving, or for some other reason. This bank will be willing to pay more for deposits than safe banks, and will bid aggressively for deposits and, if it exists, in the inter bank market as well. Because of deposit insurance, depositors will be happy to move their deposits from the safe to the riskier banks. This presents the "good" banks with the choice of either downsizing dramatically or matching the interest rates offered by the "bad" banks, a strategy that may be infeasible unless the "good" banks adopt the aggressive and risky lending strategy adopted by the "bad" bank. Whether the "good" banks choose to downsize or emulate the bad bank, the outcome is the same: the portfolio of banks adopting risky lending practices will grow at the expense of more conservative banks, and the banking system as a whole will therefore become more fragile. This is an interesting and

potentially important story about a channel through which financial vulnerability can be generated and transmitted from one institution to others. It raises important questions about the appropriate regulatory response to, for example, aggressive bidding for deposits by individual banks. But it has little to do with the macroeconomic factors that are the subject of this paper, and in particular does not explain the aggregate lending booms that precede crises, so we will little more to say about the story.

***"Good times are bad times for learning"**: Information, credit booms, and banking collapse:* The preceding explanations for the observed link between lending booms and financial collapse have placed responsibility for both credit booms and deteriorating bank portfolios on financial liberalization. The following story has a somewhat different structure. In it we suggest that the causes of the lending boom are macroeconomic developments, largely unrelated to developments in the banking industry, but that the credit boom then creates information and incentive problems for banks that lead to a deterioration of portfolio quality, and an increase in financial vulnerability.

A key idea is that, when the banking system as a whole is expanding rapidly, it is very difficult for bankers to obtain information about the creditworthiness of borrowers. This is for several reasons. Lending booms tend to take place during periods of macroeconomic expansion, when borrowers are transitorily very profitable and, therefore, liquid. In addition, the speed with which loan portfolios grow during a lending boom may itself worsen the information problems that confront bankers. First, in order to expand a loan portfolio very rapidly, bankers will typically need not only to increase the size of their exposure to their existing clientele, but also to find new borrowers.

But, almost by definition, new customers are those about whom bankers have relatively little information, so that as the lending boom proceeds, the riskiness of the portfolio will rise and loans to uncreditworthy enterprises are likely to increase.

A second reason why "good times are bad times for learning" about creditworthiness is that, when credit is plentiful, borrowers can easily pass "liquidity tests" for solvency by obtaining credit from another lender, rendering the test of much less use than in times of scarce credit. Not only does this predict that credit booms will be associated with deteriorating loan portfolios, but it also suggests the presence of an information externality in the credit market: because bankers do not account for the adverse impact of the loans that they grant on other bankers' information, they will be excessively willing to grant loans. This provides an additional reason to worry that, in the absence of official intervention; credit booms will be excessively rapid. In short, these information problems imply that the very rapid expansion of bank balance sheets that occurs during a lending boom is likely, over time, to generate a deterioration of banks balance sheets, although the deterioration is unlikely to be visible to either bankers or regulators until after the lending boom slows and the ability of borrowers to generate the financial resources required for repayment is put to the test. But, while they explain why lending booms may be dangerous, the information problems do not explain why they occur. What might generate the boom?

Here we can make a conceptual distinction between "demand-driven" and "supply-driven" lending booms. In demand-driven booms the shock is to the demand for domestic credit, perhaps because of an actual or perceived "productivity shock" that raises investment demand and expectations of future income, which may raise demand for credit to finance consumption spending, or some other reason. In supply-driven

lending booms, the initial shock is to the supply of loanable funds at banks' disposal, either because of an increase in deposit demand or a surge of international capital flows to the domestic banking system. Mexico during 1990 to 1994 appears to be a good example of a lending boom driven by the supply of loanable funds at the disposal of the domestic banking system. Due in large part to consolidation of the inflation stabilization that began in the mid-1980s, bank deposits rose from about 20 percent of GDP in 1989 to 30 percent in 1994, while at the same time government demand for bank credit was declining and the ability of banks to borrow abroad was increased. The increase in real deposit demand provided banks with resources to lend, and in fact lending to the private sector exploded, from about 10 percent of GDP in 1990 to nearly 40 percent in 1994. In retrospect, it seems plausible that this rapid rate of growth in lending was at least partly responsible for the loan-quality problems that were becoming apparent in many Mexican banks even before the crisis that began in December 1994.

2.6 Conclusions

In this section; a short history of banking sector and the definition of banking crises are introduced. The factors behind the banking crises are examined. The factors are divided into two groups: micro and macro reasons of the banking crises.

SECTION 3

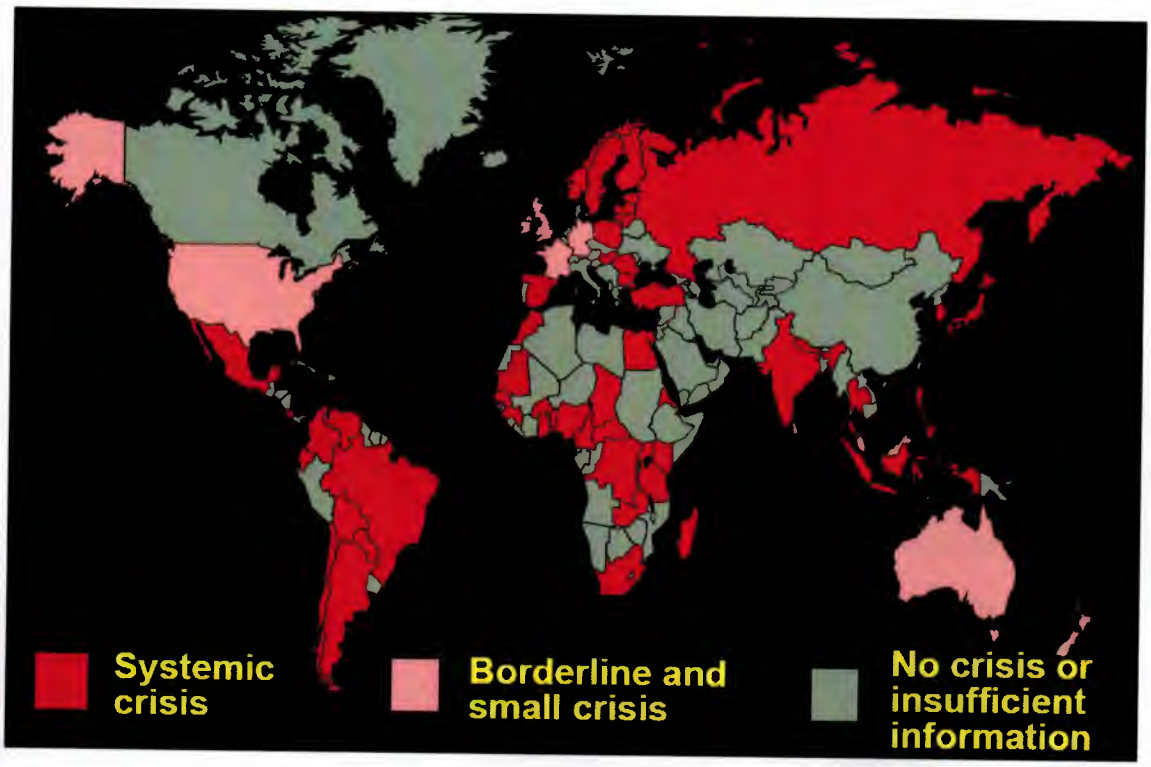
BANKING CRISES IN THE WORLD

3.1 INTRODUCTION

This section tells us the how bank crises spread to the world and some examples from recent bank crises

3.2 WHY ARE THERE SO MANY BANKING CRISES

FIGURE 3.1



Let us come now to the substance, namely why are there so many banking crises? Indeed, the last 20 years have seen an impressive number of banking and financial crises all over the world. In an interesting study of the IMF, Caprio and Klingebiel

(1997) identify 112 systemic banking crises in 93 countries and 51 borderline crises in 46 countries since the late 1970s. More than 130 out of 180 of the IMF countries have thus experienced crises or serious banking problems. Similarly, the cost of the savings and loans crises in the USA in the late 1980s has been estimated to over US $150 billion which is more than the cumulative loss of all US banks during the Great Depression, even after adjusting for inflation. On average the fiscal cost of each of these recent banking crises was of the order of 12% of the country's GDP but exceeded 40% in some of the most recent episodes in Argentina, Indonesia, Korea and Malaysia.

Here is a map that I like. The countries represented in pink are the ones that have experienced banking crises, while the countries in red have only experienced significant banking problems and as for the countries in grey either we don't have sufficient information, like probably for most of the Arabic countries, or these countries have not experienced any significant banking problem.(ROCHET 2002)

3.3 What Is a Systemic Banking Crisis?

Banks take on and manage risk, and some bankers are better at it than others. So there will always be occasional bank failures even in healthy financial systems. In fact, isolated bank failures contribute to the efficiency of financial markets because they enable resources to be reallocated from poorly managed and inefficient banks to well-managed institutions. Even otherwise well-managed banks may fail as a result of overexposure to risk emanating from events thought to be so unlikely that the risk is often acceptable to bankers and regulators before the event occurs. These failures, while often spectacular, are isolated events with limited impact on the stability of the financial system and on people's confidence in it.

In a systemic crisis, multiple banks fail simultaneously, and the collective failure impairs enough of the banking system's capital so that large economic effects are likely to result and the government is required to intervene. But how big is "enough"? There is no precise answer to this question. Typically, researchers have examined the statements and actions of a country's central bank to classify a banking system problem as a systemic one. In other words, when central bankers think that a particular shock to the financial system could develop into a systemwide problem, the problem is considered systemic. For practical purposes, if the capital of the banking system is almost or entirely wiped out by loan defaults, the crisis is systemic for sure. By this definition, the banking crises in Southeast Asia, Latin America, Japan, Russia, and Scandinavia qualify as systemic events. On the other hand, the savings and loan debacle and the regional banking crises of the 1980s in the United States do not meet the definition of a Systemic banking crisis. For while the government interceded to the tune of $160 billion (1995 estimate), this amount is very small relative to the size of the U.S. economy and its financial sector. (Ergungor and Thomson, 2005)

3.4 FEW EXAMPLES FROM RECENT BANKING CRISES

3.4.1 INDONESIA

Indonesia's banking crisis was characterized by particularly deep insolvency, a large number of banks in the system, limited management capacity, and little scope for resolution through outside acquisitions. In November 1997, in the face of widespread runs on the banking system, the authorities closed 16 banks (3 percent of the banking system). The closures themselves were handled efficiently, but there was a lack of clarity as to why the banks had been selected. The authorities failed to demonstrate

commitment to the concomitant economic program, and the limited deposit insurance scheme prompted concerns about losses among large depositors. Over the following weeks runs on the banks resumed and became pervasive, leading to a generalized run on the currency. At the end of January 1998, and facing imminent financial meltdown, the authorities announced a blanket guarantee for all depositors and creditors and established the Indonesian Bank Restructuring Agency (IBRA). In mid-February, IBRA intervened in 55 banks that had borrowed more than twice their capital from the central bank. But this very "soft" open bank resolution, which did not replace owners and managers or announce these steps to the public, did little to stem the crisis. The next month, IBRA took over seven large banks that had borrowed heavily (over $240 million), changed management and suspended owners' rights. IBRA also closed seven small banks that had borrowed over 500 percent of their capital, subsequently closing three and identifying the largest remaining bank as a "platform bank" into which the remaining banks of this group would be folded. Finally, in March 1999, the authorities were able to take a comprehensive approach to resolving the remaining private banks. They categorized 74 small banks as sufficiently strong to survive unaided; jointly recapitalized, with the owners, 9 middle- performing banks, and closed 38 very weak banks.

Enoch observed that banking system resolution typically involves both bank closures (where the doors are closed and assets and liabilities transferred) and open bank resolution (where ownership and management generally change but the bank stays open). In either case, he said, intervention is only the first stage, and the final cost of intervention will be determined as much by the efficiency of follow-up activities. The authorities' approach will evolve as information becomes available, but initial

interventions are likely to be on banks with protracted runs or deep insolvency, or where there is evidence of fraud. (Imf. 2000)

3.4.2 MEXICO

The roots of Mexico's 1994 banking crisis lay in the government's emphasis on maximizing revenue from the privatization of banks that already had portfolio problems. Banks that were nationalized in 1982 had long ago lost private sector initiative and their best staff. When Mexico reprivatized these banks in 1991–92, excluding foreign banks, it awarded licenses without proper tests of new and unproven bankers and permitted a number of banks to be set up with little capital and highly leveraged assets. A 1991–94 credit boom, a large number of foreign-currency-denominated loans, inadequate accounting standards, weak supervision, and distorted incentives set the stage for a banking crisis even before political and economic shocks led to a run on the currency in late 1994.(IMF 2000)

Kalter and **Ribas** (1999) analyze the Mexican crisis with a focus on the role of expanding government operations, within the context of a quasi-fixed nominal exchange rate, in reducing the relative price of traded goods. Increases in government expenditures and taxation is associated with increased production costs, excess demand for non traded goods, and a deterioration in the financial health of the traded goods sector

Becker, Gelos, and **Richards** (2000), using company-level data in Mexico during 1994-95, find that although interest rates failed to show a clear confidence loss in the

exchange rate regime, the relative performance of net exporters suggests that expectations of devaluation increased continuously.

The sizable devaluation, the sharp increase in interest rates, and the abrupt downturn of the economy in the aftermath of the crisis created serious liquidity and solvency problems for the banking sector. IMF research indicated that the Mexican banking crisis manifested on the asset side but did not cause a run on the system's deposits; however, it did lead to a flight *from* quality.

(IMF, 2001)

3.4.3 RUSSIA

The Russian banking system grew with astonishing rapidity, Hoelscher noted, burgeoning from 10 banks to 1,600 between 1992 and 1997.With most banks meeting Russia's prudential regulations, the authorities assumed that all was well in the banking system, but existing statistics did not reflect actual conditions, he said. The banking system was highly concentrated (10 banks held 80 percent of the system's assets), and the portfolios of these large banks were heavily concentrated (almost 60 percent were concentrated in GKOs, the Russian government bonds) and had significant exposure to foreign exchange risk. While a forced restructuring of the GKOs and exchange rate depreciation provided the immediate impetus for the 1998 banking crisis, its roots, Hoelscher suggested, lay in the banks' significant level of nonperforming loan portfolios, as well as their vulnerability to exchange rate volatility and the heavy concentration in GKOs. The crisis immediately left large banks illiquid.

As a result, deposits were frozen, the payment system ground to a halt, and banks defaulted on forward exchange contracts and foreign debt-service obligations. But the Russian authorities, who remained unconvinced that this was an insolvency problem, called for a moratorium on foreign debt payments and permitted households to shift deposits to Sherbank, the state-owned savings bank. In the absence of reliable data and in the face of severe budget and institutional constraints, a joint IMF-World Bank team of advisors identified the need to collect more accurate data on the major banks, strengthen the legal framework for bank restructuring and liquidation, and establish an institutional framework for restructuring. A World Bank–financed due diligence review subsequently found 15 of the 18 major banks deeply insolvent, with a net negative worth of 173 percent of assets (in individual cases, net negative worth was the equivalent of 400 percent of assets). The review also found that the default on the GKOs was not the principal culprit—provisions for nonperforming loans and foreign exchange losses figured much more prominently.

As a result of this review and a series of technical assistance missions and activities related to the use of IMF and World Bank resources, the Central Bank of Russia removed the licenses of 6 of the 18 banks and put 3 others under management of a newly established bank restructuring agency, Hoelscher explained. Both bank bankruptcy and bank restructuring legislation were signed into law in 1999. In addition, the central bank began modernizing supervisory regulations and consolidating and improving the management of these supervisory functions.

3.5 CONCLUSION

This section completed a map of banking crises in the world. And some examples are given. Indonesia, Mexico and Russian banking crises are introduced briefly.

SECTION 4

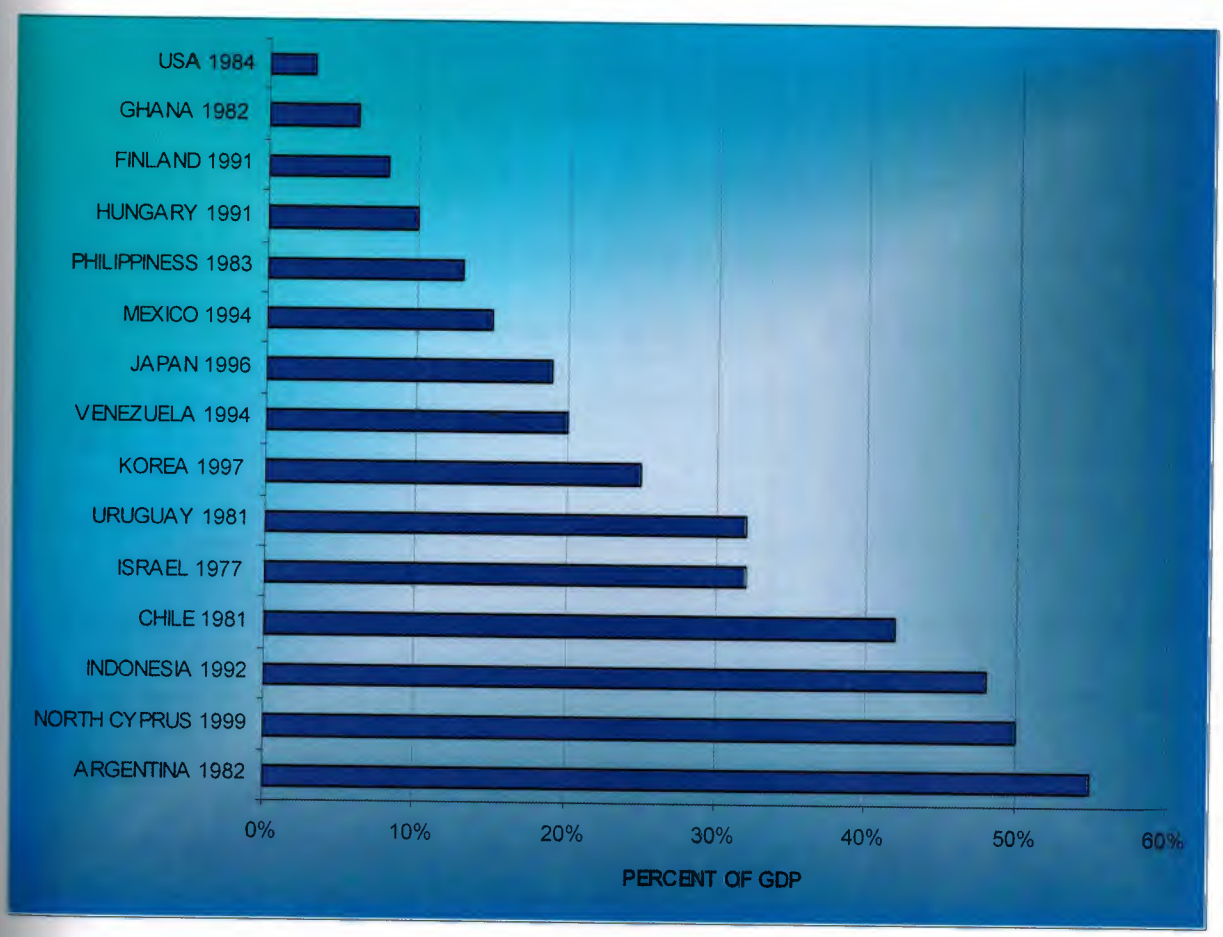
THE COST OF BANKING CRISES

4.1 INTRODUCTION

In this section cost of banking crises is introduced and few examples from recent banking crises are shown as graphically.

4.2 THE COST OF CRISES

GRAPH 4.1



Financial crises can be very costly, both in the fiscal and quasi-fiscal costs of restructuring the financial sector and, more broadly, in the effect on economic activity of the inability of financial markets to function effectively. Resolution costs for banking crises have in some cases reached over 40 percent of GDP (for example, in Chile and Argentina in the early 1980s), while nonperforming loans have exceeded 30 percent of total loans (for example, in Malaysia during 1988 and for state banks in Sri Lanka during the early 1990s). In general, the resolution costs of banking crises have been higher in emerging market countries than in industrial countries: except for Spain, resolution costs in industrial countries have been held to under 10 percent of GDP, whereas in several emerging market countries, particularly in Latin America, resolution costs have been much larger (IMF, 1998)

No type of country has been free of costly banking crises in the last quarter century. The prevalence of banking system failures has been at least as great in developing and transition countries as in the industrial world. By one count, 112 episodes of systemic banking crises occurred in 93 countries since the late 1970s and 51 borderline crises were recorded in 46 countries (Caprio, Klingebiel 1999).

Governments and, thus ultimately taxpayers, have largely shouldered the direct costs of banking system collapses. These costs have been large: in our sample of 40 countries governments spent on average 12.8 percent of national GDP to clean up their financial systems (Figure 1 shows some of the higher costs in our sample). The percentage was even higher (14.3) in developing countries. Some crises have led to much larger outlays: governments spent as much as 40-55 per cent of GDP in the early 1980s crises in

Argentina and Chile. A substantial part of the costs of the recent East Asian crisis – now projected in the region of 20-55 per cent of GDP for the three worst affected countries – will ultimately fall on the budget. Despite the fact that their economies are small, developing economies as a group have suffered cumulative fiscal costs in excess of $1 trillion. Among industrialized countries, Japan's long- and drawn out banking crisis has been the costliest; to date, the Japanese authorities have spent around 20 percent of GDP to restructure the system. (Honohan and Klingebiel 2000)

4.3 CONCLUSION

This section described the cost of banking crises and the effects on GDP. Also some examples are given and importance of banking crises for a country is studied.

SECTION 5

BANKING SECTOR IN TRNC

5.1 INTRODUCTION

In this section some information about TRNC economy was given. Factors behind TRNC banking crises were studied.

5.2 TRNC ECONOMY

After the crises in 2000 and 2001 TRNC economy started to expand with the Turkish economy. Main reason behind that; Turkish lira is used in TRNC so every event in turkey may easily affect the TRNC economy.

5.3 FACTORS BEHIND THE TRNC BANKING CRISES

The TRNC banking sector which comprises almost the entire financial sector in the TRNC has grown in numbers considerably under the influence of the liberalization trend of the 1980s.

The banking crisis of the Turkish Republic of Northern Cyprus (TRNC), which occurred at the beginning of the year 2000, has resulted in the liquidation of ten banks and ended up with economic losses of approximately 200 trillion TL, almost equivalent to 50% of GNP for 1999(Şafaklı 2003)

We can define 4 problems behind the banking crises in TRNC.

- MACRO ECONOMIC PROBLEMS
- POOR REGULATION
- BALANCE SHEET PROBLEMS IN BANKS
- BALANCE SHEET PROBLEMS IN TRNC CENTRAL BANK(**TRNC central bank annual report)**

5.3.1 MACRO ECONOMIC PROBLEMS

- Economic recessions affect the banking sector negatively
- Inflation and high interest rate
- Increasing reserve requirements by the central bank
- Poor regulation system

TABLE 5.1

YEAR	STATE BANKS	PRIVATE BANKS	FOREIGN BANKS	ACTIVE BANKS	SDIF	TOTAL
1985	1	6	4	11	0	11
1990	2	8	4	14	0	14
1990	2	18	4	24	0	24
1996	2	20	4	26	0	26
1997	2	27	4	33	0	33
1998	2	29	5	36	0	36
1999	2	29	6	37	0	37
2000	2	24	6	32	5	37
2001	2	20	4	26	4	30
2002	2	19	4	25	5	30

Recourse: TRNC central bank annual report 2003

- As we see from the table; there is a high increase in number of banks, but no supervisions and regulations were made to prevent this increasing.
- Banks in TRNC were small and medium sized banks and they couldn't compete in international market. So this affected the profitability of banks in a negative way. **(TRNC Central Bank Annual Report)**

5.3.2 POOR REGULATION

- All regulation and supervision authority was being controlled by the Ministry. So government used this power as a tool to reach its goals (to cover budget deficit, to borrowing).
- Some banks (e.g. cooperative banks) were dealing with activities other than banking. This brought banks weaker and less profitable position at that time.
- Both risk management and supervision were not made properly. So banks in TRNC didn't see its future clearly.
- There were also credit problems. **(TRNC Central Bank Annual Report)**

5.3.3 BALANCE SHEET PROBLEMS IN BANKS

- Equity capital was insufficient to cover any losses that come from financial crises.1994 equity capital was %7 and in 2001 it decreased to %5.
- Stock holders were composed of one family member.
- Credits were given for long term but at the same time, deposits were short term. Banks couldn't roll over the deposits.
- Credits were given very easily. But they are not collected completely. So asset side of bank's balance sheet became very weak.

- The number of bank staff was increased every year until 1999. And the cost of banking staff became big problem for banks. **(TRNC Central Bank Annual Report)**

5.3.4 BALANCE SHEET PROBLEMS IN TRNC CENTRAL BANK

TRNC Central Bank has no authority to make emission. This was an important aspect. The main sources of central bank were the legal reserve and bank deposits. Between 1994 and 2000 all central bank sources were used to finance public debts, but only a small amount this credits came back to the central bank.

As a result all of these factors created the banking crises in TRNC and people started to withdraw money from their banks. So banks become illiquid. Then many banks are started to be controlled by SAVING DEPOSIT AND INSURANCE FUNDS. **(TRNC Central Bank Annual Report)**

5.4 CONCLUSION

This section introduced reasons of banking crises in TRNC and position of banks in the crises period.

SECTION 6

WHICH BANKS DID TAKE PART IN THE CRISE PERIOD?

6.1 INTRODUCTION

In this section number of banks which went to liquidation in crises period is introduced. Cost of these crises is examined.

6.2 BANKS WHICH ARE TRANSFERED TO SAVING DEPOSIT AND INSURANCE FUNDS

TABLE 6.1

BANKS	TRANSFER DATE	PRESENT POSITION
K.YURTBANK LTD.	21.03.2000	**IT WENT TO LIQUIDATION 5.05.2001**
K.FINANSBANK LTD.	21.03.2000	**IT WENT TO LIQUIDATION 5.05.2001**
EVERESTBANK LTD.	21.03.2000	**IT WENT TO LIQUIDATION 5.05.2001**
K.HURBANK LTD.	21.03.2000	**IT WENT TO LIQUIDATION 29.01.2001**
K.KREDI BANKASI LTD.	09.10.2000	**IT WENT TO LIQUIDATION 25.06.2001**
ASYA BANK LTD.	21.12.2001	**UNDER CONTROL OF SDIF**
YASA BANK LTD.	21.12.2001	**UNDER CONTROL OF SDIF**
K.TICARET BANKASI LTD.	21.12.2001	**UNDER CONTROL OF SDIF**
TİLMO BANK LTD.	21.12.2001	**UNDER CONTROL OF SDIF**
K.ENDÜSTRİ B ANKASI LTD.	31.03.2002	**UNDER CONTROL OF SDIF**
EURO BANK LTD.	28.03.2003	**UNDER CONTROL OF SDIF**
ER BANK LTD.	25.07.2003	**UNDER CONTROL OF SDIF**

Source: TRNC central bank; 2003 annual report

The banking crisis of the Turkish Republic of Northern Cyprus (TRNC), which occurred at the beginning of the year 2000, has resulted in the liquidation of ten banks and ended up with economic losses of approximately 200 trillion TL, almost equivalent to 50% of GNP for 1999. The main reason for such huge losses for the TRNC economy is due to the fact that the commercial banks and the institutions responsible for regulation, monitoring, supervision of the financial sector together with those running the monetary policies did not have an organizational appreciation of proactive strategies. The amendments made to the Banking Law after the crises to re-establish stability within the sector could not go beyond reflecting the concept of reactive strategies and hence, did not include any proactive strategies necessary for eliminating the negative consequences of probable external factors.

Banks which were transferred to the Saving Deposit and Insurance Funds had deposit debt amount to $161.3 million. This amount created 58.382 unjustly treated people (unpaid depositors) in TRNC number of these people decreased to 9.148; in 2002 it decreased to 662. Rest of these people took their money until the end of 2004.

Total deposits of K.Ticaret Bankası Ltd, Yasa Bank Ltd, Tilmo Bank, Asya Bank Ltd and Erbank Ltd transferred to the Akdeniz Garanti Bankası Ltd and the deposits of K.Endüstri Bankası Ltd were transferred to the K.Vakıflar Bankası.

Banks which went to the liquidation in 2000 decreased their branch number from 48 to 5.In 2003 all branches were closed.

Banks which are controlled by SDIF decreased their branch number from 22 to 3.In 2003, only one branch left. **(TRNC central bank annual report)**

6.3 CONCLUSION

In this section; crises period in TRNC are examined and the position of unpaid depositors are studied.

SECTION 7

METHODOLOGY

7.1 Introduction

In this section the methodology of the study is explained. The method section consists of the explanation of the sampling design, and questionnaire design; and it explains how the laddering interviews were conducted and how the data was processed

7.2 Questionnaire

Questionnaire was designed to identify the problems in banking sector. Questionnaire itself was obtained from Asst.Prof.Dr.Okan Şafaklı and translated in English Totally, 275 depositors were asked. Interviews were placed mostly in GÜZELYURT and NİCOSİA. The main target of this questionnaire was to define the reasons why depositors choose these banks and what do they think about reasons of these crises.

Results of this questionnaire was processed by using Microsoft excel and all processed data were explained with bar chart.

7.3 Conclusion

In this section, the methodology of the study was explained. The method section explained the sampling design, and questionnaire design; the findings of this questionnaire were studied in section 8. (The Questionnaire takes place in APPENDIX)

SECTION 8

FINDINGS

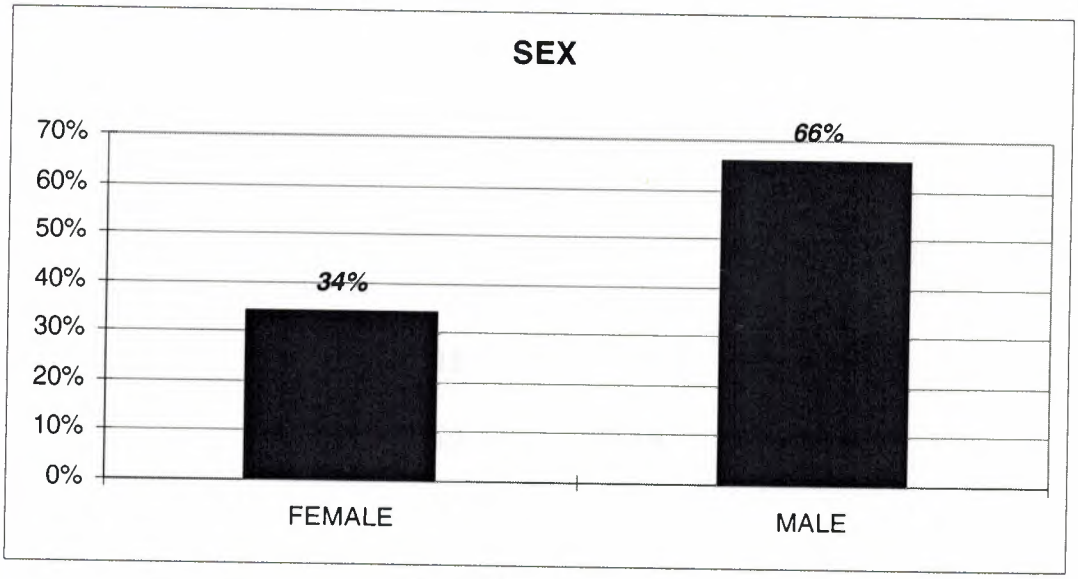
8.1 Introduction

In this section the questionnaire is introduced which was made on unpaid depositors in TRNC.

8.2 THE QUESTIONNAIRE

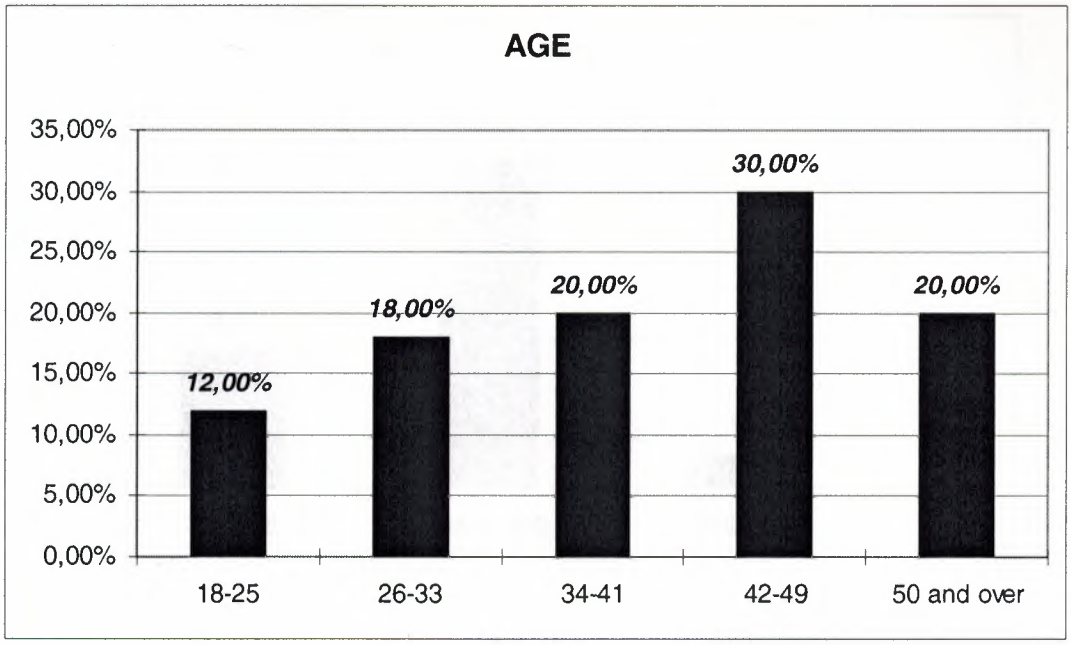
8.2.1 DEMOGRAPIC QUESTIONS

Q.1



- The interviews approached to 275 people by using laddering method. So out of 275 respondents %34 were female, % 66 were male.

Q.2



- Age of interviews are as follows;

18-25 : **%12**

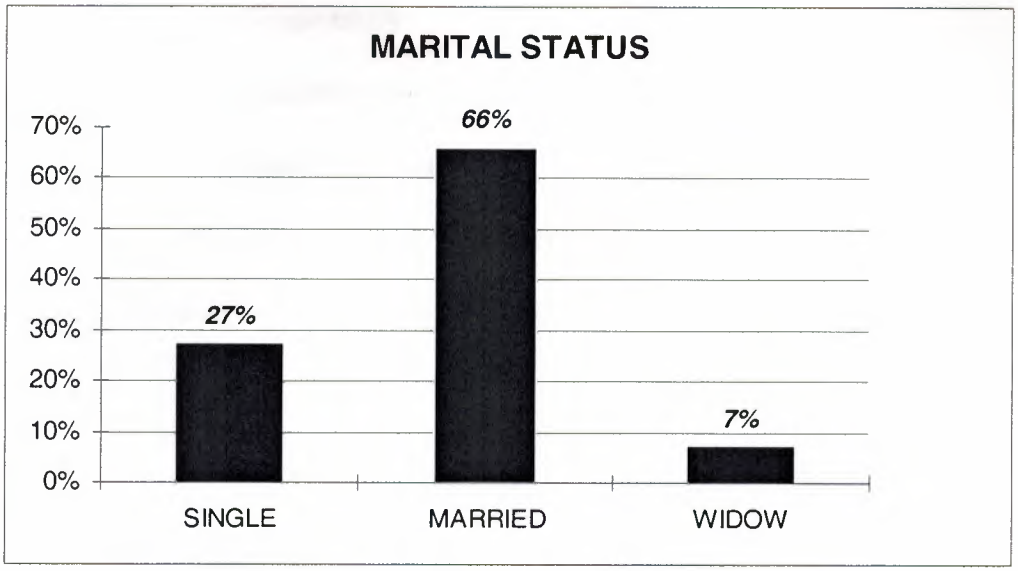
26-33 : **%18**

34-41 : **%20**

42-49 : **%30**

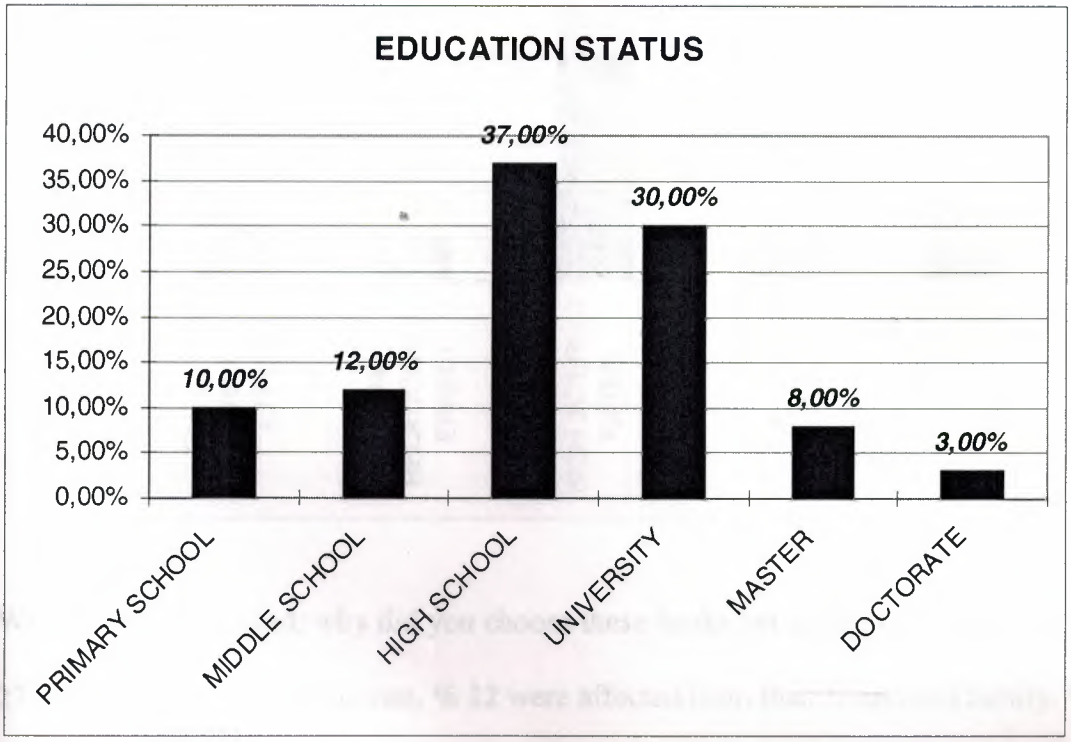
50-over: **%20**

Q.3



The marital status of respondents: Out of 275 % 66 was married %27 was single and % 7 was widow.

Q.4



As it is seen from the table; out of 275 respondent %37 finished high school

% 30 university

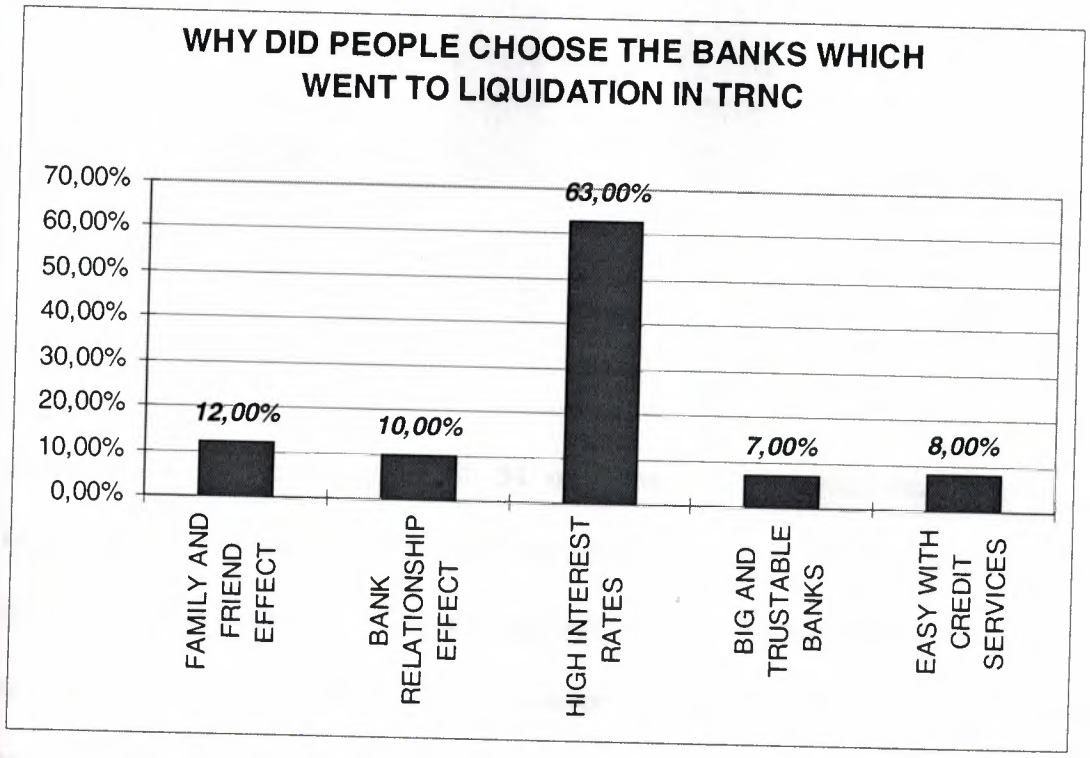
% 12 middle school

% 10 primary school

% 8 masters and % 3 doctorate this highly educated classes were the smallest percentage of all 275 respondents.

8.2.2: THE QUESTIONS ABOUT BANKING CRISES

Q.1



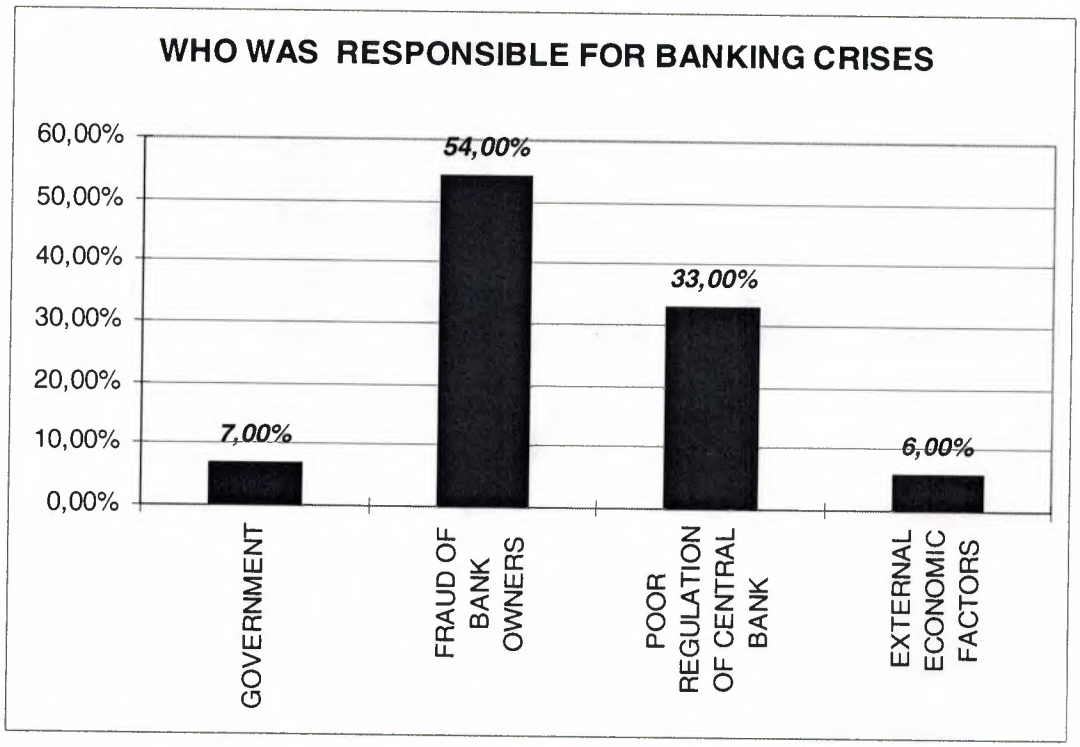
When people are asked; why did you choose these banks before the crise period? Out of 275 % 63 said high interest rates, % 12 were affected from their friend and family, % 10

choosed the banks just for the relationship, % 8 said selected these banks for their easy credit services and % 7 said that they were trustable banks.

Major finding

Major finding is that people choosed the banks just by looking at interest rates (% 63)

Q.2

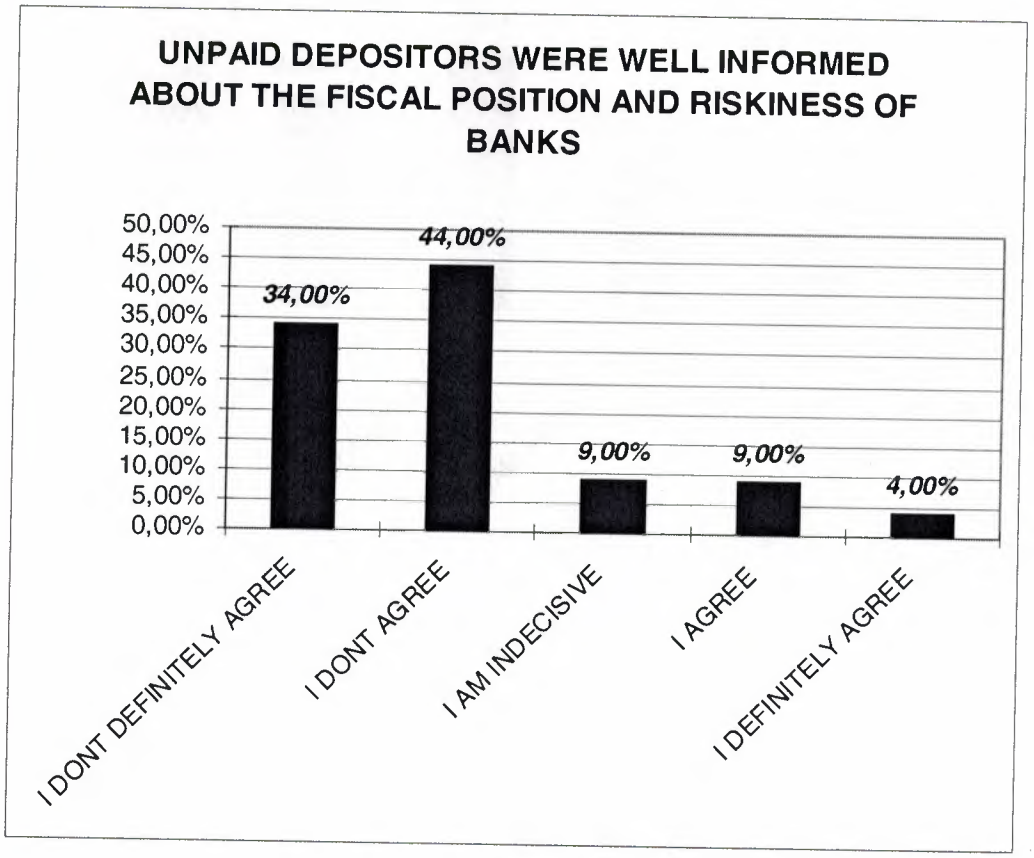


According to the questionnaire % 54 of respondent said that bank owners were responsible for the banking crises, and then they are followed % 33 of the respondents thought poor regulation of central bank was the basic reason of the crises,% 7 of respondents said government was responsible and external economic factors was the smallest percentage % 6.

MAJOR FINDINGS

Majority of respondents said that (% 54 of respondents) fraud of bank owners was the basic reason of these crises.

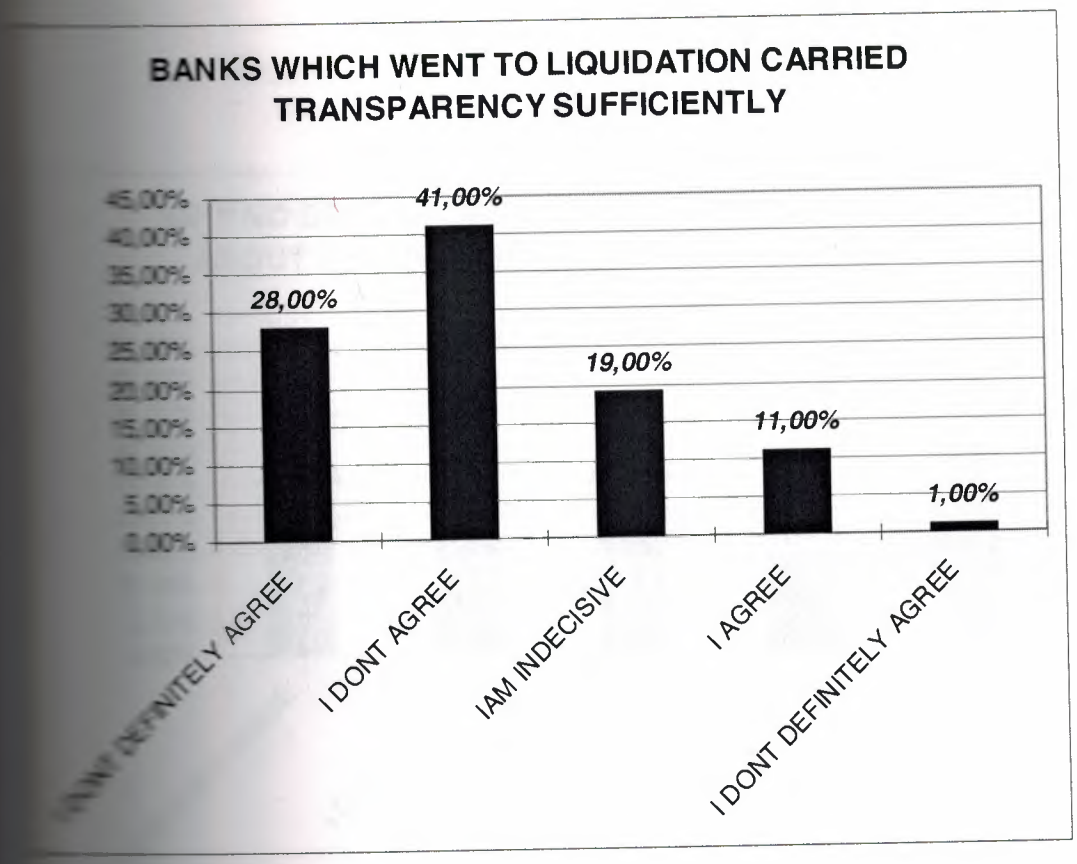
Q.3



As it is seen from the graph unpaid depositors were not informed about any financial position of banks %44 and % 34 of respondent had no information about banks,% 9 of respondents were indecisive and % 13 of respondents said that people were well informed for the risk and position of banks.

MAJOR FINDINGS

Majority of respondents said people were not informed about the financial position of banks.

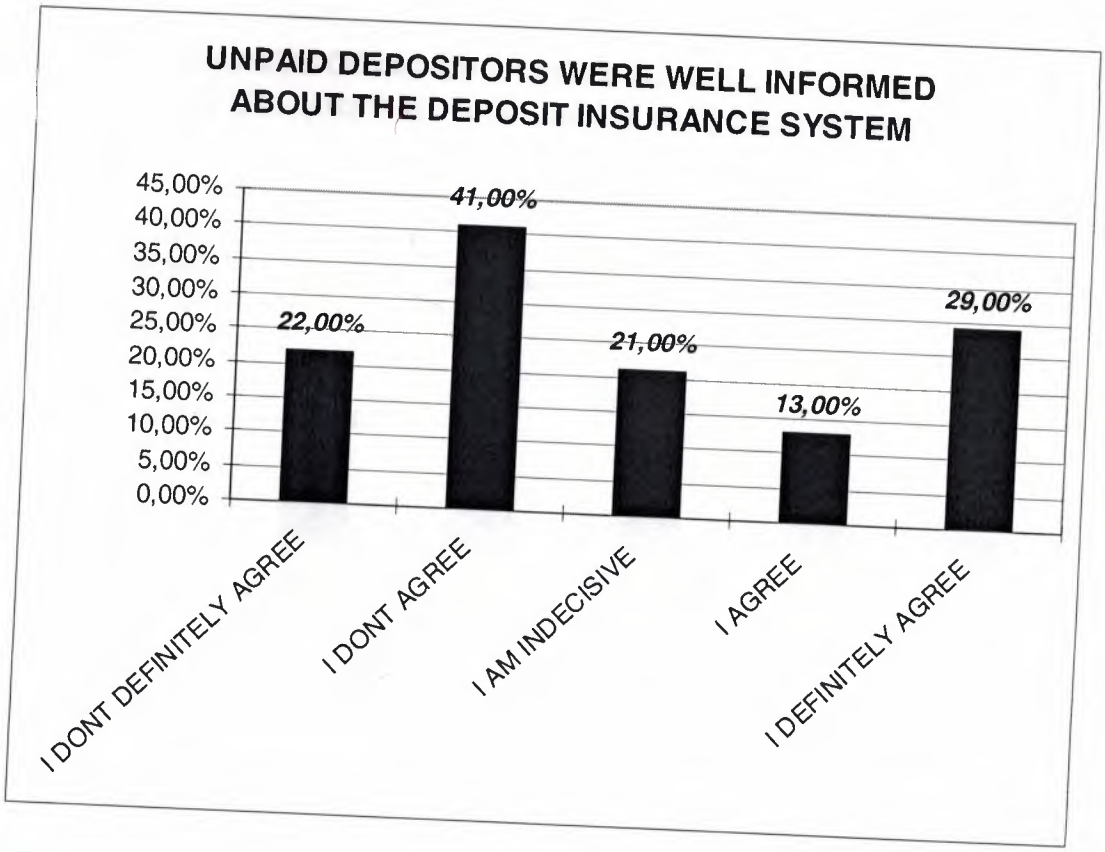


Out of 275 respondents %41 and % 28 said they didn't think banks carried transparency sufficiently,% 19 of respondents were indecisive and % 11 of respondents agree that banks were transparent in the crise period.

MAJOR FINDINGS

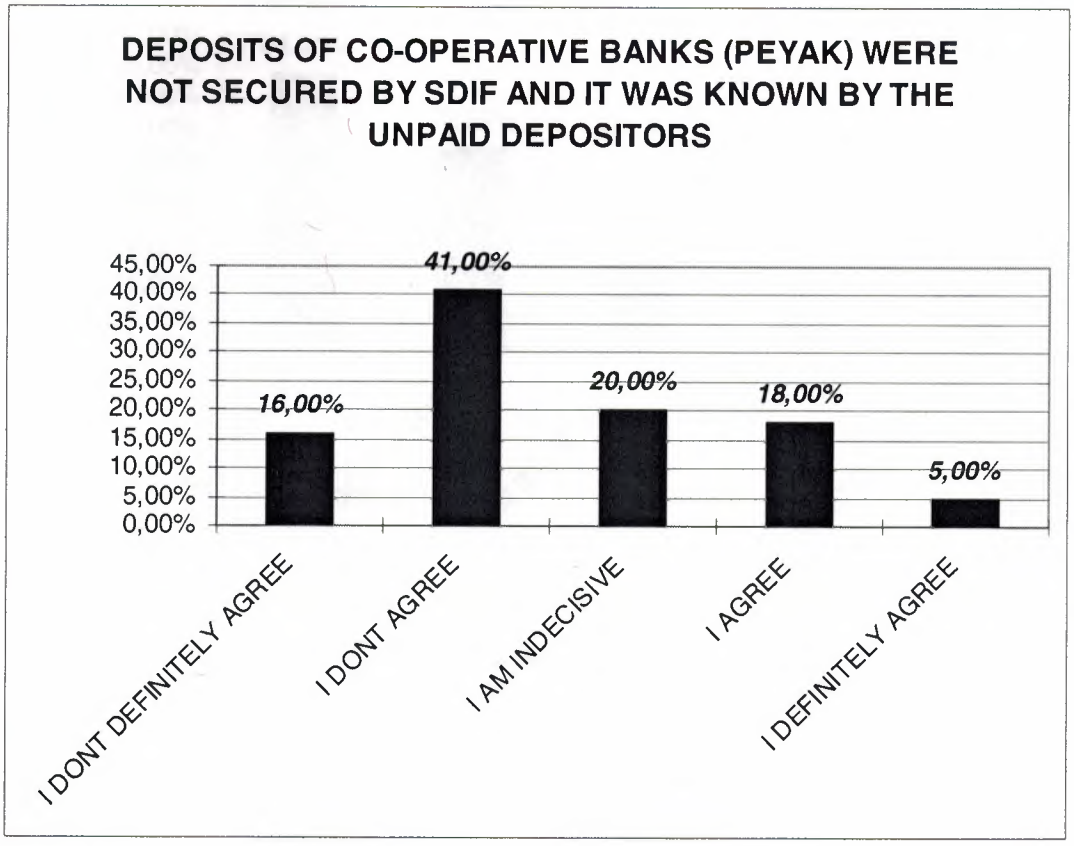
Major findings show that respondents didn't think banks were transparent. %41 of respondents didn't agree and % 28 of respondents didn't definitely agree.

Q.5



As it is seen from the graph; respondents were not informed about the deposit insurance system,%41 and %22 of respondents had no information about the deposit insurance system,%21 of respondents were indecisive ,%13and %29 of respondents said that people were informed about the deposit insurance system .

Q.6

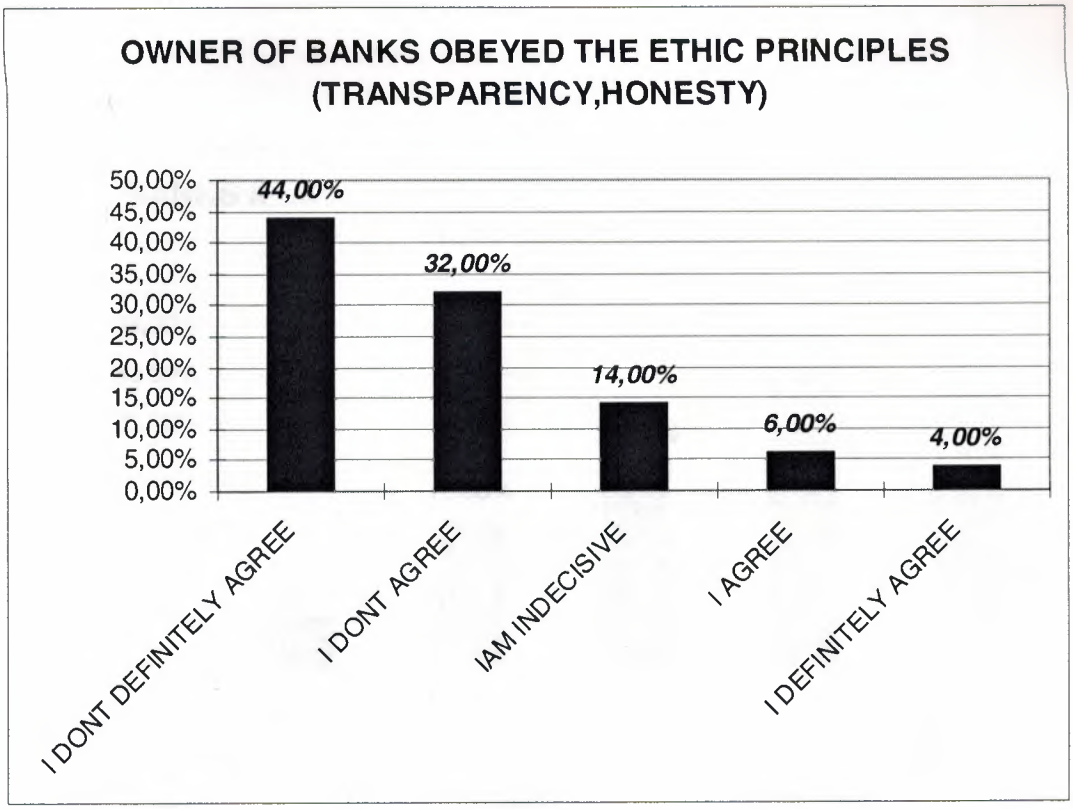


% 41 and %16 of respondents said ,they didn't know the deposit insurance system for co-operative banks (PEYAK),% 29 of respondents were indecisive ,% 18 and % 5 of respondents said they were informed about the unsecured deposit insurance system for co-operative banks.

MAJOR FINDINGS

Major findings show that people (% 41of respondents) were not informed about deposit insurance system for co-operative banks.

Q.7

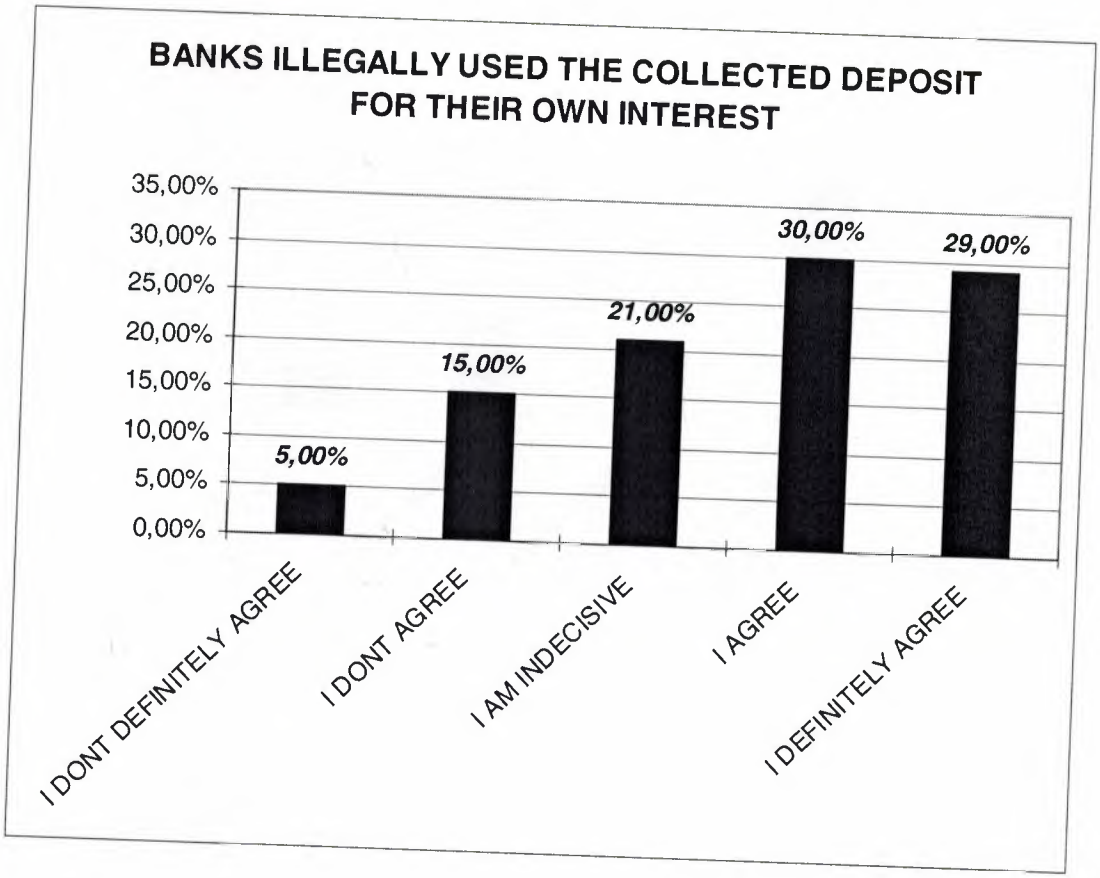


% 44 and % 32 of respondents said they didn't believe that owners of banks obey the ethic principles, % 14 of respondents were indecisive and % 6 and % 4 of respondents said owners obeyed the ethic rules in the crises period.

MAJOR FINDINGS

Majority of respondents (%44 and %32) %66 said bank owners didn't obey the ethic rules.

Q.8

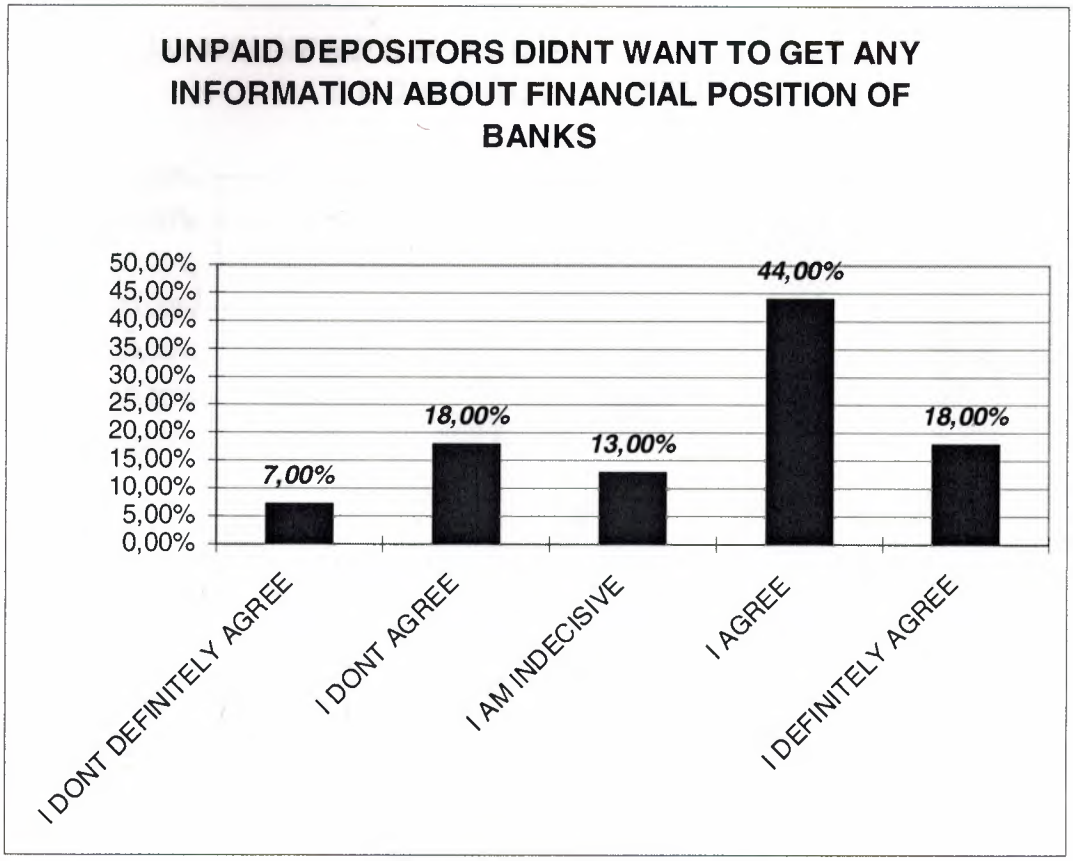


Out of 275 % 30 and % 29 of respondents said banks used deposits for their own interest,%21 of respondents were indecisive ,%15 and % 5 of respondents said banks didn't use deposits for their own interest.

MAJOR FINDINGS

% 59 of respondents said that (%30 agree, %29 definitely agree) banks illegally used collected deposits for their own interest.

Q.9

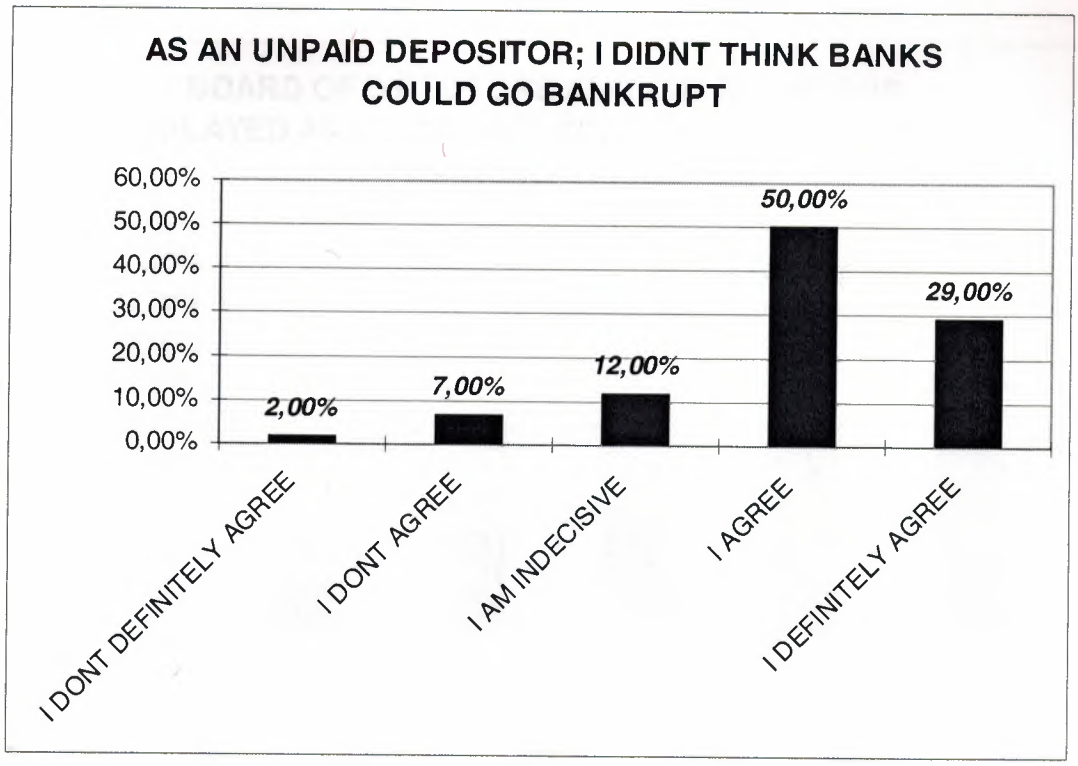


Before the banking crises in TRNC ;majority of depositors (%44 and % 18) said they didn't get any information about financial position of bank,% 13 of respondents were indecisive and % 25 of respondents said they tried to learn their financial position.

MAJOR FINDINGS

Major findings said that % 44 and % 18 of respondents didn't try to get any information about financial position of banks.

Q.10

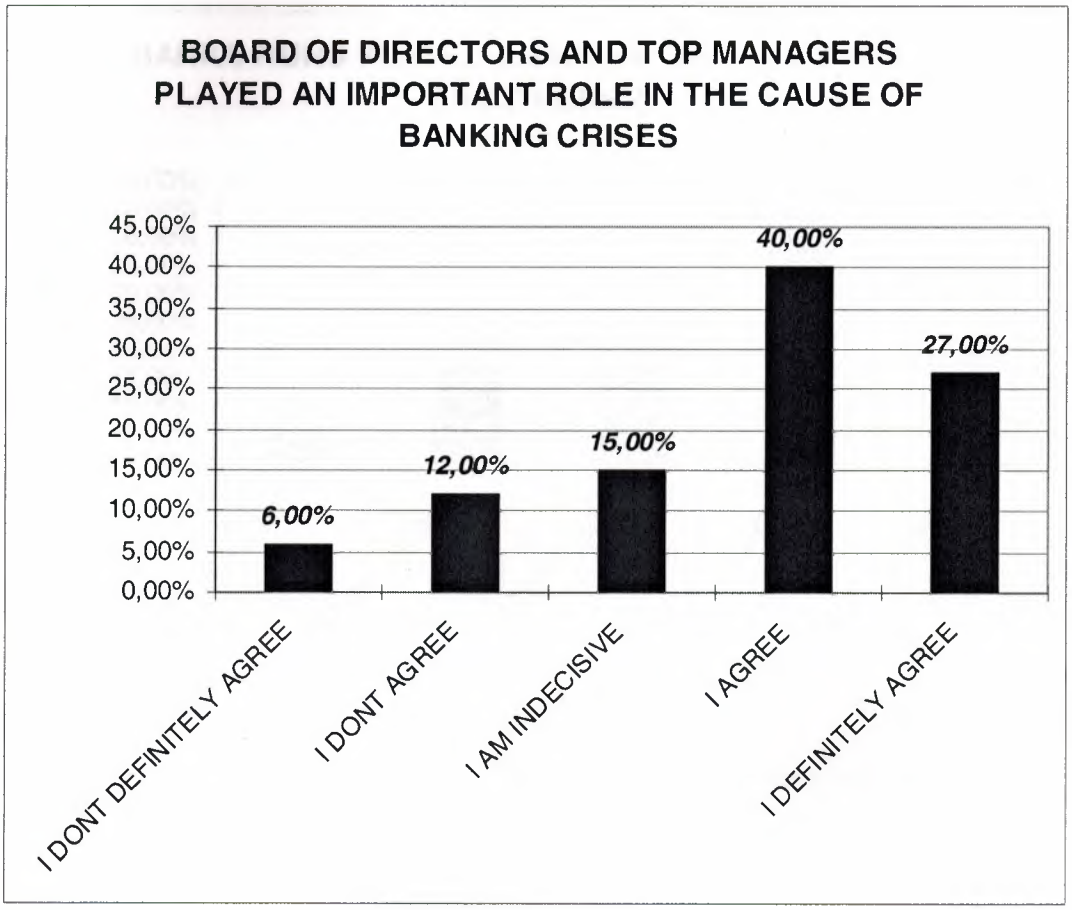


Majority of respondents (%50 and % 29) said they didn't think bank could go bankrupt. % 12 of respondents was indecisive and %9 small percentages of respondents said they thought this probability.

MAJOR FINDINGS

Major finding is that (%50 and % 29) %79 of respondents said they didn't never think banks could go bankrupt.

Q.11

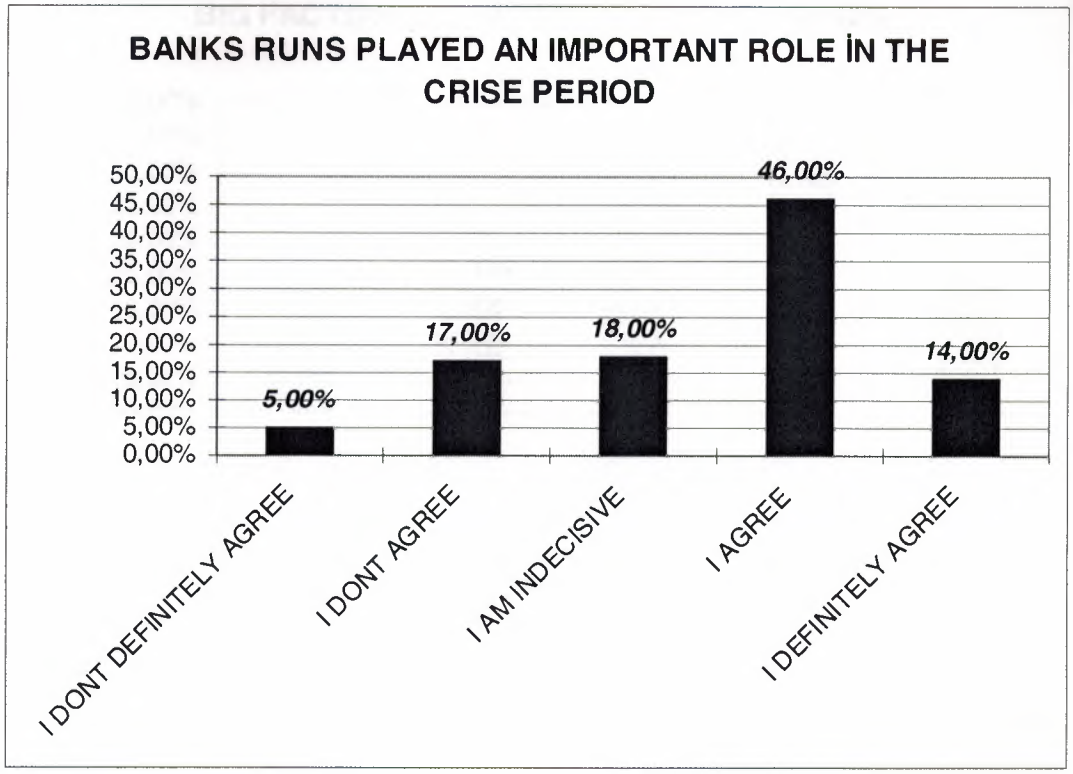


Out of 275 % 40 and %27 of respondents said top managers and bank owners were responsible for banking crises, % 15 of respondents were indecisive, (%12 and %6) % 18 of respondents didn't see top managers and bank owners as a reason of banking crises.

MAJOR FINDINGS

Major findings show that majority of respondents (% 40 and %27) said bank owners and top managers were the main cause of banking crises.

Q.12

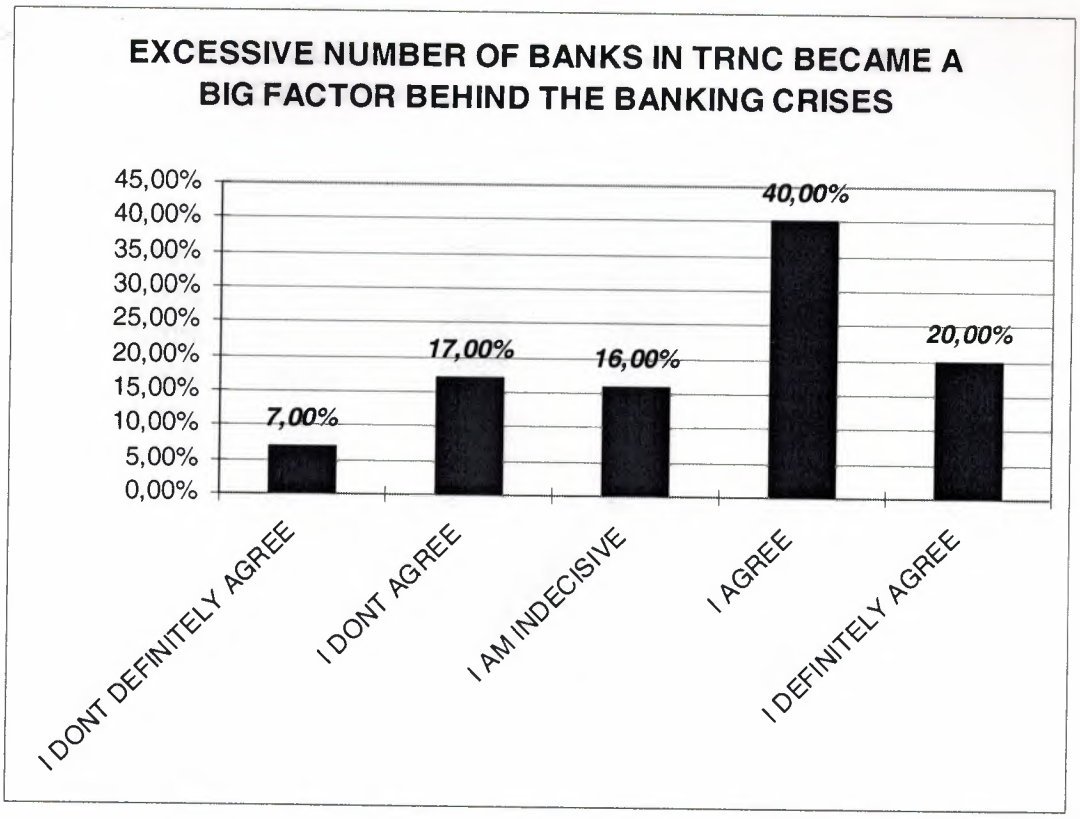


% 46 of respondents said that bank runs were important in the crises period, %14 of respondents said bank runs were crucial to trigger the banking crises, % 18 of respondents were indecisive and % 22 of respondents said bank runs were not so important.

MAJOR FINDINGS

Majority of respondents (%46 and %14) % 60 said that bank runs were a episode which triggered the banking crises.

Q.13

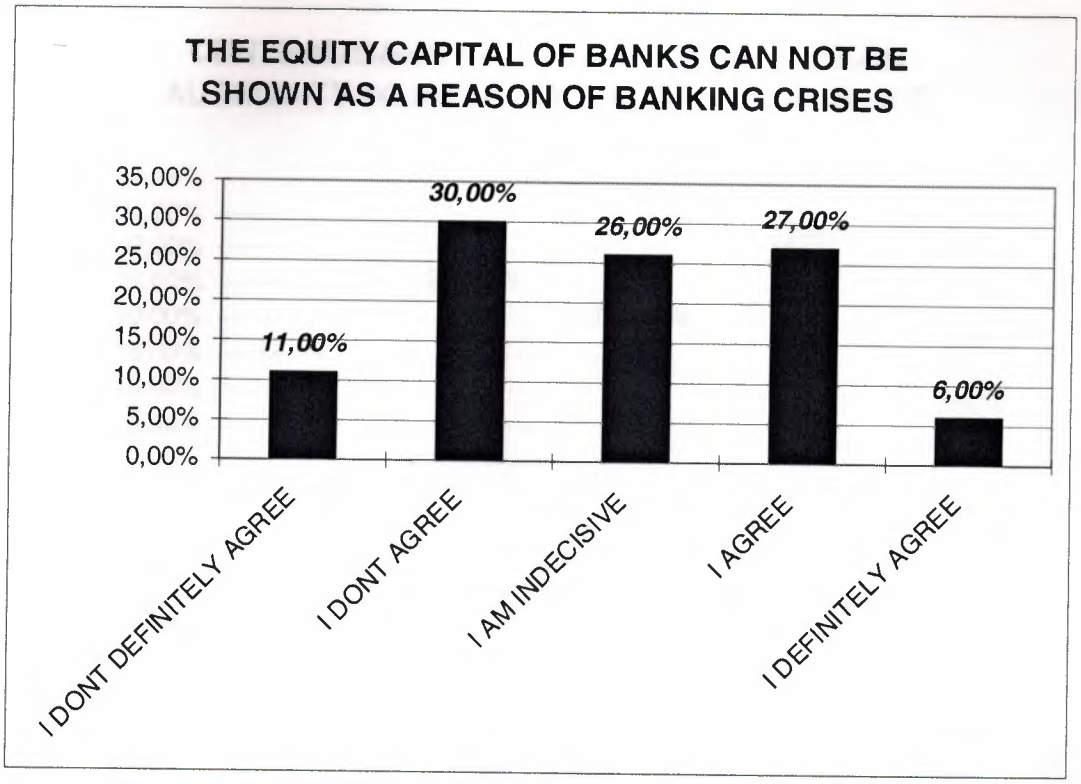


(% 40 and % 20) % 60 of respondents said increasing number of banks became a big problem for banking system,% 16 of respondents were indecisive and % 24 of respondents thought that it was not a problem for the banking system.

MAJOR FINDINGS

Majority of respondents (%60) said that excessive number of banks in TRNC became a big factor for the banking crises.

Q.14

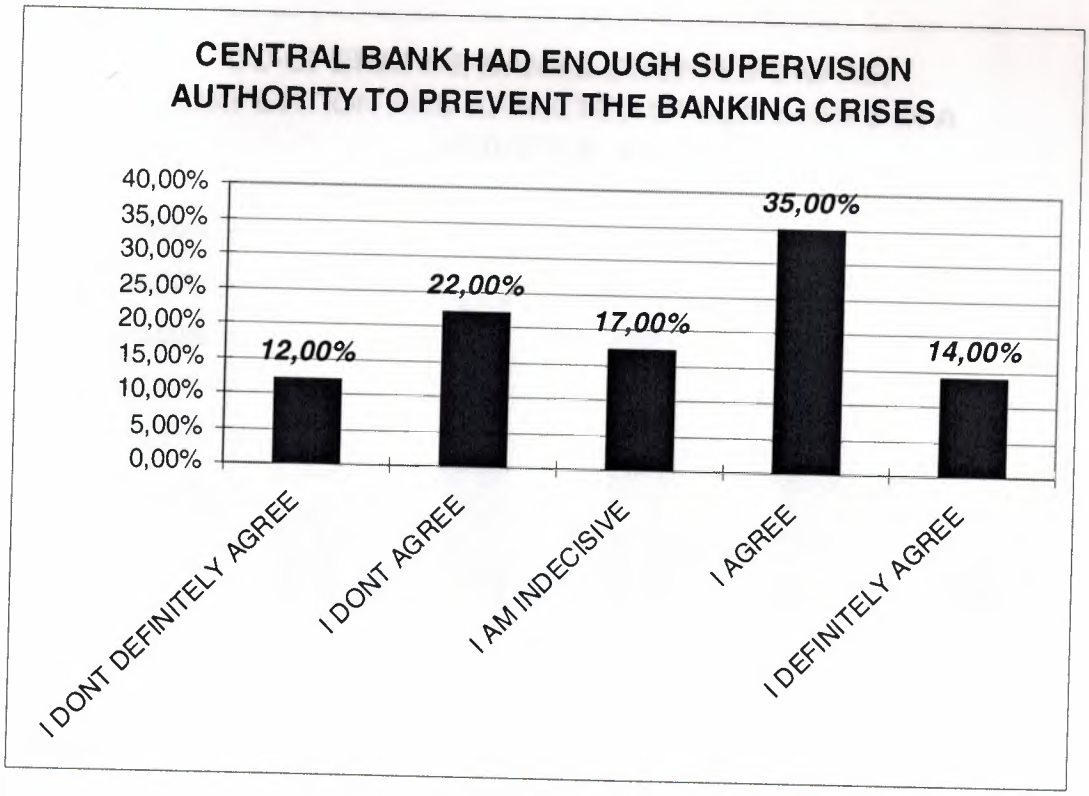


As it is seen from the table people were not informed about the financial position of banks.% 30 of respondents said weak equity capital could be a reason for banking crises,%27 of respondents said equity capital of banks was not a reason of banking crises and % 26 of respondents were indecisive.

MAJOR FINDINGS

Majority of respondents said that equity capital can't be shown as a reason of banking crises.

Q.15

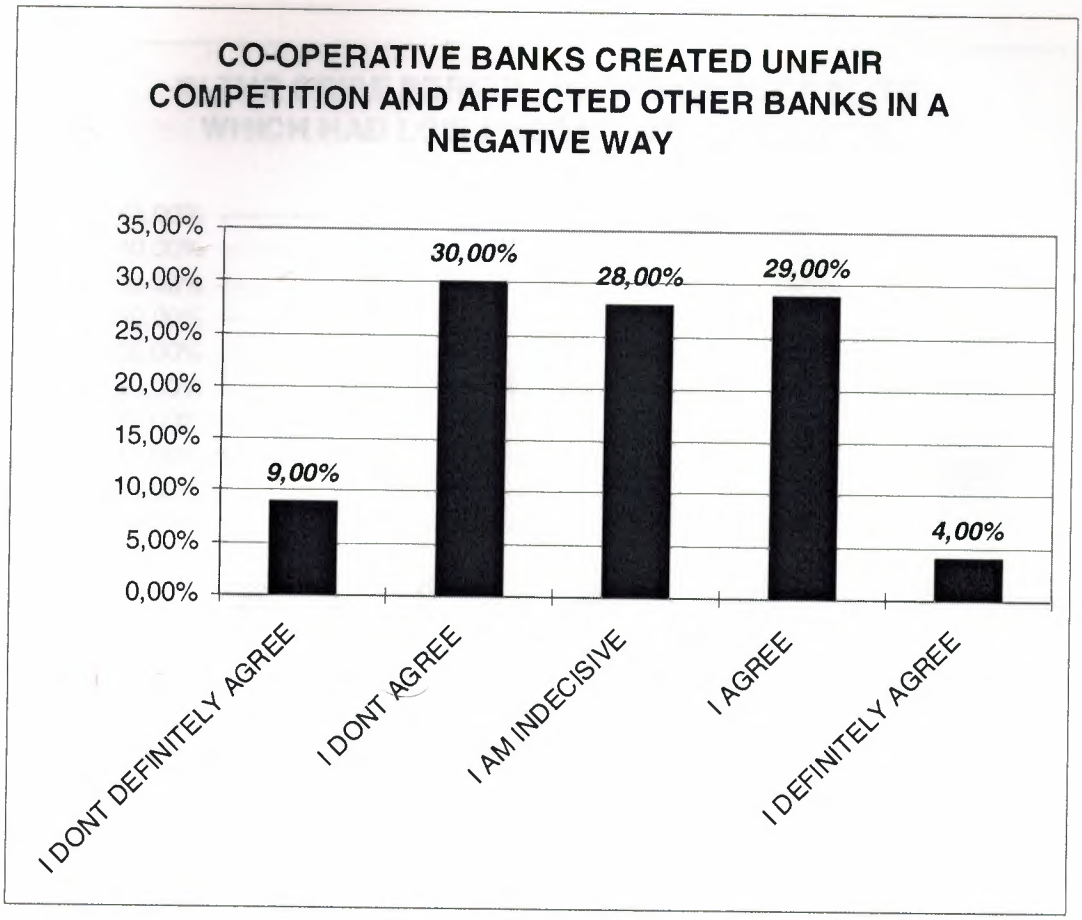


Out of 275 % 35 of respondents said central bank had enough authority in the crises period,(% 22 and %12) % 36 of respondents said there was a poor supervision and % 17 of respondents were indecisive.

MAJOR FINDINGS

Majority of respondents (%35 and %14) % 49 of respondents said that central bank had enough authority in the crises period.

Q.16

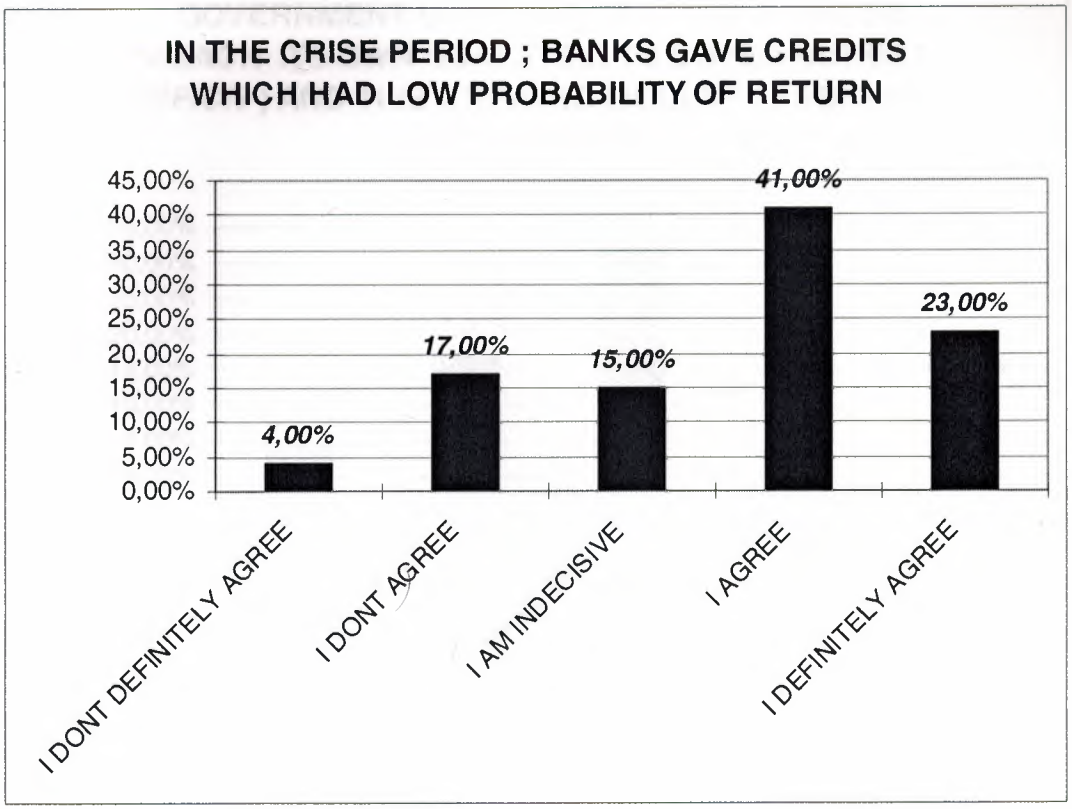


% 28 respondents were indecisive ,% 33 of respondents said co-operative banks created unfair competition in the banking sector, and (% 30 and % 9) %39 of respondents said they didn't affect the other banks in a negative way.

MAJOR FINDINGS

Majority of respondents said that co-operative banks had no effective power on the other banks.

Q.17

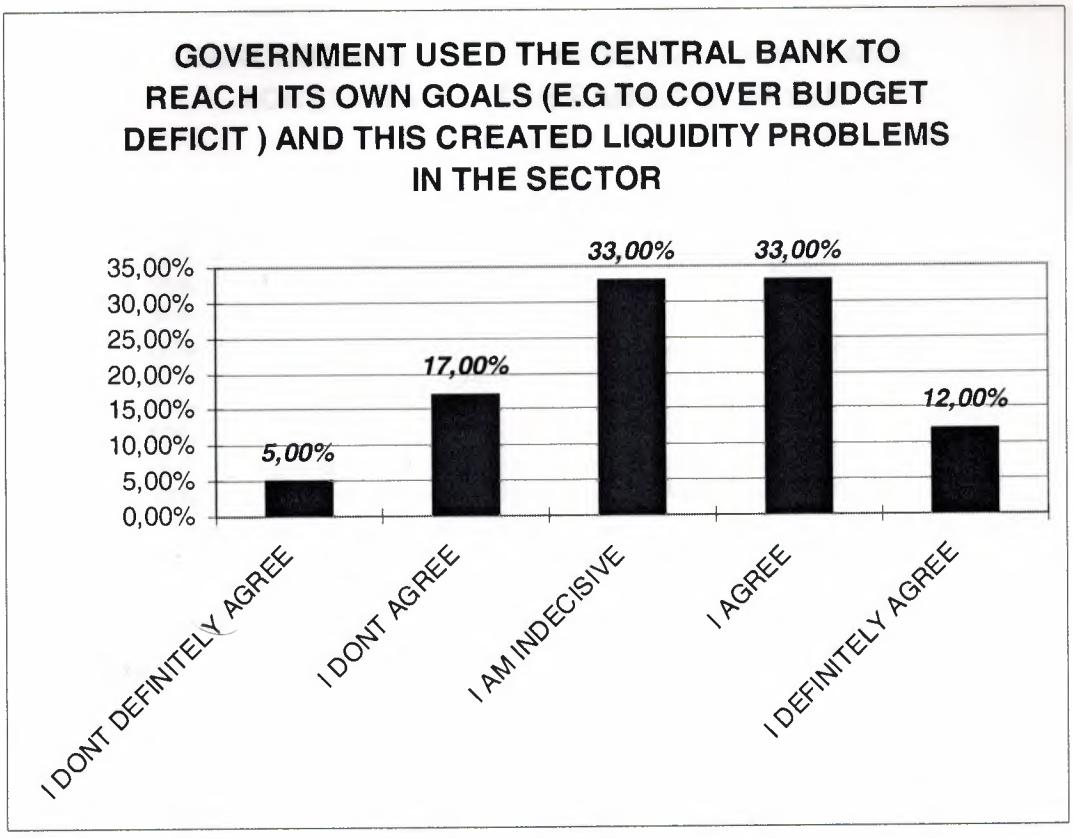


In this question (%41 and %23) % 64 of respondents said that banks gave credits but they didn't control creditors too much, and % 17 of respondents didn't agree that banks gave credits which had low probability of return, % 4 of respondents didn't definitely agree with this question and % 15 of respondents were indecisive.

MAJOR FINDINGS

Majority of respondents (%41 and %23) % 64 said banks gave too many credits which had low probability of return.

Q.18

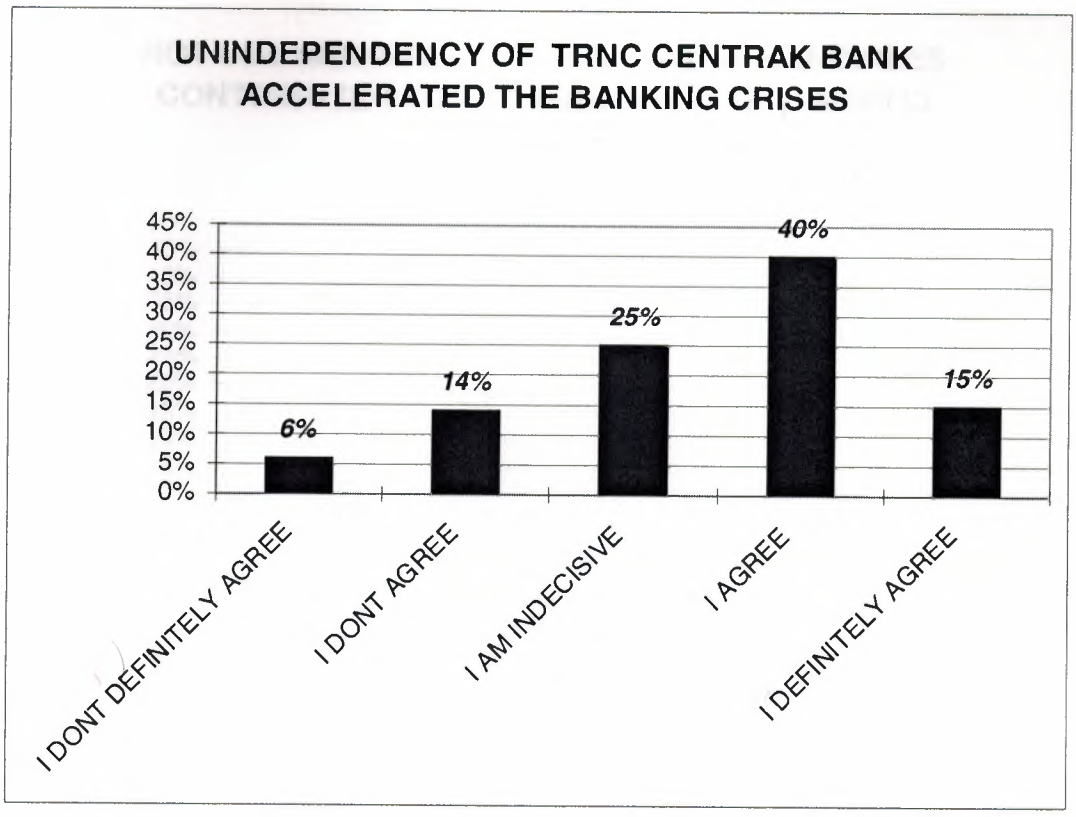


%33 of respondents were indecisive, (%33 and %12) %45 of respondents said that government used central bank to reach its own goal, in other words central bank had no independency and (%17 and%5) they are followed by % 22 who didn't agree with this questions.

MAJOR FINDINGS

(%33 and %12) %45 of respondents said that government used central bank to reach its own goal.

Q.19

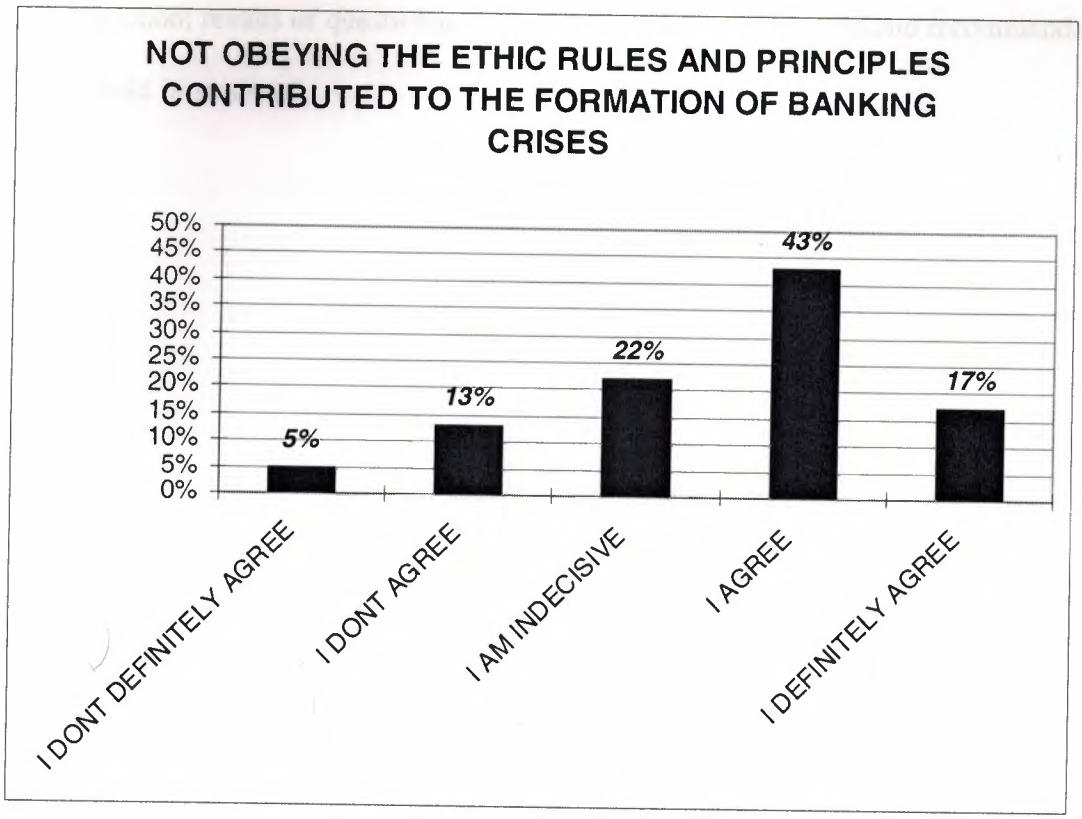


(%40 and %15) %55 of respondents said unindependency of central bank brought banking crises to a worse position, %25 of respondents were indecisive and % 20 of respondents didn't definitely agree with this question.

MAJOR FINDINGS

Majority of respondents (%55) said independency of central bank triggered the banking crises.

Q.20



% 43 of respondents said ethic rules were very important in the banking sector,% 17 of respondents said ethic rules and principles were crucial to prevent banking crises,%% 22 of respondents were indecisive and % 18 of respondents said that these were not the formation of banking crises.

MAJOR FINDINGS

As we see from the table majority of respondents (% 60) said ethic rules and principles were important in the banking sector.

8.3 CONCLUSION

In this section; results of questionnaire are represented and comment and recommendations will be held in section 9.

SECTION 9

CONCLUSION AND RECOMMENDATIONS

9.1 INTRODUCTION

In this section; conclusion and comments on findings are introduced and there was an overview of study.

9.2 OVERVIEW OF THE STUDY

The first aim of this study was to understand what are the reasons behind banking crises and what happened in TRNC between 2000 and 2002.All of these components were explored in the literature review sections. In these sections structure of banking system was introduced, roots of banking crises are studied (they were divided into 2 part; micro and macro factors) then TRNC banking crises were introduced and roots of TRNC banking crises were introduced.

To understand TRNC banking crises more clearly; the questionnaire was made. This study first asked people who didn't take money back from the banks in the crises period in TRNC. Majority of depositors took their money back from different banks after the crises period (it was studied in section 6). Interview was approached to 275 unpaid depositors and questions were about the reasons of banking crises.

9.3 ANALYZING THE FINDINGS OF QUESTIONNAIRE

Before analyzing the findings of questionnaire; it will be better to learn that how did the banking crises start in TRNC.

Actually TRNC banking crises started in turkey; it means it was started as an external factor then it came to TRNC. In 1999 YURT BANK A.Ş. was taken over by Saving Deposit Insurance Fund. This affected the TRNC banking system. Because YURT BANK had a sister bank (KIBRIS YURT BANK LTD) in Cyprus. Then depositors began to withdraw their money from Kıbrıs Yurt Bank Ltd and large withdrawal of deposits created the bank runs in TRNC.

Banking crises in TRNC created 60.000 unjustly treated people (unpaid depositors) and at this time population was between 200.000 and 210.000 it means that; 1/3 of TRNC was affected from this crises. Why were there so many unpaid depositors in the crises period?

Result is that; as we defined in section 8 (question 1) % 63 of respondents deposited their money just by looking at high interest rates (interest rates were very high because of the weak banking system).as we see from the table until the end of 1999 there was high increasing deposit account. Majority of people was not informed about the financial position of banks. And questionnaire showed that % 78 of respondents had no information about the bank. (Section 8-question 3).

Deposits At The Banks And % Change in Deposits

YEAR	TL DEPOSITS (million TRL)	FOREIGN CURRENCY DEPOSITS (USD)	TOTAL DEPOSITS (İN TRL ,TRILLION)	% CHANGE IN DEPOSITS
1996	18,769,501	406,523,100	61,42	-
1997	41,818,380	454,743,300	134,42	13,38
1998	73,750,887	499,541,300	229,25	11,62
1999	172,426,892	517,629,300	529,69	13,80

2000	213,915,391	484,021,800	538,82	-4,12
2001	419,443,317	570,773,300	1,159,6	,034
MAY 2002	556,667,057		1,351,7	20,48

Source: TRNC Central Bank Bulletin No: 28 dated 28 Sept.2000 and State Planning Organization.

It was not of course the main reason of banking crises; many other factors triggered the banking crises into a worse position**. What were they?**

- **Connected lending**
- **Poor regulation**
- **Weak risk analyze**
- **Insufficient equity capital**
- **And poor governance**

Factors we mentioned above accelerated banking crises. Firstly there was a connected lending in TRNC banking sector; ("Connected lending" refers to loans extended to banks' owners or managers and to their related businesses,. discussed in section 2). % 76 of respondents said (question 7) bank owners didn't obey the ethic rules and principles. At this period many banks gave credits at below market interest rates and with no collateral. This left banks unprofitable and insolvent. % 67 of respondents (question 11) said bank owners and top managers were responsible for bankrupts.

Another factor was the poor regulation; at the beginning we have to define banks were not transparent, the questionnaire supported us at this point % 69 of respondents said banks were not transparent before the crises period. And all regulation authority was gathered in the central bank, but government used the central banks to reach its own goal, this prevented central bank to make enough supervision, in our questionnaire; out of 275 respondents %49 (question 15) said central bank couldn't use its supervision authority. % 33 of respondents said (question 18) government used the central bank for its political goals.

Weak risk analyze also became a big problem for the banks; banks couldn't make risk analyze for the credits. They gave credits with low interest rate and with no collateral % 64 respondents (question 18) said banks gave credit which had low probability of return. And in depositors view; they didn't have enough knowledge about the financial position of banks and they couldn't also make good analyze before deposit their money; questionnaire showed that % 78 of respondents were well informed about risk they took.

One of the major problems with the 11/1976 Banking Law was that it allowed for the creation of new banks with a minimum capital requirement of TRL 50,000 million (In 1999 this amount was equivalent to USD 119,683). Insufficient capital became a big problem for banking system. % 41 of respondents said that equity capital was a factor behind the banking crises.

Co-operative banks were also a big problem for the banks in the crises period. Because the banking law in TRNC didn't include the co-operative banks and this created unfair competition in the banking system. In our questionnaire (%29 and %4) % 33 of

respondents (question 16) said co-operative bank created the unfair competition. % 39 of respondents didn't agree with this ides and % 28 of respondents was indecisive. This question was the second where respondents were undecided. As we see from the graph; respondents had no enough information about the co-operative banks. In the crises period many depositors were not well informed about the deposit insurance system for co-operative banks. In our questionnaire (%41 and % 16) % 57 of respondents (question 6) said they didn't know deposit insurance system for co-operative banks, but % 20 of respondents was undecided for this question. As we see from these questions people were not well informed for co-operative banking system. Co-operative banks used this legal blank and collected deposit like state banks. As a result they created unfair competition in the system

9.4 RECOMMENDATIONS

TRNC banking crises started at the beginning of the year 2000 and the cost of this crisis was approximately % 50 of GDP. The crisis created at least 60.000 unpaid depositors in TRNC and at this time population was between 200.000 and 210.000. 1/3 of people in the country were affected from this crisis. As we can see banking system is very fragile (banking fragility, section 2). To decrease this fragility some proactive strategies should be prepared for the banking system.

In the crisis period depositor faced regulation and supervision problem in TRNC. The main problem of banking crises was poor regulation. Central bank couldn't regulate the banks. In the crisis period central bank was not independence; government could use central bank for its own interest, so all regulation and supervision authority should be taken by central bank and it should regulate bank properly.

Credit conditions in TRNC should be looked over. Because as explained above there was connected lending in TRNC. Bank owners and top managers used the banking services for their own interest and they gave credits which below market interest rates and with no collaterals so majority of loans couldn't be returned. In the banking system credit system should be regulated carefully.

As we see from the questionnaire people should be more careful about their banks and watch closely banking system. Because; in 20 question at least % 9, at most % 33 of respondents were undecided.

Banks should become more transparent in TRNC and they should be worked collectively with central banks so depositors will feel themselves safe.

At last innovation products should be followed carefully and they should be encouraged in the system.

9.5 Conclusions

In this section findings of questionnaire was analyzed and some recommendations were made to prevent big losses that comes from crises.

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Appendix A

QUESTIONNAIRE

DEMOGRAPIC QUESTIONS

Q-1 SEX

MALE *FEMALE*

Q-2 AGE

18-25 *26-33* *34-41* *42-49* *50 AND OVER*

Q-3 MARITAL STATUS

SINGLE *MARRIED* *WIDOW*

Q-4 *EDUCATION STATUS*

PRIMARY SCHOOL *MIDDLE SCHOOL* *HIGH SCHOOL* *UNIVERSITY*

MASTER *DOCTORATE*

THE QUESTIONS ABOUT BANKING CRISES

Q-1 WHY DID PEOPLE CHOOSE THE BANKS WHICH WENT TO LIQUIDATION IN TRNC?

FAMILY AND FRIEND EFFECT

BANK RELATIONSHIP EFFECT

HIGH INTEREST RATES

BIG AND TRUSTABLE BANKS

Q-5 UNPAID DEPOSITORS WERE WELL INFORMED ABOUT THE DEPOSIT INSURANCE SYSTEM?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-6 DEPOSITS OF CO-OPERATIVE BANKS (PEYAK) WERE NOT SECURED BY SDIF AND IT WAS KNOWN BY THE UNPAID DEPOSITORS?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-7 OWNER OF BANKS OBEYED THE ETHIC PRINCIPLES (TRANSPARENCY, HONESTY)

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-8 BANKS ILLEGALLY USED THE COLLECTED DEPOSIT FOR THEIR OWN INTEREST?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-9 UNPAID DEPOSITORS DIDNT WANT TO GET ANY INFORMATION ABOUT FINANCIAL POSITION OF BANKS?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-10 AS AN UNPAID DEPOSITOR; I DIDNT THINK BANKS COULD GO BANKRUPT?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-11 BOARD OF DIRECTORS AND TOP MANAGERS PLAYED AN IMPORTANT ROLE IN THE CAUSE OF BANKING CRISES?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-12 BANKS RUNS PLAYED AN IMPORTANT ROLE İN THE CRISE PERIOD?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-13 EXCESSIVE NUMBER OF BANKS IN TRNC BECAME A BIG FACTOR BEHIND THE BANKING CRISES?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-14 THE EQUITY CAPITAL OF BANKS CAN NOT BE SHOWN AS A REASON OF BANKING CRISES?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-15 CENTRAL BANK HAD ENOUGH SUPERVISION AUTHORITY TO PREVENT THE BANKING CRISES?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-16 CO-OPERATIVE BANKS CREATED UNFAIR COMPETITION AND AFFECTED OTHER BANKS IN A NEGATIVE WAY?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-17 IN THE CRISE PERIOD; BANKS GAVE CREDITS WHICH HAD LOW PROBABILITY OF RETURN?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-18 GOVERNMENT USED THE CENTRAL BANK TO REACH ITS OWN GOALS (E.G TO COVER BUDGET DEFICIT) AND THIS CREATED LIQUIDITY PROBLEMS IN THE SECTOR?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-19 UNINDEPENDENCY OF TRNC CENTRAK BANK ACCELERATED THE BANKING CRISES?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE

Q-20 NOT OBEYING THE ETHIC RULES AND PRINCIPLES CONTRIBUTED TO THE FORMATION OF BANKING CRISES?

I DONT DEFINITELY AGREE

I DONT AGREE

I AM INDECISIVE

I AGREE

I DEFINITELY AGREE