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EFFECTIVE DEPOSIT INSURANCE SYSTEM FOR GEORGIA

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I confirm that the work corresponds to the field, is characterized by novelty, scientific and practical value and is presented by the format defined by IBSU

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Abstract

Recent political developments of Georgia (in August, 2008) proved the attitude of people toward banking institutions to be not sufficiently reliable to evade panic run. Early panic withdrawals of that period are not fully re-attracted yet. The low level of public confidence is regarded as a problem of the Georgian banking system which can probably be solved by implementation of deposit insurance system.

The study focuses on the significance of deposit insurance system for the banking sector stability and for the smooth operation of the economy. The issue is very substantial for Georgian banking system, which remains to be one of the industries all over the post Soviet area without deposit insurance mechanism in place. The paper compares discussions of different experts arguing whether or not deposit insurance undermines or promotes banking stability, observes deposit growth effect of deposit insurance system in those post Soviet countries where the system already works, demonstrates the cases of compensations of failed banks' depositors by the deposit insurance system. Though the international experience shows that deposit insurance system, if carefully and properly designed, facilitates additional economic stability, the last attempt in 2005 to implement the program in Georgia failed. The paper presents the terms of the project about obligatory insurance of individual deposits elaborated by the National Bank of Georgia (NBG) and Financial Committee of the Parliament of Georgia, and gives some proposals to refine the project after taking into consideration the recommendations of different experts and international organizations.

The paper is also to identify whether legislative basis of Georgia is developed so that to have adequate supervision of commercial banks, and to keep only strong and healthy banking institutions on the market. Consequently, the paper identifies whether the legislative basis of Georgia takes actions to protect the banking system against cases of failure and preserves banking stability. As far as prudential regulation of a country is an element essential for effective implementation and operation of deposit insurance program, determination of legal basis, regarding prompt banking supervision, helps to analyze whether Georgian banking environment is ready for project development or not.

The empirical study conducted in the research paper finds out the present day attitude of population toward banking institutions in Georgia, the behaviors of Georgian population under deposit insurance system and helps to identify the features of deposit insurance system required by the population. Taking into consideration these requirements of Georgian population together

with the recommendations of experts and international organizations in the process of designing deposit insurance system will probably ensure the positive effects of project development.

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Abbreviations

DIS – Deposit Insurance System

DIC – Deposit Insurance Corporation

DIA – Deposit Insurance Agency

FDIC – Federal Deposit Insurance Corporation

FSCS – Financial Services Compensation Scheme

CDIC – Canadian Deposit Insurance Corporation

IADI – International Association of Deposit Insurers

NBG – National Bank of Georgia

FIN-FSA – Finnish Financial Supervisory Authority

APA – Azerbaijan Press Agency

IPAB - Instituto para la Protección al Ahorro Bancario

FSD – Fondo de Seguro de Depósitos

CNB – National Banking Committee

ASBA – Association of Supervisors of Banks of the Americas

BIS – Bank for International Settlement

OECD – Organization for Economic Co-operation and Development

IMF – International Monetary Fund

EU – European Union

RWA – Risk Weighted Assets

ROA – Return on Assets

ROE – Return on Equity

GDP – Gross Domestic Product

Introduction

During the period of last two decades financial markets across the world have been frequently plagued by instabilities and banking crises, giving the rise to the global trend of instituting explicit deposit insurance schemes (Chu, 2003). Deposit insurance systems for banking industries have been shown to facilitate additional economic stability by insuring a sound, competitive banking system, which is critical to a nation's economic vitality. Banks have traditionally performed the important function of intermediating between lenders and borrowers by using liquid, short-term liabilities to fund relatively long-term, illiquid assets. By providing a liquid savings vehicles for small and large investors alike developing specialized skills to evaluate and diversify the risks of their borrowers, banks have played an important role in funding economic growth. Given this special role played by banks, safety net arrangements are often proved by governments with the public policy purpose of promoting economic growth and stability. The nature of these arrangements can take different forms; they typically include some combination of the following: bank access to lender of last resort, risk less settlement of payment system transactions, prudential supervision of banks and deposit insurance system (Ketcha, 2007).

The Statement of the Problem

The ability of most depositors to withdraw their deposits either on demand or at short notice is one of the factors causing bank run. It virtually guarantees that a bank will be unable at any time to fulfill its potential obligation to convert all or most of its liabilities to cash. Of course under normal circumstances the bank would never be called upon to fulfill all of its obligations; this is what allows the bank to invest in illiquid assets. If, however, a depositor believes that the bank will be called upon to fulfill more than the normal amount of withdrawals, that depositor would have the incentive to attempt to withdraw his or her fund. This is because once the bank has depleted its inventory of liquid assets; it must begin to sell illiquid assets to meet further withdrawal demands. In effect, each such sale means the bank is realizing a liquidation loss on the asset. At some point bank will have suffered enough losses to render it unable to fulfill its obligations to the remaining depositors. It is this "first come, first served" nature of the process that provides depositors with the incentive to run. Those depositors at the beginning of the withdrawal line lose nothing while those at the end of the line lose everything. A depositor who merely suspects that the other depositors are going to run will get in the line whether he or she desires liquidity at the time or not. This can lead to "panic run" (ibid).

The issue is very substantial for Georgian banking system. Despite the fact that it is constantly progressive industry of Georgian economy still the confidence level of population toward banks in Georgia is not high enough. The probable reason that provoked the situation is past developments concerning massive bank failures in Georgia after collapse of Soviet Union, which resulted in the loss of public savings. None of depositors in Georgia were compensated.

From 2002 till the August events of 2008 NBG records deposit growth by GEL 472 045 000, that is about 4 % of average annual GDP of Georgia of 2003-2008, and by 1 088 518 000 in foreign currency, which is about 14 % of the same average annual GDP of 2003-2008. Deposits of GEL 12 189 000 was officially recorded in 2002 and GEL 487 234 000 – in 01.08.2008, 249 910 000 of deposits were recorded in foreign currency in 2002 and 1 338 428 000 – in 01.08.2008 (National Bank of Georgia, 2002, 2003, 2004, 2005, 2006, 2007, 2008). Although, compared to the past years, the volume of deposits attracted by banks considerably increased population up today feel no safe about their savings through the banking institutions. Any political or economic uncertainty makes people rush to the banks for early withdrawals. The August 2008 political instability of Georgia showed the urgency of the issue. Georgian banking system suffered much in the period of this instability. Considerable amount of deposits were withdrawn from Georgian banks that forced them to follow safer strategy of preserving more reserves, and rejecting credit demands. Even several months later banks could not fully restore their operations and they kept up following safer strategy; long-term loans (with the maturity of more than three years) were not delivered, more severe requirements and restrictions were imposed to the applicants willing to take loan, etc. Banks were forced to act so as future behaviors of depositors were not predictable, the withdrawals of deposits were expected any time, moreover, banks appear to be unable to re-attract withdrawn funds for long period of time.

The results are terribly negative not only for the banking sector but consequently for the whole economy of Georgia. As far as banks restricted credit delivery process economic growth of Georgia was hindered; most of the business companies used to expend their activities through credit financing, consumer goods were mostly bought through consumer loans or through real estate loans in case of house purchases. Business companies hence could hardly sell their products. Especially constructing companies, which represented on average about 8 % of a country's GDP from 2003 till 2008, appeared to be very much harmed. The portion of construction field in the economy considerably decreased, it amounted 5 % of a country's GDP after August events of 2008 (National Statistics Office of Georgia, 2009). Firms were closing, new businesses were not eager to take start because of future uncertainties, unemployment rate

reached 16.5 %. According to the official statistical data unemployment rate in Georgia for last three years was around 13%, moreover since 2005 it was gradually declining by 0.2 - 0.3 % every year. From 13.8% the rate of unemployment decreased to 13.3 % till 2008, but in 2008 it increased by more than 3 % (National Statistics Office of Georgia, 2009).

Implementation of deposit insurance system in Georgia became again the subject of discussion, the issue of the day. Experts in Georgia (Papava & Pachulia, 2009; Kovzanadze, 2008; Gotsiridze, 2005) suggest that the process could be at list partially evaded if banks had their deposits insured. Knowing by depositors that their savings are compensated in an event of banking crises and thus being sure about safety of their deposits could probably stop panic runs.

The experts argue about efficiency of deposit insurance program. Some contend that the problem of moral hazard that follows the program imposition exterminates its positive effects by discouraging depositors to supervise their institutions. As a result banks are encouraged to follow riskier strategies and that increases the probability of bank failures. On a contrary assertion deposit insurance can be fully positive and negative effects of moral hazard can be vanished if designed so that the moral hazard problem can be controlled.

Research Questions

Based on the review of the literature concerning the subject of the study the following research questions emerged:

1. Does deposit insurance system support the stability of banking system by promoting the public confidence?
2. Does Georgian banking sector need implementation of deposit insurance system?
3. Can banking environment of Georgia and the economy of the country benefit under deposit insurance system?
4. Is Georgian banking sector ready for imposition of deposit insurance system?
5. What are the features of deposit insurance system that will best fit Georgian banking environment?

Subject of the Study

The subject of the study is the effects of deposit insurance system over the banking environment generally and particularly over the Georgian banking sector. The present research paper studies the level of confidence of Georgian population toward banking institutions to show

the necessity of implementation of the system and the nature of stability of banking environment in Georgia to demonstrate the readiness of Georgian banking sector for implementation of the system.

The central point and the focus of the study are the features of deposit insurance system that ensures to design a model best fitting the Georgian context.

The Purpose and Tasks of the Study

The primary purpose of present research paper is to assert the effectiveness of deposit insurance system and to create the best fitting model to Georgian banking system through taking into account the recommendations of experts, experiences of other countries and peculiarities of Georgian banking system.

The primary purpose of the paper created the set of tasks and purposes stated by the research paper as follows:

1. To show the effect of deposit insurance system over the banking environment of those countries where the system already works. The effects of the system imply either banking sector stability and deposit growth or instability of banking sector and reduced volume of deposits derived correspondingly from promoted or undermined public confidence;
2. To show public attitude in Georgia toward banking institutions operating inside the country and to find out the level of confidence they have toward banks in Georgia. These observations depict whether or not Georgian banking environment needs implementation of deposit insurance system;
3. To find out the reactions of Georgian population towards the imposition of deposit insurance system and their behaviors under the insurance system. The changes in the behavior of present or potential depositors in Georgia after implementation of deposit insurance system will help to predict whether the banking industry and the economy of the country generally can benefit under this system;
4. To find out degree of banking system stability in Georgia provided by the proper legislative basis and supervisions by the National Bank of Georgia. This will help to see how much banking environment of Georgia is ready to support successful implementation of deposit insurance system;

5. To design a model of deposit insurance system that probably fits Georgian banking system best. The model has to be based on the discussions, recommendations and proposals of experts as well as recommendations of international organizations. At the same time the model implies the experiences of different countries already having deposit insurance system in place, the peculiarities of Georgian banking sector and the requirements of the Georgian population.

Research Hypothesis

The hypotheses of the research paper were stated to support some of the purposes of the study, particularly, to show the attitude of people toward banking institutions in Georgia, to find out the behavior of Georgian population under the deposit insurance system and to see the requirements of Georgian depositors concerning the features of the system. Research hypotheses state the following:

1. Implementation of deposit insurance system increases the number of depositors in Georgia;
2. Lower interest payments paid to depositors for insured deposits decrease the number of depositors in Georgia;
3. Deposit insurance system reduces panic runs to banking institutions for the early withdrawals in Georgia in times of crises;
4. Imposition of deposit insurance system in Georgia weakens market discipline if insurance coverage is unlimited;
5. Imposition of deposit insurance system in Georgia weakens market discipline if insured deposits are compensated partially after bank failures.

Research Methodology and Research Tools

Research methods used in the research paper to reach the goals and the purposes of the research are secondary data analyses and confirmatory data analyses.

Secondary data analyses (document analysis) were done through observing post Soviet countries with deposit insurance mechanisms already in place to find out the effects of deposit insurance system over the banking environment of those countries. To show these effects banking sector developments, namely tendency of deposit growth after imposition of deposit insurance system were summarized.

Secondary data analyses were also employed to find out and examine the recommendations of international organizations, like Basel Committee on Banking Supervision, International Association for Deposit Insurers, Financial Stability Forum, Association for Supervisors of Banks of the Americas concerning basic principles of effective deposit insurance system.

Secondary data analyses were again conducted through assessing “the Manual for Commercial Bank Supervision” to observe how much banking environment of Georgia is stable and thus prepared to support successful implementation of deposit insurance system. In this respect the method used by NBG for commercial bank supervision or General Rating System called CAMEL Composite Rating was analyzed and to assess the effectiveness of this rating system last ten year developments of Georgian banking system since 2000 were observed.

Confirmatory data analyses were done through the survey conducted to get the information about current attitude of population in Georgia toward commercial banks and their level of confidence. The confidence level was evaluated through observing people’s reactions on the instabilities of political or economic nature and through their behaviors in times of crises. Research population was also questioned about their behaviors under deposit insurance system. Different behaviors under the system determine the effects of deposit insurance system over the banking environment of Georgia. Finally, the information about requirements of Georgian population concerning the features of deposit insurance system was gathered.

Confirmatory data analyses imply testing the survey results or responses of the research population through two-sample test, namely, z-test statistics for differences in two proportions. The testing process refers to testing the null and alternative hypotheses to find out at some confidence level whether the statement by the null hypotheses cannot be regarded as true or cannot be regarded as false. The hypothesis in the research paper was tested at 0.05 significance level ($\alpha = 0.05$), which means that the results of testing are true at 95 % of confidence.

Validity and Reliability of Research Tools

Hypotheses stated by the research paper were tested at 95 % of confidence. Level of significance or α (alpha) was assumed to be equal to 0.05 ($\alpha = 0.05$). It means that the results of testing are true at 95 % of confidence.

Testing results in the research paper reject the null hypotheses in favor of an alternative one if p-Value is less than 0.05 of the level of significance ($p\text{-Value} < \alpha$). It means that there is less than 5 % chance of type II error or chance that null hypothesis is accepted by mistake when

actually it is not true. Null is rejected only when there is lower than 5 % chance of mistake of accepting the null hypothesis when it is not true.

Testing results fail to reject the null hypotheses in favor of an alternative one if p- Value is more than 0.05 of the level of significance (p-Value >). It means that there is more than 5 % chance of type I error or chance that null will be rejected when actually it is true. Null Hypotheses are not rejected only when there is more than 5 % chance of rejecting the null by mistake.

Scientific Innovation

The first and the foremost innovative feature of the present research is that it provides complex and up-to-date study of the effects of deposit insurance system over the financial environment. Through the vast literature review it was verified that there is no precedent of similar type of work conducted in the Georgian context. The study evaluates real benefits of deposit insurance system and assesses the risks associated with the process of implementation of the system. The methods and the ways to control these risks are studied as well.

The primary and the most essential contribution of the paper is designing a model of deposit insurance system best fitting the Georgian context. The model was developed based on the worldwide best practices and specifics of the Georgian banking system.

Significance of the Study

The significance of the study is twofold: theoretical and practical.

The process of insurance of deposits is a relatively new concept in the banking system and this initiative has not been implemented in the domain of the Georgian banking system yet. Thus, the study provides the review of the deposit insurance practices throughout the world and highlights the scientific articles as well as researches carried out in this respect. This undoubtedly forms theoretical value of the present research as it introduces the new concept into the Georgian context and presents its theoretical background. This forms theoretical basis for the future actions which might be taken in respect of deposit insurance in Georgia.

As for the practicality of the research, the work is prominent in this respect as well. It provides theoretical analysis of the issue and draws upon practical recommendations and suggestions for the effective implementation of the deposit insurance system in the banking system of Georgia. The work creates the model of deposit insurance system, which to the best of our knowledge and experience, effectively fits the Georgian context. Accordingly, the work can

readily be used by NBS and by the Parliament of Georgia when the issue whether or not and how to implement deposit insurance system in Georgia is discussed. The work can also be used at universities as teaching and learning material for the courses in Banking.

Structure of the Paper

The present research paper consists of 137 printed pages. It contains 3 chapters, 11 subchapters, references, conclusions and recommendations. The text includes 23 tables, 17 figures and 1 appendix. The list of 107 references is attached to the research paper.

The first chapter of the research paper is a literature review on the effects of deposit insurance system. It analyzes whether or not deposit insurance provides protection to depositors and whether the implementation of the system promotes banking stability or undermines it through enhanced problem of the moral hazard and the adverse selection. To support the initiative of deposit insurance system implementation and to demonstrate its positive influence over the banking system, developments after the imposition of the system in 9 post Soviet countries (Russia, Ukraine, Lithuania, Latvia, Estonia, Azerbaijan, Armenia, Kazakhstan, and Moldova) are observed. The major focus was made on the tendency of deposit growth and the stability of this tendency after implementation of the system. Chapter I finally focuses on the proposals of experts and the recommendations of international organizations essential to the successful implementation of deposit insurance system.

Chapter two evaluates legal basis of Georgia for banking supervision, analyzes the General Rating System called CAMEL Composite Rating used by the National Bank of Georgia as a method of evaluation of commercial bank performances. It describes the features of deposit insurance project prepared by the National Bank of Georgia and the Parliament Financial Committee of Georgia cooperatively in 2005 and discusses shortcomings of the project, at the same time recommends what should be refined in the project according to the above mentioned proposals and recommendations. Chapter II finally demonstrates the necessity of deposit insurance system implementation in Georgia through discussing the behavior of Georgian depositors running to the banks for early withdrawals in an event of any minor uncertainties on the market. The behavior of Georgian population in times of crises is demonstrated by the survey. Finally the survey results, research methodology used in the paper, the process of sample selection and data collection is described.

Chapter three presents research findings and makes verbal data analysis. The verbal data analyses are supported by the statistical calculations of hypothesis testing. The results of z-test

statistics used to test null hypotheses stated in the research paper are presented and analyzed. Based on the analysis at the end of the chapter III recommendations about design of deposit insurance system are made and taking into consideration the testing results, decisions about the model of deposit insurance system that is expected to best fit the Georgian banking system is presented. The model covers the components essential to the successful implementation of deposit insurance system, like governance and power, insurance funding, membership, coverage limit, treatment of the foreign currency deposits, deposit insurance premium and the process of reimbursement to depositors.

Finally, present research findings and recommendations are summarized in the conclusion.

The major findings and recommendations of the research are depicted in five articles published in different scientific journals.

Chapter 1 – Literature Review on the Effects of Deposit Insurance System over the Banking Sector and Effective Design of the System

Deposit insurance is a mechanism offered to the commercial bank depositors for protecting them in an event of bank failures. The system implies the compensation schemes according to which bank depositors are paid part or the full amount of their savings. The amount of the compensation fully depends on the coverage limit imposed by the system.

The coverage limit is a maximum ceiling above which Deposit Insurance Agencies or the parties providing the insurance and thus taking the responsibility to compensate depositors' loss are not liable to pay.

The Agencies are funded in two ways; these legal entities are provided with a start-up fund either by the state government or by the international organizations willing to finance the project of implementing deposit insurance system or both together and later on member banks of the insurance system are obliged to pay premiums to the insurance fund for the insurance service. Deposit Insurance Agencies are allowed to invest insurance funds and create additional funding through this investment, but it is strictly required to make only the most secure and liquid investments.

The membership of the system is either compulsory or voluntary for the banking institutions depending on an individual country.

The insurance premiums are either based on the risk levels that banking institutions carry by following a particular investment strategy or it may be a fixed payment regardless the level of the risk imposed by the commercial bank to the insurance fund. Risk-based insurance premiums are relatively high for banks choosing riskier investment strategies with the higher probability of failure and correspondingly with lower risk adjusted premiums are charged commercial banks having stronger financial conditions and a lower probability of failure.

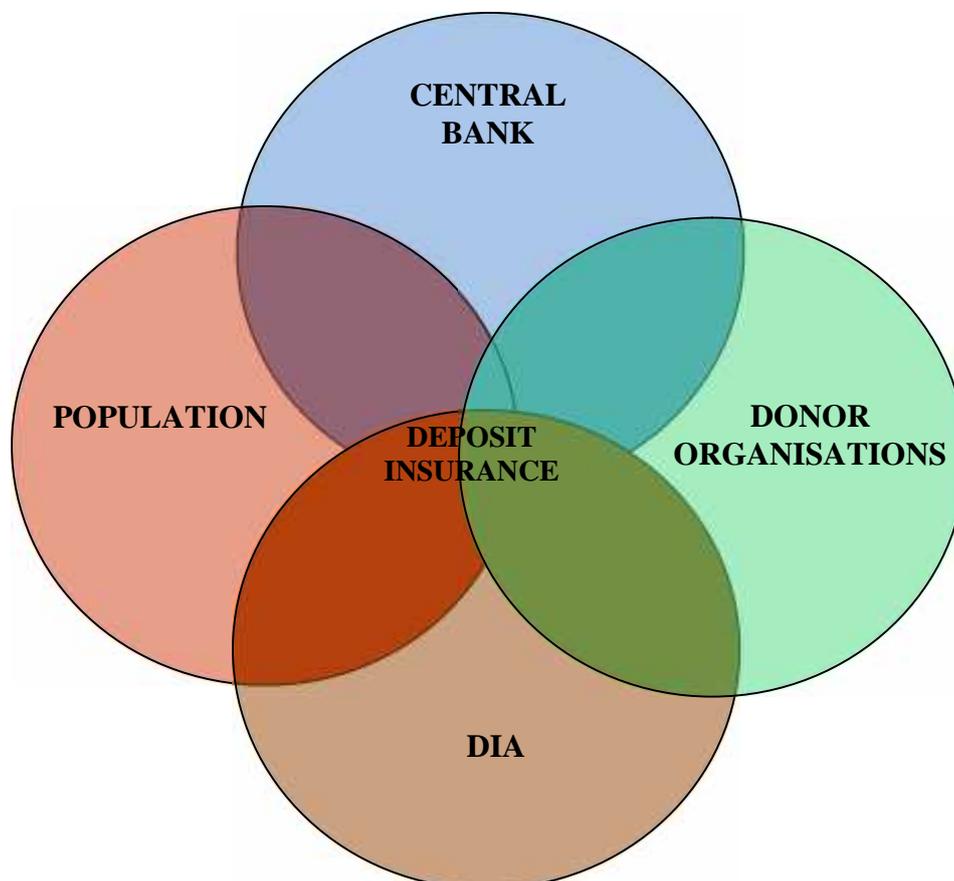
Decisions about compulsory membership, coverage limit, insurance premiums or about other features of the system, like governance and authority of Deposit Insurance Agencies, treatment of foreign deposits and the ways of reimbursing depositors of a failed bank are the matters of discussions and vary country to country. International organizations such as International Association of Deposit Insurers and the Basel Committee on Banking Supervision still recommend set of common standards and principles which probably apply to the banking environment of different countries with institutional differences.

Deposit insurance systems are designed to minimize or eliminate the risk that depositors placing funds with a bank will suffer a loss. Deposit insurance thus offers protection to the deposits of households and small business enterprises, which may represent life savings or vital transactions balances. With a deposit insurance system in place, these households and businesses are with assurance that at least part of their fund is secure. This in turn supports the stability and smooth operations of the economy (Ketcha, 2007). Deposit insurance system contributes to financial development, growth and poverty reduction. Deposit insurance play a role, along with other elements of the financial safety net, in creating an environment of confidence and thus contribute to the overall stability of a financial system. The existence of deposit insurance can help promote competition and may be associated with the increased use of savings deposits and facilitate greater access to lending services (Walker, Demaestri, & Martin, 2004).

The conceptual framework represents all interested parties involved in the operation of deposit insurance system and shows their interests and roles in the initiation and implementation of the initiative. These concepts form the framework for the inquiry in the present research.

The circles in the figure 1.1. represent all these parties interested and involved in the process of implementing deposit insurance system.

Figure 1.1. Conceptual Framework



The location of the circle representing the central bank symbolizes vertical top-down initiative which comes from the central bank and should be implemented by the commercial banks operating in the country. Initiation of the reform as well as support throughout successive process largely depends on the donor organizations and deposit insurance agencies or corporations. Donor organizations very frequently provide deposit insurance agencies or corporations with start-up funding for initiation of the deposit insurance system implementation. Deposit insurance agencies are responsible to insure deposits saved by population through the accounts saved at the commercial banks. Population is a key element in the deposit insurance system. Their interests form driving forces affecting the initiative prepared by the central banks. Primary purpose of the initiation and implementation of the deposit insurance system is to protect the depositors' interests. The population's role is decisive because if they do not show interest in deposit insurance system, the demand for this particular initiative will not be created. Besides, if deposit insurance system cannot assure high level of confidence of the population the implementation of the system fails to be successful.

1.1. Social Protection by Deposit Insurance System

Deposit guarantee schemes provide explicit deposit protection and ensure that if a bank fails, depositors will be able to recover at least proportion of their deposits (Cariboni, Branden, Campolongo, & Cesare, 2008). Hence the principal objective of designing deposit insurance system was protection of depositors from probable loss by compensating their deposits in an event of bank failures and bankruptcies saved through the bank accounts.

In compliance to the first principle of Core Principles for Effective Deposit Insurance Systems issued by the Basel Committee on Banking Supervision and International Association of Deposit Insurers in 2009 the first step in adopting a deposit insurance system or reforming an existing system is to specify appropriate public policy objectives that it is expected to achieve. These objectives should be formally specified through the legislation and well integrated into the design of the deposit insurance system. The principal objectives for deposit insurance systems are to protect depositors and hence to contribute to the stability of the financial system (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

The last section of these principles, covering reimbursement and recoveries, principle 17 indicates that depositors should be given prompt access to their insured funds by the deposit insurance system. Therefore, depositors should have a legal right to reimbursement up to the coverage limit and should know when and under what conditions the deposit insurer will start the

payment process, the time frame over which payments will take place, whether any advance or interim payments will be made as well as the applicable coverage limit (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009). To let depositors know the applicable coverage limit in advance is a critical point for ensuring high level of confidence among population (Coutu, 2008).

Deposit insurance protects insured depositors against the consequences associated with the failure of a bank but it is not designed to protect banks from failing. Still well designed and well understood deposit insurance system contributes to the stability of a country's financial system by reducing the incentives for depositors to withdraw their insured deposits from banks because of a loss of confidence (Financial Stability Forum, 2001).

Countries establishing deposit insurance schemes should have two main goals in mind. Firstly, that of protecting depositors, should a financial institution fail, thereby guarding against contagious deposit runs on otherwise healthy institutions. Secondly, to promote confidence and stability in the financial sector, while minimizing the risk of the moral hazard. The problem of moral hazard arises from distortion in incentives induced by deposit protection, as the guarantee may encourage bankers to assume greater risks and depositors not to discriminate between safe and unsafe bank (JDIC Liabrary Online, 2009).

Public attitude and expectations play a particularly important role in reinforcing the credibility and the effectiveness of a deposit insurance system. Thus, policymakers should ensure that public view all components of the deposit insurance system as credible. The level and the scope of coverage, the speed with which insured deposits are repaid, and the credibility of the underling guarantee will affect the deposit insurance system's ability to strengthen public confidence and thus to enhance stability of the financial system (Financial Stability Forum, 2001).

The real cases and the practices of compensations after bank failures will most probably foster public confidence toward implemented deposit insurance system. Compensation of depositors up to promised coverage limit in a timely manner after they were exposed to the risk of losing their savings, makes them and other potential depositors as well feel protected and secured about their deposits in the future.

The examples of compensation conducted in different countries given below are to be regarded as those practices assuring the people about efficiency of deposit insurance system and about the necessity of having their deposits insured.

The National Financial Literacy Programme published by Central Bank of Trinidad and Tobago informs their depositors about claims ever made on the Deposit Insurance Corporation and about terms and amounts compensated.

Under the Act the Deposit Insurance Corporation (DIC) may be appointed liquidator of an insolvent financial institution. In December 1986 (the same year in which the DIC was established in Trinidad and Tobago), upon the application of the Central Bank, the High Court gave orders for closure of four financial institutions. On December 22, 1986, the DIC was required to initiate insurance payments to depositors in these organizations – a deposit insurance liability of \$ 191 million within a period of 90 days. DIC was required to make payment to over 13 000 depositors. During the period 1988 and 1993, additional payments totaling \$ 27.5 million were paid out to depositors of the four financial institutions (Central Bank of Trinidad and Tobago, 2001).

In compliance to the Central Bank of Trinidad and Tobago in keeping with the corporation's mission to contribute to the stability, safety and integrity of and public confidence in the financial system, the DIC continues to prudently manage the Deposit Insurance Fund and present itself as a symbol of protection for eligible depositors of Trinidad and Tobago.

In compliance to the FDIC recent data of 2009, ninety-eight banks have failed that year, which has reduced the fund's value to \$10 billion from \$45 billion a year ago. The fund has come under severe strain in recent months amid the recent surge in bank failures (Pepitone, 2009). Even though the article shows recent financial crisis to be severe in USA depositors seem to be protected there by the Insurance Corporation, as far as 35 billion USD are paid to the failed bank customers according to the article.

The main DIS objective is protection of mass depositors. World practices show that no less than 75% of the total number deposits should be guaranteed in full value. In practice of the Russian Federation 98% deposits are guaranteed in full, meaning that Russian households have small deposits. The above figure constitutes 40% of the total banking system deposit amounts, which means the remaining 2% of the total number – are deposits of well-off people. It does not mean that the Agency is not going to protect their interests. There will be no shortage of funds to reimburse failed banks' depositors, Alexander Tourbanov, General Director of Deposit Insurance Agency, is confident of the above statement (Tourbanov, 2005)

The Financial Services Compensation Scheme (FSCS) announced that thousands of savers with collapsed Icelandic Bank Kaupthing Singer & Friedlander are to have their savings

returned to them. It will return savings to approximately 9,000 savers in the near future. Only 100 'priority' cases were dealt with before Christmas, 2009. A further 3,500 payments will be made long before that, while the remainder will be completed shortly afterwards, according to a spokeswoman for the FSCS (O'Sullivan, 2009).

Deposit Guarantee Fund of Finland announced that compensations for Sofia Bank customers are paid out. In accordance with the decision made on April 19, 2010 by the Finnish Financial Supervisory Authority (FIN-FSA), the Deposit Guarantee Fund will compensate those deposits of Sofia Bank's customers that haven't been paid by the bank. At the beginning of May, the bank paid 85% of deposits to majority of its customers. The Deposit Guarantee Fund will cover the remaining 15% of Sofia Bank's deposits, however with an upper limit of €50,000 per one depositor, regardless of the number of their deposits or accounts. The compensation includes interest. First compensations were paid in May 21, 2010 to those Sofia Bank customers that had given the required bank account details either to the bank or the Deposit Guarantee Fund. The depositors will receive the payments early this week, exact time depending on their bank accounts. The compensations are paid periodically, as the customers give their bank account details either to the bank or the Deposit Guarantee Fund. Last compensations are paid out on 29 June 2010 (Deposit Guarantee Fund of Finland, 2010).

Neil Faulkner in his publication named "Facts about the Savings Guarantee" tries to assure the public about security of their deposits and declares that most people seem to have got their money in a reasonable time in the past. From the date of their claim it may take just a few weeks (Faulkner, 2008).

The above presented examples about practices of compensations after bank failures prove protection of depositors by deposit insurance system. Fulfillment of the primary objective of depositors' protection from probable loss by the system is a critical point determining public attitude toward deposit insurance system and ensuring high level of public confidence toward the entire banking environment. The facts of compensation, as mentioned above, better convince depositors about efficiency of the system and make them feel protected.

Forms of Depositor Protection

Policymakers have choices regarding how they can protect depositors. Some countries have implicit protection that arises when the public expect some form of protection in the event of a bank failure. This expectation usually arises because of the government's past behavior or statements made by officials. Implicit protection is never formally specified. There are no

statutory rules regarding the eligibility of bank liabilities, the level of protection provided or the form which reimbursement will take. By its nature implicit protection creates uncertainty about how deposit depositors will be treated when bank failures occur (Financial Stability Forum, 2001).

Since the implicit deposit insurance system was characterized by no formal agreement (central bank law, banking law or other constitution) despite the existing de facto deposit protection provided by government guarantees and most Accession Countries experienced banking crises and lack of credibility during transition, they were strongly encouraged to introduce Deposit Insurance by the European Union requirement for reliable deposit guarantee mechanism explicit protection (Nenovsky & Dimitrova, 2003).

Explicit deposit protection is regarded to work better for the stability of financial system as far as it makes depositors feel secured and have clear idea about future expectations of their savings at the bank. As for the implicit deposit insurance it is up to the possibility and the will of the government whether or not to compensate depositors' loss and there are no clear guarantees of protection to the depositors of failed bank.

Statutes or other legal instruments usually stipulate explicit deposit insurance systems. Typically, there are rules governing insurance coverage limits, the types of instruments covered, methods for calculating depositor claims, funding arrangements and other related matters. A deposit insurance system is preferable to implicit protection if it clarifies the authorities' obligations to depositors and limits the scope discretionary decisions that may result in arbitrary actions. A deposit insurance system can also provide countries with an orderly process for dealing with bank failures (Financial Stability Forum, 2001).

1.2. Banking System Stability versus Moral Hazard and Adverse Selection

Banks by mediating between parties one with provisionally free fund and another with the need of funding appear to be an accessory for an economic up growth. This is a chance for businesses to expend and grow, for household to improve their living standards, pushing up the level of production, hence the rate of employment, the final result of which must be an economic expansion and growth.

As the banks are given this special role, their crises are painful and disruptive. The feasible results well described in the study by Asli Demirgüç-Kunt, Edward J. Kane and Luc Laeven (2006) were as follows: during a crisis liquidity typically dries up. Customers lose access

to bank balances and some worthy borrowers and equity issuers find that financial markets cannot accommodate their need for funding. Working-class and retired households may be forced into a hand-to-mouth existence. Severe crises derail macroeconomic stabilization programs, slow future growth and increase poverty. Solid businesses may lose access to credit and may be forced into bankruptcy. Diminished confidence in financial institutions may fuel a panicky flight of foreign and domestic capital. This not only closes down institutions but generates a currency crisis (Demirgüç-Kunt, Kane, & Laeven, 2006).

What is the worst in here bank failures shake the confidence of people beyond all measures, leading to the “panic run” to even healthy institutions for early withdrawals. Calling the safety of deposit accounts by depositors in question is harmful for even those financial institutions with no real reasons of failure. Having the cases of recent crises in their minds people for a long period of time refuse to trust financial institutions. Banks for this long period are unable to re-attract consumer savings back. Restoration of disrupted public confidence toward financial institutions was the reason of deposit insurance project invention in the worldwide. The presence of deposit insurance provides essential addition to the confidence of people in the periods of financial crises and after it, which is crucially important for the financial stability and smooth operation of the financial system.

The words spoken by President Franklin D. Roosevelt to the people of the United States on March 12, 1933 best show the importance of all these above: “There is an element in the readjustment of our financial system more important than currency, more important than gold, and that is the confidence of the people” (Roosevelt cited in Federal Deposit Insurance Corporation, 1998, p. 1).

To minimize pain and disruption, policymakers erect a financial safety net. The net seeks simultaneously to make crises less likely and to limit the harm suffered when insolvencies occur. Deposit insurance programs are critical components of national safety nets. Although some of the researchers argue about efficiency of deposit insurance projects (e.g. the study by Kam Hon Chu (2003) follows the idea that as time passes after impositions of deposit insurance the number of countries suffering banking crises increases due to the problem of moral hazard that rears up after project development; Nicholas Economides, R. Glenn Hubbard & Darius Palia (1996) argue about efficiency of deposit insurance system only for small size banks; Duan, Moreau, & Sealey (1993) state that risk-adjusted insurance premiums make banks riskier) individual country experiences confirm that insurance can help to develop a robust financial system when it is carefully designed.

By providing a guarantee that depositors are not subject to loss, deposit insurance has two somewhat contradictory effects. On the positive side it removes the incentive to participate in a bank run, while on the negative side it eliminates the need for depositors to police bank risk-taking. Public confidence in the safety of bank deposits promotes the stability of individual banking institutions. Public confidence reduces the likelihood that depositors at an individual bank will panic and withdraw funds suddenly if concerns arise about the condition of that institution. Thus, deposit insurance can enhance stability by preventing bank runs (Beck, 2003; Ketcha, 2007).

The former Chairman of the Board of Governors of the United States Federal Reserve System Alan Greenspan speaking about the role and importance of deposit insurance program noted that deposit insurance, combined with other components of their banking safety net (the Federal Reserves' discount window and its payment system guarantees) no longer entail widespread depositor runs on banks and thrift institutions. Quite the opposite: asset holders now seek out deposits – insured and uninsured – as safe heavens when they have strong doubts about other financial assets (Greenspan, 2003).

While deposit insurance systems contribute to stability and thereby promote economic growth, they can also generate perverse effects. By providing protection to market participants, costs of pursuing riskier strategies are reduced and excessive risk-taking might be incentivised – the moral hazard problem. With their deposits protected against loss, insured depositors have little incentive to monitor bank risk-taking and may simply seek the highest return possible on their deposits. Thus, deposits may tend to flow away from conservatively managed institutions toward those willing to pay higher returns by assuming more risk. Deposit insurance can thus exacerbate moral hazard by altering the normal risk-return trade-off for banks, reducing the costs associated with riskier investment strategies. These incentives are inherent to some degree in the nature of all insurance, and even the best structural designs for deposit insurance systems cannot be expected to eliminate moral hazard. Supervision and regulation of insured institutions, as well as some degree of market oversight, are essential for controlling moral hazard in order to maintain safety and soundness (Ketcha, 2007).

Empirical studies all over the world still go on arguing whether or not deposit insurance undermines or promotes banking stability. Some reject the idea that deposit insurance programs facilitate for banking industry additional stability in log run. They try to provide evidence that deposit insurance tends to cause banking instability because of the moral hazard problem that induces depository institutions toward excessive risk taking at the expense of the insurer.

According to Stephen D. Williamson (1997) banks tend to take on more risk under deposit insurance and to take less care in screening the loans. Study by Kam Hon Chu (2003) compares banking stabilities of 174 countries during 1980- 2000 period to examine whether banking crises are less likely to occur in countries with deposit insurance than in those without. 19 countries with deposit insurance and 155 countries having no deposit insurance were the objects of the study. To summarize results of the analysis 13 countries out of 19 with deposit insurance and 110 countries out of 155 having no deposit insurance still suffered banking crises, and 45 did not. After statistical analysis and calculations with 95 percent confidence level null hypothesis of no association between deposit insurance and banking crises has not been rejected, suggesting no strong association between deposit insurance and banking crises. Thus findings of the study conclude that countries with deposit insurance are equally likely to suffer crises in subsequent years when compared with countries without deposit insurance. But to examine short run relationship between deposit insurance and banking crises and to confirm that deposit insurance promotes banking stability in the short run pre and post deposit insurance banking stabilities of 36 countries that set up their deposit insurance during 1981- 96 period were compared. Their experiences were tabulated: 26 countries out of 36 were having pre-deposit insurance banking crises and only 14 countries experienced post-deposit banking crises, 9 countries had crises both before and after introduction of deposit insurance, 5 did not have any crises during the period under study, but how ironic it may seem in other 5 countries banking instability took place after the introduction of deposit insurance. The value of computed test statistics (again at 95 % confidence) suggests that the null hypothesis of no association between deposit insurance and banking crises can be rejected, suggesting fairly strong association between deposit insurance and banking crises. The study concludes that deposit insurance promotes banking stability in short run, based on the fact that 17 countries previously hit by crises have successfully gained banking stability after the introduction of deposit insurance. Despite short-run banking stability the study argues that banking crises are more likely to occur in the long-run, in the presence of deposit insurance. 76 countries with deposit insurance schemes as of 2000 were divided into three groups according to when deposit insurance schemes were set up. Banking crises as observed were more likely to occur among countries with deposit insurance schemes set up in 1980 or earlier (13 banks experienced crises out of 19). Out of 18 banks where deposit insurance schemes were introduced in 1981-1990 period, 12 failed and 6 did not, and banking crises were less likely to occur among deposit insurance schemes set up later during 1991-2000 period. Only one bank out of 39 failed in this time interval. The null hypothesis of no association between deposit insurance and banking crises was rejected after statistical calculations suggesting a

strong association between deposit insurance and banking crises, but concluding that deposit insurance induces banking instability in the long-run. Thus, the findings of this empirical study summarizes the following: though the positive relationship between the age of deposit insurance and the likelihood of post deposit banking instability is obvious still this relationship is not what is wished by the imposition of deposit insurance, as the time passes the number of countries suffering banking crises increases. Kam Hon Chu (2003) at the same time states that the reasons of more frequent bank failures in the long-run can probably be different designs of initially introduced deposit insurance programs. According to him deposit insurance schemes were poorly designed and thus more prone to banking instabilities. In almost all cases when deposit insurance schemes were initially introduced the insurance premiums were not risk rated. It was only recently that some deposit insurance schemes introduced risk based insurance premiums to mitigate the problem of moral hazard.

The same idea is followed by Edward Simpson Prescott (2002) and Jorge Urrutia (1990). According to them it is widely believed that risk based premiums will discourage insured banks from taking excessive risk because a bank facing higher premiums will think twice before undertaking a risky activity (Prescott, 2002). It is obvious that the institutional structure of deposit insurance scheme matters in maintaining and promoting banking stability. In practice countries do reform their original deposit insurance schemes to adopt newer and better designs whenever necessary and appropriate. Therefore, the design of the deposit insurance project, rather than when it is set up, is a crucial factor causing banking instability (Chu, 2003; Blair & Fissel, 1991).

The poor design of deposit insurance system and the absence of risk-based premiums were criticized by Clifford F. Thies & Daniel A. Gerlowsky (1989) long before risk-adjusted premiums were designed. Risk-based premiums were named as a resolution to the excessive risk taking tendency of banking institutions (Thies & Gerlowsky, 1989).

The official web- site of a Canadian Deposit Insurance Corporation (CDIC) declares that since CDIC was created, in 1967, 43 member institutions have failed, but the last time that a CDIC member failed was in 1996. Thus, there has been an example of bank failures fewer in number as time after introduction of deposit insurance passes, which can be considered as a reply to the debates about securing long run stability by deposit insurance project. As it is argued banking stability diminishes over time and may vanish when moral hazard problem associated with deposit insurance rears up, but deposit insurance tends to be destabilizing if and only if

moral hazard problem is not contained, deposit insurance schemes have to be accompanied by increased regulations to reduce moral hazard.

However, according to Edward Simpson Prescott (2002) risk-based deposit insurance premiums alone cannot control moral hazard in deposit insurance. If deposit insurers observe the banks' investment strategy and there is full information about bank investment decisions risk-based premiums are sufficient to control risk. Deposit insurer sets lower risk based premium if bank takes safe investment strategy and higher one if it chooses riskier activities. Under full information conditions risk-based deposit insurance premiums can thus succeed. But if banking institution follows moral hazard model, which means deposit insurer no longer observes investment strategy of a banking institution and the strategy followed by the bank is a private information or a hidden action (the action that is hidden from others characterizes bank's investment decisions with high level of risk), risk-based premiums cannot control moral hazard and state contingent payments are needed. Under state contingent payments banking institutions are recommended to follow particular investment strategies and the payoff (or return on investment) which a bank would receive from following this particular strategy would be different from the return it would receive from the following any other alternative investment strategies. Different returns can be determinants of different risk premiums; higher risk premiums will be charged for higher return produced. Thus, private information requires richer deposit insurance pricing schemes. This is not to say that risk-based premium is not useful but it can be regarded as only one component of the entire deposit insurance pricing system. Besides risk-based premium deposit insurer can spend resources to take actions for reducing private information of a bank. The actions for that can be the supervisory activities like safety and soundness exams, auditing. The bank may choose not to supply the screening effort but this case will be regarded as if bank has chosen to follow risky investment strategy and will become the subject of more severe deposit insurance premium (Prescott, 2002; Chan, Greenbaum, & Thakor, 1992).

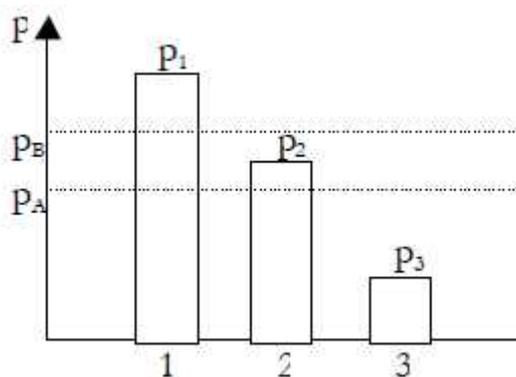
According to Dale K. Osborne and Seakwon Lee (2001) before 1993 there was no funds-cost penalty for riskier strategies, hence the premiums banks paid for deposit insurance did not vary with risk. They state that well chosen premiums make banks' cost of funds properly sensitive to the banks' asset risk. Properly priced risk encourages banks to seek the appropriate level of risk. They tend to clear out what effects risk-based premiums had on bank risk-taking. As it is impossible to isolate these effects from those of other FDIC reforms Dale K. Osborne and Seakwon Lee (2001) found it pointless to ask whether banking is safer after this particular

deposit insurance reform than before. In their study they use an indirect approach by comparing pre and post reform associations between bank risk taking and three variables: bank charter value (ratio of market value to book value of shares), bank size and bank capital (capital to asset ratio), previously found to play an important role in the moral hazard. The empirical studies of data from the pre reform period found that larger banks and banks with lower charter values or capital tended to pursue riskier strategies; large banks would not be allowed to fail because of the potential damage to the economy. Any such bank becoming insolvent would be propped up by authorities, policy known as “too big to fail doctrine” (Wall, 1993). If bankers believed that regulators will not allow the failures of larger banks in general, then larger banks would have greater risk-taking incentives. Negative relations between charter value and risk are explained as follows: charter value as the economic value of future growth opportunities is lost if a bank fails, the owners of the bank cannot sell charter once the bank is declared insolvent. Therefore a bank with high charter value has some incentive to avoid riskier strategies. As for bank capital, if bank stockholders have an incentive to expropriate wealth from creditors and thus the creditors provide the major funding, so that only a negligible part of total funding comes from stockholders, incentives for risk-taking will be all the greater. 82 bank holding companies were used as sample. The data of capital-to-asset ratio, book value of shares and asset size of each company were obtained from Standard and Poor’s Stock Report. The study shows that variances of the bank’s capital ratio, asset size and risk level are significantly higher after reform. The hypotheses tested by the study states that the associations between risk taking on the one hand and charter value, bank size and capital, on the other hand became weaker after reform. It was the strength of these associations – not risk-taking itself – in the pre-reform period that constituted empirical evidence of a link between deposit insurance and moral hazard. The empirical results of the research support the hypothesis of weakening those associations and that the tendencies of pursuing riskier strategies would be weaker after reform because they would result in higher insurance premiums or increased regulatory attention. The associations between risk taken by banks and charter values or asset size are indeed significantly weaker after reform, the association between the risk and the capital ratio is also weak but change is not statistically significant. Therefore considering that banks’ asset portfolios are largely related to risk, the results provide some evidence that reform has reduced the moral hazard created by government-backed deposit insurance (Osborne & Lee, 2001).

Another drawback of deposit insurance is an adverse selection problem (Mogyl'nyy, 2001). The study by Oleg Mogyl'nyy (2001) supposes that the banking system is represented by

three banks ($i = 1, 2, 3$) with different probabilities of a failure (p_1, p_2, p_3) and assumes that an insurance premium is the same for all banks and equals to the average value of individual probabilities of failure ($p_A = \bar{p}_i$).

Figure 1.2. Probability Levels of Bank Failure



Source: Mogyl'nyy, 2001, p. 7

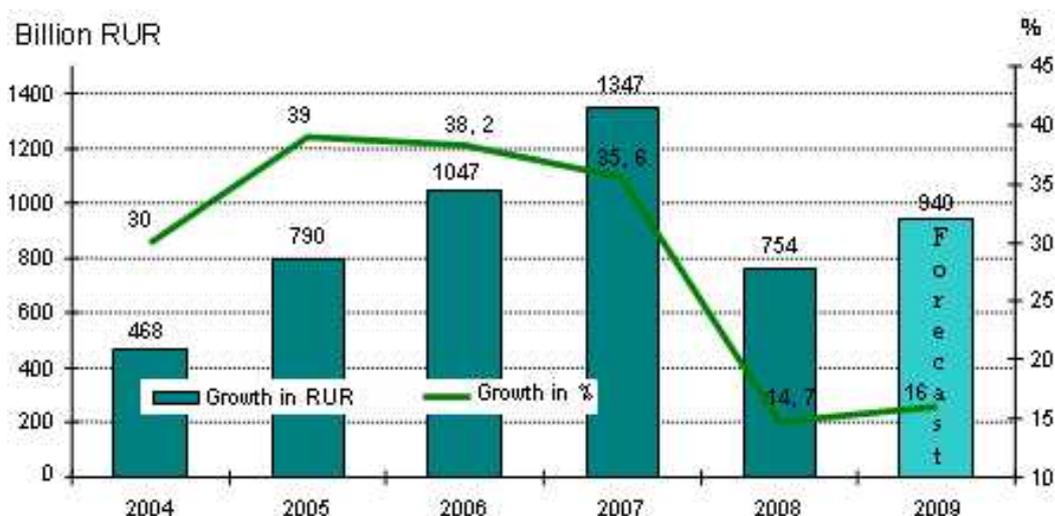
When an insurance premium equals to p_A , the system proves to be attractive for weaker financial institutions (1, 2) and much less attractive or even repelling to a stronger member of that community (3) (Figure 1.2.). A stronger member suffers from adverse selection. It can occur when deposit insurance is voluntary and charges fixed premiums that are not adjusted for the risk peculiar to specific institution. In this situation, the strongest bank is likely to be outside the system. When strong banks withdraw, the premium charged to remaining members has to be raised ($p_A \bar{E} p_B$) to cover the costs of possible bank failures (Mogyl'nyy, 2001).

1.3. Deposit Insurance for Deposit Growth

To demonstrate whether imposition of deposit insurance system had a positive effect as it was expected, post deposit insurance developments are observed below. The positive expectations imply the stronger financial stability derived from enhanced public confidence and deposit growth. The focus was made on the developments in post Soviet countries after imposition of deposit insurance as they all appear to have the economic situation similar to Georgia, concerning attitude of people toward financial sector. The collapse of Soviet Union was followed by the loss of saving accounts by millions of post soviet bank customers. The attitude of people in the countries observed toward bank institutions according to these observations show to be gradually improving; all countries observed have a tendency of constant deposit growth.

Deposit Insurance Agency (DIA) of Russia (foundation date January, 2004) published review of household deposits' market for 2008, according to which deposit insurance system had a positive effect on deposit market and contributed to maintaining positive trends in public savings area established during recent years. Since the project development in 2004 the tendency of deposit growth goes on constantly (Figure 1.3.). Due to global financial crises the volume of deposit growth is not as high in 2008 compared to previous years, but it still has increased by 14,7 % up to 754 billion RUR (Deposit Insurance Agency of Russia, 2008).

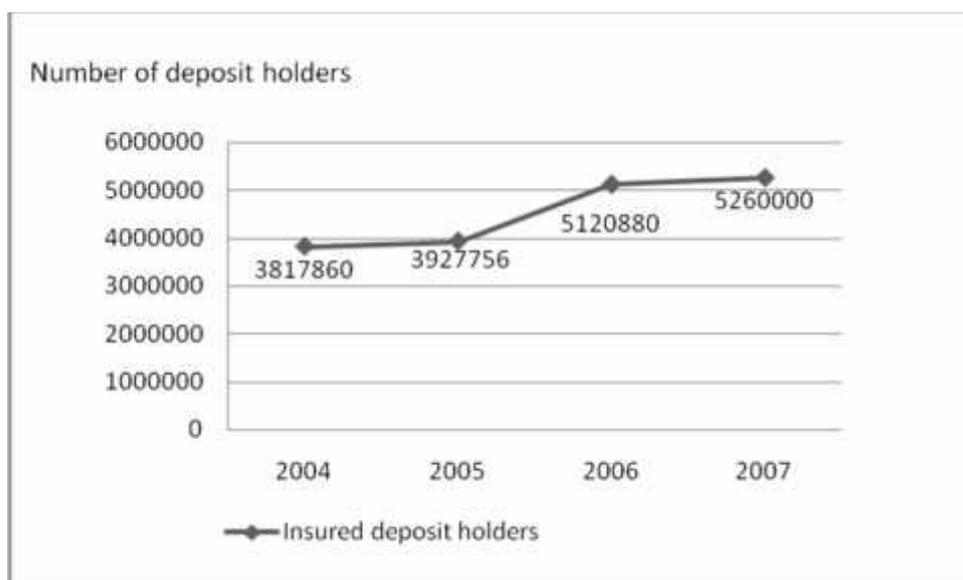
Figure 1.3. Deposit Growths in 2004-2009 (Russia)



Source: *Deposit Insurance Agency of Russia, 2008, p. 10*

Armenian Guarantee Fund at the end of 2005 reported that with the introduction of deposit guarantee scheme in November 24, 2004, positive trends have been recorded with regard to household deposits in Armenia. These trends are partly attributable to the establishment of the deposit guarantee scheme. During 2005 the average size of bank deposits of physical persons in the commercial banks as compared to the IV quarter of 2004 has increased by 3.8 percent and as of the IV quarter of 2005 it amounted 114 368.2 million Drams (Figure 1.5). Dram denominated deposits increased by 61.2 percent. The number of depositors holding guaranteed deposits also increased reaching 3 927 756 in the end of 2005 (see Figure 1.4.), while as of the end of 2004 their number was 3 817 860 (Deposit Guarantee Fund of Armenia, 2005).

Figure 1.4. The Number of Depositors in Armenia in 2004-2007

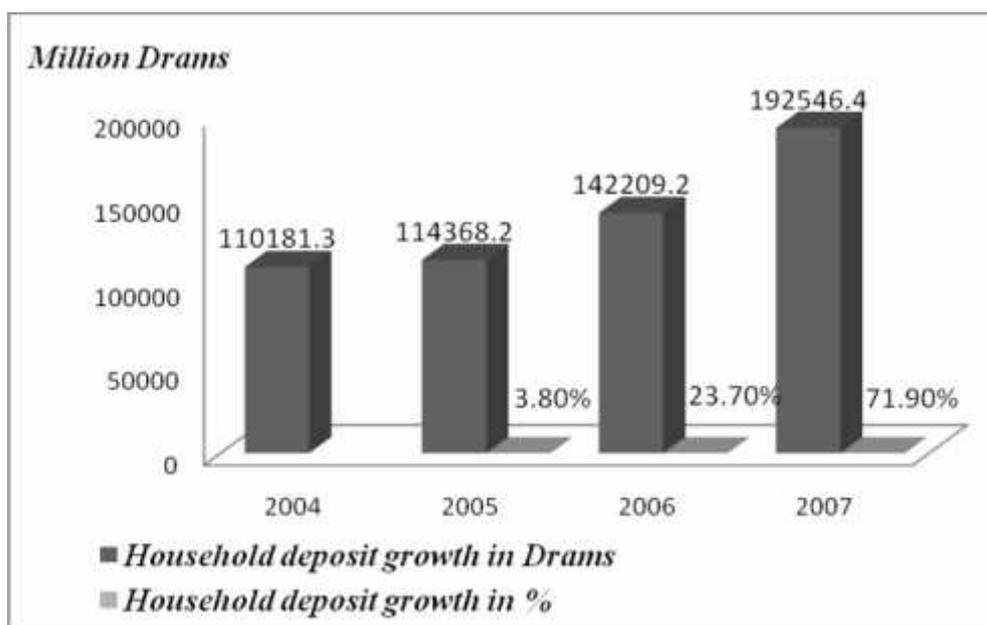


Source: Deposit Guarantee Fund of Armenia, Annual Report 2005, 2006, 2007

In the coming year of 2006 Armenian Deposit Guarantee Fund reported the same positive impacts of deposit insurance; the activities of the Fund promote public trust towards banks of the Republic of Armenia (RA). This is evidenced by both the growth of bank deposit amounts and number of depositors, as well as by the results of public survey. Compared to the end of 2005 the total size of guaranteed deposits increased by 27 224 million Drams (Figure 1.5.) or 23.7%, at the end of 2006 reaching 142209.2 million Drams (Deposit Guarantee Fund of Armenia, 2006).

In compliance with the annual report of 2007 during past few years the number and the amount of deposits of physical persons in the banks of RA have increased considerably, which could to some extent be attributed to the activities of Deposit Guarantee Fund. In 2007 compared to 2006 the average amount of household deposits increased by AMD 56827.2 million or by 41.9% and amounted AMD 192546.4 million at the end of the IV quarter (Figure 1.5.). The number of depositors holding guaranteed deposits increased by 139120 and reached more than 5 260 000 at the end of 2007 (Figure 1.4.). As of the end of 2007 the average size of banking deposits of 97.2% of depositors has not exceeded the maximum guarantee level (AMD 2 million), in other words, deposits of the absolute majority of depositors are guaranteed fully. During 2007 the situation in RA banking sector may be characterized as stable, there has not been any event of bank insolvency or bankruptcy (Deposit Guarantee Fund of Armenia, 2007).

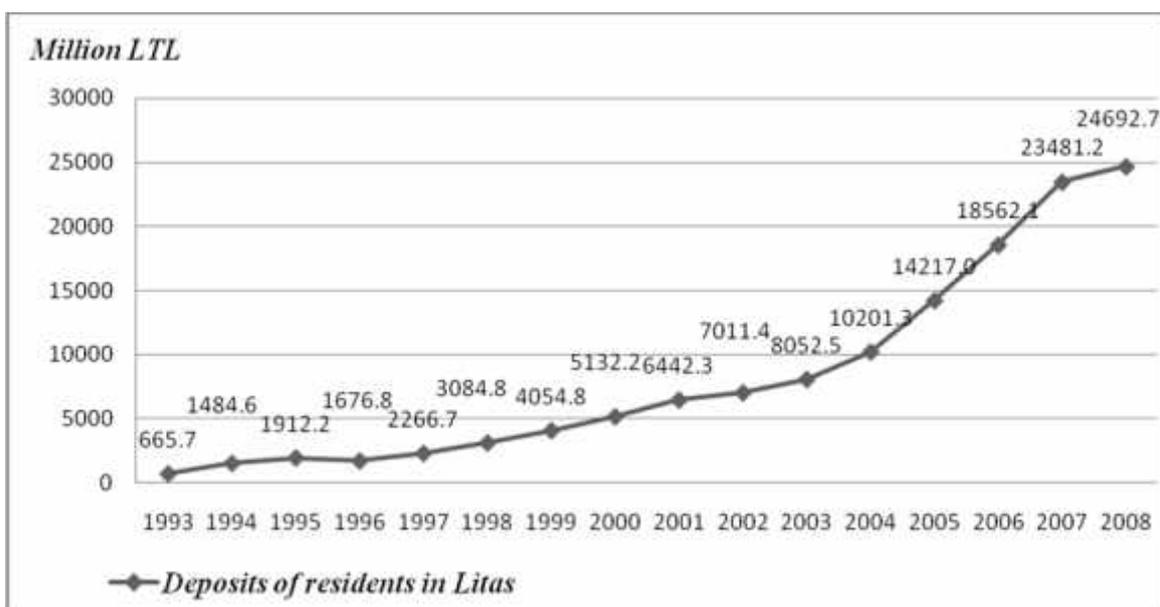
Figure 1.5. Household Deposit Growth in Armenia



Source: Deposit Guarantee Fund of Armenia, Annual Report 2005, 2006, 2007

Deposit and Investment Insurance of Lithuania describes the financial situation on the market before imposition of insurance project as follows: in December 1995 operation of the Lithuanian Equity Innovation Bank and the Litimpeks bank was suspended. At the time these were among the largest and most popular banks operating in the country. A major part of the Lithuanian population kept their savings there. Therefore, people were greatly concerned and started doubting operation of other Lithuanian banks and safety of the deposits held there. First, the public mistrusted banking activities and then they went into panic. This encouraged immediate development of the mechanism for deposit safety. Such a step became a necessity in order to regain people's trust toward banks. In 1996 the state company Deposit Insurance Fund was registered with the Ministry of Economy of the Republic of Lithuania. March 1, 1997, saw the start of insurance of deposits of individuals (Figure 1.6.). Bank of Lithuania publishes figures demonstrating pre and post project movements of household deposits. As Figure 1.6. shows it considerably diminished in the critical year of uncertainty (1996) and keeps on growing since deposit insurance project development (Bank of Lithuania, 1993 - 2009).

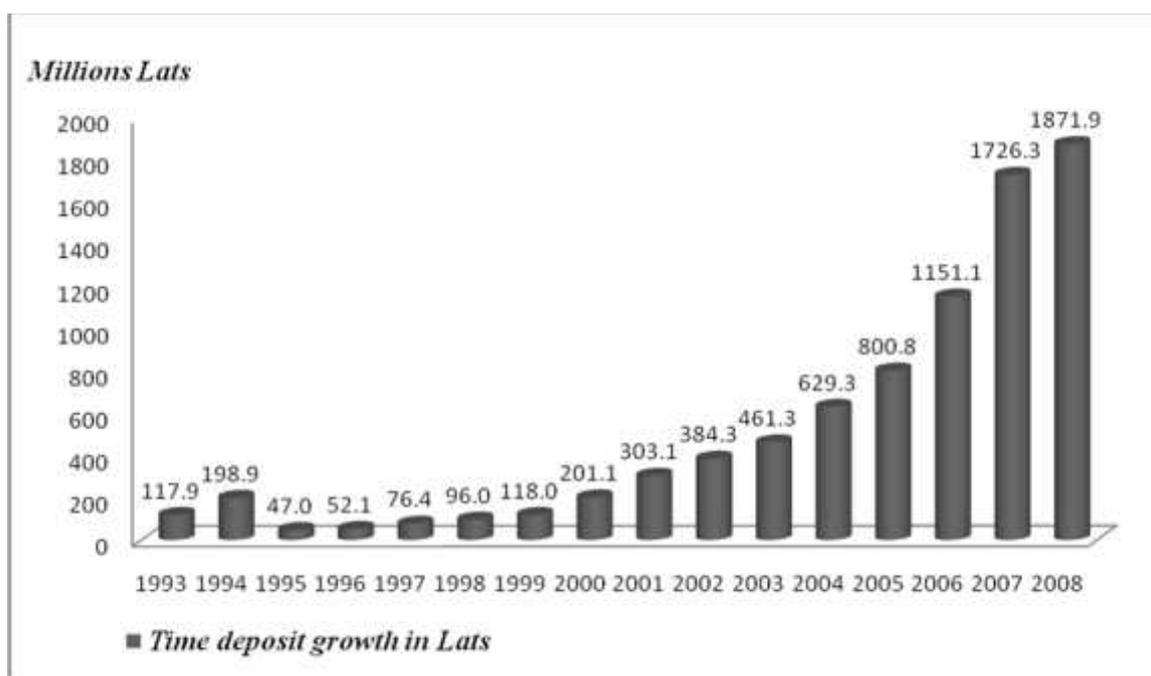
Figure 1.6. Deposit Growth in Lithuania, Deposits of Residents in Litas (LTL million)



Source: Bank of Lithuania, 12/ 1993 - 05/ 2009

Bank of Latvia shows the same positive effects of deposit insurance system. The figures published by the Bank of Latvia demonstrate household deposit fluctuation before the project development. However, since the introduction of the program to the Latvian environment in 1998 household deposits keep growing. This positive impact of deposit insurance system over the volume of household deposits is evidenced by the Figure 1.7. (Bank of Latvia, 1993 - 2009).

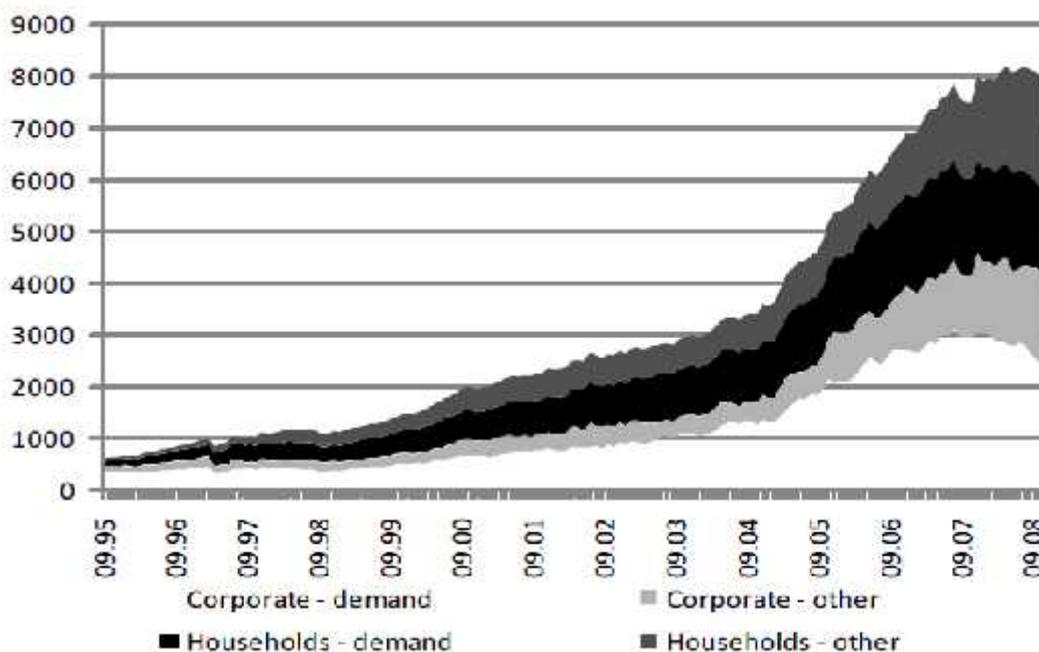
Figure 1.7. Time Deposit Growth in Latvia, Time Deposits of Residents (in millions of Lats)



Source: Bank of Latvia, I/ 1993 - V/ 2009

The volume of deposits in Estonia had been growing not as much before the project development as after it and even decreased considerably during 1996-1997 (Figure 1.8.).

Figure 1.8. Corporate and Households Deposits in Estonia (Mln Euros)

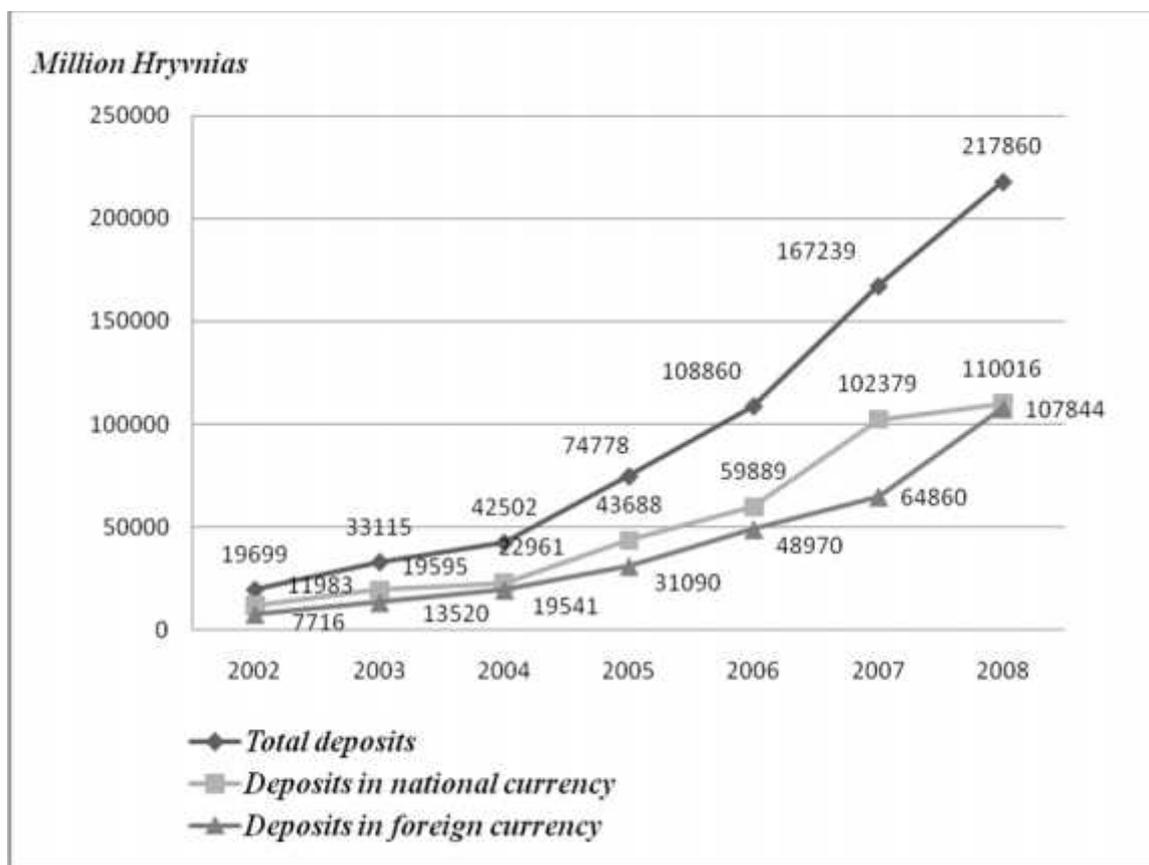


Source: *Estonian Economy and Financial Sector, 2008, p. 30*

Deposit insurance has been introduced to the Ukrainian banking system in 2001. As National Bank of Ukraine reports since then household deposits in the country keep growing (Figure 1.9.).

Monthly Analytical and Statistical Publication of the National Bank of Ukraine shows the tendency of total household deposit growth since 2001. Deposits denominated in both national and foreign currency increased. In 2007 deposits in national currency grew insignificantly compared to the previous year of 2006, but it was compensated by the considerable growth of deposits denominated in foreign currency (Figure 1.9.). This is less probably related to the confidence of depositors as the total volume of household deposits increased, most likely it is due to some uncertainties relevant to the value of the national currency (National Bank of Ukraine, 2009).

Figure 1.9. Household Deposit Growth in Ukraine, Deposits by Households Held with Deposit-taking Corporations (in millions of Hryvnias)



Source: National Bank of Ukraine, 2009

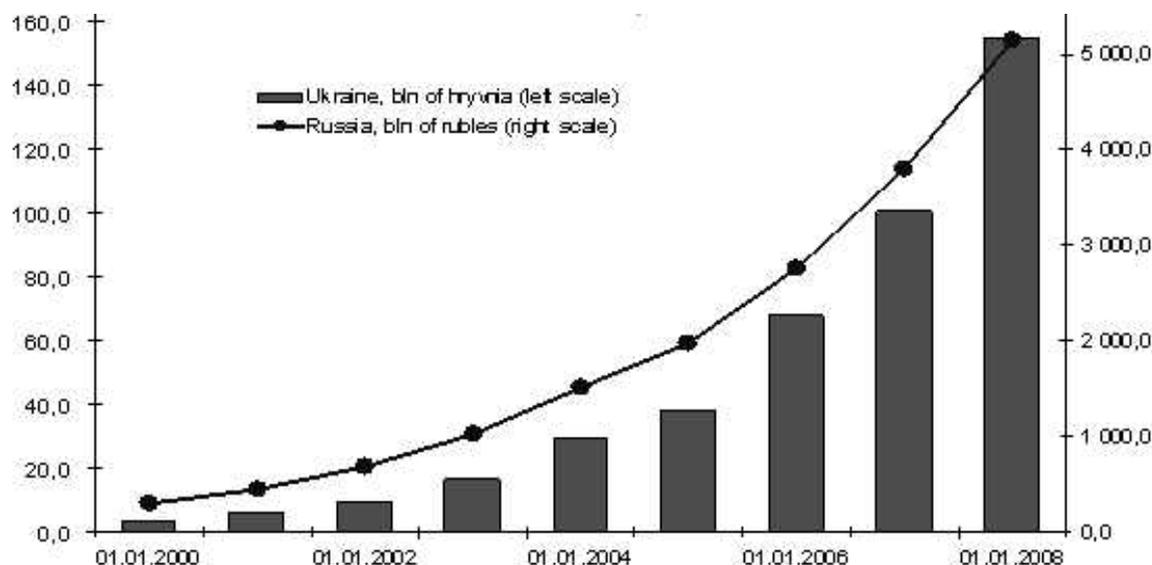
According to the survey the common feature of Kazakh, Russian and Ukrainian banking systems by the end of nineties was a low level of public confidence in banking and other financial institutions caused by devaluation of bank deposits in early 1990-s, as well as by bankruptcies of a number of young commercial banks and financial fraud occurring during the period of turbulent social-economic changes.

In all countries under review significant deposit growth was observed after introduction of DIS. Thus, in Ukraine from January 1, 2000 through January 1, 2008 total household deposits amount increased 42.2 times – from 3.7 to 115.2 billion Hryvnias. While the number of depositors during the same period grew 6.5 times – from 4.6 to 29.7 million people. The above numbers grew due to deposit de-concentration among various banks within guaranteed coverage level (International Association of Deposit Insurers; Eurasia Regional Committee, 2008).

Deposit market in Russia also showed positive dynamics during 2001-2007. From 2005 – with the start of DIS operations – annual absolute deposit market growth increased more than twice – from RUR 430 billion per annum in 2002-2004 to RUR 1.05 trillion in 2005-2007

(International Association of Deposit Insurers; Eurasia Regional Committee, 2008). The Figure 1.10. below once more demonstrates positive growth rate of insurable deposits in Russian Federation and Ukraine.

Figure 1.10. Dynamics of Household Insurable Deposits in Russia and Ukraine, 2000 - 2008

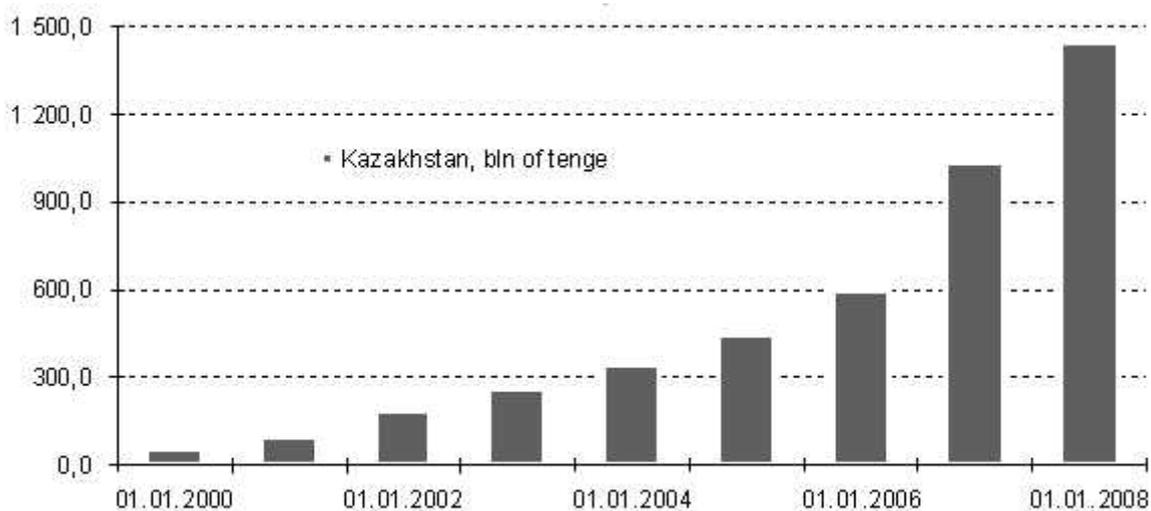


Source: International Association of Deposit Insurers; Eurasia Regional Committee, 2008, p. 4

In the Republic of Kazakhstan, which established “Kazakh Deposit Insurance Fund” in November 1999, during the same period (2000-2007) public deposit base grew 26.3 times from 55 to 1447.8 billion Tenge (Figure 1.11.). Alongside this, every year except 2002 and 2007 absolute growth of public resources in banks was on the upper side (International Association of Deposit Insurers; Eurasia Regional Committee, 2008).

High deposit growth rate during the first years of DIS operations in the above countries testify specifically to the growth of public confidence in banks. As the survey concludes on the whole, the results of the review with respect to Kazakhstan, Russia and Ukraine have shown that DIS introduction was conducive to enhancing public confidence in banks and the level of their protection (International Association of Deposit Insurers; Eurasia Regional Committee, 2008).

Figure 1.11. Dynamics of Household Insurable Deposits in Kazakhstan, 2000 - 2008

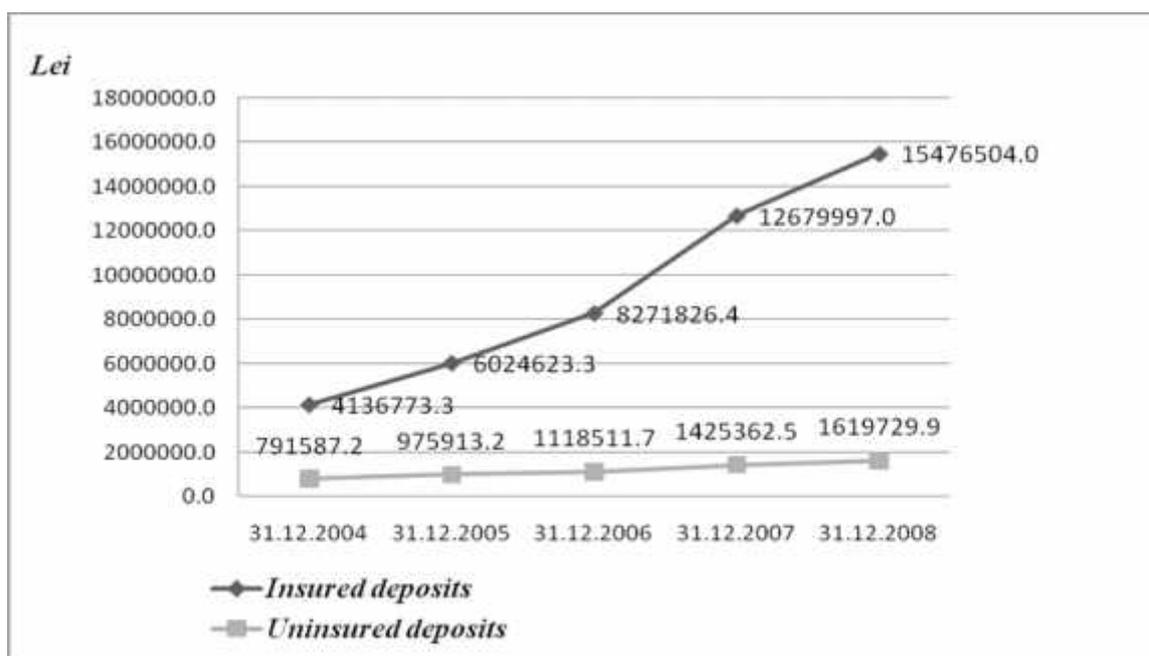


Source: International Association of Deposit Insurers; Eurasia Regional Committee, 2008, p. 5

Azerbaijan Press Agency (APA) announces the latest news about Azerbaijan getting rise in insured deposits. The total amount of deposits put by individuals in the member banks rose to AZN 1.731 billion, including the amount of uninsured deposits increased to AZN 268 million, insured deposits rose to AZN 1.462 billion and the number of insured deposit holders reached 1 275 540 people. Azerbaijan Deposit Insurance Fund has been in operation since August 13, 2007 and has 38 member banks (Azerbaijan Press Agency, 2008).

Moldovan Deposit Guarantee Fund in Banking System publishes the same positive trends of household deposit growth since 2004 when deposit insurance program was introduced to the Moldovan banking system. The considerable attention has to be paid to the Figure 1.12. demonstrating insignificant growth rate of uninsured deposits and considerable increase of the volume of insured deposits for the period of 2004 – 2008.

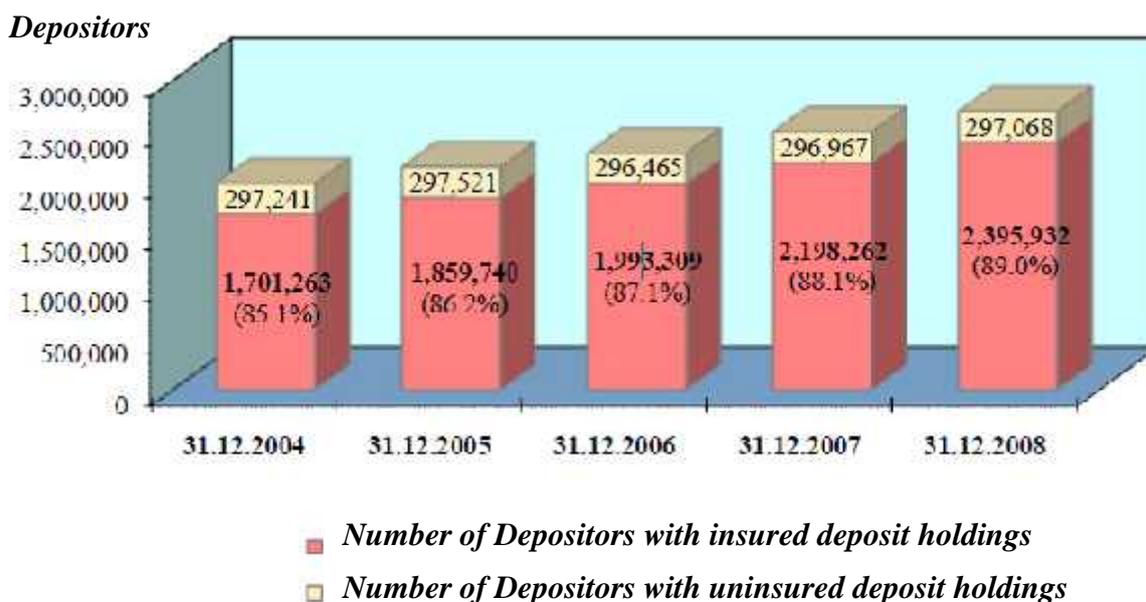
Figure 1.12. Structure of Household Deposit Growth (Moldovan Lei)



Source: Deposit Guarantee Fund in Banking System, 2008

The number of depositors holding uninsured deposits, according to the same Moldovan Deposit Guarantee Fund fluctuates, either increases or decreases, when the number of depositors with insured deposit holdings systematically goes up and at the end of 2008 it reaches 89 % of total number of bank depositors (Figure 1.13.).

Figure 1.13. Structure of Household Depositors in Moldova



Source: Deposit Guarantee Fund in Banking System, 2008, p. 11

The figures show one and the same positive effects of deposit insurance on the deposit markets of all countries observed. Regardless the changes and fluctuations in the volume of deposits before the project development, after the project implementation the volume of deposits started to constantly grow. Although, the ability of commercial banks to attract considerably bigger amount of deposits from households after imposition of deposit insurance can be explained by different factors, such as better stabilized overall economic situation in the country leading to safer investment opportunities or a population income growth, still the factor that could cause the number and the volume of deposits to increase in all countries observed can more presumably be an enhanced public confidence. The assumption is that people began to trust banks more; they started to understand that if deposit insurance works even in the worst cases of crises they will be compensated. It seems to be the most genuine reason because in all 9 countries constant deposit growth is recorded immediately after introduction of deposit insurance system. Population income growth or better investment conditions or any other factors seem less likely to exactly coincide to the implementation of deposit insurance system in all countries under observation and if these factors are assumed to have occurred before or after the insurance system at least in some countries, then the result of deposit growth in these countries would have been observed long before or after the implementation of deposit insurance system.

1.4. The Effects of Deposit Growth over the Financial Environment

Intensive growing tendency of household deposits on the market obviously is effective not only for the banking institutions but for the whole financial environment of the country as well. It is out of question that this will lead to the expanded banking operations and economic growth. The sample calculation below demonstrates additional income that is to be generated by commercial banks if extra deposits are added to the bank accounts. On every additional GEL 1000 received every time period (e.g. every month) for the next 12 periods and invested (loaned out) at a rate of 3% (yearly interest rate -36% divided by the number of periods -12) the total cash flows at the end of the annuity's life (one year) would be worth GEL 14 192.03.

$$FV(A) = A \left(\frac{(1+i)^n - 1}{i} \right)$$

Where, $FV(A)$ = the value of the annuity at time n

A = the value of a periodic investment in an annuity

i = the interest rate per period

n = the number of investment periods (Gitman, 2009; Berk & DeMarzo, 2007)

$$FV(A) = 1000 \left(\frac{(1 + 0.03)^{12} - 1}{0.03} \right) = 1000 \frac{0.42576088}{0.03} = 14\,192.03 \text{ (GEL)}$$

The figure is to be much bigger actually as the calculations do not imply the income that can be generated from the whole reinvested monthly payments (about 101 GEL every month during a year) made by borrower. Hence the final result of growth is even much bigger. As far as the investments by banks mean that the fund has returned back to the individuals, part of it probably will generate additional income for them. The process supposedly will cause further growth of fund flowing back again to the bank channels.

The effect of a deposit growth over banking system is illustrated by the theoretical model of a deposit creation or a model demonstrating the process of creation of “new money” by the banking system:

$$\Delta D = I + c / (r + e + c) \times \Delta R$$

Where,

ΔD denotes change in total deposits in the banking system,

c – money in circulation,

r – required reserve ratio,

e – excess reserves

ΔR – changes in the bank reserves.

The formula demonstrates that every expansion of bank reserves (deposited amount or ΔR) will multiply the increase of deposit accounts in the banking system (ΔD).

Multiple effect of expanded deposit accounts in the banking system is expressed by so called money multiplier (m) as follows:

$$m = I + c / (r + e + c)$$

The multiple effect of bank reserves or deposited accounts over the extra deposit creation is constrained due to the situations listed below:

1. Loan supplied by a banking institution may not be deposited at another bank but may be kept in circulation through keeping these funds by its new owner, or may be deposited but withdrawn back by deposit holders any time (c);
2. Banks may not extend loans or invest in the full amount of their excess reserves but rather keep it in form of an excess reserve (e).

There are two main considerations concerning multiple deposit creation not to constrain the process of creation of “new money” in the banking system and hence not to hinder expansion of banking activities:

1. Rate of required reserves should not be as high as to restrict multiple deposit creation and expansion of crediting;
2. Deposit insurance system is recommended to be introduced in order to lower required reserve ratio (Mishkin, 2007).

The recommendation about imposition of deposit insurance system to lower required reserve ratio can be explained as follows: as far as the system of deposit insurance increases confidence level of population toward banking system and thus reduces the incentive of people to run to banks for early withdrawal, less reserves are needed for future uncertainties to meet depositors demand. Correspondingly, central bank permits commercial banks under the deposit insurance system to lower required reserves kept at the central bank account. Lower required reserves allow commercial banks to use extra funds for crediting and expanded banking activities will obviously lead to the economic growth.

1.5. The Main Principles of Successful Deposit Insurance System: International Experience

The choice of how a deposit insurance system should operate depends on many factors that are unique to each country and to its governmental and financial systems (Financial Stability Forum, 2001). However, some general principles of effective deposit insurance system for many different countries observed are still discussed by different studies.

Global financial crisis of 2008 illustrated the importance of effective deposit insurance system in fostering public confidence. In response to these recent crises Basel Committee on Banking Supervision and International Association of Deposit Insurers (IADI) agreed on an international set of principles for effective deposit insurance systems in 2009. They collaborated and issued “Core Principles for Effective Deposit Insurance Systems”.

The most important principles recommended by the Basel Committee and IADI affecting and ensuring prompt operation of the system are presented later on in this chapter.

Before working on these core principles the Committee published “Deposit Protection Schemes in the Member Countries of the Basel Committee”, where it is declared that Basel Committee has not issued recommendations as to whether or not countries should have deposit protection arrangements or how these arrangements should be structured. According to this publication it was partially because of institutional differences between its members and also because the principle focus of its work has been to create the conditions in which deposit protection is less likely to be needed (Basel Committee , 1998). So the primary focus was made on the supervision of the banking institutions so that to keep only strong banks on the market and to lower the probability of their failure. But the experience shows that strong banking institutions cannot guarantee the prevention of their failures in times of financial crises and hence cannot ensure stronger public confidence. Any single case of bankruptcy still frightens the people and causes the panic. Effectively designed deposit insurance system should work for preserving the banking environment from such a panic situations and from the cases of early withdrawals deteriorating financial conditions of commercial banks and damaging overall financial stability.

Key issues about design of deposit insurance system are advised by different studies. In the study about “Deposit Insurance System Design and Considerations“, by Nicholas J. Ketcha Jr. (2007) recommendations were about organizational structure, deposit insurance coverage, deposit insurance system financing, deposit insurance premiums.

The major principles of deposit insurance system efficiency are discussed by the empirical research by Asli Demirgüç-Kunt, Edward J. Kane and Luc Laeven (2006). Six common-sense principles of good design are identified for countries that have already installed or are in the process of designing an explicit deposit-insurance scheme. According to them no government can afford to neglect these principles. Even in the strong institutional environments, weaknesses in deposit-insurance design and distortionary political pressures that support them can fuel financial fragility and lessen the discipline that banks receive from private counterparties. To control and offset these effects, six design features have proved themselves useful (Demirgüç-Kunt, Kane, & Laeven, 2006).

These principles are about:

1. Coverage limit;
2. Compulsory membership;

3. Joint responsibility;
4. Shifting losses and loss exposures to the surviving banks;
5. Risk-adjusted premiums;
6. Involvement of deposit insurers in the process of resolving the bank insolvencies.

The most straightforward principle entails setting enforceable coverage limits. Insurers' first priority must be to assure that official supervision complements private monitoring. To accomplish this, the scheme must be designed and managed in ways that convince large depositors that part of their funds are truly and inescapably at risk. Maintaining strong incentives for private parties to bond and police bank risk exposures is especially important in contracting environments where accounting transparency and government accountability are deficient (Demirgüç-Kunt, Kane, & Laeven, 2006).

It is critical to establish the coverage limit for insured instruments. Coverage must be sufficient to prevent destabilizing banking runs, but not so extensive as to eliminate all effective market discipline on the bank's risk-taking (Schich, 2008; Velikova, 2006). Deposit insurance schemes around the world vary widely in the amounts and types of coverage provided. Some systems protect deposits of all types, several exclude interbank deposits, and some protect only household accounts. Coverage is limited to less than 10 000 USD per account in some countries and is unlimited in others, with most systems falling between these extremes (Table 1.1.). Several countries provide only coinsurance, such as protection for 80 percent of the deposit account balance. Coinsurance provides an incentive for all depositors to monitor bank risk-taking by exposing them to small losses, but it thereby also provides an incentive for risk exposure among depositors, as well as depositor reactions to adverse financial news and economic shocks (Ketcha, 2007).

Table 2.1. Deposit Insurance Schemes of Different European Union Countries

| <i>Country</i> | <i>Savings limit</i> | <i>Coverage</i> | <i>Valid since</i> | <i>Comments and previous amounts</i> |
|-----------------|-----------------------------------|-----------------|--------------------|--|
| <i>Belgium</i> | EUR 40,000 | 100% | | Divided into initial compensation of up to 20,000 euro and additional compensation of up to 20,000 euro. |
| <i>Bulgaria</i> | BGN 100,000 (EUR 51,129) | 100% | 15 April 1998 | |
| <i>Denmark</i> | DKK | 100% | Unlimited | The coverage of the sector's trust |

| | | | | |
|--------------------|--------------------------|------|----------------------|---|
| | 300,000 + unlimited | | from October 5, 2008 | fund <i>Garantifonden for Indskydere og Investorer</i> remains at DKK 300,000. For the two year period from October 5, 2008 to September 30, 2010 an unlimited governmental guarantee for deposits in excess of that amount has been added. |
| <i>Finland</i> | EUR 50,000 | 100% | 1998 | Increased from EUR 25,000 on October 8, 2008. The increased amount is valid until December 31, 2009. |
| <i>France</i> | EUR 70,000 | 100% | | |
| <i>Germany</i> | EUR 50,000 | 90% | July 2009 | Additional voluntary guarantee schemes run by different banking associations (private banks, cooperative banks, savings banks). An unlimited state guarantee was announced in October 2008 (and extended in July 2009), if one of those schemes failed. The legal details are nevertheless unclear. |
| <i>Greece</i> | EUR 100,000 | | October 2008 | Was 20,000 EUR, increased in October 2008 |
| <i>Ireland</i> | Unlimited | | September 2008 | Amount raised to unlimited in September 2008 |
| <i>Italy</i> | EUR 103,291.38 | 100% | December 4, 1996 | |
| <i>Netherlands</i> | EUR 100,000 | 100% | October 7, 2008 | Before October 7, 2008 coverage was 100% of first EUR 20,000, 90% of next EUR 20,000 (hence a compensation of up to EUR 38,000). The raised amount is valid until December 31, 2010. |
| <i>Poland</i> | EUR 50,000 (PLN 175,000) | 100% | October 2008 | Amount raised from EUR 22,500 in October 2008 |
| <i>Portugal</i> | EUR 100,000 | 100% | November 2008 | Amount raised from EUR 25,000 to EUR 100,000 in November 2008. |
| <i>Slovenia</i> | Unlimited | 100% | November 20, 2008 | |
| <i>Spain</i> | EUR 100,000 | 100% | 1998 | |
| <i>Sweden</i> | SEK 500,000 | 100% | October 6, 2008 | From 1996 to October 2008, amount was SEK 250,000. |
| <i>United</i> | GBP 50,000 | 100% | October 7, | Amount raised from 35,000 to |

| | | | | |
|----------------|--|--|------|---|
| <i>Kingdom</i> | | | 2008 | GBP 50,000 effective October 7, 2008. Before October 1, 2007 coverage was 100% of the first GBP 2,000 and 90% between 2,000 and GBP 35,000. |
|----------------|--|--|------|---|

Source: the table is prepared based on the information provided by the central bank official websites of those countries listed in the table (see the reference)

Vast international experience says that optimal insurance coverage correlates with the GDP per capita with a coefficient from 1 to 2 (Tourbanov, 2005). Sometimes the coverage ratio is recommended to be higher for developing countries (Demirgüç-Kunt, Karacaovali, & Laeven, 2005).

International Monetary Fund also uses one or two times per capita GDP as the general rule in advising countries on appropriate limits for deposit insurance coverage. It is intuitive that deposit insurance coverage limits should bear some relationship to measures of income or wealth, so as to provide a relatively constant amount of protection to savers. However, coverage limits have not been explicitly connected to income measures in several of the longer-standing deposit insurance systems, including the system in the United States. The real value of United States deposit insurance coverage has declined significantly since its adoption. In 1935, the 5000 USD coverage limit was almost 10 times per capita income, while the 100 000 USD limit today amounts to less than four times per capita income (Blinder & Wescott, 2001).

In systems with explicit deposit insurance, the frequency of bank crises rises as the ratio of deposit insurance coverage to per capita GDP increases. When the United States raised its policy limits on deposit insurance from \$40,000 to \$100,000 per depositor per bank in 1980, coverage shot up to approximately nine times per capita GDP. Shortly thereafter, the 1980s U.S. savings and loan crisis ensued. Today, economists estimate that the likelihood of that crisis would have dropped by forty-three percent if the U.S. ratio had been the same as Switzerland's (one-half of per capita GDP). More generally, countries with coverage of over four times per capita GDP are five times more likely to suffer bank crises than countries with coverage of under one time per capita GDP (McCoy, 2007).

Coverage: policymakers should define clearly in law, prudential regulations or by-laws what an insurable deposit is. The level of coverage should be limited but credible and be capable of being quickly determined. It should cover adequately the large majority of depositors to meet the public policy objectives of the system and be internally consistent

with other deposit insurance system design features (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

A second principle is to make membership in the deposit-insurance system compulsory. This increases the size of the insurance pool and prevents strong institutions from selecting out of the pool whenever the fund needs an injection of new capital (Demirgüç-Kunt, Kane, & Laeven, 2006).

Compulsory membership: Membership in the deposit insurance system should be compulsory for all financial institutions accepting deposits from those deemed most in need of protection to avoid adverse selection – the risk that only small and weak banks will participate in the process of deposit insurance if participation is voluntary (Principle 8, Basel Committee on Banking Supervision (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

It is argued that participation in deposit insurance system is more attractive for weaker banks with higher probability of failure especially under the condition when all commercial banks are equally judged and the same insurance premiums are imposed to all of them. To avoid only weak bank memberships of the system it is recommended to eliminate voluntary participation in the system.

A third principle supported by cross-country evidence is to make the public and private sectors jointly responsible for overseeing the scheme. A public-private partnership establishes checks and balances that improve management performance. The Association of Supervisors of Banks of the Americas (ASBA) has published key findings and recommendations about effective deposit insurance schemes. According to their publication the same is recommended about joint responsibilities of different parties involved in the process. It is said that effective interrelationships between safety net players are critical. Bank supervisors, Deposit Insurance Agencies (DIA), central banks, and others involved in financial safety nets, should share similar goals and their interactions should be guided by a clear division of powers and responsibilities (Schich, 2008). Effective bank supervision, resolutions programs, and deposit insurance schemes require that all safety net participants have access to an adequate flow of information. Strong and cooperative relationships between safety net participants should be fostered. While recognizing that the amount and type of information needed by each safety net participant will vary depending on their powers and mandate, information sharing and coordination agreements, both formal and informal, that establish responsibilities and accountability, should be adopted. These

arrangements should prove particularly useful to Deposit Insurance Agencies that lack the authority to independently evaluate or examine an insured institution.

At the same time ASBA recommends that the DIA should be governed by an independent board of directors which is responsible and accountable for all aspects of the DIA's operations. The board, officers, and employees of the DIA should be afforded legal protection from personal and institutional liability for actions taken in good faith while performing their duties so that they can conduct their work with independence and without fear of undue legal actions. This legal protection must coexist in an environment where there is clear accountability at the individual and institutional level.

The recommendations are the same about the governance and authority of deposit insurance agencies by Nicholas J. Ketcha Jr. (2007) and George J. Benston (1995). According to him to the extent that the structure facilitates the organizational and political separation of the deposit insurance system from other government operations, there may be less potential for incentive conflicts that compromise the effectiveness of the deposit insurance program. Experience suggests that times of crises produce potential pressures for decisions that may not be in the long run interest of a sound and efficient banking system. An independent authority is in the best position to resist such pressures (Benston, 1995). However, it must be recognized that establishing a separate authority for deposit insurance requires careful attention to the balance of power among the various banking authorities. The issue involving the appropriate responsibilities among bank regulators is whether the deposit insurer should also have direct supervisory authority. In case where the insurer is not also a bank supervisor, the arrangement must provide the insurer with the necessary information on the current condition and practices of all insured institutions (Ketcha, 2007).

Governance: The deposit insurer should be operationally independent, transparent, accountable and insulated from undue political and industry influence (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

Powers: A deposit insurer should have all powers necessary to fulfill its mandate and these powers should be formally specified. All deposit insurers require the power to finance reimbursements, enter into contracts, set internal operating budgets and procedures and access timely and accurate information to ensure that they can meet their obligations to depositors promptly (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

The fourth principle is to limit the fund's ability to shift losses and loss exposures to the general taxpayer. Whether or not the insurer holds a formal fund of reserves, it must be crystal clear that except, in truly catastrophic circumstances, funds to cover bank losses will come principally from the pool of surviving banks. Access to taxpayer assistance should be legally impeded by statutory provisions that can be relaxed only in extraordinary circumstances and by following extraordinary procedures (Demirgüç-Kunt, Kane, & Laeven, 2006).

The fifth principle is to price deposit-insurance services appropriately. Laeven (2006) shows that countries have typically underpriced deposit insurance. He describes several methods for pricing deposit insurance accurately. To follow "Core Principles for Effective Deposit Insurance Systems" by International Association of Deposit Insurers policymakers have a choice between a flat-rate premium system and a premium system that is differentiated on the basis of individual bank risk profiles. The bases and criteria used in a risk-adjusted differential premium system should be transparent to all participants. As well, policymakers who adopt risk-adjusted differential premium systems should ensure that necessary resources are in place to administer the system appropriately (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009)

The same key consideration in designing pricing scheme for deposit insurance system according to Nicholas J. Ketcha Jr. (2007) involves deposit insurance premium assessment. A simple and relatively easy-to-implement system for assessing deposit insurance premiums is flat-rate system, during which institutions were charged a given rate per Dollar of total deposits. Such a pricing system is aimed to maintain adequate financial capacity for the insurer, and leaves the task of controlling moral hazard to the supervisory process and the market.

Risk-adjusted premiums are newer technique to alleviate moral hazard pioneered in the United States in 1995 (McCoy, 2007).

In compliance to the principle 2 (Mitigating moral hazard) of the "Core Principles for Effective Deposit Insurance Systems" by Basel Committee and IADI moral hazard should be mitigated by ensuring that the deposit insurance system contains appropriate design features and though other elements of the financial system safety net (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009). Risk-based insurance premiums work precisely as one of the elements controlling and minimizing the risk of the moral hazard.

At present, risk-based premium system that assesses higher rates on institutions that pose greater risks to the insurance fund are widely used. Risk-based insurance premium proposals require an accurate method of assessing bank risk (Cornett, Mehran, & Tehranian, 1998). Each institution is assigned to one of nine risk categories using a two-step process based first on capital ratios or the capital group assignment and then on other relevant information covering the supervisory subgroup assignment (Association of Supervisors of Banks of the Americas, 2006;).

By 2003 twenty countries adjusted their deposit insurance premiums for risk (McCoy, 2007). Federal Deposit Insurance Corporation insurance premiums are assessed based on Risk-Based Deposit Insurance System – required by the FDIC Improvement act of 1991, premiums appropriately reflect the risks posed to the insurance funds and fund reserve ratios are maintained at or above the target Designated Reserve Ratio of 1.25 percent of insured deposits (Schumer, 1990).

Assessment rates for insured depository institutions are assigned based on an assessment of risk using a risk classification system. Assessment risk classification is composed of two parts: a capital adequacy group and supervisory subgroup. An institution is assigned to one of three capital groups – well capitalized, adequately capitalized and under capitalized (Table 1.2.) – using the minimum capital ratios:

Table 1.2. Minimum Capital Requirements across Capital Categories

| | <i>Total risk-based ratio</i> | | <i>Tire 1 risk-based ratio</i> | | <i>Tire 1 leverage ratio</i> |
|---------------------------------------|---|-----|--------------------------------|-----|------------------------------|
| <i>Well capitalized</i> | 10% | and | 6% | and | 5% |
| <i>Adequately capitalized</i> | 8% | and | 4% | and | 4% |
| <i>Undercapitalized</i> | 6% | and | 3% | and | 3% |
| <i>Significantly undercapitalized</i> | < 6% | or | < 3% | or | < 3% |
| <i>Critically undercapitalized</i> | Ratio of tangible equity to total assets is | | | | 2% |

Source: Koch & MacDonald, 2003, p. 478

Within each capital group, each institution will be assigned to one of three subgroups based on supervisory evaluations provided by the institution’s primary federal regulator. The three supervisory subgroups are:

Subgroup A: Financially sound institutions with only a few minor weaknesses.

Subgroup B: Institutions that demonstrate weaknesses that could result in significant deterioration of the institution and increased risk of loss to the insurance fund.

Subgroup C: Institution that pose a substantial probability of loss to the insurance fund unless effective corrective action is taken.

Based on this system there are nine different risk categories (Table 1.3.). The current assessment rate schedule for insured institutions is as follows:

Table 1.3. Assessment Rate Schedule for Insured Institutions

| <i>Capital Groups</i> | <i>Supervisory Subgroups</i> | | |
|------------------------|------------------------------|----------|----------|
| | A | B | C |
| Well capitalized | 0 bp | 3 bp | 17 bp |
| Adequately capitalized | 3 bp | 10 bp | 24 bp |
| Undercapitalized | 10 bp | 24 bp | 27 bp |

Source: Koch & MacDonald, 2003, p. 497

Basis points, denoted by bp, represent some percentage of insured deposits payable by commercial banks as an insurance premium. 0 bp refers to 0 % of insured deposits, 3 bp – to 0.3 % of insured deposits, etc. As illustrated by the Table 1.3. the minimum insurance premium paid by commercial banks to the insurance fund in the United States is 0 % of insurance deposits or no insurance premium paid, these are banks belonging to the supervisory subgroup “A” and to the capital group “well capitalized”. And the maximum amount paid by banking institutions as an insurance premium is 2.7 % of insured deposits, these are banks which belong to the supervisory subgroup “C” and to the capital group “undercapitalized”.

Approximately 93 percent of all insured institutions in United States are currently listed in the lowest risk category (with 0 bases point) and pay no assessment (Koch & MacDonald, 2003). The fact that 93 % of insured institutions in the United States are listed to the lowest risk category and pay no assessment or insurance premium is an indicator that implementation of deposit insurance system did not provoked the problem of moral hazard, or did not encouraged commercial banks in America to keep riskier positions and to undertake excessive risks in the hope of weaker market discipline and less severe supervision from the depositors side. They rather look for the lowest possible insurance premiums payable to the insurance corporation to reduce expenses. In this case risk-based insurance premiums seem to be effective.

A risk-related premium system, as mentioned, provides additional control over moral hazard. At a minimum, such a system can create stronger incentives for institutions to avoid actions that may result in a weakened condition (O'Keefe, 1993). This is true of systems that charge higher premiums based primarily upon deteriorating financial performance. The liability

structure of institutions should also be considered in establishing an effective risk-based premium system. An institution with a high percentage of liabilities that are secured may represent a high risk of loss to the insurer and be the subject to higher premiums. Risk-based pricing of deposit insurance would influence bank decision-making well ahead of supervisory sanctions, providing incentives for institutions to avoid undue risk-taking. Bank examinations, which, at a minimum entail an assessment of the financial condition of banks and their operating practices and controls, are essential to assessing the risk profile of banking institutions, but the experience of other countries has indeed shown that simply monitoring financial statements is not sufficient to assess the condition of a bank. To be the most effective, such a pricing system must be based upon the current practices of institutions, current market signals regarding changes in the risk profiles of institutions, or other forward-looking factors, as opposed to observed changes in financial conditions (Ketcha, 2007; Kwak, 2001).

The sixth and final principle is that deposit insurers must actively involve themselves in decisions about when and how to resolve individual-bank insolvencies. Because deposit insurers are responsible for paying off insured depositors, they have a strong interest in assuring the prompt and speedy resolution of insolvent banks. Beck and Laeven (2006) argued that deposit insurers are more efficient than courts because banking supervisors better understand bank risk-taking incentives and how to remedy them. Using data for over large number of banks in over 50 countries, they show that banks are more stable and less likely to become insolvent in countries where the deposit insurer has the responsibility of intervening failed banks and the power to revoke membership in the deposit insurance scheme.

Besides these six common principles there are other elements essential to the successful implementation of deposit insurance system:

1. Funding;
2. Treatment of foreign deposits;
3. Public awareness;
4. Intensified supervision;
5. Optimal time for deposit insurance system implementation.

Key issue to be considered is whether or not to establish a separate deposit insurance fund, there may be political obstacles to obtain funds when they are needed for deposit insurance purposes. With a stand-alone fund, monies will be available when needed, provided that the

premiums charged have reflected realistic assumptions regarding potential losses and other deposit insurance cost. A benefit of establishing a stand-alone deposit insurance fund financed solely through premiums paid by insured institutions is that these institutions may perceive a direct stake in the financial health of the insurance system, providing motivation for them to scrutinize deposit insurance operations and maintain industry self-policing (Ketcha, 2007).

If a separate deposit insurance fund is created, an important question is the appropriate target ratio of the fund balance to total insured deposits. The answer to this question is likely to vary over time, depending upon the strength of the banking industry and condition of the economy. In practice, the task of choosing reserve ratio to maintain solvency and fund adequacy is difficult, involving judgments on the basis of imperfect information about potential losses. The issue is complicated further by considering other relevant factors, such as economic costs associated with the premium volatility that may be required to maintain a given reserve ratio continuously. These considerations raise the possibility that flexibility in choosing a target reserve ratio, as well as determining the appropriate steps to achieve it may provide better balance among the relevant objectives (Ketcha, 2007).

Funding: A deposit insurance system should have available all funding mechanisms necessary to ensure the prompt reimbursement of depositors' claims including a means of obtaining supplementary back-up funding for liquidity purposes when required. Primary responsibility for paying the cost of deposit insurance should be borne by banks since they and their clients directly benefit from having an effective deposit insurance system.

For deposit insurance systems utilizing risk-adjusted differential premium system should be transparent to all participants. As well, all necessary resources should be in place to administer the risk-adjusted differential premium system appropriately (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

Significant issue of designing a coverage scheme is a treatment of foreign currency deposits. Again, there is a great variety in the treatment of foreign deposits among deposit insurance systems. Most systems that cover foreign deposit protect themselves from foreign exchange risk in some fashion, usually by making payment only in domestic currency up to the coverage limit (Ketcha, 2007).

One more principle essential for effective deposit insurance system recommended by Basel Committee on Banking Supervision and International Association of Deposit Insurers is about public awareness.

Public awareness: In order for a deposit insurance system to be effective it is essential that the public be informed on an ongoing basis about the benefits and limitations of the deposit insurance system (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

The characteristics of a deposit insurance system should be publicized regularly to maintain and strengthen public confidence. Depositors have to be informed not only about safety of their savings when they have them insured but they have to be aware of responsibilities they carry in order to make deposit insurance project effective. Depositors have to know that it is essential to supervise performance of their banking institutions not to weaken market discipline after imposition of deposit insurance system.

Figure 1.14. Public Awareness Score in Seven Jurisdictions (self assessment)



Source: Association of Supervisors of Banks of the Americas, 2006, p. 37

The Figure 1.14. demonstrates the level at which safety net players in 7 Latin American countries have their population informed about deposit insurance program design, organizational structure and other specific details. Scale of 1 through 5; 1 indicates little public awareness and 5 indicates strong public awareness. The practices of how these countries manage to do it are as follows: In compliance to the Association of Supervisors of Banks of Americas according to the Article 94 of the Law on Banks and Financial Groups in Guatemala financial institutions are responsible for informing depositors about deposit insurance coverage. In Mexico Instituto para la Protección al Ahorro Bancario (IPAB) discloses information about deposit insurance using written press, radio, posters, information packets, surveys, e-mail, telephone hotline, information booths in bank branches and IPAB's web site. In Peru the maximum coverage limit provided by the Fondo de Seguro de Depósitos (FSD) is published daily in major newspapers. The public is informed by the Superintendencia, through the media, when a bank is placed in receivership, but not when an institution is troubled or risks failure (Association of Supervisors of Banks of the Americas, 2006).

Deposit insurance system due to probability of reduced market discipline and increased moral hazard at depositories has intensified the need for supervisory authorities to supervise and regulate banks. Regulations have a purpose to prevent bank management from undertaking activities that excessively increase risk to the detriment of existing depositors and creditors or the insurance fund. Regulators covering bank capital requirements similarly serve to limit a bank's appetite for excessive risk-taking (Furlong, 1989). Capital requirements serve to reduce the incentives of owners to increase risk since, the greater the amount of capital, the larger is the owners' loss in the event of failure. As a critical element of assuring capital adequacy and to minimize market distortions, capital standards should approximate the level of capital that market discipline would require if there were no deposit insurance. In this way, standards for capital adequacy provide supervisory protection while achieving the benefits of a market-based system, which are efficient allocation of resources, competitiveness, healthy innovation and stability. The specifics of bank supervision and regulation will vary from nation to nation given their institutional, cultural, historical and legal differences, but the basic goals are quite similar; maintaining public confidence in the banking system, protecting depositors' funds, fostering an efficient and competitive banking system and insuring compliance with banking laws and regulations. In this regard, bank supervision, examinations and regulations provide effective mechanisms for limiting excessive risk-taking by banks. Effective supervision is aimed at ensuring stability in the banking system, which in turn, allows banks to reform their various roles effectively (Ketcha, 2007; Schich, 2009).

Governments put banking regulation systems in place, replete with entry restrictions, activity restrictions, prophylactic rules, examinations, and sanctions. Similarly, tough bank resolution techniques, including prompt closure of critically undercapitalized banks and prohibitions against bailouts of failed bank shareholders, are crucial safeguards against moral hazard (French, 1992). These measures are not enough alone to curb moral hazard. In addition, three more things are needed to reduce the risk created by deposit insurance. First, all deposit insurance schemes need to incorporate risk-reducing features. Second, and related to the first, countries need to foster incentives to encourage large depositors, shareholders, and other creditors to monitor their banks. Finally, neither of these points matters if a country lacks the institutions to adopt and enforce these safeguards. Unless countries have strong institutional environments, explicit deposit insurance will do more harm than good to their overall financial stability (McCoy, 2007; Garcia, 1997).

Observers of deposit insurance project development suggest that the optimal time for any country to create a deposit insurance scheme is when the economy and the financial system are stable and expanding, and financial institutions are adequately capitalized and profitable (Hovakimian, Kane, & Laeven, 2003). Many of the experts declare that explicit deposit insurance favorably impacts the level and volatility of financial activity only in the presence of strong institutional development (Cull, Senbet, & Sorge, 2005). However, history shows that these ideal situations rarely exist. Typically during economic expansions, little consideration is given to adopting measures that would be useful during a recession or other economic hardship. Rather, legislators, government authorities, supervisors, and bankers have demonstrated that they prefer to adopt these types of measures immediately after a financial crisis. Examples of legislative changes following financial crises in many countries prove it to be successful. Association of Supervisors of Banks of the Americas (ASBA) states it to be so. In Argentina, the effects of global depression led to the banking and monetary reform of 1935, which provided a legislative basis for the central bank's supervision of its banking industry. By the 1970s, the country's economy began a chronic hyperinflationary cycle that led to a banking crisis in the early 1980s and enactment of a set of economic and monetary measures, such as the Convertibility Law, in the early to mid-1990s. The aftermath of the ensuing banking crisis of the 1990s resulted in the 1995 establishment of a banking capitalization fund and deposit guarantee fund aimed to avoid banking runs and as a way of increasing depositor confidence and enhancing the safety of the banking industry.

In Bolivia, after the liquidation of two banks in 1994, the Fund for the Development of the Financial System and Assistance to the Productive Sector was created, with the goals of capitalizing institutions with solvency problems and injecting liquidity into the financial system. In December 2001, several changes to the banking law were made, particularly for the treatment of problem banks. The changes established a preventive process designed to avoid traumatic liquidations and created the deposit insurance scheme as a mechanism to assist resolution processes.

In Mexico, the National Banking Committee (CNB) was created in 1924, complemented by a banking law in 1941 and the incorporation of insurance oversight in 1970. Following the 1982 financial crisis and nationalization of private banks, the CNB was divided into separate banking and insurance supervision agencies in 1989. The 1990 banking law allowed for private participation in the banking industry that, after the mid- 1990s banking crisis, led to regulatory

changes and a stronger supervisory framework, which in turn resulted in a significant growth and internationalization of the country's banking industry.

In Peru, the Banking Superintendence was created in 1931 with the objective of supervising 16 financial institutions authorized to operate in the country. The scope of supervised entities was subsequently expanded in 1972 and 1981. The severe economic and banking crisis of the late 1980s led to the 1991 banking law and the 1991, 1993, and 1996 legislation on financial oversight, which framed the current institutional arrangements of the supervisory agency.

Immediate development of the mechanism for deposit safety became a necessity in order to regain people's trust toward banks when the largest and most popular banks operating in Lithuania, Lithuanian Equity Innovation Bank and the Litimpeks bank, were suspended by Lithuanians In 1996. State company Deposit Insurance Fund was registered with the Ministry of Economy of the Republic of Lithuania in 1996. March 1, 1997, saw the start of insurance of deposits of individuals. After critical years of uncertainty in 1996 soon after deposit insurance have been imposed deposit started to significantly grow and keeps growing since then.

Deposit insurance was adopted in the United States in response to the many bank suspensions since the beginning of the Great Depression (Martin, 2003). The Federal Deposit Insurance Corporation (FDIC) was established in 1933. At the height of this Great Depression in 1933 many banks could not meet their obligations (White, 1998). The FDIC was created three months later when the President Franklin D. Roosevelt signed into law the Banking Act of 1933. Opposition to this plan believed a system of deposit insurance would be unduly expensive and would unfairly subsidize poorly managed banks. Federal deposit insurance became effective on January 1, 1934, providing depositors with \$2,500 in coverage, and by any measure it was an immediate success in restoring public confidence and stability to the banking system. Only nine banks failed in 1934, compared to more than 9,000 in the preceding four years. In its seventh decade, federal deposit insurance remains an integral part of the nation's financial system, at different points in time there have been too few bank failures and it is argued that because of deposit insurance (Federal Deposit Insurance Corporation, 1998).

The practices of choosing the proper time for implementation of deposit insurance system in the countries above enable to conclude that the important thing is how country manages to design effective deposit insurance system providing financial stability.

One factor essential for successful implementation of deposit insurance system is proved to be the design and the features of the system, another precondition is the legislative basis and regulations providing strong supervision of banking sector (Helfer, 1999). “Banking stability is improved if deposit insurance is accompanied by appropriate regulation and supervision” (Demirgüç-Kunt, Kane, & Laeven, 2006). Despite some sort of disturbances country in general has to be ready for project development by having strong banking institutions operating on the marketplace. Legislative basis providing control and supervision of banking activities for their risk assessment and management processes are essentially important for having strong banking system in the country. It is proved by different studies that primary principle of success for deposit insurance project is prudential regulations that countries have.

Core Principles for Effective Deposit Insurance Systems by Basel Committee and International Association of Deposit Insurers declares that no one principle or a feature of deposit insurance system can provide successful insurance programs if the preconditions below are not met:

First the introduction of deposit insurance system can be successful when a country’s banking system is healthy and its institutional environment sound.

Second, an effective deposit insurance system needs to be based on a number of external elements or preconditions. These preconditions, although mostly outside of the direct jurisdiction of the deposit insurance system, have a direct impact on the system. These preconditions include:

- a) An ongoing assessment of the economy and banking system. Policymakers should undertake a situational analysis of the economic environment as it affects the banking system and will influence the effectiveness of a deposit insurance system. The soundness of the banking system, including a detailed evaluation of the condition of bank’s capital, liquidity, credit quality, risk management policies and practices should be assessed. Additional factors that should be considered include the ability of a legal regime to support the intervention or closure of troubled banks in timely manner.
- b) Sound governance of agencies comprising the financial system safety net. It strengthens the architecture of financial system and contributes directly to financial system stability. Four major elements comprising sound governance are operational independence, accountability, transparency and disclosure, and integrity.
- c) Strong prudential regulation and supervision. The strength of prudential regulation and supervision will have direct implications for the effectiveness of a deposit

insurance system. Strong prudential regulation and supervision should allow only viable banks to operate and be members of the direct insurance system. Banks should be well capitalized and follow sound and prudent risk management. Other characteristics include an effective licensing or chartering regime for new banks, regular and thorough examinations, risk assessment of individual banks and a framework for the early detection and timely intervention and regulation of troubled banks.

A well developed legal framework, sound accounting and disclosure regimes are necessary for an effective deposit insurance system. Accurate, reliable and timely information reported by these regimes can be used by management, depositors, the marketplace and authorities to make decisions regarding the risk profile of a bank, and thereby increase market, regulatory and supervisory discipline (Basel Committee on Banking Supervision; International Association of Deposit Insurers, 2009).

Banks are supervised to:

1. Protect interests of depositors;
2. Control whether banks meet all requirements by law;
3. Avoid such complication of problems when it becomes impossible to correct them if not too expensive for government financial decisions are made;
4. Be aware of problems and weaknesses a particular bank faces and examine reasons for that. It helps supervisors to give recommendations and directives to such banks about how to overcome problems and difficulties they face.

Chapter 2 – Banking Environment of Georgia

2.1. Prudential Regulations of Banking System in Georgia as Precondition for Successful Implementation of Deposit Insurance Project

Current legislative basis of Georgia most probably can ensure successful implementation of deposit insurance system. The whole process of bank supervision and risk assessment, essential for that, is in compliance with the consultative document of Basel Committee on Banking Supervision about Core Principles for Effective Banking Supervision of 2006.

Through regular monitoring the supervisors of commercial banks make all efforts to ensure that the banks in Georgia:

- a) Are financially reliable;
- b) Are managed skillfully;
- c) Do not endanger depositors' interests.

In compliance with the “Organic Law of Georgia on the National Bank of Georgia” (Chapter VIII) NBG is authorized to police commercial bank activities, NBG assesses and controls risk level each commercial bank faces, hence protects them from choosing risky activities and whole banking system from the danger of undesirable failure, keeping safety and stability of banking sector.

In order to realize its authority NBG has worked out “The Manual for Commercial Bank Supervision”, which describes and explains policy and administration of bank inspection. NBG evaluates financial condition of each particular bank by use of rating system. General Rating System is an instrument to discover degree of stability of supervised bank and to expose banks with financial or operational weaknesses, those been in need of special attention. According to this rating system each bank is given composite rating, which is made up of five major components describing financial condition of commercial bank. This system called CAMEL rating evaluates:

1. Capital adequacy (rating from 1 denoting well capitalized, to 5-undercapitalized banks);
2. Asset quality (form rate 1- banks with high quality assets to rate 5- critical standard of asset quality);

3. Management (from rate 1- banks with strong management to rate 5- weak management);
4. Earnings (from rate 1- high income banks to rate 5- banks experiencing loss that bank capital are not enough to absorb it);
5. Liquidity (from rate 1- banks with high liquidity to rate 5- critical liquidity level).

Composite rating is an average grade of all five component rates.

According to the CAMEL composite rating banks are ranked from 1 to 5 (Table 2.1.). 1 indicates the highest rating, strongest performance and risk assessment practices, hence does not need to be strictly supervised, herewith 5 is the lowest rating, weakest performance, banks given this rating has inadequate risk management practices and therefore are in need of sever control and requires corrective arrangements.

Table 2.1. CAMEL Composite Rating

| | |
|--|--|
| <i>Composite rate 1 – satisfactory</i> | Banks in this group are stable in all its aspects and have components rated 1 or 2. Weaknesses are insignificant and can be handled through everyday management process. In an event of business fluctuations they keep their stability best. They follow legislation and have adequate risk management methods. Banks from this group are in need of less attention and supervision. |
| <i>Composite rate 2 – adequate</i> | Banks in this group are fundamentally stable and sound. No component rating can be more than 3. Weaknesses are moderate and can be corrected. Such banks easily endure business fluctuations. They follow legislation. Risk management methods are satisfactory. Banks from this group need insignificant supervisory reactions. |
| <i>Composite rate 3 – less adequate</i> | Banks in this group are with some weaknesses that bank management is unable to timely cope with. No component rating can be more than 4. They are very sensitive toward external effects and are less consistent to business fluctuations. Banks most probably break legislation. Risk management practices are not adequate. Considering financial condition of these banks it is less probable for them to fail, but strict supervision is still required. |
| <i>Composite rate 4 – inadequate</i> | Banks in this group are less stable, with serious financial and managerial gaps. They are not resistant to environmental fluctuations. Have seriously violated legislation. Such banks need detailed supervision and serious corrective arrangements not to fail and hence shake the stability of banking systems. |
| <i>Composite rate 5 – critical</i> | Extremely unstable banks. Their risk management is inadequate. They create serious supervisory problems. External financial support or other type of assistance is necessary to keep such banks solvent. They need to be permanently supervised. The probability of their failure is very high and thus banking system stability may be at serious risk if banks from |

| | |
|--|--|
| | this group will not get over the weaknesses they have. |
|--|--|

Source: National Bank of Georgia, Supervisory Department, 2007

Capital Adequacy Standards

The issue of capital adequacy is a complicated question. The level of capital is different for each bank and depends on the size of the bank and level of risk bank faces. According to “The Manual for Commercial Bank Supervision” bank supervisors can analyze bank risks and determine minimal level of capital adequate for bank safety. Capital adequacy standards determined by NBG are based on the system worked out by the Basel Committee. According to it primary and supervisory capital has to be not less than correspondingly 8% and 12% of risk weighted assets. Risk weighted assets are divided into four categories (Table 2.2.).

Table 2.2. Categories of Risk Weighted Assets

| <i>Asset categories</i> | <i>Risk Weight (Conversion Factor)</i> | <i>Risk Coefficient</i> |
|---------------------------------|--|-------------------------|
| 1 st category assets | 0 % | 0 |
| 2 nd category assets | 20 % | 0.2 |
| 3 rd category assets | 50 % | 0.5 |
| 4 th category assets | 100 % | 1.0 |

Source: National Bank of Georgia, Supervisory Department, 2007

To measure risk weighted assets each asset category is multiplied by its risk coefficient determining relative risk of each asset categories (calculations are shown by Table 2.4.). Asset categories are shown by the Table 2.3.

Table 2.3. Composition of Asset Categories

| |
|---|
| <i>1st category- 0% risk assets</i> |
| Cash, required reserves and correspondent accounts at NBG, claims (defined broadly to include securities, loans, and leases) or the portion of claims that are directly and unconditionally guaranteed by NBG, claims or portion of claims directly and unconditionally guaranteed by the governments of the Organization for Economic Co-operation and Development (OECD), claims collateralized by debt securities issued or guaranteed by OECD central governments, claims collateralized by cash on deposits in the bank. |
| <i>2nd category- 20% risk assets</i> |
| Local currency (GEL) and OECD member countries’ currency securities, claims guaranteed by resident banks of OECD member countries, Ministry of Finance of Georgia treasury bills, claims or portion of claims collateralized by t-bills issued and guaranteed by Ministry of Finance of Georgia, claims or portion of claims guaranteed |

by international financial institutions, claims or portion of claims collateralized by deposits in resident banks of OECD member countries, claims or portion of claims guaranteed by OECD central governments or central banks, gold corresponding to the international standards and other precious metals, claims or portion of claims collateralized by gold corresponding to the international standards and other precious metals.

3rd category- 50% risk assets

Cash and OECD nonmember countries currency securities, claims guaranteed by resident banks of Georgia, short-term claims guaranteed by resident banks of OECD nonmember countries, claims or portion of claims directly and unconditionally guaranteed by Ministry of Finance of Georgia, claims or portion of claims collateralized by debt securities issued and guaranteed by ministry of Finance of Georgia, claims or portion of claims directly and unconditionally guaranteed by local governments (municipalities) of OECD member countries, claims or portion of claims collateralized by debt securities issued and guaranteed by municipalities of Georgia and OECD member countries.

4th category- 100% risk assets

Claims or portion of claims directly and unconditionally guaranteed by the governments or central banks of OECD nonmember countries, claims or portion of claims collateralized by debt securities issued and guaranteed by the governments or central banks of OECD nonmember countries, long-term claims guaranteed by resident banks of OECD nonmember countries, corporate debt securities, investments in the primary capital of legal entity, gold not corresponding to the international standards and other precious metals, claims or portion of claims collateralized by gold not corresponding to the international standards and other precious metals, loans and other assets not included in 0%, 20% and 50% risk asset categories.

Source: National Bank of Georgia, Supervisory Department, 2007

Table 2.4. Simplified Calculation of Risk Weighted Assets and Capital Adequacy Coefficient

a) Balance Sheet (1000 GEL)

| Asset | | Liability | |
|------------------------|------------|--------------------------|------------|
| Cash | 20 | Deposits | 190 |
| Corresponding accounts | 50 | Primary capital | 8 |
| Mortgage loans | 30 | Retained earnings | 2 |
| Other loans | 100 | Total capital | 10 |
| Total assets | 200 | Total liabilities | 200 |

Source: National Bank of Georgia, 2006

b) Risk weighted assets

| Total capital | | | | 10 | |
|------------------------------------|-----|-------------------------|------|-----------------------|------------|
| Risk Weighted Assets (RWA) | | Risk Coefficient | | Calculated RWA | |
| Cash (0%) | 20 | x | 0.00 | = | 0 |
| Corresponding accounts (20%) | 50 | x | 0.20 | = | 10 |
| Mortgage loans (50%) | 30 | x | 0.50 | = | 15 |
| Other loans (100%) | 100 | x | 1.00 | = | 100 |
| Sum of Risk Weighted Assets | | | | | 125 |

Source: National Bank of Georgia, 2006

c) Capital adequacy coefficient =

= Total capital / Sum of calculated risk weighted assets = 10 / 125 = 0.08 (8 %)

Asset Quality

The asset quality rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios, other real estate owned, and all other assets. The primary factor effecting overall asset quality is the quality of the loan portfolio and the credit administration program. Loans are usually the largest of the asset items and can also carry the greatest amount of potential risk to the bank's capital account. Securities can often be a large portion of the assets and also have identifiable risks.

NBG determines five categories of asset classification standards (National Bank of Georgia, Supervisory Department, 2007):

Standard Loans – Loans are classified as standard loans if principal and interest payments are always made in accordance with the schedule. The borrower is financially stable and at the same time financially strong enough to absorb unexpected losses. All commercial banks are required to keep 2 % of residual amount of standard loan as a reserve for loan losses.

Watch Loans – Trustworthy loans are adequately protected but payment potentials are weak. Borrower seemed to be financially stable and creditworthy at the moment when loan was granted but later on it appeared to have a critical financial condition due to undesirable developments on the market (negatively effecting borrowers business activities and income) or

due to changes in the enterprise of the borrower. Banks are demanded to keep loan loss reserves of 10% of residual amount of trustworthy loans.

Substandard Loans – Substandard loans are inadequately protected by the current sound worth and paying capacity of the obligor or of the collateral pledged, if any. Loans so classified have well defined weakness or weaknesses. They are characterized by the distinct possibility that the bank will sustain some loss if the deficiencies are not corrected. All banks have to keep loan loss reserves of 30% of residual amount of substandard loans.

Doubtful Loans – Loans classified Doubtful have all the weaknesses inherent in those classified Substandard with the added characteristic that the weaknesses make collection or liquidation of the collateral in full needed, on the basis of currently known facts, conditions and values, highly questionable and improbable. Commercial banks are required to keep 50% of residual amount of doubtful loan as a loan loss reserve.

Bad Loans (or Loss) – Loans classified Loss are considered uncollectible and of such little value that their continuance as bankable assets is not warranted. This classification does not mean that the loan has absolutely no recovery or salvage value but rather it is not practical or desirable to defer writing off this basically worthless asset even though partial recovery may be affected in the future. Banks are obliged to keep loan loss reserves of 100% of residual amount of loss loans.

Investment debt securities bear the same classification standards, correspondingly financial securities have to be classified based on the credit risk typical to them. A required reserve for each category asset is tabulated by the Table 2.5.

Table 2.5. Classification Standards of Debt Securities

| Category | Characteristics | Required Reserve Rate |
|--------------------|-------------------------------|------------------------------|
| Standard | Same to the standard loans | 2 % |
| Watch | Same to the watch loans | 10 % |
| Substandard | Same to the substandard loans | 30 % |
| Doubtful | Same to the doubtful loans | 50 % |
| Loss | Same to the loss loans | 100 % |

Source: National Bank of Georgia, Supervisory Department, 2007

Factors that examiners are required to consider in the process of assessment of the asset quality are the following (National Bank of Georgia, Supervisory Department, 2007):

- a) The adequacy of underwriting standards, soundness of credit administration practices, and appropriateness of risk identification practices.
- b) The level, distribution, severity, and trend of problem
- c) The adequacy of the allowance for loan and lease losses and other asset valuation reserves.
- d) The credit risk arising from or reduced by off-balance sheet transactions, such as unfunded commitments, credit derivatives, commercial and standby letters of credit, and lines of credit.
- e) The diversification and quality of the loan and investment portfolios.
- f) The extent of securities underwriting activities and exposure to counter-parties in trading activities.
- g) The existence of asset concentrations.
- h) The adequacy of loan and investment policies, procedures, and practices.
- i) The ability of management to properly administer its assets, including the timely identification and collection of problem assets.
- j) The adequacy of internal controls and management information systems.
- k) The volume and nature of credit documentation exceptions.

Management

The capabilities of the board of directors and management, in their respective roles to identify, measure, monitor, and control the risks of an institution's activities and to ensure a financial institution's safe, sound, and efficient operation in compliance with applicable laws and regulations is reflected in this rating.

The capability and performance of management and the board of directors is rated based upon an assessment of the following evaluation factors (National Bank of Georgia, Supervisory Department, 2007):

- a) The level and quality of oversight and support of all institution activities by the board of directors and management.

- b) The ability of the board of directors and management, in their respective roles, to plan for, and respond to, risks that may arise from changing business conditions or the initiation of new activities or products.
- c) The adequacies of, and conformance with, appropriate internal policies and controls addressing the operations and risks of significant activities.
- d) The accuracy, timeliness, and effectiveness of management information and risk monitoring systems appropriate for the institution's size, complexity, and risk profile.
- e) The adequacy of audits and internal controls to: promote effective operations and reliable financial and regulatory reporting; safeguard assets; and ensure compliance with laws, regulations, and internal policies.
- f) Compliance with laws and regulations.
- g) Responsiveness to recommendations from auditors and supervisory authorities.
- h) Management depth and succession.
- i) The extent that the board of directors and management is affected by, or susceptible to, dominant influence or concentration of authority.
- j) Reasonableness of compensation policies and avoidance of self-dealing.
- k) Demonstrated willingness to serve the legitimate banking needs of the community.
- l) The overall performance of the institution and its risk profile.

Earnings

This rating reflects not only the quantity and trend of earnings, but also factors that may affect the sustainability or quality of earnings.

The coefficients calculated using ROA (Net Profit / Total Asset) and ROE (Net Profit / Equity Capital) are standardized measurements for bank profitability, ROA better measures general profitability rate of bank rather than ROE, as ROE very much depends on both bank income and amount of capital owned by bank, the analysis require to determine whether high ROE is a result of high income generated by bank or less capital kept.

The rating of an institution's earnings is based upon an assessment of the following evaluation factors (National Bank of Georgia, Supervisory Department, 2007):

- a) The level of earnings, including trends and stability.

- b) The ability to provide for adequate capital through retained earnings.
- c) The quality and sources of earnings.
- d) The level of expenses in relation to operations.
- e) The adequacy of the budgeting systems, forecasting processes, and management information systems in general.
- f) The adequacy of provisions to maintain the allowance for loan and lease losses and other valuation allowance accounts.
- g) The earnings exposure to market risk such as interest rate, foreign exchange, and price risks.

Liquidity

To determine adequate liquidity rate is a complicated issue for bank management, though there are ways helping them to make decision: bank has to hold liquid assets being some percentage of total liabilities. As far as liabilities are stable at different degree it needs to be considered types of liabilities hold by banks.

Banks are demanded to meet following requirements of liquidity ratios (National Bank of Georgia, Supervisory Department, 2007):

Average Monthly Liquid Assets / Average Monthly Liabilities = 30%

Total Loans / Total Assets = from 50 % to 75 % (recommended)

Total Loans / Deposit - checked but no legal requirement rate for that

Total Deposits / Total Assets = from 65 % to 90 % (recommended)

Demand Deposit / Total Assets - checked but no legal requirement rate for that

Time Deposits / Total Assets - checked but no legal requirement rate for that

In evaluating the adequacy of a financial institution's liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution's size, complexity, and risk profile.

Liquidity is rated based upon an assessment of the following evaluation factors (National Bank of Georgia, Supervisory Department, 2007):

- a) The adequacy of liquidity sources compared to present and future needs and the ability of the institution to meet liquidity needs without adversely affecting its operations or condition.
- b) The availability of assets readily convertible to cash without undue loss.
- c) Access to money markets and other sources of funding.
- d) The level of diversification of funding sources, both on- and off-balance sheet.
- e) The degree of reliance on short-term, volatile sources of funds, including borrowings and brokered deposits, to fund longer term assets.
- f) The trend and stability of deposits.
- g) The ability to securitize and sell certain pools of assets.
- h) The capability of management to properly identify, measure, monitor, and control the institution's liquidity position, including the effectiveness of funds management strategies, liquidity policies, management information systems, and contingency funding plans.

Protection of banks from excessive concentration of risk is an essential component of banking supervision. For that NBG states some other limitations (Table 2.6.) that commercial banks have to follow to protect banking sector and keep safety and stability on the market by preserving healthy banks those being able to meet all the requirements of Georgian legislation.

Table 2.6. Financial Ratios and Limitations Resolved for Commercial Banks of Georgia

| |
|---|
| The volume of loans to one insider party has to be not more than 5 % of supervisory capital |
| The volume of loans to all insiders has to be not more than 25 % of supervisory capital |
| The volume of loans to one outsider party has to be not more than 15 % of supervisory capital |
| The volume of loans to the related parties has to be not more than 25 % of supervisory capital |
| The volume of large-scale loans has to be not more than double amount of supervisory capital |
| Commercial bank shares in the supervisory capital of any legal entity have to be not more than 50 % of bank's equity capital. |

Source: National Bank of Georgia, 2006

Results of CAMEL rating, according to NBG requirements, have to be sent back to bank management for examining and correcting their weaknesses. Complete checking up is carried out in every 18th month, though alternative supervision can be done once a year.

In compliance with the “Organic Law of Georgia on the National Bank of Georgia” (Article 4) NBG is independent in its activities. Legislative or executive bodies have no right to intervene and participate in the operations fulfilled by the National Bank of Georgia or to monitor and supervise the bank except the cases regulated by the constitution of Georgia (The Parliament of Georgia, 1995). Operational independence certainly applies to the process of supervision as well, which is an essential for successful fulfillment of the process of supervision itself and for the successful operation of deposit insurance system.

Based on the information above it is to say that Georgian banking sector has well developed legislative base regulating banking system through severe supervision, risk assessment and control. It ensures keeping only strong and competitive banks on the market and guarantees safety and stability of banking sector. The presence of deposit insurance obviously changes nothing regarding market discipline; banks cannot abrogate current requirements and limitations, furthermore after implementation of insurance project they appear to be the subjects of even more severe supervision and control. Hence, the imposition of well designed deposit insurance in Georgia less probably undermines market discipline. Researchers, doubting positive effects of deposit insurance, and their fear regarding attempt of insured banks to follow riskier activities (the problem of moral hazard) thus can be criticized under well developed prudential regulations of the country.

Some may doubt whether or not all commercial banks operating on the market really follow the regulations and meet all the limitations and restrictions required by the regulatory bodies, even though all of them officially show it to be so, but the absence of cases of failures in Georgian banking system for last years must be a strong argument against such considerations. Official statistical data shows no bankruptcies occurred in the banking system since 2001. Though there were not publicized cases when banks disappeared from Georgian banking system. “Intellectbank” and “Tbilcreditank” are not any more operating on the market, but the NBG does not officially confirm the failure of these banks. Even the failure of several banks for 10 years does not really prove the instability of banking sector and inefficient supervision of commercial banks. The only cases that NBG declares about are transfer of assets and liabilities of “Absolutbank” to the ownership of “Kartubank” in 2001 and 100% acquisition of “Tbiluniversalbank” by the “Bank of Georgia” in 2004. These cases are not painful for the

banking system as not only bank assets but all its liabilities toward bank customers, toward depositors among them, are transferred to the ownership of another bank. Hence, the bank remaining on the marketplace takes the responsibility to meet another bank's engagements and becomes liable for depositors demand.

However, the missing component of the rating system seems to be a drawback of "The Manual for Commercial Bank Supervision". The consultative document of Basel Committee about Core Principles for Effective Banking Supervision of 2006, according to which this manual by NBG is elaborated, advises Central Banks to use sixth component, namely sensitivity to market risk, when evaluating commercial bank performance. Market risk implies the fluctuation of interest rates, exchange rates and security prices on the market and the process of assessment and evaluation of this risk helps Central Banks to find out how much a particular banking institution is capable to sustain the financial condition it had before the market fluctuations and how much their income and expenses are affected by new market conditions. This is an important element and a powerful tool of evaluating the durability, stability and soundness of banking institution. Therefore, National Bank of Georgia should apply to this component in order to completely evaluate not only current but future expected financial condition and strength of a commercial bank.

The requirement about information opacity seems to be another incorrect approach of "The Manual for Commercial Bank Supervision". This requirement hinders the process of having public aware of the financial conditions of banking institutions on the market. The manual implies bank rating results confidential and prohibits the information disclosure. Even though the information describing and analyzing the general condition of Georgian banking system in respect of capital adequacy, liquidity, profitability and etc. are provided by the National Bank of Georgia through annually published Financial Stability Report, it does not supply the information about individual bank performances necessary for depositors to evaluate financial condition of a particular banking institution where depositors have already deposited or plan to deposit their savings. In the presence of deposit insurance information about commercial bank financial condition and rating results has to be transparent and accessible to the public.

At the same time NBG publishes "Core Principles of Banking Supervision" which names insufficient information owned by the people as one of the main reasons for banking instability; the financial statement published by commercial banks are declared to be often not enough to let people analyze strength and weaknesses of financial institution, thus, to be confident about their investment if they have made it there. Two statements concerning rating result opacity and

insufficiency of information on the market by NBG are absolutely controversial, and the decision about not publishing the rating results needs to be changed (CAMEL composite rating results has to be available to the public) in order to have depositors better informed about financial condition of banks where they have their savings invested in. It would probably work for higher level of public confidence.

Establishment of some other mechanisms like foundation of independent Rating Agencies which will provide society with an appropriate information about banking sector generally and about financial conditions of an individual bank can be regarded as another alternative for having depositors and generally public better informed about their savings. This can be even considered as better alternative as far as CAMEL ratings are for professional usage. These mechanisms can be rating-analytical researches provided by international as well as local companies. These companies may have their own standards similar to the NBG standards of evaluating financial condition of a commercial bank.

2.2. Deposit Insurance Project of Georgia by NBG: Strength and Weaknesses

The current attitude of people toward banking institutions enables to conclude that level of public confidence in Georgia by all means needs to be amplified, which probably can be achieved by imposition of deposit insurance program. However, as noted before, a recent attempt to implement this program in Georgia failed. Georgian Parliament in 2005 rejected the projected law about “Obligatory Insurance of Individual Deposits” prepared by the National Bank of Georgia under the leadership of Roman Gotsiridze (the former president of NBG) and the Parliament Financial Committee under the instruction of Irakli Kovzanadze.

The project aimed to compensate insured depositors in an event of banking crises, to rise confidence level of population toward Georgian banking system and thus to stimulate attraction of public savings by Georgian banking institutions.

In compliance to the terms of the project it was planned to insure all individual deposits according to the bylaw predetermined terms except: deposits of those shareholders owning more than 5 % of commercial bank shares of capital, bank administrators, those responsible for preparing commercial bank financial documents, auditors and their family members (National Bank of Georgia; Financial Committee of the Parliament of Georgia, 2005).

This exceptions imposed by the project was to avoid undesirable influence of shareholders, administrators or any other parties on the commercial bank policy and decision

making or the falsification of financial statements by the parties involved in the process of financial reporting.

Deposit insurance system according to the terms of the law had to insure “foreign” deposits, including deposits payable in foreign currency, deposits at the domestic branches of foreign banks but excluding deposits at the foreign branches of domestic banks.

Thus, in case of adoption of the projected law it was planned to share the experience including foreign deposits in the insurable amount. Decision about insuring deposits denominated in foreign currency with best of our knowledge was a right decision made by project makers. The official statistical data of 01.12.2006 provided by the National Bank of Georgia shows that 83 905 000 000 of deposits were saved in national currency through the commercial bank accounts operating on the territory of Georgia and considerable amount of deposits, 619 376 000 000 were denominated in foreign currency (National Bank of Georgia, 2006). In order not to diminish effective influence of deposit insurance system over stability of banking environment and to make public feel protected it is essential to promise the compensation of foreign currency deposits as well representing a significant part of depositors’ savings in Georgia.

Deposit insurance coverage according to the project had to account GEL 5000 at each commercial bank, which means that each depositor of a failed bank would receive compensation of GEL 5000 if the National Bank of Georgia had announced failure of a commercial bank and had revoked its license, or if any of the reasons had come due for which deposit withdrawal demands could not be met within 21 days (National Bank of Georgia; Financial Committee of the Parliament of Georgia, 2005).

According to the NBG macroeconomic data of 2006, per capita GDP of Georgia was figured out by 3 133.1 GEL in 2006 when the project was worked out, meaning that decision about coverage limit amounting GEL 5000 was almost two times GDP per capita as recommended by the IMF.

Participation of all commercial banks in deposit insurance system was planned to be compulsory. For the moment when commercial banks were chartered they had to become participants of deposit insurance system, and the process of participation was terminated only for the moment when liquidation process of commercial banks was over.

Thus, the problem of adverse selection, the risk that strong banks would not be willing to participate from the beginning or would leave the process later and that only comparatively weak

banks would insure their depositors, was planned to be evaded by making the participation in the insurance system compulsory.

To better attain the project objectives Deposit Insurance Agency of Georgia (the Agency) was planned to be formed. The Agency had to be a legal entity with an independent funding, current or other type of account held at the National Bank of Georgia, with accounting standards and systematically published financial reports prepared according to the Georgian legislation.

Controlling the process of calculation of insurance premiums payable by commercial banks, collecting insurance premiums and transferring them to the deposit insurance accounts, investing temporary free insurance funds held by the Agency, compensating depositors of failed banks and any other activities related to the above mentioned operations were to be the functions of the Agency. The Agency was planned to be given the right of passing normative acts, obliging commercial banks to follow.

Commercial banks had to be obliged to provide the Agency with all necessary information about deposit accounts and liabilities of depositors, according to the rules stated by the Agency beforehand, they also had to submit audited financial reports, or any other information required by the Agency to operate, pay insurance premiums according to the Agency instructions. If any of these requirements were not met after even official warning the case had to be discussed by National Bank of Georgia for committing administrative arrangements.

Thus, the recommendations on independent authority of deposit insurance system and on providing insurer with all necessary information as it is seen from the project content were planned to be facilitated by the projected law of deposit insurance in Georgia.

Insurance Fund for Compensation were to be collected by obliging commercial banks to make primary payment, membership fees, insurance premiums, penalties for delayed or partial payment of insurance premiums (0.5 % of unpaid amount of insurance premium for each delayed day) to the agency fund, or by generating return through investing temporary free insurance funds. Deposit insurance fund collected from above mentioned resources had to cover all expenses related to the Agency requirements plus all administrative costs of the Agency. In case of adoption of the project Georgian government had to take responsibility of providing the Agency with discount rate loan if insurance premiums or other sources of income of the Agency did not amount funds sufficient to meet all needs and expenses of the Agency.

Deposit insurance project of NBG implied the recommendation about self-financing and creating stand-alone fund, but the issue of choosing appropriate target reserve ratio was not

resolved. Target ratio or a certain percentage of insured deposits for which the Agency takes responsibility to compensate and the amount of deposits insured by the Agency determine reserve fund. The reserve funds had to be permanently kept as a caution against the probability of member banks' failure. It is hard to previously determine target ratio in the project as it largely depends on the economic situation in the country and future expectations on the market, but at least the characteristic of target ratio (be it fixed or flexible target ratio) has to be predetermined. Fixed ratio does not change according to the market conditions when flexible target ratio is modified according to the future expectations on the market. Flexible target ratio is believed to better ensure the solvency of the Agency, because in order to remain solvent (the ability to meet the liabilities by providing depositors with compensations after member bank fails), the Agencies had to be obliged to increase the target ratio or the reserve fund for compensation under bad financial environment and expected fluctuations on the market when the risk of the failure of member banks increases. The project obliging the Georgian government to provide the Agency with a discount loan in case of liquidity problem somehow meets the requirement of maintaining the solvency but it needs more detailed concentration on the issue and predetermination of the terms of the target ratio.

The project of deposit insurance of Georgia had not determined one more key issue essentially important for the successful operation of deposit insurance system. Nothing is mentioned in the project about the management of financial resources by the Agency. The primary criterion to allocate the agency fund is their security and liquidity. The project probably had to develop the benchmark portfolio, according to which the Fund's financial resources shall be invested exclusively in the most secure financial assets not to impose the risk over the insurance fund and to eliminate the chance of the solvency. Otherwise, the failure of Deposit Insurance Agency to provide the compensation to depositors whenever required will absolutely destroy the effective influence of the system.

The pricing system of assessing deposit insurance premiums or any type of payments had to be worked out by Supervisory Board of the Agency and submitted to the National Bank of Georgia for the final approval. Pricing methods of deposit insurance was chosen to be risk-based premium system.

The issue of insurance premiums critically important to the successful operation of deposit insurance system was not elucidated in full by the deposit insurance project of NBG. The project, as already mentioned, was obliging the Insurance Agency to design pricing scheme for deposit insurance system, but in our opinion assessing deposit insurance premiums, deciding the

type of the system (be it flat-rate or risk-based premium system) and elaborating the methods of assessment of insurance premiums are key issues that has to be discussed long before the decision about acceptance of the project will be made as far as these critical details of the program determine largely success and effectiveness of the project.

Insured deposits were to be compensated by 100% up to insurable amount of 5000 GEL (insurance coverage) if bank suffered crises. The amount of compensation payable toward depositor had to be equal to the sum of deposited amount and interest income on insured deposit minus depositor's obligations toward banking institution.

If the Agency had to compensate deposits of more than one bank, in case of several bank failures, depositor would receive compensation for each insured deposits held at these different banking institutions. The Agency was planned to be obliged to inform depositors about primary procedures of the process of compensation within 3 days after National Bank of Georgia would declare about commercial bank failure. Within 90 days the Agency had to perform the following procedures: calculate the amount payable to each depositor as compensation, choose commercial bank through which depositors would receive their funds, transfer funds for compensation to the intermediary commercial bank and send depositors all the terms of the process of compensation.

Such a detailed determination of each step of the process of reimbursement, which is also essential for the proper operation of the system, would most probably work for the successful implementation of the project. Precisely predetermined terms of the compensation is believed to ensure the efficiency of the system. Knowing all the procedures beforehand by depositors about how and when are they going to be paid in an event of bank failures would help to attain the primary objective of insurance system of keeping depositors calm.

The start-up capital was planned to be formed by the help of the government and the international institutions to ensure beginning of the project development.

Georgian Government before enforcement of this law had to apportion GEL 10 million to provide the Agency insurance fund with the primary capital (National Bank of Georgia; Parliament Financial Committee, 2005).

The initiative of project development was supported by international financial institution, namely by development bank of Germany (KfW Bankengruppe). It apportioned 4 million EUR out of which 3.5 million EUR was directed to the Agency insurance fund and 0.5 million EUR – to the technical maintenance (Kharazishvili, 2008).

The vital issue of intensified supervision and regulation of banking institutions in case of adoption of deposit insurance project was considered to be followed. According to the projected law the process of supervision was planned to be fulfilled by the Agency. The law was allowing the Agency to ask for any data and information to be provided by the commercial banks any time when needed and required. It would enable the Agency to evaluate financial conditions of banking institutions and to properly fulfill all the functions of supervision required by the law. The information could be obtained through sending the Agency representative to the banking institutions in order to locally demand all the data needed for evaluation. The Agency was also given right to pass normative acts which would be obligatory for all commercial banks to follow. It would ensure imposition of restrictive and regulative activities to the banking institutions if needed.

The drawbacks of deposit insurance project of Georgia may be the reasons of its rejection. Though, the obstacles of project enactment and implementation can be other than its weaknesses. However, the reasons of the rejection of the project are not within the scope of our interest and may be the topic of another research.

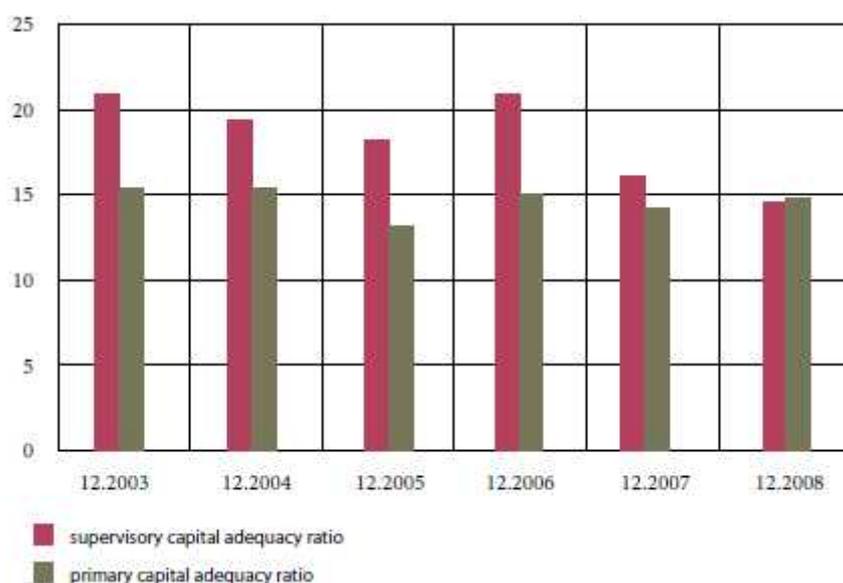
2.3. Absence of Deposit Insurance – One of the Weaknesses of Georgian Banking Sector

According to the National Bank of Georgia (NBG) almost 99 percent of financial intermediation in Georgia belongs to the banking sector. Mobilization of financial resources and their transformation into investment resources basically occur via banking institutions and not through stock exchanges. The situation in the foreseeable future is unlikely to change. Hence, the banking system in Georgia has an exclusively key role to expedite economic growth rate of the country. It is important to develop a relevant program that will identify the key principles on which the banking system should be based on, as well as concrete measures for its development. To serve the given goal, the NBG has developed Strategic Document of Banking System Development in 2006-2009. In compliance with the given document, the main objective of the NBG in the midterm prospect along with the gradual elimination of current problems in the conditions of market competition and strengthening of sustainability and efficiency of the banking system is its dynamic growth that will result in the promotion of the role of the banking system in the country's economy. According to the given strategy document imposition of deposit insurance program is one of the key principles for the stability of the banking system in 2006-2009 (National Bank of Georgia, 2006).

In compliance with the Annual Report of 2008 of the National Bank of Georgia (NBG) growth rate of banking sector in 2007 significantly exceeded growth rate of any other sector of Georgian economy. Official figures and statistical data of NBG show banking sector to be a leading sector of Georgian economy for already more than three years; the volume of bank assets for the period of 2004-2007 has increased by 60 %, commercial bank assets accounted 7.2 million GEL at the end of 2007, that was 43 % of country's GDP, the volume of deposit accounts increased by 55 %. The same tendency used to go on in the beginning of the year of 2008, when the volume of assets, liabilities and equity capital has considerably increased. At the end of 2008 the banking sector fully satisfied the capital adequacy coefficients. The regulatory capital adequacy level was traditionally high. Despite certain decline in 2008, it still remained higher than the 12% requirement, equaling 13.9%. Primary capital adequacy ratio was even higher by end-year at 14.4% (see Figure 2.1.). During 2008 the liquidity ratio of the banking sector, measured as total liquid assets divided by total liabilities, fell from 39% to 28%, which is also higher than the 20% requirement. Overall, it should be pointed out that the Georgian banking sector attempts to keep position of having the strong ability to absorb shocks (National Bank of Georgia, 2008).

This must be due to the conservative supervisory requirements of NBG on one hand and due to the uncertainties concerning unpredictable behaviors of bank customers on the other. Commercial banks seem to always be ready for future instabilities, which speaks of significant perspectives in the banking sector developments.

Figure 2.1. Capital Adequacy Ratios



Source: National Bank of Georgia, 2008, p. 39

Still it is not what is wished to be for permanent stability. Every, even insignificant disturbances of any nature, economic or political, create uncertain banking environment. After August 2008 developments the situation has dramatically changed. This recent developments of August 2008 in Georgia showed the issue of the day, the urgency of the problem, as for the moment when political instability took place in the country commercial banks terminated their operations in fact. In fear of panic runs they were forced to follow safer strategy of preserving excess reserves and rejecting credit demands.

Despite the fact that all commercial banks of Georgia were closed for 3 days after hard political instabilities in August 2008, Georgian population still managed to withdraw considerable amount of their deposits. Assets of Georgian banking system declined by 700 million GEL out of which 300 million GEL was deposit account outflow (Noniashvili, 2008).

Table 2.7. shows yearly deposit growth from 2002 till the beginning of 2008, but after political instability of August 2008 the volume of deposits (both in national and foreign currency) has dramatically decreased (by 10 % in five days). Since then the volume of deposits either continue to decline or increase by insignificant amount from month to month up to now.

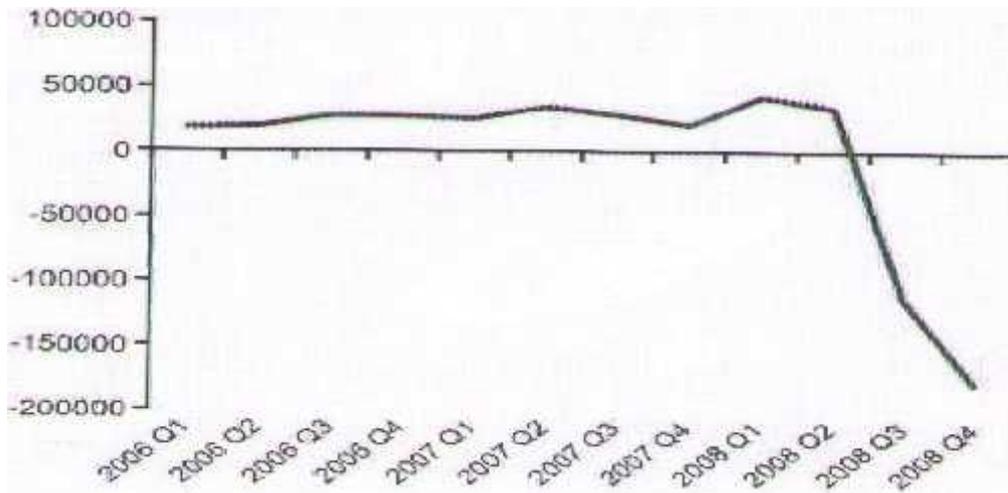
Table 2.7. Household Deposits Allocated in Commercial Banks of Georgia (GEL, thousands)

| <i>Period</i> | <i>Deposits in National Currency</i> | <i>Deposits in Foreign Currency</i> | <i>Period</i> | <i>Deposits in National Currency</i> | <i>Deposits in Foreign Currency</i> |
|----------------|--------------------------------------|-------------------------------------|----------------|--------------------------------------|-------------------------------------|
| 1.12.02 | 12,189 | 249,910 | 1.07.08 | 467,758 | 1,319,224 |
| 1.12.03 | 17,097 | 362,877 | 1.08.08 | 487,234 | 1,338,428 |
| 1.12.04 | 43,477 | 428,133 | 1.09.08 | 385,128 | 1,131,040 |
| 1.12.05 | 83,905 | 619,376 | 1.10.08 | 381,230 | 1,137,647 |
| 1.12.06 | 138,060 | 930,867 | 1.11.08 | 373,152 | 1,067,940 |
| 1.12.07 | 311,447 | 1,205,739 | 1.12.08 | 340,032 | 1,275,565 |
| 1.01.08 | 344,792 | 1,234,076 | 1.01.09 | 306,050 | 1,552,893 |
| 1.02.08 | 332,693 | 1,278,984 | 1.02.09 | 303,115 | 1,496,272 |
| 1.03.08 | 378,269 | 1,296,348 | 1.03.09 | 315,812 | 1,487,073 |
| 1.04.08 | 424,852 | 1,249,429 | 1.04.09 | 268,574 | 1,360,243 |
| 1.05.08 | 447,047 | 1,289,085 | 1.05.09 | 266,007 | 1,246,842 |
| 1.06.08 | 444,390 | 1,283,763 | 1.06.09 | 275,154 | 1,272,111 |

Source: National Bank of Georgia, 2010

The effects are obviously negative resulting in considerable fall down in the profitability rate of Georgian banks (Figure 2.2.).

Figure 2.2. Bank Profitability (GEL, thousand)



Source: National Bank of Georgia, 2008, p. 36

Figure 2.3. Profitability Dynamics of Banking Sector in Georgia (GEL, millions)



Source: National Bank of Georgia, 2008, p. 38

So, the August instabilities were the reasons of massive deposit outflows, in the fair of intensive withdrawal demands of deposits banks terminated the process of credit supply. They tried to keep excess funds and rejected credit demands. Undesirable consequences of the event are illustrated by the Figure 2.3.

The official figures and statistical data of NBG help to conclude that a little future uncertainty caused by economic or political instabilities effect banking sector too much in the negative.

Some proper measures were taken to control the situation, like NBG used USD 180 million to preserve exchange rate of GEL. Besides, rate of required reserves were reduced from 13% to 5% and free excess reserves were used by commercial banks to meet their liquidity needs. All these and some other arrangement of NBG prevented Georgian banking system from further aggravation of the process. But the problems are not over yet; it may rear up further, when all problematic assets, deteriorated in August 2008 will show up.

The case expresses the level of confidence people have in Georgia toward banking institutions. It is certainly not high enough to keep depositors calm when needed. Even though there were no economic reasons and risk for Georgian banks to fail, depositors still feared to leave their savings and created artificial problems to the banks. The presence of deposit insurance would most probably ensure stronger public confidence and soothe strained environment.

Banking experts argue that the process could be evaded if deposit insurance mechanism had been pursued years ago. According to the instructor of the Financial Committee working on the deposit insurance project Irakli Kovzanadze, Georgian banking system instability was even aggravated due to the absence of deposit insurance system. According to him it is the most important element of preserving financial system stability in times of crises. In his opinion they were on the right path when elaborating the project about the obligatory insurance of individual deposits in Georgia and rejection of this project by Georgian parliament was not right decision. Georgia remains to be one of the countries throughout the post Soviet Union without deposit insurance mechanism in place (Kharazishvili, 2008).

In compliance with the Euro Directive 94/19/EC (adopted by the Euro Parliament and Council of Euro Union on May 30, 1994) EU member states are obliged to introduce deposit insurance system.

Directive 94/19/EC on deposit protection forms an essential counterpart to the prudential supervision of credit institutions because of the solidarity it creates between all the institutions operating in the same financial market in the event of failure of one of them. Harmonization is confined to the main elements of deposit-guarantee schemes and ensures, within a very short period, payments under a guarantee calculated on the basis of a harmonized minimum level (European Union, 2009).

The Directive requires every credit institution to join a deposit-guarantee scheme and prescribes each member state to ensure that within its territory one or more deposit-guarantee

schemes are introduced and officially recognized. The Directive provides that deposit-guarantee schemes must normally cover the aggregate deposits of each depositor up to Euro 20 000 in the event of deposits being unavailable. This amount is periodically reviewed. Higher or more comprehensive cover is permitted in certain cases, mostly on social considerations. Duly verified claims must be paid within three months of the date on which the competent authorities establish that deposits are unavailable (European Union, 2009).

Table 2.8. Recommendations for Further Approximation of Georgian Financial Services Legislation with that of EU

| <i>Area</i> | <i>EU respective normative act, other international acts/standards</i> | <i>The Normative act of Georgia to be amended/adopted</i> | <i>Content of the Proposed Measure</i> | <i>Comments</i> |
|-------------|--|---|--|---|
| Banking | Directive 94/19/EC on deposit-guarantee schemes | New law shall be adopted | Adopt the Law on Deposit Insurance | This measure will increase the confidence of consumers in banking sector and will mitigate the risk of bank run |

Source: European Union, 2009

Becoming a member state of EU is among long-term priorities of the government of Georgia. Accordingly, the government of Georgia seeks to transform the state legislation to match the standards and requirements recommended by the EU (Table 2.8.). Banking system is not an exclusion. NBG states that the deposit insurance system will be introduced in Georgia in compliance with the Euro Directive 94/19/EC. As a result deposits, likely in the amount of GEL 3-5 thousand (as well as equivalent of the stated amount in foreign currency) will be insured and in case the bank goes bankrupt it will be fully reimbursed.

2.3.1. Past Experience – Public Attitude toward Banking System after the Collapse of Soviet Union

After independence, many defunct state enterprises formed bank subsidiaries, and as many as 229 banks in 1995 existed with less combined capital than one mid-sized American bank. Most of these so-called banks had made loans to insiders who promptly fled with the money, so their assets were often worthless. Moreover, the government had frozen deposits

during the hyperinflation of 1994, certainly not a policy to inspire confidence in potential depositors. Bankruptcy and consolidation, encouraged by NBG enforcement of minimum capital requirements and other regulations, reduced the number of banks to 47 by 1998. Only 22 were considered to be viable and they accounted for almost all the deposits and current lending in Georgia (MacPhee, 2001).

The situation described above was the reason of very low level of public confidence in Georgia. It gave rise to the mentioned pragmatic attitude of Georgian population toward Georgian banking system. The bankruptcies of that time caused great financial losses among depositors of failed banking institutions. People lost thousands of their saving accounts. They were never compensated since then.

The attitude of Georgian population was especially critical in the near future after the collapse of Soviet Union, when almost everybody was the victim of that massive bank failures mentioned above. Those still risking to trust newly established banks after independence experienced the loss again as most of them with very low capital and generally with very poor financial condition were systematically going on collapsing.

The results of these events are harmful for the Georgian banking system even today. Considerable part of Georgian population feels no safe to keep their savings at the commercial bank accounts and still prefer to keep them at home. Another part of the population in Georgian keeping their savings through the banking accounts, rush for early withdrawals for the moment of instabilities or uncertainties of any nature.

2.3.2. Present Day Attitude of People toward Banking System in Georgia

A banking professional, new to Georgia, Liz Skipper (2009) describes how it is understood by Georgians definition of saving money: “The idea of ‘savings’ as a noun is entirely alien to them. Whereas I always squirreled away my Christmas money into government bonds, employer-backed pension funds etc. that I knew would give safe returns, my colleagues had learnt to put their cash into tangible goods: televisions, fridges, cars, the best and latest mobile phones. Outwardly, they might seem conspicuous spenders but in fact this is their safety net and it’s all they trust” (Skipper, 2009).

Department of statistics of Georgia gives an official figures showing considerable amount of net savings held by Georgians population after their consumptions and all their payables are

subtracted from Gross National Income generated all over the year. Calculations of 2007 net savings are given below (Table 2.9.).

Table 2.9. National Income and Other Aggregates of National Accounts (GEL, millions)

| | |
|--|-----------------|
| Gross National Income | 17 060.5 |
| (-) <i>Consumption of fixed capital</i> | 1 617.0 |
| (=) Net National Income | 15 443.4 |
| (+) <i>Current transfers receivable from the rest of the world</i> | 1 280.2 |
| (-) <i>Current transfers payable to the rest of the world</i> | 133.7 |
| (=) Net National Disposable Income | 16 589.9 |
| (-) <i>Final consumption</i> | 15 731.9 |
| (=) Net Saving | 858.0 |

Source: National Statistics Office of Georgia, 2009

As tabulated above in 2007 Georgian population held GEL 858 000 000 of net savings but NBG statistics show only GEL 509 657 000 to be allocated at the commercial bank accounts of Georgia that year (Table 2.10.), about 41 % of savings most probably were kept at home rather than investing. Even if investments were made elsewhere but not in banking institutions of Georgia it means that population better trust other investment opportunities rather than banks. Commercial banks in Georgia have to somehow successfully compete on the market to attract the greater share of public savings.

Table 2.10. Deposits by Owners in the Reporting Period (GEL, thousands)

| Deposits of Residents | Interbank Deposits | Deposits of the Legal Entities | Household Deposits |
|---|---------------------------|---------------------------------------|---------------------------|
| Deposits in National Currency | 125 384 | 51 999 | 27 924 |
| Deposits in Foreign Currency | 104 955 | 41 995 | 157 400 |
| Total Deposits of Residents in National and Foreign Currencies | | | |
| 509,657 | | | |

Source: National Bank of Georgia, 2009

2.3.3. Research Methodology

The empirical study was carried out in the research paper that allowed to find out the attitude of the Georgian population toward banking institutions and their reaction to the implementation of deposit insurance system.

The deposit insurance system does not yet work in practice and has not ever worked in Georgia. Accordingly, the absence of statistical data in Georgia concerning the effects of deposit insurance system over the behavior of depositors and over volume of deposits make it impossible to carry out any statistical analysis and calculations showing whether the insurance system works or worked well for the protection of depositors and whether it has or had a positive influence over the banking system of Georgia. Only future impacts of deposit insurance system over the Georgian banking system and the probable behavior of depositors under the deposit insurance system can be foreseen based on the responses of the population who were questioned.

The research employed the following research tools: document analysis and the survey.

Documents were studied as a secondary data analysis. Secondary data analysis was conducted through observing the effects of implementation of deposit insurance system over the banking system of post Soviet countries and examining the recommendations of international organizations about effective deposit insurance system.

Document analysis also involved assessment of “The Manual for Commercial Bank Supervision” developed by NBG. Whether or not Georgian banking system is ready for deposit insurance system is determined by the legislative basis of Georgia providing commercial bank supervision and hence the financial stability on the market. To evaluate the process of commercial bank supervision by the NBG, the method used for this supervision or General Rating System called CAMEL Composite Rating was analyzed in detail and to evaluate the effectiveness of this rating system last ten year developments of Georgian banking system since 2000 were observed. The major focus was made on whether the cases of failure and massive instabilities have occurred for this period. The method of supervision is regarded to be effective if it really manages to keep only strong banking institutions on the market without excessive risks of failure. The absence of cases of bankruptcies supports the idea that the process of supervision is carried out effectively by the regulatory bodies. The results of observation helped to find out degree of banking stability in Georgia.

The official reports of NBG were used to observe the background and current state of the banking system of Georgia.

The survey was conducted through questionnaires (see Appendix 1). 500 people were questioned in July and August of 2009. The research population was randomly selected from different regions of Georgia. People were questioned namely from Kartli, Imereti and Kakheti regions.

The survey results were tested through two-sample test, or z-test statistics for differences in two proportions. Testing process implied testing the null and alternative hypothesis. The result of testing either rejected null hypothesis in favor of alternative hypothesis when the statement by the null was not regarded to be true at 95 % of confidence or failed to reject the null when the statement by null was not regarded to be false again at 95 % of confidence.

The survey results were used to find out how people in Georgia feel about keeping their savings through the commercial bank accounts, what their level of confidence toward banks in Georgia is, what their reactions are to the instabilities that take place inside the country and how their behaviors would change under deposit insurance system. Moreover, the survey helped to find out what are the requirements of depositors in Georgia concerning the components and design of the system.

2.3.4. Sample Selection

Questionnaires were distributed randomly among the Georgian population and the foreigners living in Georgia for substantially long period of time. People from Tbilisi (Kartli region), Kutaisi and Samtredia (Imereti region), Akhmeta (Kakheti region), were questioned.

The data was collected from all over the territory of Georgia which determined the decision of distributing questionnaires among the population from different regions of the country.

The questionnaire in the final section obtained demographic information about the respondents including education, income level, occupation and age. Selection of research population was not determined by their education, level of income, occupation or the social background. The only restriction was imposed to the age categories. The population aged 22 and above was questioned.

The imposition of age restriction was intentional and logically resulted in concentration on the individuals who were already graduates, with high education, occupation and stable income having the ability to save some portion of their earnings. Thus, selection of the population according to the age criteria reduced the chance of having questioned the respondent with no ability to save and increased the probability that the population under the study have the ability to save and deposit their savings. Thus, the behavior of exactly this particular social group under the deposit insurance system was the most interesting, because their level of confidence

toward banks and desire to save at the bank accounts largely determine deposit growth in the banking sector.

The decision about age restriction was made because the behavior of this particular social group will largely determine the success of deposit insurance system. They make up a social group which carries the ability to save up money and their attitude and the level of confidence toward banking sector considerably affect the flow of deposits to the banking channels. Thus, if implementation of deposit insurance system enhances the level of the confidence of this particular group of population, then the system will promote deposit growth and can be regarded to be effective and successfully implemented.

2.3.5. Data Collection

Primary data collection:

Questionnaires were distributed among the population living in Georgia. The purpose of the survey was to get the primary data for the research. The questionnaires were collected later, after they were filled up by the respondents. The data was used to demonstrate current attitude of Georgian population toward commercial banking institutions, their behavior in times of uncertainty, their opinion about deposit insurance system to be developed in Georgia and their behaviors after the project implementation.

Secondary data collection:

The effects of deposit insurance system were observed in 9 different post soviet countries: Russia, Ukraine, Azerbaijan, Armenia, Lithuania, Latvia, Estonia, Moldova and Kazakhstan. The aim of analyzing these data was to observe the state of deposits after the implementation of deposit insurance system in the countries under the study. The data come from the official reports of the Central Banks of the mentioned countries. The major source of the information was the internet official web pages of these Central Banks (see the references).

Observations were made on the negative effects of recent political instabilities on the overall banking sector of Georgia and the behaviors of Georgian depositors after the August 2008 developments. It was intended to demonstrate how the depositors in Georgia felt about their savings. The research aimed at demonstrating the degree of necessity of deposit insurance system for the Georgian banking sector. The data was collected based on the official figures from annual reports provided by the NBG (see references).

Finally, the observations were made on the banking supervision in Georgia. The analyses were made to show the ability of National Bank of Georgia to ensure successful implementation of deposit insurance system by proper supervision and keeping only strong banks on the market. The data for evaluation was collected from “The Manual for Commercial Bank Supervision” provided again by the NBG (see references).

Chapter 3 – Research Findings and Data Analysis

3.1. Analysis of Questionnaire and Hypotheses Testing

The survey results were the following:

Section 1: Public Behavior before Deposit Insurance System in Georgia

Out of 500 respondents just 170 (about 34%) have kept their savings at the commercial bank accounts at present and remaining 66% or 330 respondents do not. Out of them who keep no deposits only 76 respondents (23%) behave so because of the absence of free funds to save and 254 respondents (almost 77%) showed no desire to deposit their savings. Those who have no desire to save declare that even if they had free fund they would not trust banks to keep these funds there. Most of the respondents, 235 out of 254 or about 92 % name lack of trust toward financial institutions as a reason for such a behavior. Only remaining 8% or 19 respondents out of 254 name other reasons for preserving themselves from saving at the bank accounts. Considerable number of respondents 198 out of 235 or more than 84 % say that their pragmatic attitude toward banks in Georgia is provoked from their opinion that if banking institution where they have kept their savings fail, they would not be compensated. Only 9 respondents out of 235 or about 4 % think that Georgian banks fail easily because of weak management and the remaining 28 respondents that is almost 12% of 235 respondents name uncertain financial environment as a reason for refusing to trust banks in Georgia. Almost 98% of respondents (488) replied that in an event of any political or economic instability they would immediately run to their banks for early withdrawals, just 12 out of 500 or not more than 2% of respondents prefer to wait a little to see further developments. It appeared that none of them trust their banks so that they could stay calm despite probable failure; not even a single person feels safe about their savings.

Analysis of data: Survey findings show extremely pessimistic attitude of population toward banks in Georgia. According to the survey results it is depositors' bad future expectations about their savings at the banking institutions that make them not to deposit their savings. Considerable part of the respondents (84% of respondents who do not save due to lack of confidence) regarding commercial banks unable to compensate their loss if banking institution goes bankrupt complicates pragmatic attitude of Georgian population and explains depositors' behavior in the country. Even though very small number of respondents (9%) think that Georgian banks fail easily it does not protect banks operating in Georgia from panic withdrawals.

Section 2: Changes in the Behavior of Georgian Population after Deposit Insurance System

According to the survey results considerable number of respondents 473 (around 95%) are ready to insure their savings if deposit insurance system operated in Georgia. All of them (the same 95% of respondents) state that they would still prefer to have their deposits insured even if they receive lower interest payments for that. As they declare the volume of their deposits in case of insurance would increase up to nearly full amount (100 %) of their savings, which means that about 95% of respondents (473 people) showed to be ready to deposit their excess funds under deposit insurance system. At the same time about 51% or 247 respondents out of 488, running to the bank for early withdrawals before deposit insurance system is implemented in Georgia, say that if their deposits were insured they would feel more confident about safety of their savings and would restrain themselves from panic run in times of uncertainty.

Analysis of data: The number of respondents (95%) supporting the idea of deposit insurance development in Georgia enables to state that after imposition of deposit insurance the part of the savings previously kept at home by Georgian population will probably flow into the bank channels. The survey findings show that the cost depositors are going to experience in the form of lower interest payment is not expected to change the positive effect of attraction of additional savings because it did not really discouraged them to insure their deposits.

According to the survey results on one hand depositors in Georgia knowing that their savings are protected against failure are going to feel more confident about keeping their savings at the commercial bank accounts that probably lead to deposit growth, expansion of banking activities and the overall economic growth, on the other depositors being confident about their investments restrain from panic withdrawals that makes bank failures less probable and helps to keep financial system stable and strong.

Section 3: Features of Deposit Insurance System Required by the Respondents

According to the survey results 376 or about 75% of respondents observe overall economic situation inside the country to control performance of banking institution where they have deposited their savings, 1% (4 respondents) check financial statements of their institutions, 9% or 45 respondents observe future opportunities their commercial banks have planned to take advantage of and 15% or 75 of respondents compare risk levels of their banking institution with the risk levels that other commercial banks face.

Considerable number of respondents, 409 out of 500 respondents or almost 82 %, state that even if their deposits were insured fully (100% of coverage) they would be still interested in

how well their commercial bank operates and they would go on controlling its financial condition, the remaining 91 or 18% of respondents say that they would give up the process of observation. Considerably bigger number, 455 or 91 % replied that they would be more incentivised to control their bank performances if their deposits were insured partially up to some limited amount, than in case of a full coverage and just 45 respondents or 9 % would give up the observation.

The currency that respondents mostly choose to make their savings in appeared to be a foreign currency, around 81% or 405 answered that they prefer to keep deposits in currency other than GEL, and only about 19% or 95 respondents save deposits denominated in national currency. Those having made their savings in GEL certainly do not care about coverage of foreign currency deposits by insurance, but for considerable number of respondents (405 or 81%) who have made their investments in currency other than national Lari, deposit insurance makes no sense if foreign currency deposits would not to be insured. This most probably will diminish the positive effects of deposit insurance system.

Analysis of data: The survey results from section three of the questionnaire helped to understand what features of deposit insurance system are required by the Georgian population that makes the system be successful.

100 % of the respondents or all 500 respondents under the study systematically observing the performances of their financial institutions provide strong market discipline. In compliance with the survey results considerable number of population (376 out of 500 or 75 %) evaluate overall economic situation in the country rather than financial statement or future opportunities of a particular banking institution, which proves once more that depositors doubt more about financial stability of a country rather than the financial condition of commercial banks. Whatsoever the reason of their suspicion is deposit insurance can improve their expectations about the future.

Market discipline based on the survey results is not expected to decline. Only insignificant number of respondents (18 % or 91 out of 500) think that it loses the sense to control their banks if their deposits are insured. The coverage limit seems to work for stronger market discipline. The number of respondents not willing to check financial condition of their banking institutions has declined to 9 % or 45 respondents out of 500 for the case when deposits are not fully covered.

Survey results show that if insurance coverage limit is used introduction of deposit insurance to the Georgian banking system would less probably weaken market discipline, as it is feared by critics of deposit insurance system. Respondents do not show themselves to be less incentivized to watch their bank performances.

Research findings demonstrating the currency denomination of savings made by Georgian depositors show that considerably bigger part of population (81 % or 405 respondents out of 500) prefer their savings to be denominated in foreign currency rather than in national Lari. This fact helps to conclude that deposit insurance in Georgia should cover foreign currency deposits as well in order to have a favorable effect on the level of public confidence.

To better visualize the results of the survey the findings are summarized in the Tables 3.1. - 3.5. below:

Table 3.1. Public Behavior in Georgia Concerning people’s Decisions to Deposit their Savings before Deposit Insurance System Implementation (sample size 500)

| The interest of the survey | Number of the respondents | Percentage numbers of the respondents |
|---|----------------------------------|--|
| Respondents with deposit accounts | 170 | 34 % |
| Respondents without deposit accounts | 330 | 66 % |
| <i>Respondents with no funds to save</i> | 76 | 23 % |
| <i>Respondents with no desire to save</i> | 254 | 77 % |
| <i>Reasons other than level of confidence</i> | 19 | 8 % |
| <i>Lack of trust toward banking institutions</i> | 235 | 92 % |
| <i>Banks fail easily</i> | 9 | 4 % |
| <i>Economic uncertainty</i> | 28 | 12 % |
| <i>No compensation</i> | 198 | 84 % |

Table 3.2. Public Behavior in Georgia Concerning People’s Decision to Withdraw the Funds from their Deposit Accounts (sample size 500)

| The interest of the survey | Number of the respondents | Percentage numbers of the respondents |
|------------------------------------|----------------------------------|--|
| Before DIS | | |
| Respondents preserving the balance | 0 | 0 % |

| | | |
|--|------------|-------------|
| even under uncertainty | | |
| Respondents observing future developments before withdrawal | 12 | 2 % |
| Respondents running for early withdrawal | 488 | 98 % |
| After DIS | | |
| <i>Respondents still running to banks for early withdrawal</i> | 241 | 49 % |
| <i>Respondents feeling safer about their savings</i> | 247 | 51 % |

Table 3.3. Public Behavior in Georgia Concerning People’s Decision whether to Insure their Deposits or not (sample size 500)

| The interest of the survey | Number of the respondents | Percentage numbers of the respondents |
|--|----------------------------------|--|
| Respondents not insuring their deposits | 27 | 5 % |
| Respondents ready to insure their deposits | 473 | 95 % |
| <i>Respondents denying to insure their deposits because of lower interest payments for insured funds</i> | 0 | 0 % |
| <i>Respondents insuring their deposits under even low interest payments</i> | 473 | 100 % |

Table 3.4. Public Behavior in Georgia Concerning People’s Decision whether to Monitor Performance of Banking Institutions or not (sample size 500)

| The interest of the survey | Number of the respondents | Percentage numbers of the respondents |
|---|----------------------------------|--|
| Before DIS | | |
| Respondents not observing performance of banking institutions | 0 | 0 % |
| Respondents observing performance of banking institutions | 500 | 100 % |
| <i>Respondents checking bank financial statements</i> | 4 | 1 % |
| <i>Respondents observing future opportunities of banking institutions</i> | 45 | 9 % |

| | | |
|--|-----|------|
| <i>Respondents comparing risk levels faced by commercial banks</i> | 75 | 15 % |
| <i>Respondents observing overall economic situation in the country</i> | 376 | 75 % |
| After DIS | | |
| Respondents interested in bank performance under full coverage | 409 | 82 % |
| Respondents who gave up the observation under full coverage | 91 | 18 % |
| Respondents interested in bank performance under partial coverage | 455 | 91 % |
| Respondents who gave up the observation under partial coverage | 45 | 9 % |

Table 3.5. Public Behavior in Georgia Concerning People’s Decision in which Currency to Save their Deposits (sample size 500)

| The interest of the survey | Number of the respondents | Percentage numbers of the respondents |
|--|----------------------------------|--|
| Respondents saving their deposit accounts in GEL | 95 | 19 % |
| Respondents saving their deposit accounts in foreign currency | 405 | 81 % |
| Respondents to whom DIS make sense if only GEL denominated deposits are insured | 95 | 19 % |
| Respondents to whom DIS make no sense if only GEL denominated deposits are insured | 405 | 81 % |

To support the survey results and to confirm that the analyses of data are true, statistical method of two-sample test (testing the hypotheses) called confirmatory data analyses were conducted.

The hypotheses stated in the research paper were tested to show whether deposit insurance system really has a positive and stabilizing effects over the banking system of Georgia in the way of fostering confidence level of Georgian population, to find out people’s reactions on the implementation of deposit insurance system and their behaviors under the system. The

behaviors of population show their requirements concerning the features of the system and thus help to find out determinants of effective deposit insurance system for Georgia.

The following hypotheses were tested:

1. Implementation of deposit insurance system increases the number of depositors in Georgia;
2. Lower interest payments paid to depositors for insured deposits decrease the number of depositors in Georgia;
3. Deposit insurance system reduces panic runs to banking institutions for the early withdrawals in Georgia in times of crises;
4. Imposition of deposit insurance system in Georgia weakens market discipline if insurance coverage is unlimited;
5. Imposition of deposit insurance system in Georgia weakens market discipline if insured deposits are compensated partially after bank failures.

First calculations were conducted to test the null hypothesis (H_0) of whether or not the number of depositors increases after imposition of deposit insurance system. The alternative hypothesis (H_1) was that the number of depositors after the deposit insurance system does not change or decreases.

According to the survey results 170 respondents out of 500 have deposited their savings at the Georgian commercial bank accounts, and 76 would make their investments if they had an excess fund, remaining 254 respondents refused to deposit their savings even if they had an excess fund to invest.

In the second section of the questionnaire survey results show that the number of respondents standing ready to deposit their savings considerably increased. Huge number of population questioned, 473 respondents which is about 95 % of the total population under the study, agreed to deposit their excess funds if deposit insurance system operated in Georgia.

Thus, the sample size or the total number of the population under the study equals to 500 respondents. 1 sample population or the number of successes equals to 473 respondents willing to save their excess funds after implementation of deposit insurance system, and 2 sample population is equal to 246, which is derived from 170 respondents already having deposits kept at the bank accounts plus 76 respondents who are ready to deposit their savings if they had an excess fund to invest.

The proportion of 1 sample population (p_1) in the total sample size equals to 0.946, and the proportion of the 2 sample population (p_2) is equal to 0.492.

The null hypothesis thus refers to the differences between these two proportions of the variables to be more than zero and the alternative hypothesis refers to the same difference to be less than or equal to zero:

$$H_0: p_1 - p_2 > 0$$

$$H_1: p_1 - p_2 \leq 0$$

If the null hypothesis is not rejected in favor of the alternative hypothesis or the difference between these two proportions is really more than zero, then according to statistical calculations and the testing results the number of depositors in Georgia increases after the implementation of deposit insurance system.

To test the hypothesis two-sample test, namely, z-test for differences in two proportions was used (Table 3.6.). The formula below shows the way of conducting z test calculations:

$$z = \frac{(\hat{p}_1 - \hat{p}_2) - d_0}{\sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}}$$

- Where,
- \hat{p}_1 = sample 1 proportion
 - \hat{p}_2 = sample 2 proportion
 - n_1 = sample 1 size
 - n_2 = sample 2 size
 - d_0 = hypothesized population mean difference

The level of significance or α (alpha) in the testing process was assumed to be equal to 0.05 ($\alpha = 0.05$). It means that the results of testing are true by the 95 % of confidence.

Table 3.6. Z Test for Differences in Two Proportions: Testing H_0 the implementation of deposit insurance system increases the number of depositors in Georgia

| Data | |
|--------------------------------|-------------|
| Hypothesized Difference | 0.5 |
| Level of Significance | 0.05 |
| Group 1 | |
| Number of Successes | 473 |
| Sample Size | 500 |
| Group 2 | |

| | |
|--|---------------------|
| Number of Successes | 246 |
| Sample Size | 500 |
| Intermediate Calculations | |
| Group 1 Proportion | 0.946 |
| Group 2 Proportion | 0.492 |
| Difference in Two Proportions | 0.454 |
| Average Proportion | 0.719 |
| Z Test Statistic | -1.618118156 |
| Lower-Tail Test | |
| Lower Critical Value | -1.644853627 |
| p-Value | 0.052818568 |
| Do not reject the null hypothesis | |

Thus, hypothesis testing results failed to reject the null hypothesis when $\alpha = 0.05$. It means that according to the testing results the null hypotheses that implementation of deposit insurance system increases the number of depositors in Georgia cannot be rejected at 95 % of confidence or at 95 % of confidence null is true.

Null hypothesis is not rejected if p- Value is more than alpha or the level of significance ($p\text{-Value} > \alpha$). As far as hypothesis is tested at 0.05 significance level ($\alpha = 0.05$) and results of calculations show p- Value to be 0.0528 or more than 0.05, testing results failed to reject the null. It means that there is more than 5 % chance of type I error or chance that null will be rejected when actually it is true. Null hypothesis is rejected only when there is more than 5 % chance of rejecting null by mistake.

The hypothesized difference of 0.5 means that introduction of deposit insurance system to the Georgian banking sector will increase the number of depositors in Georgia by 50% is not rejected at 95 % of confidence. If the hypothesized difference becomes 0.51, z testing results reject the null hypothesis in favor of alternative one. It means that hypothesis testing results do not support at 95 % of confidence more than 50 % growth of the number of depositors under the deposit insurance system.

Testing result is more than satisfactory in the sense that 50 % growth of the number of depositors with no doubt will support expansion of banking activities and economic growth.

Hypothesis testing was also conducted to test whether the population under the study is going to restrain themselves from keeping their savings at the bank accounts if they receive lower interest payment for deposited amount.

The same z testing method was used to support the data analysis (Table 3.7.). Survey results show that 473 or about 95 % of respondents declare to be ready to deposit their excess funds at the bank accounts if deposits were insured, and none of them changed their decision even if they receive lower interest payment for the insured deposits. Exactly the same number 473 of respondents replied to be ready to insure their deposits even at the lower interest rate offered by the bank.

The proportions of both sample population (p_1 and p_2) equal to 0.946 as the sample size is again 500 people. p_1 refers to the proportion of 1 sample population in the total sample size and p_2 refers to the proportion of 2 sample population in the same total sample size. 1 sample population is the number of respondents who are willing to deposit their savings at the bank account under the deposit insurance system before they learn that they will be paid less for the insurance. 2 sample population is the number of respondents who are again ready to deposit their excess funds even if they receive lower interest payment for insured savings.

The null hypothesis is that lower interest payments paid to depositors for insured deposits decrease the number of depositors in Georgia, and the alternative hypothesis state that lower interest payments paid by banking institutions for offering the service of deposit insurance does not affect the number of depositors in Georgia:

$$H_0: p_1 - p_2 > 0$$

$$H_1: p_1 - p_2 = 0$$

Hypothesis testing was conducted again at 0.05 significance level ($\alpha = 0.05$) meaning that testing results are confident by 95 %.

If testing results reject the difference between these two proportions to be less than zero, then null hypothesis will be rejected in favor of the alternative hypothesis. It means that the number of population in Georgia willing to deposit their savings at the bank accounts under deposit insurance system does not decrease even after they learn that less interest payments are paid for the insured deposits.

Table 3.7. Z Test for Differences in Two Proportions: Testing H_0 lower interest payments paid to depositors for insured deposits decrease the number of depositors in Georgia

| Data | |
|-----------------------------------|---------------------|
| Hypothesized Difference | 0.024 |
| Level of Significance | 0.05 |
| Group 1 | |
| Number of Successes | 473 |
| Sample Size | 500 |
| Group 2 | |
| Number of Successes | 473 |
| Sample Size | 500 |
| Intermediate Calculations | |
| Group 1 Proportion | 0.946 |
| Group 2 Proportion | 0.946 |
| Difference in Two Proportions | 0 |
| Average Proportion | 0.946 |
| Z Test Statistic | -1.678954002 |
| Lower-Tail Test | |
| Lower Critical Value | -1.644853627 |
| p-Value | 0.046580504 |
| Reject the null hypothesis | |

Null hypothesis is rejected in favor of an alternative one if p-Value is less than alpha or the level of significance ($p\text{-Value} < \alpha$). Testing results show p-Value to be approximately 0.04658 when alpha is assumed to be 0.05 or p- Value is less than 0.05. It means that there is less than 5 % chance of type II error or chance that null hypothesis is accepted when actually it is not true. Null is rejected only when there is less than 5 % chance of mistake of accepting the null hypothesis when it is not true.

According to the testing results null hypothesis is rejected. It means that at 95 % of confidence lower interest payments in Georgia do not reduce the number of depositors who are ready to keep their saving at the bank accounts.

Testing results are true when the hypothesized difference equals to 0.024. It means that testing results at 95 % of confidence allow 2.4 % decrease of the number of depositors in

Georgia because of the lower interest payments payable on their deposit savings. If z test is conducted at the hypothesized difference of 0.023, then null hypothesis fails to be rejected in favor of the alternative one. It means that if it is assumed that the number of depositors in Georgia decreases by less than 2.4 % than null hypothesis will be rejected, which means that even though the testing result reject the effect of low interest payment on the number of depositors in Georgia still 2.4 % reduction is expected.

Decrease of the number of depositors by only 2.4 % cannot be really regarded as a significant fall down in the number of depositors, when previous hypothesis testing results does not reject even 50 % growth of the number of depositors.

Hypothesis testing was conducted once more to see the effects of deposit insurance system over the behavior of depositors in sense of reduced panic runs to banking institutions for early withdrawals.

According to the responses of the population under the study absolute majority of respondents, about 98 % or 488 people would immediately run to banks where they have deposited their savings to withdraw funds in case of any political or economic instability. Only 12 people prefer to wait just a little to see further developments on the market. Situation has dramatically changed under deposit insurance system. 247 respondents running to the bank before deposit insurance system is implemented in Georgia say that they would feel better secured if deposit insurance system is introduced to the Georgian banking system and would not run to the banking institutions for early withdrawal.

To conduct testing, 1 sample population is assumed to be 488 people or depositors under the study running to banks for early withdrawals before deposit insurance system in Georgia and 2 sample population refers to 241 people, or respondents who do not trust deposit insurance system, even under deposit insurance system feel not protected from losing their savings if bank fails and preserve their position to run to bank for early withdrawal. The figure of 1 sample population 241 respondents is derived from total sample size or 500 people minus 12 people who do not run to banks even before deposit insurance system minus 247 people who do not run to banking institutions under deposit insurance system.

The proportion of 1 sample population in the total sample size equals to 0.976 ($p_1=0.976$) and the proportion of 2 sample population – 0.482 ($p_2 =0.482$) when total sample size is 500 people again.

Z testing was conducted to test the hypothesis below:

$$H_0: p_1 - p_2 > 0$$

$$H_1: p_1 - p_2 \leq 0$$

The null hypothesis states that deposit insurance system reduces panic runs to banking institutions for early withdrawal in Georgia in times of crises. In order not to reject the null the difference between two sample proportions must be positive or more than zero. It means that if null is not rejected the number of depositors running to the banks for early withdrawal decreases.

Alternative hypothesis is that deposit insurance system does not reduce the panic, moreover, it is even fostered. To reject the null in favor of alternative hypotheses the difference between two sample population must be less or equal to 0. If the null is rejected it means that panic runs were even incentivized or the number of depositors running to the bank did not change even after implementation of deposit insurance.

Hypothesis testing was conducted at the same 95 % of confidence level, which again means that testing results are true at 95 % of confidence (Table 3.8.).

Table 3.8. Z Test for the Differences in Two Proportions: Testing H_0 deposit insurance system reduces panic runs to banking institution for the early withdrawals in Georgia in times of crises

| Data | |
|--------------------------------|--------------|
| Hypothesized Difference | 0.54 |
| Level of Significance | 0.05 |
| Group 1 | |
| Number of Successes | 488 |
| Sample Size | 500 |
| Group 2 | |
| Number of Successes | 241 |
| Sample Size | 500 |
| Intermediate Calculations | |
| Group 1 Proportion | 0.976 |
| Group 2 Proportion | 0.482 |
| Difference in Two Proportions | 0.494 |
| Average Proportion | 0.729 |
| Z Test Statistic | -1.636362154 |
| Lower-Tail Test | |

| | |
|--|---------------------|
| Lower Critical Value | -1.644853627 |
| p-Value | 0.050881908 |
| Do not reject the null hypothesis | |

According to the testing results p- Value of about 0.051 does not allow null hypothesis to be rejected. As far as it is more than the level of significance (p- Value > 0.05) the null hypothesis fails to be rejected. If null is not rejected, then at 95 % of confidence the number of depositors running to the banking institutions for early withdrawal in Georgia decreases and at the same 95 % of confidence reduction of panic among the Georgian depositors by deposit insurance system in times of crises and bank failures are not rejected.

Testing results are true when hypothesized difference equals to 0.54, which means that the number of depositors running to the bank after deposit insurance system is introduced to Georgian banking system decreases by 54 %. According to the testing results when hypothesized difference becomes 0.55 the null is rejected. Thus, testing results at 95% of confidence do not support more than 54 % reduction in the number of depositors running to banks in times of crises.

Reduction of panic runs to banking institutions by 54 % in times of crises with no doubt supports the stability of banking system. The results of testing can be regarded really important for Georgian banking environment as far as the banking system of Georgia showed to be especially troubled due to the panic among population in an event of future uncertainties.

The effect of coverage limits imposed by deposit insurance system was also tested. The purpose of testing was to see whether or not implementation of deposit insurance system weakens market discipline in Georgia if depositors know that they will be fully compensated.

The survey results show that all 500 or 100% of respondents observe performances of banking institutions where they have invested their savings. According to their responses either financial conditions of these commercial banks or their future perspectives and opportunities or overall economic situation in the country are controlled to feel confident about safety of their investments. The number of population under the study controlling and following all occurrences on the market decreased if deposit insurance system promises to fully cover and compensate their deposits in times of crises and bankruptcies. 18 % of respondents considered their savings to be better secured after imposition of deposit insurance system and gave up the process of observation. The remaining 409 or 82 % of respondents still kept the same position to follow the

current and future situations on the market and continued to observe the financial conditions and future perspectives of banking institutions even if deposit insurance system is implemented in Georgia.

Thus, proportions of sample populations equal to 1 ($p_1 = 1$) and 0.818 ($P_2 = 0.818$) when the total sample size is again 500 people. 1 sample population is the number of depositors in Georgia who observe commercial bank performances and their future perspectives before deposit insurance system is implemented in the country and 2 sample population is the number of depositors in Georgia continuing the process of observation on the financial conditions of banking institutions under deposit insurance system.

Considerable reduction of the number of depositors evaluating bank performances is regarded as weakening of market discipline, leading to the problem of moral hazard. It means that banking institutions also feel secured if they know that their operations, strategies and performances are less watched by the depositors and undertake excessive risks.

Null hypothesis is that market discipline weakens under the deposit insurance system if insurance coverage is not limited and equals to 100% meaning that depositors are fully compensated after the bank failure. The hypothesis is true if the number of depositors observing commercial bank performances considerably decreases after imposition of deposit insurance system.

The alternative hypothesis states that market discipline or the number of depositors who are still willing to control activities of the banking institutions do not change their behavior under the insurance system even if their deposits are fully covered:

$$H_0: p_1 - p_2 > 0$$

$$H_1: p_1 - p_2 = 0$$

If testing results prove the difference between two proportions of sample populations to be less than zero it means that the number of depositors watching bank performances is less under deposit insurance system or market discipline is weaker under the system and hence null hypothesis will not be rejected.

Statistical z testing was again conducted (Table 3.9.) at the significance level of 0.05 ($\alpha = 0.05$). As far as alpha is equal to 0.05, the results of hypothesis testing are true again at 95% of confidence.

Table 3.9. Z Test for the Differences in Two Proportions: Testing H_0 the imposition of deposit insurance system in Georgia weakens market discipline if insurance coverage is unlimited

| Data | |
|-----------------------------------|---------------------|
| Hypothesized Difference | 0.22 |
| Level of Significance | 0.05 |
| Group 1 | |
| Number of Successes | 500 |
| Sample Size | 500 |
| Group 2 | |
| Number of Successes | 409 |
| Sample Size | 500 |
| Intermediate Calculations | |
| Group 1 Proportion | 1 |
| Group 2 Proportion | 0.818 |
| Difference in Two Proportions | 0.182 |
| Average Proportion | 0.909 |
| Z Test Statistic | -2.089060239 |
| Lower-Tail Test | |
| Lower Critical Value | -1.644853627 |
| p-Value | 0.01835115 |
| Reject the null hypothesis | |

According to the testing results p- Value < or less than 0.05 level of significance, which means that at 95 % of confidence null hypothesis is rejected in favor of alternative hypothesis. Accordingly, imposition of deposit insurance system does not weaken market discipline at 95 % of confidence or does not considerably reduces the number of depositors who are willing to observe the activities and financial conditions of banking institutions where they have invested their savings.

When null is rejected hypothesized difference equals to 0.22, which means that even 22 % decrease of the number of depositors observing the bank performances are not allowed. Although at 95 % of confidence testing results fail to reject that the number of depositors may decrease by less than 22 %. If hypothesized difference becomes 0.21 and less testing results do not reject the null. It means that maximum 21 % of depositors may consider that their deposits

are secured and may give up the observation. Thus, at 95 % of confidence testing results fail to reject that the number of depositors still willing to observe banking activities and performances may decrease by 21 % or less.

Reduction of the number of depositors observing commercial bank performances by 21 % will less probably weaken market discipline.

Hypothesis testing was conducted again to see whether or not the number of depositors trying to watch bank performances decreases by the same amount or less if depositors are not fully compensated but rather just part of their savings is paid in an event of bank failure. Thus, testing results show whether or not the market discipline becomes weaker under deposit insurance system in Georgia if coverage limit is imposed and the insurance coverage is less than 100 %.

The survey results show that the number of depositors who are observing commercial bank performances, their current financial conditions and future perspectives or the economic situation in the country decreases less under deposit insurance system with partial coverage relative to the full coverage. If depositors are paid not full but only the part of their investments in times of crises and failures, then bigger number, 455 or 91 % of respondents showed to preserve their position and to still watch banking institutions. Thus, only 45 respondent 9 % gave up the process of observation under the partial compensation of deposits.

1 sample population again refers to the number of depositor observing commercial bank financial conditions when deposit insurance system does not yet work in Georgia and 2 sample population refers to the number of depositors trying to watch the bank performances under deposit insurance system.

The proportion of 1 sample population in the total sample size is again 1 ($p_1 = 1$), because the same 500 or 100 % of respondents observing commercial bank performances are assumed to be beginning sample under the test. The proportion of 2 sample population equals to 0.91 ($p_2 = 0.91$).

Z testing was conducted to test the hypothesis below (Table 3.10.):

$$H_0: p_1 - p_2 > 0$$

$$H_1: p_1 - p_2 = 0$$

Null hypothesis states that the difference in two proportions is positive or more than zero. It means that if null is not rejected the number of depositors controlling banking institutions

decreases or the market discipline again weakens under deposit insurance system even if deposited savings are not fully compensated and the part of depositors savings are at risk after bank failure.

Alternative hypothesis is that the number of depositors observing financial conditions and performances of banking institutions does not change under exactly the same conditions or under partial compensation.

Hypothesis were tested at 0.05 level of significance ($\alpha = 0.05$). Thus, testing results are true again at 95 % of confidence.

Table 3.10. Z Test for the Differences in Two Proportions: Testing H_0 the imposition of deposit insurance system in Georgia weakens market discipline if insured deposits are compensated partially after bank failures

| Data | |
|-----------------------------------|---------------------|
| Hypothesized Difference | 0.12 |
| Level of Significance | 0.05 |
| Group 1 | |
| Number of Successes | 500 |
| Sample Size | 500 |
| Group 2 | |
| Number of Successes | 455 |
| Sample Size | 500 |
| Intermediate Calculations | |
| Group 1 Proportion | 1 |
| Group 2 Proportion | 0.91 |
| Difference in Two Proportions | 0.09 |
| Average Proportion | 0.955 |
| Z Test Statistic | -2.28814381 |
| Lower-Tail Test | |
| Lower Critical Value | -1.644853627 |
| p-Value | 0.011064574 |
| Reject the null hypothesis | |

Testing results reject again the null hypothesis in favor of alternative hypothesis at 95 % of confidence. According to the testing results p- Value is less than 0.05 of significance level. It

means that the hypothesis of weakening market discipline is once more rejected, although, reduction in the number of depositors observing financial conditions of banking institutions is still expected.

Hypothesized difference of 0.12 demonstrates that 12 % reduction in the number of depositors watching the banks is not allowed. In return testing results allow at 95 % of confidence that maximum 11 % of depositors may feel that their deposits are not at risk and they may change their position and stop the observation. This is evidenced by the testing results when hypothesized difference is 0.11 or less. In this case testing results fail to reject the null hypothesis at 95 % of confidence.

The purpose of last two testing was to find out whether the implementation of deposit insurance system in Georgia significantly weakens market discipline. As a result of testing null hypotheses were rejected at 95 % of confidence in both cases in favor of alternative hypothesis. It means that the number of depositors watching bank performances does not considerably decrease, but at the same the results of testing do not totally reject reduction of the number of depositors observing the financial condition of commercial banks.

Testing results show that market discipline is weaker when full coverage is imposed by deposit insurance system relative to the second case when deposit insurance system promises only partial coverage or partial compensation. The number of depositors observing the commercial bank financial conditions under the full compensation according to the testing results is allowed to decrease by 21 % and under the partial coverage – by 11 %. Both results are true at the 95 % of confidence.

Generally, decrease of the number of depositors in Georgia willing to observe the financial conditions of banking institutions and to watch risk levels of commercial banks is really insignificant in both cases. Thus, according to the results of testing implementation of deposit insurance system does not considerably change the situation on the market in respect of market discipline. Although, the partial coverage or partial compensation is more desirable to be a component of deposit insurance system as partial compensation to depositors shows to have less effect over the market discipline rather than the full coverage.

3.2. The Model of Deposit Insurance System Fitting Georgian Banking Environment

The proposals, recommendations and principles of successful deposit insurance system supplied by different studies and international organizations, as well as testing results of the survey conducted among Georgian population helped to form a model of deposit insurance system which most likely work effectively for the stability of Georgian banking system. The components essential for the success of the system which to the best of our experience and knowledge should be taken into consideration in the process of designing deposit insurance system for Georgia are highlighted in the subsections below.

3.2.1. Governance and Power

Deposit Insurance Agency is recommended to be governed independently with no political or other institutional influences in order to make their decisions work best for the financial and banking system stability. Very much like other countries the political intervention is a critical point in Georgia. Not to negatively influence decisions of Deposit Insurance Agency and not to act for the best interest of other parties, which may harm long-run financial stability, the Agency is probably better to be governed independently like recommended by the international experience.

At the same time the Agency governance has to be given full authority to obtain any type of information to supervise and evaluate member bank performances. The Agency must be the one supervising commercial bank financial conditions and exposures to risk. As far as bank failures and losses has to be covered by the insurance fund of the Agency it needs to be given all the authority and right to control commercial banks' performance. It is in the best interest of the Agency to keep only strong banks without or with an insignificant weakness exposing the lowest risk or no risk at all to its insurance fund. That is why the supervision of member banks by the Agency will most probably be the most proper and severe.

3.2.2. Deposit Insurance Funding

Deposit Insurance Agency has to have separate funding as recommended. The stand alone fund is thought to be available any time when needed for insurance purposes; to evade the cases when the funds may not be available whenever needed to compensate depositors' loss.

The initial funding (start-up capital) to establish the Agency before it operates and starts collecting insurance premiums needs to be financed by the government or international financial

institutions. As already mentioned many such international institutions were supporting the idea of developing deposit insurance system in Georgia and development bank of Germany (KfW) was ready to finance this project by 4 million EUR in 2005.

Another source of filling up the insurance fund is insurance premiums paid by commercial banks for insuring their depositors. The critical point is to determine ratio of insured deposits payable to the insurance fund by member commercial banks. Insurance funds need to be enough to reimburse depositors claim and hence to meet all liquidity requirements. As far as premiums are recommended to be risk based it is difficult to say one particular ratio that should be imposed generally to all commercial banks. The level of risk (the chance of failure) exposed by each commercial bank to the insurance fund should determine what percentage of insured deposits should be paid in the form of insurance premiums by this individual bank to the Insurance Agency. Commercial banks creating greater risk of loss to the agency fund should be obliged to pay higher premiums.

The payments by commercial banks should be made to the insurance fund in case of delays in scheduled insurance premiums as well. The penalties have to be imposed.

Deposit insurance funds should be self-managed but very accurately and safely. Deposit Insurance Agencies should be allowed to create additional funding through investing insurance funds, but there must be a strict restriction concerning the portfolio. The investments by the Agency should be the most liquid (to easily liquidate the assets if compensations are urgently required) and the most secure to evade the risk of losing the insurance fund used for investments.

To determine how much of insurance fund to use for the investments and how much to keep as a reserve funds for the urgent compensations (or determining the target ratio) is also critical point. The attention should be paid to the economic situation in the country and probable fluctuations on the market. During high risk of uncertainties the Agency should keep more insurance fund against the probable failures to be able to compensate the probable losses of depositors of failed banks. Due to this factor it is probably better to impose flexible target ratio to modify the amount of reserve fund according to the future expectations on the market.

3.2.3. Membership

Participation of banking institutions in deposit insurance system is recommended to be compulsory. Commercial banks are not to be the ones deciding whether or not to be the members of deposit insurance system. By prohibiting the possibility of commercial banks to choose

whether to be a member of the insurance system or not will save the system from having only small and weak banks as a members. Strong banks most probably leave the system.

The issue is said to be critical under flat rate insurance premium. If insurance premiums paid by member banks are not risk based and all commercial banks participating in the process are not charged according to the risk of the strategies they choose to follow, then voluntary membership will demotivate stronger banks with lower probability to fail to become a member of deposit insurance system. Thus, risk based insurance premium and compulsory membership both together are needed to eliminate the problem of adverse selection. Insurance premium at the same time is said to undermine the problem of moral hazard.

Georgian deposit insurance system should follow these recommendations. To protect the banking system of Georgia from the problem of adverse selection the membership has to be compulsory for Georgian banks especially at the beginning stage of project implementation, till Georgian depositors fully understand the principles and functions of deposit insurance system and start demanding their deposits to be insured. After population in Georgia find out that insurance of deposits provides protection to their savings, trust insurance system and start to demand their deposits to be insured, the participation in the system will become attractive itself for all commercial banks as otherwise depositors will save their excess funds through only the member bank accounts and consequently, deposits most probably will flow to the commercial bank accounts providing and offering the insurance service to depositors.

3.2.4. Coverage Limit

The experience shows that imposition of coverage limit to the insured deposits is one of the major determinants of effective deposit insurance system.

Based on the survey results considerable number of respondents declare that they observe and compare risk levels of a commercial bank where they have invested their savings with other commercial banks operating on the market in order to control the performance of this particular banking institution. This means that finally considerable part of deposit savings appear to be accumulated at the bigger and stronger commercial bank accounts. The official statistical figures show the same. The imposition of deposit insurance most probably will make distribution of public savings among all commercial banks comparably even. The effect is going to be even more significant if deposit insurance will impose coverage limits.

Knowing that their deposit savings are insured up to some amount depositors will probably distribute their savings among different banks, if their deposits exceed the amount covered by insurance coverage. The expected result of it is going to be strengthened financial condition of comparably smaller banks. It would enable them to successfully compete with stronger banks on the market in the way of attracting bigger portion of public savings (improved competition).

Another positive impact of having limited coverage is proved to be stronger market discipline compared to the case when there is full coverage insurance. The experience again shows that 100 % insurance coverage makes depositors less willing to control their bank performances and to observe operations their banking institutions follow.

The research findings of present paper show the same depositor incentives. Though considerable number of respondents say that they would check whether or not their banking institutions are doing well even after their deposits are insured, still bigger number of population declare that control upon their bank performance is going to be more severe and strong if their savings were insured up to some limited amount rather than in case of 100 % insurance coverage. Results of testing the hypothesis show at 95 % of confidence that the number of depositors in Georgia observing commercial bank performances would decrease by 22 % under the full coverage and only by 12 % under the limited coverage, which prove that coverage limit sustains the market discipline.

The critical point as already mentioned is determination of right amount covered by insurance. Insurable amount should be not as high to demotivate depositor monitor banking performance and not as low as to neutralize the fare of loss and reduced panic run to banking institutions for early withdrawals.

To follow the recommendation of International Monetary Fund advising countries to use one or two times per capita GDP as the general rule on appropriate limits for deposit insurance coverage, GEL 4352.9 of GDP per capita of Georgia (official statistical data of 2008) allows to conclude that GEL 10 000 can be imposed as coverage limit of deposit insurance in Georgia to get favorable effects of coverage limit.

3.2.5. Foreign Currency Deposits

Considerable part of savings deposited at different commercial banks of Georgia are denominated in foreign currency rather than in national currency. Official statistical data

provided by NBG proves it to be so – 1 616 402 000 000 totally are recorded to be saved in foreign currency at the commercial bank accounts of Georgia at the end of October, 2009, that is about 84 % of all deposited funds and only 314 211 000 000 of deposits were denominated in GEL, that is around 16 % of total deposits saved in commercial banks operating in Georgia.

Survey results as already mentioned demonstrate the same; the absolute majority of respondents prefer to save in foreign currency rather than in national Lari.

It is clear that the respondents having their savings denominated in currency other than Georgian Lari say that deposit insurance makes no sense for them if foreign currency deposits are not to be covered by insurance, and only for small part of the respondents who have made their savings in national currency such a deposit insurance system covering only GEL denominated deposits matters.

The survey results show that in order to attain the primary objective of deposit insurance system in Georgia and to protect majority of depositors in the country, insurance has to cover not only national currency deposits but all the savings made by Georgian depositors in foreign currency as well. It probably exposes additional risk (foreign exchange risk) to deposit insurer, but in order for deposit insurance project to work it is essential to make people feel protected.

As for the problem of dollarization, evidenced in the country from the observation, the main point to declare is that implementation of deposit insurance system does not change the situation; as far as the system insures both, national and foreign currency deposits, it does not affect the decision of depositors in which currency to save. Deposit insurance system is not implemented to protect the national currency or to fight against the process of dollarization, important is to make all depositors regardless currency denomination of their deposits feel protected and confident toward the banking institutions, which can be only reached if all currency denominated deposits are insured against the failure.

3.2.6. Deposit Insurance Premium

Insurance premium in Georgia payable by the member banks is better to be risk based as far as it is expected to solve both the problem of adverse selection and moral hazard.

If commercial banks are to pay insurance premiums according to the risk level each banking institution faces, then stronger banks with lower probability of failure, imposing lower risk to insurance fund are going to be charged by lower premiums compared to weaker banks facing higher probability to fail.

Weaker banks with higher insurance premiums payable are feared to be in difficulties to meet these payments. But even if the imposition of high insurance premiums due to the riskier strategies followed make them to fail it may not be bad at all for the overall banking system of Georgia, as far as only strong banks will survive to operate on the market. These failures will less probably show to be painful for the banking system when deposit insurance system is implemented and depositors of these failed banks are protected against loss.

It does not mean that strong banks are not to be watched by Deposit Insurance Agency. Not to let strong banks take excessive risk for higher expected return is an important thing to observe. As soon as commercial banks follow risky strategy they have to be punished by high premiums to discourage them do so.

Though the part of the premium costs are covered by depositors through receiving lower interest payments for insured deposits the survey results still show that Georgian population is ready for that and do prefer to have their deposits insured even if they are paid less for that.

Risk-based insurance premiums recommended for effective deposit insurance system to control the problem of moral hazard require careful risk assessment method. The CAMEL rating system of Georgia used by NBG, as denoted in “The Manual for Commercial Bank Supervision” detects risky strategy followers and rates commercial banks in Georgia as it is already described according to their risk categories from satisfactory to critical. Risk assessment method can be used for assigning different insurance premiums to different risk category institutions.

Georgian regulators can pursue the experience of pricing deposit insurance demonstrated above that is assessing capital adequacy groups and supervisory subgroups to evaluate bank risk categories. It can be considered banks with capital adequacy coefficient below 8% (about 6%) as undercapitalized, 8% - as adequately capitalized and above 8% (about 10%) – as well capitalized, (calculations of capital adequacy coefficients are shown by Table 2.4.). Although last year, with world financial crises of 2008 background, highly developed countries start discussing the case of rising Prudential Capital Adequacy Ratios from 6 % to 8 % and from 8 % to 12 %. This case also has to be taken into consideration when pricing deposit insurance and calculating deposit insurance premiums.

As for supervisory subgroups Georgian banks are already rated into 5 composite rates (each composite rate is illustrated by Table 2.1.). The premium rate has to be predetermined by the project per assessable deposits, according to the level of risk banks face. Banks assigned to

the highest risk category has to be charged by highest rate of premium and the lowest risk bearing banks – by the lowest one.

3.2.7. Reimbursement to Depositors

The project of implementation of deposit insurance system should precisely define the time when Deposit Insurance Agency has to start the process of reimbursement to depositors. The process of reimbursement should take place only if the commercial bank is insolvent or unable to meet its liabilities, definitely after the bank is officially declared as bankrupt by the National Bank of Georgia.

The role of Deposit Insurance Agency during the process of liquidation of banking institution is another critical issue that should be clearly defined by the deposit insurance project. After commercial bank is declared as insolvent the process of reimbursement by DIA should take a start. Not to make depositors wait the compensation has to be carried out using the Agency insurance funds, as the process of liquidation of banking institution usually lasts long. After all assets of commercial bank are liquidated by NBG agents DIA should be paid the part of the liabilities of commercial bank, namely, deposits of commercial bank already reimbursed to the depositors by DIA.

The element essential to the successful implementation of deposit insurance system or the process of reimbursement to depositors after bank failure should be discussed and described by the project of deposit insurance system in details. Detailed description of the process largely supports promotion of public confidence and helps to assure depositors that they will be really compensated if banking institution fails.

Description of the process of reimbursement necessitates the explanation of the steps that depositors should:

1. be clearly informed about the coverage limit of the compensation in advance, or how much of their savings will be compensated in an event of failure;
2. be distinctly informed about the delays of reimbursement or when exactly they are to be compensated;
3. know under what conditions the deposit insurer will start the payment process;
4. be informed about the time frame over which payments will take place if the loss of depositor is to be compensated gradually;

5. know whether any advance or interim payments will be made.
6. precisely know the steps of the process of reimbursement which they should undertake in order to be compensated. These steps imply when to claim for compensation and how to apply to Deposit Insurance Agencies for reimbursement.

Knowing these details by depositors helps them to better understand the principles of deposit insurance system operation and helps them to trust the system. Lack of trust of population toward the insurance system makes the system absolutely ineffective. Once depositors start to believe in the effective operation of deposit insurance system, the system starts to have stabilizing effect over the banking environment and financial system of the country.

3.3. Public Awareness

The most significant factor of deposit insurance system efficiency is prompt understanding the nature of the system and its objectives by the population.

Thus giving the full information about how deposit insurance is going to work and persuading depositors that their insured deposits are safe is what makes deposit insurance system have favorable effect on the banking system.

When depositors start to feel protected even the cases of failure cannot destroy the positive influence of the system, but for that insurers have to always stand ready to fulfill their responsibility to compensate. Deposit insurance does have a positive effect when facts of reimbursing depositors of a failed bank take place.

Deposit insurance system and the corporation providing the insurance has to be advertised by both the government and National Bank of Georgia to pass the information about positive aspects of deposit insurance system, especially at the start up point when depositors cannot see real facts of compensation yet.

All means of communication has to be used, TV or radio channels, posters, official notifications, etc.

Member commercial banks also have to be involved in the process. Banks may appoint officers working particularly on that. It is in their best interests as well to act so.

Conclusion and Recommendations

Georgian banking sector has been considered to be the most progressively and permanently developing sector of economy for years. Nevertheless, it does not ensure high level of confidence among Georgian population. The confidence of people completely destroyed after the collapse of former Soviet Union has started to recover, but mentioned political instability in Georgia in August, 2008 demonstrated insufficiency of public confidence to evade panic among Georgian population; based on the official statistical data depositors withdraw their savings at a short notice of instability. The experiences of those countries having deposit insurance in place prove deposit insurance to be a strong medicine for recovery of public confidence. Although, some of the research findings contradict with the suggestion that deposit insurance program has stabilizing effect over the banking industry in long run. The observations on the practices of deposit insurance system implemented throughout the world helps to support the positive effects of the system over the banking sector. The arguments against critics of deposit insurance system can be stated as follows:

1. Deposit insurance system cannot certainly be the guarantee of financial stability to absolutely stop the banking crises. The system serves primarily the purpose of protecting depositors if banking institution fails. This most probably strengthens confidence of depositors and evades panic runs in the future. Crises do not necessarily occur because of intensive deposit withdrawals or excessive risk-taking. The reasons of any particular case of failure need to be investigated. If reasons of bank failures are other than panic runs then deposit insurance system should not be blamed in provoking the crises.
2. One more argument against critics of deposit insurance efficiency is that all countries should not be equally judged, as each of them have different histories and backgrounds of development in a particular field of industry, and thus, in a specific point of time they experience different levels of economic stability and progress and their financial environments may differently ensure the success of the implementation of deposit insurance system. Good corporate governance and sound risk management of individual banks, effective market discipline, and frameworks for strong prudential regulation, supervision and laws can mitigate the problem of moral hazard that may be provoked by the system.

3. Studies conducted over deposit insurance system often show destabilizing effects of deposit insurance system in the long run and try to assert that banks under deposit insurance system for longer period of time experience crisis more than banking institutions which operate under deposit insurance system for shorter period of time and concludes that deposit insurance system fosters bank failures in the long-run. However, the reason for the bank failures in long-run can be a poor design of deposit insurance systems implemented earlier. E.g. deposit insurance systems at the beginning stage of its invention did not impose risk-based insurance premium, which now is considered to be a key element for controlling the problem of the moral hazard and for successful implementation of deposit insurance system. Thus, whether deposit insurance system benefits or harms a country largely depends on how well it is designed and administered; deposit insurance systems containing certain design features can mitigate moral hazard.

Experiences of those countries having deposit insurance program imposed proves it to be effective if it is designed so that all important elements of the program are estimated. In order to be successful and to have positive effects deposit insurance system needs to be designed carefully, in a manner to preserve the benefits of heightened financial stability and the protection of small depositors without a further increase in moral hazard or reduction of market discipline.

Besides these general considerations of effective deposit insurance system, research paper focuses on the issues of effects of deposit insurance particularly over Georgian banking system and concludes:

1. The implementation of deposit insurance system will most probably have positive effects over Georgian banking system. Practices of imposition of deposit insurance system in post Soviet countries demonstrated constant deposit growth after its implementation. As far as other factors that might have caused this growth could not exactly coincide to the implementation of the system, the imposition of deposit insurance system can be regarded as a reason of this growing tendency. Taking into consideration that the economic situation in those countries are very much similar to the Georgian economic environment (the population all over these countries experienced loss after the collapse of Soviet Union and consequently had pessimistic attitudes toward banking institutions) implementation of deposit insurance system in Georgia will most probably have similar positive effects over the Georgian banking sector.

2. The Georgian banking system is in need of implementation of deposit insurance system for further development and growth. The present stability of the Georgian banking system ensured by NBG supervision creates the growing tendency of banking sector in the country. Accordingly, official statistical data show significant development of the Georgian banking industry. However, the Georgian banking system stability and progressiveness did not ensure protection of banking institutions from panic runs in times of future uncertainty, due to which banks in Georgia were negatively affected and faced financial difficulties in August 2008. Deposit insurance system providing the guarantee to compensate depositor's loss enhances the public confidence and reduces the panic among population in times of crisis. The testing results of the research paper state the same stabilizing effects of deposit insurance system over the Georgian banking sector; the hypothesis that after implementation of deposit insurance system panic runs to banking institutions will be reduced by 54 % was not rejected at 95 % confidence. This positive effect of Deposit insurance system will most probably promote the banking stability in Georgia even under the risk of uncertainty supporting future development of banking industry.
3. The Georgian banking sector can benefit from the implementation of deposit insurance system. The survey of the research paper showed Georgian population to be ready for the implementation of the system and to be demanding deposit insurance. Vast majority (about 95%) of respondents, 473 people replied to be ready to insure their savings if deposit insurance system operated in Georgia. Moreover, testing results showed that the number of depositors under deposit insurance system will increase in Georgia. The hypothesis that the implementation of deposit insurance will increase the number of depositors by 50 % was not rejected at 95 % of confidence. Georgian population showed to be ready to insure their deposits even if they face the cost of insurance. The hypothesis about a considerable decrease of the number of depositors willing to insure their deposits even if they receive lower interest payment for insured funds was rejected. Testing results allowed only 2.4 % reduction. This is really insignificant figure compared to the previous testing results showing the number of depositors to be 50 % more under deposit insurance system. Such a significant growth in the number of deposits will certainly have positive effects over the banking system of Georgia in respect of expanded banking activities and growth.

4. The legal basis of Georgia can ensure successful implementation of deposit insurance system in the country. Prudential regulation of Georgia on the banking supervision is developed well enough to protect commercial banks operating on the market from high risk of failure. National Bank of Georgia responsible for the supervision of financial conditions and overall performance of commercial banks in the country can be regarded to be successful in keeping only strong banks on the market. Observations on last ten years developments (since 2000) showed no official data about bankruptcies in Georgia. Though several banks disappeared from the market (not officially announced as bankrupts) it still does not show the instability of Georgian banking system. The fact of several bank failures during ten years does not really enable to conclude that commercial banks in Georgia are not effectively supervised. Stability of banking system and its well developed legal basis is one of the most important factors ensuring successful implementation of deposit insurance system.
5. The model of deposit insurance system best fitting the Georgian banking environment should imply below considerations and recommendations:
 - a. Deposit Insurance Agency is recommended to be governed independently, with no political or other institutional influences in order to make their decisions work best for the banking system stability;
 - b. Deposit Insurance Agency should have separate funding to be available any time when needed to compensate depositors' loss. Insurance fund should be invested in the most safe and liquid assets to be protected and to evade the probable loss. Flexible target ratio should be imposed by the system to enable the modification of the amount of reserve fund according to the expectations on the market. Under the high risk of failure of member banks the reserve fund for compensation should be increased and the opposite.
 - c. The membership of deposit insurance system for the commercial banks is recommended to be compulsory, otherwise the participation is expected to be attractive only for weak banks with the high probability of failure.
 - d. Coverage limit is recommended to be imposed. According to the testing results of the research paper if depositors in Georgia are not promised to compensate their losses fully they showed stronger interest and desire to

observe commercial bank performances. The hypothesis that the implementation of deposit insurance system in Georgia will decrease the number of depositors observing financial conditions of commercial banks was not rejected at 95 % of confidence in neither of the cases with the coverage limit and without, but in case of full coverage 22 % reduction was observed when in the case of partial compensation only 12 %. Thus, coverage limit proves to support the maintenance of market discipline.

- e. Foreign currency deposits are better to be insured. Official statistical data shows the major part of total deposits in Georgian banking system to be denominated in foreign currency rather than in GEL. For this reason it is better to have foreign currency deposits insured in Georgia not to undermine the effects of deposit insurance system over the banking environment.
- f. Deposit insurance premiums are better to be risk-based to mitigate the moral hazard. Risk based insurance premiums will force commercial banks to follow less risky activities not to pay high premiums that will reduce their chance of failure.
- g. The process of reimbursement should be explained to depositors by Deposit Insurance Agencies very clearly and in details. Depositors should exactly know when, how and by how much will they be reimbursed.

Additionally the process of deposit insurance system implementation can include the following considerations: excluding certain categories of depositors from coverage (reject to insure or compensate deposits of those representatives of managerial bodies), demonstrating a willingness to take legal action against directors and others for improper acts, more severe requirements of regulators to prevent excessive risk-taking by banks, like higher capital requirements to reduce an incentive for high risk-taking in fear of a greater owners' loss, intensive supervisions and examinations of banks' financial conditions to somehow measure the level of risk they face.

It is also substantial to have public informed about how the system works. Public communication techniques and approaches should be considered. One effective communications tool is the mandatory use of official signs that inform the public about degree of protection offered by that country's Deposit Insurance Agency. Other communication tools that should be

considered are mandatory disclosures of deposit insurance protection in certain advertisements, publications, and public notices.

Based on the research findings the renewal and elaboration of deposit insurance project of Georgia can be recommended to the NBG. After taking into consideration all the proposals and principles of successful deposit insurance system recommended in the present research paper, the projected law about obligatory insurance of individual deposits in Georgia worked out before should be refined and the case of adoption of this project should be discussed again.

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Appendix

1. The Sample of Questionnaire

Section 1: Public Behavior before Deposit Insurance System in Georgia

1. Have you saved your excess fund at any commercial bank account of Georgia?
 - a) yes
 - b) no
2. If you had excess fund would you save it at the commercial bank account?
 - a) yes
 - b) no
3. If no is it because of:
 - a) lack of trust toward financial institutions
 - b) low interest paid
 - c) other, please note it
4. If you don't trust banks in Georgia is it because you think that:
 - a) financial environment in Georgia is uncertain
 - b) banks fail easily because of weak management of banks in Georgia
 - c) in an event of bank failure your deposit accounts will not be compensated
5. What would you do as a depositor if any economic or political instability takes place inside the country?
 - a) run to the bank immediately to withdraw your account
 - b) wait a little to see further developments and withdraw fund if situation is out of control
 - c) you trust your bank and despite the probable failure you feel secured about you savings

Section 2: Changes in the Behavior of Georgian Population after Deposit Insurance System

6. Would you insure your deposits if deposit insurance system operated in Georgia?
 - a) yes
 - b) no

7. If you receive lower interest payment for the insured deposit accounts will you still prefer to have your deposits insured?
- a) yes b) no
8. Would your volume of investment increase if your deposit accounts were insured?
- a) yes b) no
9. Would you deposit your savings fully at any commercial bank account in Georgia if your deposits were insured?
- a) yes b) no
10. If your deposits were insured in case of uncertainty would you:
- a) be more confident and relaxed about safety of your savings
- b) still go to your bank for early withdrawals

Section 3: Features of Deposit Insurance System Required by the Respondents

11. Mark the currency you prefer to make your savings in:
- National currency
- Foreign currency
12. Does deposit insurance make sense for you if foreign currency deposits are not insured?
- a) it makes no sense for you because considerable part of your savings are made in foreign currency
- b) it makes no difference because all you save is denominated in national currency
13. What do you do to control the situation and to be informed about financial institution you have invested in?
- a) always check financial statements of your institution
- b) compare the risk levels that your and other banking institutions face
- c) observe future opportunities of commercial bank
- d) just observe overall economic situation inside the country
14. If your deposits were insured fully, 100 %, would you:
- a) be less interested in commercial banks' financial condition

b) be still caring about how well your financial institution operates

15. Assume that your savings are insured partially (not 100 %):

a) would you be more incentivised to observe commercial bank activities you have invested in

b) your behavior about your bank inspection will not be effected by this fact

Personal Information:

Education: higher general

Your personal monthly income: -----

The place of your residence: -----

Your age: -----