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**Article**

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# The Problem of Moral Hazard and Effects of Deposit Insurance Project

**Sophio KHUNDADZE**

## ***Abstract***

*The paper focuses on the significance of deposit insurance program for the financial system stability and smooth operation of the economy. The issue is very substantial for Georgian banking system, which remains to be the only industry all over the post Soviet area without deposit insurance mechanism in place. Georgian banking system lacks the confidence level of its customers, that probably can be restored by imposition of deposit insurance program. The article compares discussions of different experts and their empirical studies arguing whether or not deposit insurance undermines or promotes banking stability. But the experience shows that it, if carefully and properly designed, facilitates additional economic stability, though the last attempt to implement the program in Georgia failed. The article presents the terms of the project elaborated by the National Bank of Georgia and Financial Committee, and gives some proposals needed to perfect the program taking into consideration the recommendations of different experts.*

**Keywords:** *Deposit Insurance, Moral Hazard, Banking, Georgia*

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## **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. Deposit insurance programs 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 (Nicholas J. Ketcha Jr. 2007).

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”.

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 their funds are secure. This in turn supports the stability and smooth operations of the economy (Nicholas J. Ketcha Jr. 2007). Deposit insurance system contribute 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 (David K. Walker, Edgardo Demaestri and Facundo Martin, October 1, 2004).

The issue is very significant 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, followed by the loss of public savings. None of depositors in Georgia was compensated. Although, compared to past years, the amount of deposits at banks considerably increased, population up today fill no safe about their bank savings. Even recent developments proved it to be so, any political or economic uncertainty makes people rush to the banks for early withdrawals. Georgian banking system suffered much by August political instabilities. Considerable amount of deposits were withdrawn from Georgian banks, that forced them to follow safer strategy of preserving more reserves, they rejected credit demands. Even after a few months later banks can not fully restore their operations, they keep up following safe strategy; long-term loans (with maturity more than three years) are not delivered, more severe requirements and restrictions are imposed to the applicants willing to take credit and so forth. Banks are

forced to act so as future behaviors of current depositors are not predictable, they may withdraw their savings any time, the fact is that none of the deposit withdrawals occurred in August were deposited back, banks appear to be unable to re-attract those funds, people keep them home that proves that they do not trust Georgian banking institutions. The results are terribly negative not only for banking sector but consequently for the whole economy of Georgia, as far as banks restrict credit delivery process economic growth of Georgia is hindered at the moment; most of the businesses expend their activities through credit financing, consumer goods were mostly bought using consumer loans or real estate loans in case of house purchases and so on. Businesses hence can hardly sell their products, especially constructing companies appeared to be very much harmed. Firms are closing, new businesses are not eager to take start because of future uncertainties, unemployment is expected to reach its high levels in February. Thus deposit insurance project implementation in Georgia became again the subject of discussion, the issue of the day. Experts in Georgia suggest that the process could be at list partially avoided if banks had their deposits insured. Depositors would be sure about safety of their savings knowing that they would be compensated in an event of banking crises.

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 of which encouraging banks to follow riskier strategy and increasing 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 in a way that the moral hazard problem will be controlled. The first part about effects of deposit insurance system illustrates empirical studies conducted by different researchers and its results concerning these issues.

The goal of this article is to assert deposit insurance effectiveness for the stability of banking system and consequently for the entire economy, for its growth and prosperity, to bring opposite argument for those promoting the idea of deposit insurance inefficiency. The article presents deposit insurance project design considered as a perfect design by different studies, based on other countries experience having the problem of moral

hazard under complete control. It also demonstrates deposit insurance project of Georgia rejected by the Georgian parliament in 2006, analyzes its shortcomings and shows in what ways it should be amended according to the above mentioned design. Declares that imposition of deposit insurance project is very needful for Georgian banking industry because of pragmatic attitude of Georgian population toward their institutions, for which reason it states that deposit insurance program will probably have more favorable effects in Georgia than in other countries.

### **Effects of Deposit Insurance System**

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.

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 can not 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 (Nicholas J. Ketcha Jr., 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 long 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 the study of Kam Hon Chu (2003) banking stabilities of 174 countries during 1980- 2000 period were compared 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 of this data and calculations with 95 percent confidence level null hypothesis of no association between deposit insurance and banking crises has not been rejected. Thus the empirical approach and findings of the study conclude that there is no association between deposit insurance and banking crises, because 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 percent confidence) suggests that the null hypothesis of no association between deposit insurance and banking crises can be rejected. 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. 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.

Some finds it pointless to ask whether banking is safer after deposit insurance reform than before. Dale K. Osborne and Seokwon Lee (2001) in their study 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”). 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 can not 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. 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.

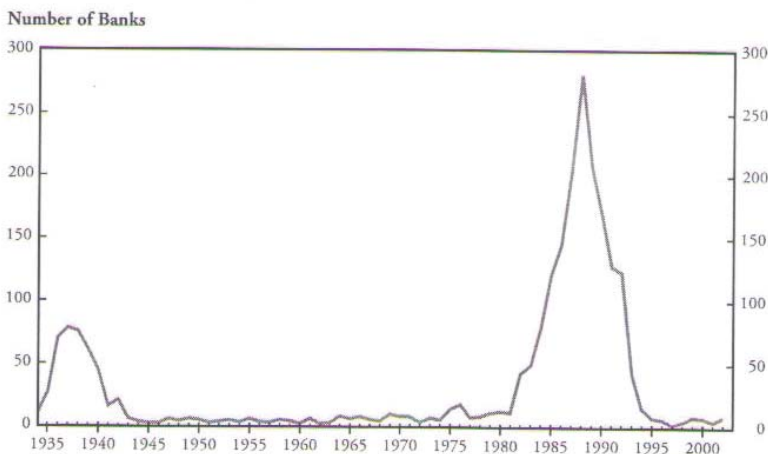
Thus some of the findings of the researches contradict with the suggestions that deposit insurance programs have stabilizing effect on banking industry in long run, but the statement is not to be posed this way; deposit insurance projects certainly can not absolutely stop banking crises, it can not be the guarantee of banking stability, it just serves a narrow purpose of preventing panic runs by strengthening public confidence and hence supporting stability of banking operations. It needs to be investigated the reasons of failure for any particular case, crises do not necessarily occur because of intensive deposit withdrawals or excessive risk-taking. If reasons of bank failures are other than panic runs it is not to conclude that deposit insurance program was not successful or had no sense to implement. Bank collapses may be caused due to many other outside factors like bad economic environment, political instability, or different designs that means older 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 rated premiums to mitigate the moral hazard problem. It is 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. 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. This can be considered as a reply to the debates about securing long run stability by deposit insurance project. As it was 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. Later on paper focuses on more detailed discussions of these suggestions.

Intensive bank failures in United States when deposit insurance had already been imposed for more than 40 years (1980 – 1995) is explained by factors other than problem of continual deposit withdrawals, by Antoine Martin, an economist at the Federal Reserve Bank of Kansas City:

Deposit insurance was adopted in 1933 in response to the many bank suspensions since the beginning of the Great Depression. Whereas an average of about 600 banks were suspended every year from 1921 to 1929, that average climbed to over 2,250 from 1930 to 1934, with 4,000 suspensions in 1933 alone. When deposit insurance became effective in 1934, it contributed to a substantial decrease in the number of bank failures. From 1934 to 1941 the number of bank failures handled by the newly created FDIC fell to 370, a little over 50 banks a year. In the 40 years from 1940 to 1979, on average only seven banks failed every year (Figure 1).

**Figure 1:** Insured Bank Failures



**Source:** FDIC (<http://www.kc.frb.org/Publicat/econrev/pdf/1q03mart.pdf>)

Until the 1980s, deposit insurance functioned very well. While there was no apparent need for major changes, deposit insurance underwent some modifications. One important change was an increase in the FDIC's use of purchase and assumption (P&A) transactions as a way of resolving

banks. As indicated in the FDIC's resolution handbook: "A P&A is a resolution transaction in which a healthy institution purchases some or all of the assets of a failed bank and assumes some or all of the liabilities, including all insured deposits." In the 1960s and 1970s most failing banks were resolved through P&A, implicitly extending coverage to uninsured deposits. The number of bank failures increased dramatically in the early 1980s and remained high for about a decade. From 1983 to 1992, on average almost 150 banks closed every year, with 280 bank failures in 1988. Although there were many factors contributing to the failures, it is generally agreed that moral hazard played an important role. If moral hazard is partly to blame for the 1980s crisis, why did it take over 45 years to manifest itself? Several factors exacerbated the problem: increased competition, high inflation, and ill-conceived deregulation. Banks also suffered from a series of shocks in the 1980s. Small regional banks were hurt by bubbles in energy and agricultural land prices. Some large banks held significant amounts of debt from lesser developed countries in the early 1980s. These loans lost most of their values in 1982 as Mexico and about 40 other countries defaulted. Shocks such as these led to many bank failures (Antoine Martin, first quarter 2003).

It is important to note, as one more argument against deposit insurance efficiency critics that not all countries can 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.

### **Banking Environment and Deposit Insurance Project of Georgia**

As the level of trust is very low and thus problematic for Georgian population and deposit insurance objective is to compensate depositors in case of insolvency of commercial bank, increasing confidence level of potential depositors, deposit insurance may be more effective and useful for Georgia than for other countries. Collapse of soviet system caused failure of banking institutions, people lost thousands of their saving accounts, the loss was never compensated. It is not a distant past, people still fear, they lost their confidence toward banking institutions and they very often prefer to simply keep their savings rather than deposit them at

banks. Deposit insurance program may be the solution of this particular problem of Georgian banking industry; it may restore public confidence and stimulate attraction of consumer savings.

Although, annual financial reports of NBG shows that banking sector is a leading sector of Georgian economy for already more than three years; the volume of bank assets for this period 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 % (National Bank of Georgia, Annual Report, 2007), (Table 1) showing

**Table 1:** Volume of Commercial Bank Deposit Accounts

	01.01.07	01.04.07	01.07.07	01.10.07	01.01.08
GEL (000)					
<i>Time Deposits in National Currency</i>					
Total	122 378	107 697	181 014	222 635	297 732
Short-term	99 365	85 909	150 522	169 300	246 598
Long-term	23 013	21 788	30 492	53 335	51 134
<i>Time Deposits in Foreign Currency</i>					
Total	827 448	857 120	1 021 618	1 167 641	1 259 778
Short-term	551 610	557 006	641 187	722 137	830 843
Long-term	275 838	300 114	380 431	445 504	428 935

**Source:** National Bank of Georgia, Annual Report, 2007

([http://www.nbg.gov.ge/uploads/publications/annualreport/tsliuri\\_angarishi\\_2007\\_geo\\_interneti.pdf](http://www.nbg.gov.ge/uploads/publications/annualreport/tsliuri_angarishi_2007_geo_interneti.pdf))

amendment of public confidence, still its not what is wished to be for permanent stability. Every, even insignificant, disturbances of any nature, economic or political, create uncertain banking environment. Recent developments 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 fare of panic runs they were forced to follow safer strategy of preserving excess reserves and rejecting credit demands.

Despite the fact that after hard political instabilities in August, 2008 all commercial banks of Georgia were closed for 3 days, still Georgian population 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. Some proper measures were taken to control the situation like, NBG used 180 million USD to preserve exchange rate of GEL, beside, rate of required reserves were reduced from 13% to 5% and free accounts were used by 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 in the first quarter of 2009, when all problematic assets, deteriorated in August, will show up. 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 caused because of the absence of deposit insurance program. In times of crises it is the most important element of preserving financial system stability. In his opinion they were on the right path when elaborating the project and rejection of the project by Georgian government was not proper decision. Georgia is the only country throughout the post USSR (Union of Soviet Socialist Republic) without deposit insurance program in place (Maka Kharazishvili, 2008).

The 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 – both insured and uninsured – as safe heavens when they have strong doubts about other financial assets (Alan Greenspan, 2003). Comparing the public attitude toward banks in US described by Alan Greenspan with the Georgian case the difference is significant. Public confidence in Georgia by all means needs to be amplified, probably achievable by deposit insurance program, however, as noted before, a recent attempt to implement this program in Georgia failed. Georgian Parliament rejected the projected law about “Obligatory Insurance of Individual Deposits” prepared by the National Bank of Georgia under the leadership of Roman Gotsiridze (the president of NBG) and the 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. According to 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. Deposit insurance system according to the rules and terms of the law had to insure “foreign” deposits, which include deposits payable in foreign currency, deposits in domestic branches of foreign banks but not deposits in foreign branches of domestic banks.

Deposit insurance coverage of insured depositors at each bank accounted 5000 GEL, which had to be compensated if National Bank of Georgia would cancel the license of any commercial bank or due to any of the reasons for which demands on deposit accounts could not be met within 21 days.

Participation of all commercial banks in deposit insurance system was to be obligatory. For the moment of chartering commercial banks were becoming participants of deposit insurance system, and the participation process was terminated when liquidation process of commercial bank was over. Commercial banks were to be obliged to provide the Agency with all information about deposits and liabilities of depositors, according to the rules stated by the Agency, submit audited financial reports, or any information needed by the Agency to operate, pay insurance premiums according to the Agency instructions. If any of these requirements were not met even after official warning the case had to be discussed by National Bank of Georgia for committing administrative arrangements.

To support execution of the project objectives “Deposit Insurance Agency of Georgia” (the Agency) was planned to be formed. The Agency had to be a legal entity with independent fund, with a current or any other type of accounts at National Bank of Georgia, with accounting and financial reporting prepared according to the Georgian legislation. Checking the process of calculation, collecting and transferring insurance premiums, payable by commercial banks, to the obligatory deposit

insurance accounts, investing temporary free funds, making compensation payments to depositors, and any related activities were to be the functions of the Agency. It had to have given right to pass normative acts, obliging commercial banks to follow.

Insurances Compensation fund were to be collected from commercial banks primary fees of agency fund, membership fees, insurance premiums, special insurance premiums, penalties for delayed or uncompleted insurance premiums (0,5 % of unpaid premium each day) or by generating income from investments. Sources of deposit insurance fund had to cover all expanses related to the Agency requirements and administrative costs. Georgian government had to take responsibility of providing the Agency with discount loan if insurance premiums or other income of the Agency could not amount sufficient funds to meet all needs of the Agency.

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 to approve. Pricing methods of deposit insurance was chosen to be risk-based premium system.

Insured deposits were to be compensated by 100% if bank suffered crises, but the maximum compensation received by depositor would never exceed 5000 GEL (insurance coverage). Compensation had to be equal to the sum of deposited amount and interest income on insured deposit minus depositor's liabilities toward banking institution. Foreign deposits were to be compensated in Georgian national currency. If the agency had to compensate deposits of more than one bank, depositor would receive compensation for each insured deposits held in those bank. The Agency would be obliged to inform depositors within 3 days about primary procedures of compensation process after National Bank of Georgia would have declared about commercial bank failure. Within 90 days the Agency would send to depositors terms of compensation, calculate the amount of compensation for each depositor, choose commercial bank through which depositors would receive their funds and transfer funds to the mediator commercial bank.

Georgian Government before enforcement of this law would apportion financial guarantee of 10 million GEL to provide the Agency

The Problem of Moral Hazard and Effects of Deposit Insurance Project insurance fund with the primary capital (Georgian Law about Obligatory Insurance of Individual Deposits (project), 2006).

The initiative of project development was supported by many international financial institutions, especially by KFW (German credit institution), which 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 (Maka Kharazishvili, 2008).

### **Recommendations about Deposit Insurance Design**

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. 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. (Patricia A. McCoy, February 18, 2007). Key issues about deposit insurance system design are advised by different studies. In the study about “Deposit Insurance System Design and Considerations“, by Nicholas J. Ketcha Jr., (2007) recommendations are about organizational structure, deposit insurance coverage, deposit insurance system financing, deposit insurance premiums. 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. 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. These recommendations about independent authority of deposit insurance system and about providing insurer with necessary information as can be seen from the project content, was planned to be facilitated by the Georgian projected law.

**Coverage limit.** 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. 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 US Dollar per account in some countries and is unlimited in others, with most systems falling between these extremes (Table 2). 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. Different schemes likely will be optimal for different countries, depending upon these factors. Considering before mentioned pragmatic attitude of Georgian population toward Georgian banking system, 100 percent protection of the deposit account balance was correct

decision made by the project makers.

**Table 2:** Deposit Insurance Schemes of Different European Union Countries

As of October 2008, many EU countries are in the process of increasing the amounts covered by their deposit insurance schemes. Since these amounts are typically encoded in legislation, there is a certain delay before the new amounts are formally valid.

Country	Savings limit	Coverage	Valid since	Comments and previous amounts
Belgium	EUR 40,000	100%		Divided into initial compensation of up to 20,000 euro and additional compensation of up to 20,000 euro.
Germany	EUR 20,000		October 2008	An unlimited guarantee was announced in October 2008 but the legal details and timeline for implementation are unclear.
Ireland	Unlimited		September 2008	Amount raised to unlimited in September 2008.
Netherlands	EUR 40,000	100% of first EUR 20,000, 90% of next EUR 20,000 (hence a compensation of up to EUR 38,000)		Temporarily until October 2009: 100% of first EUR 100,000.
Portugal	Unlimited		October 2008	Amount raised from EUR 25,000 to unlimited in October 2008.
Sweden	SEK 500,000	100%	October 6, 2008	From 1996 to October 2008, amount was SEK 250,000.
United Kingdom	GBP 50,000	100%	October 7, 2008	Amount raised from 35,000 to 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 from the source below:

International Monetary Fund 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 US Dollar coverage limit was almost 10 times per capita income, while the 100 000 US Dollar limit today amounts to less than four times per capita income (Alan S. Blinder and Robert F. Wescott, March 20, 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 U.S. 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 (Patricia A. McCoy, February 18, 2007).

As for the Georgian case, according to the NBG macroeconomic data, per capita GDP of Georgia was figured out by 3 133.1 GEL in 2006 when the project was worked out, that means decision about coverage limit of 5000 GEL was almost two times GDP per capita as recommended.

**Treatment of foreign deposits.** Another significant issue in designing a coverage scheme involves the treatment of “foreign” deposits. Again, there is grate 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. According to the projected low Georgian deposit insurance system, in an event of project

acceptance, planned to share the same experience of treating foreign deposits, and thus protecting itself from foreign exchange risk.

**Deposit insurance fund.** Another 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.

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.

Deposit insurance project of NBS implied the recommendation about self-financing and creating stand-alone fund, but the issue of choosing appropriate target reserve ratio was not resolved. None of the article of the project mentioned what percentage of insurance fund had to be kept as reserve funds, or would it be fixed or flexible target ratio. The article of the project obliging Georgian government to provide the Agency with a discount loan in case of liquidity problem somehow meets the requirement of maintaining solvency but it needs more detailed concentration on the issue, to have clearly predetermined ratio and its

design.

**Deposit insurance premium.** Key consideration in designing pricing scheme for deposit insurance system 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, by 2003 twenty countries adjusted their deposit insurance premiums for risk (Patricia A. McCoy, February 18, 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. 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 3) – using the minimum capital ratios:

**Table 3:** Minimum Capital Requirements across Capital Categories

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

**Source:** FDIC, Timothy W. Koch, S. Scott MacDonald, Bank Management, Thomson, fifth edition, 2003, pg. 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 4). The current assessment rate schedule for insured institutions is as follows:

**Table 4:** Assessment Rate Schedule for Insured Institutions

Capital Groups	Supervisory Subgroups		
	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

10 bp (basis points) represent 0.1 percent of insured deposits of insurance premium. Approximately 93 percent of all insured institutions are currently listed in the lowest risk category (with 0 bases point) and pay no assessment (Timothy W. Koch, S. Scott MacDonald, Fifth Edition, 2003, p. 478, 496-497).

A risk-related premium system 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. 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.

However, risk-based deposit insurance premiums alone can not 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 deposit insurer no longer observes the banks' investment strategy and its private information for bank that is hidden action or moral hazard model, risk based premiums can not control moral hazard and state contingent payments are needed. That considers recommended investment strategies to banks and the payoff a bank would receive from taking this investment will be different from when it chooses any other alternative investment strategies, thus different returns can be the determinant of different risk premiums. Private information requires richer deposit insurance pricing schemes. This is not to say that risk based premiums are not useful but that they are only one component of the entire deposit insurance price system. Beside deposit insurer may spend resources reducing private information; the actions may be taken by deposit insurer can be the supervisory activities like safety and soundness exams, auditing. The bank may choose not to supply the screening effort but in this case it is considered that bank chooses risky investment strategy and will become the subject of more severe deposit insurance premium (Edward Simpson Prescott, 2002).

The issue crucially important of insurance premiums was not clarified by the deposit insurance project of NBS. As already mentioned in the paper the project was obliging the Insurance Agency to design pricing

scheme for deposit insurance system, but I think assessing deposit insurance premiums, deciding the type of the system (would it be flat-rate or risk-based premium system) are key issues that has to be discussed long before decision about acceptance of the project will be made as far as these critical details of the program determine success and effectiveness of the project.

**Banking supervision and regulation.** Deposit insurance program because 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. 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, that is 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 (Nicholas J. Ketcha Jr., 2007).

This vital issue of intensifying need for more severe supervision and regulation of banking institutions in an event of imposing deposit insurance program was considered by deposit insurance project of National



Bank of Georgia, as it had to allow the Agency to ask for any data and information from commercial banks any time when needed to investigate financial condition of an institution and to properly fulfill all the functions of supervision obliged by the law. The information could be obtained using all means, like sending Agency representative to the bank location and demanding to show all the data needed locally. The Agency was also given right to pass normative acts obligatory for banks to follow, that would ensure restrictive and regulative activities for banking institutions.

### **Conclusion**

Based on above evaluations deposit insurance project of NBG was not fully and completely developed, some key details missed might have been considered as minuses of the project, being the reasons of its rejection. Though in my opinion working on the project has to be renewed and after perfecting and accomplishing the project, case has to be discussed again. The imposition of deposit insurance program has great importance for Georgian banking industry. Its present problem of lack of confidence among Georgian population toward banking system could be solved by the program, serving directly this objective of increasing level of trust and thus motivating attraction of public savings, at the same time keeping financial stability by preventing bank runs in an event of banking crises. But in order to be successful and to have positive effects deposit insurance program 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.

There is not a “one size fits all” approach for any of the important elements in the deposit insurance system. Institutional, cultural, historical and legal differences among countries will dictate certain differences in the design of deposit insurance system (Nicholas J. Ketcha Jr., 2007). The Basel Committee declares that it has not issued recommendations as to whether or not countries should have deposit protection arrangements or how these should be structured. That is partly because of institutional differences between its members (Basel Committee, June 1998). Years of experience 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. As already mentioned beside the features of the program like coverage limit, deposit insurance fund or deposit insurance premium recommendations about banking supervision and regulation are vitally important, the process includes more severe requirements of regulators to prevent excessive risk-taking by banks, like higher capital requirements, reducing an incentive for high risk-taking in fear of a greater owners' loss, or to reject insure or compensate deposits of those representatives of managerial bodies who bear the responsibility of bankruptcy, those who made decision forcing bank to face excessive risks resulting the failure, intensive supervisions and examinations of banks' financial conditions to somehow measure the level of risk they are facing and taking measures to prevent such actions. It is also substantial to have public informed about the system of how the program works. Given the importance of communicating with the public combination of 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. If all followed deposit insurance project presumably is to be effective for a banking industry hence for the economic stability and growth.

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