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Deposit Insurance in Ukraine: Time for Reform?

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About the German Advisory Group

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Deposit Insurance in Ukraine: Time for Reform?

Executive Summary

The recent international financial crisis has also hit the Ukrainian banking system. The withdrawal of deposits, a weakening of the hryvnia (UAH) and ownership conflicts around Ukraine's sixth largest bank, Prominvestbank, caused liquidity problems and led to panic purchases of foreign currency in the population. As an answer to these problems, the NBU issued a legal act that brought important temporary changes to the system, among them a suspension of early deposit withdrawal. As another consequence of the crisis, the role of the deposit insurance fund has received special attention lately.

This paper deals with several proposals to deal with the crisis, with special respect to the deposit insurance scheme (DIS). It is argued that a DIS is an important component in stabilizing the banking sector and in enhancing depositor's confidence in banks. But it has to be accompanied by the central bank as a lender-of last-resort. DIS can only cope with singular banking failures. In the event of a systemic collapse it is overburdened.

The present paper develops several proposals and supports certain proposals put forward recently by Ukrainian authorities to react in the short-term:

- A comprehensive solution is always better than tactical crisis containment.
- The new ceiling of guarantees should be kept at UAH 150,000.
- Corporate non-bank deposits should be included in DIS.
- NBU should lend to the fund without collateral.
- According to a passage in the "Anti-crisis"-law from 31 October, the government should contribute UAH 1 bn (excess profits of the NBU) in 2008/2009 to the Deposit Guarantee Fund (DGF).

These short-term proposals are complemented by different proposals regarding long-term measures:

- In Ukraine, DGF should be allowed to invest a limited amount in EUR and USD assets.
- Coinsurance of 10% should be imposed and banks should be obligated to issue uninsured subordinate debt.
- In the long-term, foreign deposits should be compensated in foreign currency. Sufficient access to foreign assets or other sources of foreign currency are a prerequisite for this.
- The target reserve ratio for the DGF should be set at UAH 4 bn. However, should the fund extend its coverage to all non-bank-deposits incl. corporate deposits the fund should increase its target volume accordingly to ca. UAH 7 bn.
- The private sector should participate in DIS oversight more strongly.
- In Ukraine, DIS should be actively involved in decisions when and how to resolve individual bank insolvencies. The DGF should be assigned additional functions that exceed the paybox function.
- Great efforts should be taken to reduce the time needed to pay out depositors in Ukraine. To put this into perspective, the EU currently plans to shorten the respective deadline from nine months as of today to three days in the future.
- Risk-based premiums should be assessed on banks for funding the DGF. The recommendation is to set different premiums for different rating-classes of banks and to try to add market-based information.

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1. Introduction: purpose of deposit insurance systems

1.1. Functions of deposit insurance

Throughout the world, financial institutions are in crisis. But because banks play a crucial role in the economy as financial intermediaries and serve as a repository for savings, it is worth thinking about short- and long-term measures to improve banking sector stability. It is common for banks to accept deposits that are payable at par value on a first-come, first-serve basis. The deposits are used to fund illiquid loans and other assets. As a result of these structural differences on the two sides of the balance sheet and in available information to depositors, banks are subject to runs whenever depositors believe that banks' assets are insufficient to fulfill its obligations to them even when bankers know otherwise.

If runs occur and are widespread, banks are forced to sell illiquid assets at "fire-sale" prices and thereby be driven into insolvency. An illiquidity problem has been transformed into an insolvency problem. Such an event not only results in severe disruptions in the payment and credit system but also has adverse effects on the real economy. Therefore, such an event has to be avoided by all means.

One way to prevent such a situation is to have a central bank that stands ready to provide liquidity to solvent banks with liquidity problems. Additionally, in most countries deposit insurance schemes have been established in which depositors are protected against a loss of their deposits. When offering a credible guarantee, any incentive for a run on banks is eliminated.

Functions of deposit insurance can be summarized as:

- Protection of (small, unsophisticated) depositors by guaranteeing prompt repayment of insured deposits in case of bank failure
- Promotion of public confidence in the banking system and thus, prevention of bank-runs, contagion and systemic crisis
- Increase savings by offering a safe investment vehicle

1.2. Scope and limits of deposit insurance

Deposit insurance schemes (DIS) are able to deal with solvency problems of singular banks. Their main task is to cover losses of (small) depositors. But DIS have their limitations. Nowhere in the world are DIS capable of dealing with a failing very large bank or a systemic crisis. In order to insure such an event, a Deposit Guarantee Fund (DGF) would have to contain a volume that equals the combined deposits or liability side of the banking sector, a dimension close to the monetary base!

Therefore, DIS can cope with failures of a handful of banks but not with a systemic run or sector wide crisis. A DGF is always too small to cover all losses in a system-wide crisis. It is appropriate for quiet times but in a crisis, it can be overstrained very quickly. Its main task is to deal with solvency problems of singular banks and to enhance confidence of depositors in the banking sector, in good times as in bad times.

Because deposit insurance schemes have their limitations and can run out of money in case of multiple bank failures, they must be accompanied by a central bank that is able to fulfill the lender-of-last-resort function to solve liquidity problems of banks. Several conclusions can be drawn:

- DIS must be accompanied by a lender-of-last-resort
- When multiple failures of big banks are likely, only the state can offer a credible guarantee
- In a crisis, only state support can break the cycle of panic and pessimism to suck the economy into recession.

In the current financial crisis, deposit insurance alone cannot restore confidence in the banking sector, but it makes a substantial contribution.

1.3. Trade-off between short-term stabilization and long-term incentive structures

Deposit insurance has its own set of problems. It encourages risk-taking by insured institutions, neglect by depositors and intervention by regulatory agencies. Banks are encouraged to take risks because the costs of financing risky assets are unrelated to the probability of default. With a deposit insurance guarantee depositors are insured and care little about the riskiness of a bank and the quality of the bank's assets.

When a country decides to install a DIS, the way it is structured and the associated banking supervisory system affect the likelihood of moral hazard and adverse selection problems.

2. International comparison of deposit insurance schemes

Before expanding the analysis of DIS to the case of Ukraine, it is worth outlining an international overview through some statistical elaborations based on available data. In the present chapter, 12 countries including Ukraine will be compared with each other. On two points, digressions will be made: "The German DIS" (box 1) and "Answers to the recent international financial crises in selected countries" (box 2).

Tables 3 to 6 in the appendix present information on the structure of the DIS of Ukraine and selected countries: Austria, Canada, Czech Republic, France, Germany, Hungary, Italy, Poland, Sweden, United Kingdom and United States. [1] The main structural criteria of the analyzed DIS will be presented in the following order:

- Administration and membership
- Coverage
- Funding
- Competences of intervention

2.1. Administration and membership

A first important object of investigation is whether membership in DIS is mandatory for banks, and who is responsible for the management of the DGF.

In 6 out of 12 cases, the DIS are administered by the government, in 4 countries the schemes are administered by the banking industry, and in the remaining 2 countries, schemes are jointly administered by government and industry. Most countries (11), moreover, make it mandatory that banks join the insurance scheme. Only the German Deposit Protection Fund for private banks is voluntary. All observed countries allow membership of branches from other states.[2] The number of members of each DIS differs between 27 in Czech Republic and 1,345 in Great Britain.

Canada is the only country that does not cover foreign currency denominated deposits. France and Hungary are restrictive in the set of foreign currencies they cover. Hungary extends coverage to deposits denominated in EUR or currencies of other OECD countries and France only in currencies of EEA countries.[3] The rest covers all foreign currencies. In the following box we will take a close look on the German DIS.

Box 1:

Overview on the German DIS in the three-pillar banking system

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1 To ensure comparability between the countries only the Deposit Protection Fund (covering private banks) of Germany's three pillar banking system will be considered for the international overview.

2 For 2 countries there is no data available in this case.

3 EEA: European Economic Area. This includes all EU and all ETFA-members except for Switzerland.

The German banking system is characterized by a three-pillar system: private banks, public savings banks and cooperative banks. Each banking group has its own DIS:

German private commercial banks: All privately owned banks in Germany are members of German banks' statutory compensation scheme (Entschädigungseinrichtung deutscher Banken – EdB).[4] 90% of the amounts of deposits (in EU currencies) that are held by private individuals, partnerships and small companies up to a maximum of EUR 20,000, are covered by this compensation scheme. Annual contribution is 0.008% of customers' liabilities.

In addition, private banks may participate voluntarily in the Deposit Protection Fund. The coverage provided by the Fund begins where the statutory compensation scheme's coverage ends. If a member bank fails, this Fund covers the 10% deductible, plus deposit amounts exceeding the EUR 20,000 limit, up to the bank's individual protection ceiling. The Fund protects all "non-bank deposits", i.e. also deposits held by commercial enterprises and public authorities. The protection ceiling is 30% of the bank's liable capital. Annual premiums are 0.03% of deposits, non-risk based.

All non-bank-deposits at cooperative banks are fully guaranteed by 100%. Additionally the solvency of the banks is guaranteed (institutional guarantee). The protection scheme consists of a guarantee fund and additionally a guarantee network (cross-liability of all cooperative banks). Premiums currently are 0.05% (max. 0.2%); risk-based premiums are applied in form of a surcharge of up to 40% on this amount. A maximum of up to four times the basic assessment rate can be levied on the banks per year.

Deposits at public savings banks in Germany are protected by several funds and the obligation to pay additional premiums. Deposits are fully insured. Besides, the funds' protection schemes also consist of a guarantee network (cross-liability of all savings banks). Risk-based premiums are applied.

An unlimited guarantee for private savings deposits was announced in October 2008 by chancellor Merkel but the legal details and timeline for implementation are unclear. This guarantee can be seen as a political declaration not covered by current legislation.

2.2. Coverage

The level of coverage and the coverage limit is a crucial point that determines the success of DIS. A good way to compare the coverage is the ratio of deposit coverage to GDP per capita (figure 1). The average level of coverage of the selected countries is 3.2 times GDP per capita. Currently the United States has the highest level of 5.5 while in the Ukraine the coverage is at the level of 3.6.

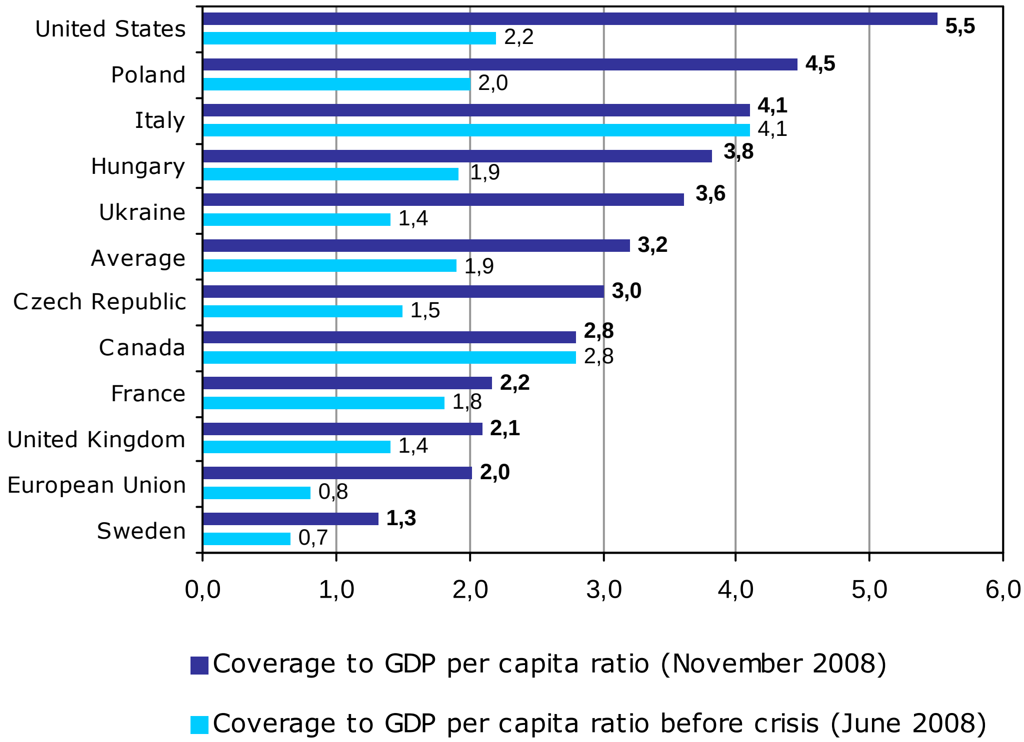
Coinsurance means depositors are not fully insured up to the level of coverage provided for in the national legislation. Instead, depositors suffer losses on the basis of a certain percentage of their deposits. Before the crisis, Poland and Czech Republic had coinsurance of 10%. Now they have full coverage.

The EU-minimum requirement is insurance of EUR 20,000 and a coverage level of 90%, which means 10% coinsurance. In most EU countries, deposit insurance schemes exceed the EU-minimum requirement and offer full protection of deposits (100%) up to a certain amount.

4 Exceptions are branches from foreign banks from EU-member states that are members in their home countries DIS.

Figure 1:

Ratio of Deposit Coverage to GDP per capita, 2008[5]



Source: own estimations based on information of DIS of selected countries

In the following box we take a closer look on changes after the international financial crisis in 2008.

Box 2:

Reaction to the recent international financial crisis in selected countries

Many countries have expanded their DIS in the course of the financial crises in 2008. Hong Kong has moved to full deposit insurance. Government guarantees have been announced in Ireland, Denmark, Austria, Germany and Greece. Even New Zealand and Australia have abandoned their purist stances on deposit insurance – they now have one.

Other countries have lifted the ceiling on deposit insurance. The USA have temporarily lifted the ceiling from USD 100,000 to USD 250,000 to restore public confidence in the financial system. In Sweden, the coverage per depositor has been doubled to EUR 50,400 recently. Switzerland raises the minimum guarantee on household bank deposits from CHF 30,000 to CHF 100,000 (EUR 67,000) from early November onwards. Mid-October, the Luxemburg government decided to raise the minimum guarantee on deposits to EUR 100,000.

The minimum level of harmonization among the EU countries existing since 1995 also changed. The EU finance ministers decided in early October to raise the minimum amount of coverage of private savings in the EU from EUR 20,000 to at least EUR 50,000. From 2010 onwards it will be EUR 100,000. In Germany, the protection of private banks, cooperate and saving banks already goes far beyond that. The European Commission also dramatically shortens payment deadlines in case of bank failures. In the future, savers should get their money back in three days instead of currently nine months.

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5 Reasons for not including Germany and Austria in the graph: German banks statutory compensation scheme. In Germany, the protection level of private banks, saving banks and cooperate banks is already far beyond the numbers in the figure. In Austria, a complete backup of all deposits was introduced in October 2008.

2.3. Funding

DIS are usually distinguished on the basis of the funding mechanism they use. Among the 12 countries analyzed, 7 build and manage a fund that is promptly usable to cover losses as they arise (ex-ante schemes). Conversely, 2 countries (Austria, United Kingdom) have only virtual funds, i.e. members are asked for contribution only after the intervention decision is made (ex-post schemes). Finally, Canada, France and Italy have a hybrid system, which combines elements of ex-ante and ex-post funding.

The premium assessment base is the foundation used to determine the contributions made to the fund by member institutions. The extent of the assessment base is determined by taking into account the maximum exposure of the deposit insurance system and can vary among systems. The most common assessment bases are insured (7) or total deposits (2). However, some systems like the ones in Germany and Italy may have a broader base and include domestic liabilities or all liabilities and obligations or take into account considerations such as non-performing loans.

An important question is whether DIS use flat-rate or risk-based premiums. In the latter case, monitoring systems to assess member banks' level of risk are needed to adjust contributions on the basis of risk levels. 5 out of 12 schemes do not use any monitoring system, while the 7 others (Canada, Germany, France, Hungary, Italy, Sweden and the United States) analyze members' risk profiles and generally apply risk-based contributions as well. The rate adjustment differs from 0.014~0.114% in Canada to 0.75~1.25% in France.

Member institutions are the main source of funding in every country of the sample. Member institutions usually have to pay premiums as one of the conditions of membership. The questions which emergency funding sources exist besides member contributions, and what the main types of investments of DGF are, have been analyzed in a major sample. The results can be seen in table 1.

There are a number of potential sources from which to obtain contingency funding. Borrowing from the government or the central bank and government guarantees are the most common sources. But also the private sector (issuance of bonds or borrowings from private sources) can be used as a source. Multilateral organizations or bilateral development banks may be approached for help in some cases, too.

Table 1:
Emergency funding sources and types of investments of DIS (January 2008)

Emergency funding sources (besides member contributions), n=78 countries, binomials are possible		Types of investments allowed of DIS reserves, n=60 countries, binomials are possible	
borrowings from the central bank	36	claims on the government	42
borrowings from the government	33	claims on the central bank	15
government guarantee	18	claims on member institutions	15
borrowings from private sources	17	claims on foreign governments (foreign banks)	12
bond issues	13	low-risk / high-liquid instruments	9
borrowings from member institutions	11	prohibition to invest in claims on member institutions	4

Source: IADI: Funding of Deposit Insurance Systems, Discussion Paper, 2008.

When a DIS is primarily funded on an ex-ante basis, policy makers need to consider what investment or portfolio management policy to pursue. There is a trade-off between liquidity and return. A fund must have an adequate level of liquid assets at hand to compensate insured depositors quickly in case of failure of an institution. In most systems funds are invested in claims on the government (42) and claims on the central bank (15). Claims on member institutions (15) are also quite common types of investment.

2.4. Competencies of intervention

The deposit insurance schemes operating in various countries exhibit significant differences with regard to their powers and types of activities. In accordance with the international terminology, such schemes may be divided into two categories:

- **paybox** – their powers are limited to paying out guaranteed deposits when a credit institution declares bankruptcy.
- **risk minimizer** – such institutions have wide-ranging powers including the option of extending financial support to prevent a bank from failure. It should be noted here that there are significant differences between individual schemes regarding the instruments employed.

The DIS of the Czech Republic, Sweden and United Kingdom are paybox systems, whereas the other countries gave their institutions wide-ranging powers. In five countries the deposit insurance authority makes the decision to intervene in a bank. The deposit insurance authority has the legal power to cancel or revoke deposit insurance for any participating bank in 9 cases. And in 4 cases, the deposit insurance fund can take legal action against bank directors or other bank officials.

In the period from 2000-2005, 14 banks were closed or merged. With 60 months, Ukraine needs the longest time to pay depositors in full.

3. Deposit insurance in Ukraine (until the “Anti-crisis”-law)

The explicit deposit insurance scheme of Ukraine was **established in 1998**. It is officially administered and jointly funded. The initial capital of UAH 20 m was provided by the NBU and will be lend when necessary. Deposits of insiders and interbank deposits are excluded in the scheme, as well as corporate non-bank deposits. The fund **covers different kinds of deposits** (term, demand, and notice) but no securities like bank obligations. Deposits are 100% guaranteed. A coverage limit was initially set at UAH 500 which was raised to UAH 1,500 in 2003 and to UAH 50,000 in September 2007. Foreign currency deposits are covered but compensated in UAH using official rate at the time of bank closure.

Participation: Participation in the DGF is compulsory. Administration of the fund is mixed public/private: 2 persons from NBU, 2 from government, 1 from banks.

Funding: The DIS is funded by quarterly flat-rate premiums paid by banks (quarterly 0.125% of household deposits, i.e. 0.5% p.a.) and initial premiums for new banks (1% of authorized capital).

Emergency funding: If the fund runs out of money, it can levy a special premium on banks, turn to the NBU, government or private investors for financing. The special levy is limited to the regular premium and thus can be max. 0.5% p.a. The fund is guaranteed to receive government funding if it lacks funds, in UAH or state bonds of up to 2.5% of household deposits outstanding. State aid has to be foreseen in the budget. NBU contributions are only implicit guarantees. With regard to the **investment guidelines,** only state bonds and interest-bearing deposits at the NBU are allowed.

Current data: At the end of September 2008, household deposits stood at UAH 202 bn in Ukraine. In October, at least UAH 8 bn were withdrawn from bank deposits. The volume of the DGF was estimated at UAH 1.7 bn in October 2008. If no banks fail, the following funds will be available to the fund in 2009: Premiums will be UAH 1.5 bn until the end of 2009. Part of NBU profits due to the fund in 2008 and 2009 may reach UAH 2 bn. When required, a special levy of UAH 1 bn can be charged in 2009. With an additional contribution of the Ukrainian government of UAH 4.2 bn, the maximum volume of the funds may reach UAH 10 bn.

4. Proposals for Ukraine

4.1. Current situation

Ukraine has been hit by the international financial crisis in recent months. The withdrawal of deposits, a weakening of the hryvnia (UAH) and ownership conflicts around Ukraine's sixth largest bank, Prominvestbank, caused liquidity problems and triggered a bank run with panic and increased demand for cash in the population. Around UAH 6 bn of deposits have been withdrawn during the first half of October. As a response, the NBU issued a legal act[6] that tried to stabilize the situation and brought important temporary changes to the system: Banks were forbidden to increase their assets (exceptions are investments in government bonds, NBU deposit certificates and interbank transactions). Additionally, NBU's freeze on early withdrawal from term deposits for six months reduced in the near-term the risk of deposits outflows and bank runs. However, it should be noted that some of the restrictions imposed were subsequently relaxed[7]. In October, the NBU provided UAH 20 bn (about USD 4 bn) of liquidity support to a number of banks.

At this stage, a run on a bank could be caused by either of the following factors:

1) Bankruptcy of a large bank or a number of smaller banks
2) Spread of the implications of the international financial crisis to the wider population. A run on deposits in Russia, for example, would be a very bad example for Ukraine

To prevent this and to open the door for an IMF loan of USD 16.4 bn, in late October the parliament approved the "Anti-crisis"-law, a set of measures to recapitalize banks, to increase the deposit guarantee ceiling from UAH 50,000 to UAH 150,000 (ca. USD 25,000) and to set up a stabilization fund.

The banks are also obliged to use their incomes to raise their capital ratios and the state will buy majority stakes in troubled lenders. From now on, the DGF will be built up using 25% of the NBU profits, but not less than UAH 1 bn annually.

In case of a bank run, a crisis could be triggered: Liquidity problems of single banks can transform into insolvency problems and cause a widespread banking crisis. This bears the risk that the DGF is insufficiently capitalized and runs out of money. Another problematic situation can arise because the DGF faces foreign exchange rate risks. The assets of the DGF are in hryvnia but insured assets are in foreign currency to a great extent.

In face of these developments modifications and reforms of DIS with the aim of stabilizing the banking sector and preventing a system-wide run will be discussed in the following chapters. Chapter 4.2 will focus on immediate measures to restore confidence, whereas the subsequent chapter deals with long-term reforms of deposit insurance based on economic principles.

As will be seen shortly, the main problem is to balance the trade-off between short-term stability and long-term incentive problems. Measures that are inevitable in the short run to calm down a crisis can set the wrong incentives in the long run and provoke the next crisis.

4.2. Short-term measures

A DIS is a legitimate tool to promote banking sector stability and to prevent a bank run. DIS is more appropriate to provide a safety net than the central bank or the government, because a price for insurance cover can be set. In transition countries when institutions

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6 Resolution No. 319 from 11 October 2008.

7 Resolution No. 328 from 16 October 2008.

are still weak, explicit limited deposit insurance is credible. Only when institutions are very strong, an implicit system can be credible.

This implies that a DIS is the right tool to promote banking sector stability in stable times as in a crisis, but it has to be accompanied by other measures. In the following part, fundamental issues concerning a short-term reaction to the crisis, as well as ways to improve deposit insurance will be discussed:

Recommendation 1: A comprehensive solution is better than tactical crisis containment

All country experience shows that a comprehensive solution is better (less costly, quicker and less painful) than tactical crisis containment, e.g. emergency loans.[8] This means that instead of dealing with each failing bank on a case-by-case basis it is more advisable to carry out a more general approach that consists of different measures:

- Bank recapitalization. Shore-up bank capital by injecting preferred stock. Bail-out fund to boost confidence
- Government sets up institution to manage distressed assets
- Government guarantee for banks debt issuance
- Liquidity injection by central bank. Longer term loans to banking sector. In Ukraine, the NBU gives emergency access to central bank funds and accepts a wider range of securities as collateral against lending

The sooner a credible and comprehensive bank restructuring can be implemented, the lesser the need for blanket guarantees.

Recommendation 2: Government help needed in case the DGF runs out of money

Generally, in a market-based economy bankruptcies of companies as well as banking institutions should be possible. The logic behind this is to replace inefficient institutions by better run institutions and to give incentives for the management and owners for “good” corporate behavior. The problem with banks is that they are often “too-big-to-fail” or “too-connected-to-fail” and with depositors losing their savings there is a risk of triggering a systemic crisis.

In the current crisis and in the event that the DGF runs out of money, government support is necessary. Several alternative ways to save the banking system are on offer in this case: The government could re-capitalize the DGF, it could explicitly or implicitly guarantee all deposits, it could offer help directly to failing banks or it could exercise a mix of above measures to restore confidence.

All three alternatives require a huge amount of capital. But although such government help needs a lot of money, some of it will eventually be earned back and it will be small compared to 16% of GDP that a banking crisis typically swallow[9].

Government guarantees for banks are only credible when the government can meet its obligations, e.g. by raising future taxes. Government guarantees work best when banks are small and borrow at home. That’s why the credibility of a government guarantee in Ukraine is not necessarily without doubt, because

- No deep capital markets exist to raise the required government debt

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8 Laeven, L./Valencia, F.: The use of blanket guarantees in banking crises, IMF working paper WP 08/250, p. 5, 2008.

9 Economist: America's bail-out plan, Sep. 25, 2008.

- Bank debts are in foreign currency to a great extent
- NBU/Government has only a limited amount of foreign reserves at hand

In the literature, many case-studies are documented in which countries made experiences with temporary government guarantees that exceeded the DIS limits. These will be looked at in the following chapter.

Recommendation 3: Blanket guarantees of deposits are inferior to guarantees and recapitalization for failing institutions only

In a severe banking crisis, when a DGF is in danger of running out of money, one solution for policy makers to restore confidence in the banking sector is to issue blanket guarantees on bank liabilities in order to stop a widespread bank run. This however is only a second best solution in comparison to giving a guarantee for all failing institutions and to recapitalize them.[10]

A government blanket guarantee for all deposits or the purchase of troubled assets produces windfall profits also for healthy banks. This sets the wrong incentives and makes the government program more expensive. Therefore, to minimize moral hazard government aid should be limited to those banks that face bankruptcy. Therefore, a temporary government guarantee and recapitalization for failing institutions is better than a general guarantee for deposits.

Guarantees for banks break the rule that insolvent banks should be allowed to fail. Therefore, when banks are too big to fail the **regulator should impose costs on institutions** that come close to failing and shareholders should lose their equity if a bank is assisted to stay open. After recapitalization and in stable times shares in banks can be sold again.

Blanket guarantees as a last-resort-tool can prevent bank runs when they are credible. Several countries in Europe have announced such guarantees lately, including Germany, Denmark, Iceland and Ireland. However, they can add substantial fiscal cost and tend to increase moral hazard. That is why certain skepticism is advisable when it comes to blanket guarantees.

Also, banks' **foreign liabilities** appear to be virtually **irresponsive to blanket guarantees.**[11] All country experience shows that non-residents continue withdrawing deposits because the cost of exiting a country is lower for them than for residents and they dislike the risk to trust the announcement and the guarantee to be fulfilled.

Recommendation 4: Temporal limitations of guarantees

Guarantees should be limited in time. Unlimited guarantees carry the risk to be effective for several years and for too long (example Turkey, over 8 years). It is not easy to lift an unlimited guarantee later. Therefore, it is better to set an expiry date right from the beginning.

Recommendation 5: More generous deposit insurance scheme and increase in coverage ceiling

After the likely damage in confidence caused by the temporary freeze on term deposits, specific measures to reassure depositors are needed. An important step is to design a more generous DIS, including the already publicly discussed increase in the compensation guarantee. The advantage is the increase in confidence of the depositors

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10 Laeven, L./Valencia, F.: The use of blanket guarantees in banking crises, IMF working paper WP08/250, p. 6., 2008.

11 Laeven, L./Valencia, F.: The use of blanket guarantees in banking crises, IMF working paper WP08/250, p. 4, 2008.

and a psychological effect because of government action. Lifting the coverage ceiling can have a positive effect on the economy, as it should calm down the situation. The increase of the deposit guarantee should alleviate the reaction of the public on the NBU's recent resolution, prohibiting premature deposit withdrawals.

When deciding about the coverage limit, it is important to note that net **benefits** from deposit insurance **are unlikely to be maximized with either zero or complete cover.**[12] Removing ceilings, so that all savers are fully guaranteed, poses the risk to push the deposit insurance fund into bankruptcy. Also, people start thinking about the credibility of the DIS promises. A coverage that is too high or a government guarantee for all deposits reduces market discipline by depositors and creates moral hazard. In this case, depositors do not care about bank risks and deposits tend to be shifted to risky banks which are offering high interest rates.

The introduction of **coinsurance** of 10% – although a good measure in the long run – should not be implemented during a crisis because it could send a destabilizing signal and trigger a bank run.

What needs to be done is the **increase of insurance cover** but by not as much as to create complete neglect by depositors. To determine what insurance level is appropriate we take a look to the structure of deposits in Ukraine and to the coverage of eleven other countries.

Table 2:
Deposit structure in Ukraine

Size of deposit, UAH	Number of accounts, thousands	% of total	Amount at the accounts, UAH m	% of total	Average size of the deposit, UAH
<50,000	33,444.4	98.1	70.500.2	36.5	2,108
50,000-100,000	402.8	1.2	26,534.9	13.8	65,875
>100,000	231.9	0.7	95,856.7	49.7	413,323
Total	34,079.2	100.0	192,888.6	100.0	5,660

Source: Deposit Guarantee Fund Ukraine

Setting enforceable coverage limits is important in order to convince large depositors as well as subordinated debt holders in corresponding banks that their funds are truly and inescapable at risk. This maintains strong incentives for private parties to monitor bank risk exposure and is especially important in environments where accounting transparency and government accountability are rather weak.

With a **maximum coverage of UAH 150,000,** more than 99% of all private accounts are insured and more than 50% of the overall deposit amount.[13] In comparison, in the USA 62% of the deposit base are protected, in Britain 60%. That means that the new law from 31 October 2008 increased the protection level to a roughly similar ratio compared to these states.

12 Sinclair, P.: Optimum deposit insurance, University of Birmingham, p. 2, 2005

13 Unfortunately, we do not have a more detailed breakdown of deposits above the level of UAH 100,000. However, it seems very likely that the value is considerably above 50%.

In the world, the average coverage has been 2 to 3 times GDP per capita.[14] In recent months during the crisis many countries have lifted this ceiling or announced to do so. Other countries still think about rising this limit and some have virtually unlimited protection (Austria, cooperative banks and savings banks in Germany). That means the average ratio (coverage to GDP per capita) will rise in the direction of 4. Additionally, a clear tendency in international comparisons can be seen that countries with low GDP per capita tend to have higher cover ratios than high income countries.[15]

Assuming as a rule of thumb this ratio should be around 5, it means the new law from 31 October 2008 increased the protection level to a sufficient ratio compared to international standards. **Deposit coverage should stay at UAH 150,000.** A further increase, e.g. to UAH 200,000 or higher, is not without problems since it protects also larger depositors that are important for market discipline.

Recommendation 6: Include corporate bank deposits in deposit insurance scheme

The nightmare of a bank run is not limited to risk of withdrawals by small depositors. Flight by big depositors could pose a still greater risk. That is why in more than half of the countries in our sample also corporate non-bank deposits are insured. In a broader perspective, out of 24 observed countries, 13 countries (incl. Austria, Germany, Poland, Slovak Republic, Slovenia, Latvia, Estonia but also USA, Canada) also insure corporate non-bank deposits. On the other hand, in 11 countries (incl. Czech Republic, Hungary, Lithuania, France, Italy) corporate deposits are not insured.

For example in Germany, not only deposits from private customers but also deposits from corporate clients as well as the government are insured. Thereby the ratio of deposits from private customers to all German deposits (EUR 2,676 bn) is around 53%, while the ratio of corporate deposits to all deposits is 39% in September 2008.

By contrast, interbank deposits are not insured in almost all countries in order to force banks to monitor each other. This only holds true for systems without institutional guarantee, of course. In this case deposits from all customers are covered.

Possible reasons not to insure corporate bank deposits are:

1. Commercial firms need less protection. Due to their professionalism, they are better equipped to monitor banks and to exercise market discipline to banks. It is questionable though, whether this holds true for small firms.
2. Insuring also corporate bank deposits carries a higher risk that the deposit insurance fund runs out of money.

These arguments make partly sense. But in a crisis, the risk of a bank run initiated by companies withdrawing their deposits carries more weight. Also, very often small and medium-sized enterprises (SME) often lack sophisticated financial know-how and need a form of deposit protection in our view.

The second argument must be taken serious. But instead of rejecting corporate deposits as insured items, the size of the fund should be discussed and potentially increased. In case of the inclusion of corporate non-bank deposits, the volume of the DGF has to be considered. The current volume seems to be too small in light of UAH 8.9 bn that companies deposited with Prominvestbank alone.

14 The countries looked at in this study (Germany, Sweden, Poland, Czech Republic, Hungary, Great Britain, France, Italy, Canada, Austria, USA) have an average ratio of 2 that increased to 3,4 in recent months. Not considered are those countries that virtually have limitless coverage as Germany.

15 Nenovsky, N./Dimitrova, K.: Deposit overinsurance in accession countries, in: Demirküc-Kunt, A./Kane, E.J./Laeven, L.: Deposit insurance around the world, MIT press, Cambridge Mass., p. 281, 2008.

Recommendation 7: Foreign currency deposits being compensated in UAH poses a risk to depositors in foreign currency

At the moment, foreign currency deposits are compensated in hryvnia. For the DGF, this has the advantage of paying-out compensation in hryvnia, the currency most of the fund's reserves are held in. But still, the fund faces a foreign exchange risk: When the hryvnia devalues, the value of foreign currency deposits increases in terms of domestic currency. A reduced exchange rate risk for the DGF results because with devaluation the coverage limit calculated in foreign currency is reduced.

For the depositor in foreign currency, two types of risk arise:

a) The official exchange rate that is used for calculating the compensation in hryvnia may be less profitable than the market rate;

b) Banking crises often go hand in hand with turmoil at the foreign exchange market. As the rate prevailing on the date of failure is used to convert the foreign-currency deposit into the local currency, then the risk of devaluation between the date of failure and the date of repayment is borne by the depositor.

For these two reasons depositors in foreign currency deposits in Ukraine have incentives to a withdrawal of funds, when depreciation is expected. This poses a risk of massive withdrawals and liquidity problems for Ukrainian banks that are heavily indebted in foreign currency. However, so far depositors didn't exhibit preferences for withdrawing deposit in foreign currency.

Some of the compensation in hryvnia will be converted into foreign currency right away, so that turbulences in the foreign exchange market could arise. That means stabilizing effect for the currency markets when all pay-outs of the DGF are in hryvnia will be limited.

Conclusion: A trade–off exists between preventing foreign depositors from withdrawing their deposits and securing the solvency of the DGF. Short-term action during the crisis could be damaging, but in the long-term foreign deposits should be compensated in foreign currency. A deposit insurance system that offers to repay depositors in a foreign currency must have access to sufficient foreign assets or other sources of foreign-currency funding to make this commitment credible.

Recommendation 8: Subsidies to the DGF to increase fund volume

In times of financial crisis, the government help for failing banks can be indispensable as described above. Additionally, it makes sense that the government should further back-up funding of the DGF. Because banks are already short of funds they cannot be the ones to add more capital. If the banks had to inject more money into the fund their situation would become more severe. But the government or the central bank could help in this situation.

One way is to explicitly or implicitly guarantee deposit insurance, another to re-capitalize the fund. One proposal for subsidies to the fund is to make central bank's profits available to the DGF. After the "Anti-crisis"-law from 31 October, the DGF will be built up using 25% of the NBU profits, but not less than UAH 1 bn annually. This is an appropriate measure and means a raise of DGF's capital from UAH 1.7 bn to UAH 2.7 bn

Government aid to the DGF, though, should be the exception. In normal times the banking industry should be responsible for funding the DGF, to avoid under-pricing the insurance coverage.

Summary of recommendations: What should be done in the short-term?

- A comprehensive solution is better than tactical crisis containment.
- Deposit insurance is the right instrument to enhance confidence in the banking sector, but it can only handle solvency problems of singular banks and must be accompanied by the central bank as a lender-of-last-resort for illiquid but solvent banks.
- Ceiling of guarantees should be kept at UAH 150,000.
- Corporate non-bank deposits should be included in DIS.
- NBU should lend to the fund without collateral.
- According to a passage in the "Anti-crisis"-law from 31 October, the government should contribute UAH 1 bn (excess profits of the NBU) in 2008/2009 to the Deposit Guarantee Fund (DGF).
- Authorities could extend notice period (e.g. by 1 or 2 weeks) for withdrawals of deposits from banks to give banks "breathing space".

But all these measures might not be sufficient in a system-wide crisis or a bank run. In addition, further measures are necessary:

- NBU as lender-of-last-resort must provide liquidity to banks.
- Rapid re-capitalization of banks when needed.
- Government should issue bonds to refinance.
- Blanket guarantees of deposits are inferior to guarantees and recapitalization for failing institutions only.
- Government guarantees should be limited in time.

4.3. Long-term measures

Deposit insurance lowers market discipline and creates moral hazard. It increases risk taking by banks[16] because it lowers the incentives of depositors to monitor the creditworthiness and risk-behavior of banks. DIS encourages banks to take more risks (moral hazard). Banks are able to fund high-risk loans at low interest rates. Moral hazard is most severe for insolvent banks because share holders have nothing to lose. As a result, the banking system becomes less stable when risk-taking is encouraged.

To counterbalance the negative effects of deposits insurance risk taking of banks has to be limited. This can be done by two ways. One way to mitigate moral hazard is by strong supervision and capital requirements. Then effective banking regulation is acting as a proxy for the market in disciplining risk and encouraging prudence.

Another way is to introduce market discipline to banking regulation and deposit insurance to avoid wrong incentives for banks and depositors that can lead to a next crisis. Therefore it is of crucial importance to reform deposit insurance in Ukraine in a way that strengthens market discipline and minimizes moral hazard.

Recommendation 9: Compulsory membership

Compulsory membership increases the size of the insurance pool and excludes adverse selection, where only weak members stay in the system and strong institutions select out of the pool whenever the fund needs an injection of new capital.

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16 Cull, R./Senbet, L. W.: Deposit Insurance and Financial Development: World Bank Policy Research Paper 2682, p. 2, 2001.

Therefore, the DIS in Ukraine should keep the recent status and remain compulsory.

Recommendation 10: Deposit insurance coverage ceiling

A coverage that is set at a low level and with a narrow definition of what is covered may not meet the deposit insurer's objectives. In turn, coverage that is set at a high level and that uses a broad definition of what is covered, may reduce any potential incentive depositors have for monitoring bank risk-taking and may increase the funding requirements for providing deposit insurance.

That is the reason why demand deposits should get cover only up to a ceiling. The limit of UAH 150,000 should thus stay at this level in the medium-term. We recommend equal coverage of foreign currency and local currency deposits.

Recommendation 11: Establish coinsurance

By imposing coinsurance of 10% for example, large depositors are exposed to potential losses. Thus we have a class of investors that have incentives to monitor und discipline banks. Interbank deposits as well as insider deposits should be excluded from deposit insurance, so that banks monitor each other and managers participate in the loss of banks. Coinsurance makes sure that depositors still have an incentive to monitor banks but are insured against big losses, since they only carry a small amount of risk. Coinsurance encourages monitoring by depositors and is unlikely to raise the risk of runs. A similar intention has the recommendation to obligate banks to issue uninsured **subordinate debt**. This creates a class of investors that have a strong incentive to monitor banks. And the market price of subordinate debt gives signals about the riskiness of banks.

Recommendation 12: Guidelines regarding the investment policy of DGF

The fund must be well managed and readily available to cover losses as they arise. Important is the question in which currencies and investment vehicle the DGF should be allowed to invest.

In the cross-country comparison, specific investment rules could be found for 60 countries out of 94:

- The majority of countries favors low-risk / high-liquid instruments
- In 1/3 of all countries only investments are allowed in claims on the government (42 countries incl. US, UK). Many countries add claims on the central bank.
- Some countries add bank deposits (e.g. Bulgaria)
- 15 countries allow claims on member institutions, a small fractions allows claims on foreign governments / foreign banks (e.g. Czech Republic). But there are also 4 countries that prohibit investments in claims on member institutions.
- Some countries (e.g. France) have no regulatory restraints: professional fund management of monetary instruments, shares, bonds etc.
- IADA recommends: "It is advisable to invest funds in financial assets in the currency in which potential claims are most likely to be paid". "Funds should be invested such has to hedge the risk exposure."
- In Ukraine, the DGF should be allowed to invest a limited amount in EUR and USD assets that are low-risk/highly-liquid such as foreign bank deposits (rating S&P A- or better) and government bonds as well as FX-contracts for hedging purposes.

Recommendation 13: Target reserve ratio

The ratio of fund reserves to total deposits or insured deposits should be defined as a target ratio. Once the minimum reserve ratio has been accomplished, insurance premiums can be lowered. Temporary suspension of premiums is not recommended since it creates incentive problems.

Insured deposits in Ukraine stood at UAH 70.5 bn at the beginning of October 2008. All deposits, including corporate deposits, are estimated to be at UAH 336 bn. The DGF currently has capital of UAH 1.7 bn, i.e. 2.4% of insured deposits. After deposit guarantee was increased to UAH 150,000 this ratio dropped to 1.5% of insured deposits (using an estimate of 60% of total deposits). This seems to be an acceptable level by international standards.[17] In addition, considering additional premiums in 2008 and 2009 (under the assumption of no bank failures) and UAH 1 bn from NBU profits, the maximum fund volume is about UAH 4 bn, which equals 3.5% of current insured deposits (1.2% of total deposits).

That means, the amount of UAH 4 bn set as a target reserve ratio by the authorities seems adequate. Today only with additional premiums provided by banks (levy) or the government the fund seems just about adequately capitalized. However, should the fund extend its coverage to all non-bank-deposits incl. corporate deposits the fund should increase its target volume accordingly to ca. UAH 7 bn.

Recommendation 14: Who should supervise the DIS?

Cross-country evidence suggests making the public and private sector jointly responsible for supervising the scheme. A public-private partnership (PPP) establishes checks and balances and improves management performance.[18] Supervision of the DIS by banks ensures that the agency will manage its operations in a fiscally responsible manner. The private sector participating in DIS supervision ensures a greater independence from politics.

Recommendation 15: DIS should be actively involved in decisions when and how to resolve individual bank insolvencies

Today, the DIS in Ukraine is that of a paybox, that simply pays out on insured depositors in case of bank failures. Because deposit insurers are responsible for paying off insured depositors, they have a strong interest in insuring the prompt and speedy resolution of insolvent banks. It can be argued that DIS is more efficient than courts because banking supervisors better understand bank risk-taking incentives and how to remedy them. Beck and Leaven show in a cross-country comparison that banks are more stable and less likely to become insolvent when the deposit insurer has responsibility for intervening in failed banks.[19]

For Ukraine, this means that the DGF should be assigned additional functions that exceed the paybox function. DGF should become a risk-minimizer whose mandate might include bank supervision and regulation of its members. In order to act as a risk-minimizer, the DGF should have access to supervisory information and/or the right to demand bank information concerning accounting data and risk exposure. Additionally, it should possess instruments to discipline banks. Should the DGF conclude that the business policy of a bank is not consistent with sound banking; measures should be taken towards changing the business policy.

However, this does not mean to trim the competencies of the NBU. The optimal system depends on the task sharing between central bank, supervisor and DIS. Internationally, no single system dominates. More important then the organizational arrangements are

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17 In the USA, the available deposit insurance funds at the end of second quarter of 2008 (USD 45 bn) were 1.01% of insured deposits (USD 4.5 trillion). That has proved to be too small. The target ratio is 1.25%.

18 Demirküc-Kunt, A./Kane, E.J./Laeven, L.: Introduction. in: Demirküc-Kunt/Kane/Laeven: Deposit insurance around the world, MIT press, Cambridge Mass., p.6, 2008.

19 Beck/Laeven, L.: Deposit insurance and bank failure resolution: cross-country evidence, in: Demirküc-Kunt/Kane/Laeven: deposit insurance around the world, Cambridge Mass., p. 149, 2008.

the right incentives in place. An efficient system of supervision, prompt corrective actions and early intervention rules are important for the success of deposit insurance, but do not necessarily have to be done by DIS. One deduction can be drawn: The DGF should at least have some controlling rights and supervisory power.

Recommendation 16: Preventive measures should be allowed

When DIS is a paybox it can only spend its funds when bank insolvency has occurred. Should the DIS be allowed to spend money even before a crisis has broken out?

Out of 13 countries, in 5 countries (France, Italy, Canada, Poland, Germany) the DIS can undertake pro-active measures. In the USA, the Federal Deposit Insurance Improvement Act in 1991 requires the FDIC to resolve bank failures using the method that presented the least cost to the fund. Economically this makes sense since it reduces the cost of bank restructuring. In Ukraine not only should DIS be given more responsibility but also the rights to spend money as a preventive measure.

Recommendation 17: How long should it take to pay depositors in full?

In Ukraine, the DIS usually starts repayment within 30 days, but claims may be filed within three years of bank failure. In the United Kingdom, insured depositors of Northern Rock faced months of red tape before getting their money back.

In Germany, it can take up to 6 weeks until depositors are compensated by the Deposit Protection Fund. In case of a troubled bank, a moratorium is imposed by BaFin, the German financial supervisory authority, has to determine whether or not there is still a chance of keeping the bank alive. The bank is only allowed to accept payments which are intended to pay off debts. The moratorium lasts 6 weeks at the most. If BaFin finds that there is no chance of the bank continuing to do business or if the moratorium has already lasted six weeks, it declares that compensation is payable. Only then can the Deposit Protection Fund start compensating depositors. At the statutory compensation scheme it can take up to 6 weeks until compensations starts.

When it takes too long, incentives arise to withdraw cash immediately. That means great efforts should be taken to reduce the time needed to pay out depositors in Ukraine. To put this into perspective, the EU currently plans to shorten the respective deadline from nine months as of today to three days in the future.

Recommendation 18: Funding

Funding of a DIS system is best done by its member banks. It should be clear that – except for truly catastrophic circumstances – funds to cover bank losses will come principally from the pool of surviving banks, a liquidity injection in a crisis is tolerable but relying on banks premiums ensures that the agency will manage its operations in a fiscally responsible manner. Funding should be ex-ante or hybrid, so that a prize on deposit insurance is set. Ex-ante funding has many advantages: because it enables the accumulation of a fund in stables times, it better insures prompt reimbursement to insured depositors and maintenance of public confidence.

There should be an additional obligation to make additional payments (premiums should be levied ex-post) in case of bank failures (hybrid approach). In a crisis exclusive funding of member banks might be impossible, so if necessary government should back-up funding of DIS fund. In the EU in 2/3 of the countries DIS schemes are funded ex-ante, whereas in 6 countries funding is ex-post.

Recommendation 19: Emergency funding

In most cases, countries do not make explicit the source of funding for catastrophic losses that overwhelm the reserve fund. The reason is that it would destroy depositor's incentives to monitor banks. Also, in many countries as in Germany the volume of the fund is not publicly known.

If possible, an agreement with multilateral and bilateral donors and development banks and institutions should be made to obtain emergency funding. This would make it easier and more credible for the Ukrainian DGF to insure foreign currency deposits.

Recommendation 20: Risk-based premiums

Risk-based premiums assessed on the member banks are superior to flat-rate premiums because they minimize moral hazard and introduce market discipline to banks. Flat-rate premiums provide a cross-subsidy from less risky to riskier banks. Theoretically, risk-based premiums lead to better risk-pricing by banks and help to avoid under pricing the deposit insurance. But the calculation of fair premiums is not easy!

Nowhere in the world has appropriate risk-based pricing been established. In countries with implicit DIS pricing, it is not feasible by definition. With an explicit DIS the problem is the accurate and dynamic estimation of risk for each bank and each asset class. But any system that differentiates between different classes of risky banks is better than a flat-rate system, since it substantially transfers wealth from conservative to risky banks and from taxpayers to bank shareholders.[20]

How to set premiums? To prize the value of deposit insurance, accounting-based information (capital ratios) or credit ratings should be used (expected loss pricing). Option pricing models cannot be recommended for Ukraine because a prerequisite are well developed capital markets. But it should be investigated whether other **market-based information** (yields on bank bonds, subordinated debts) can be embedded. Moody's, a rating agency, says that market implied ratings, such as CDS spreads, tally loosely with credit ratings 80% of the time[21] and anticipate rating changes frequently. Our **recommendation** is to set different premiums for different rating-classes of banks and to try to add market-based information.

Recommendation 21: Effective bank regulation as a proxy for market discipline

Every DIS lowers market discipline. Therefore, effective banking regulation has to act as a proxy for the market in disciplining risk and encouraging prudence. The current international financial crisis has shown that banking regulation must be improved in several ways. Some lessons can be learned:

- Strong capital standards: It must be ensured that banks have sufficient equity capital. Ukraine as a transition country has higher capital requirements than the minimum set by the Basle accord. Currently, the banking system exhibits a regulatory capital adequacy ratio (H2) of 13.16%, higher than the 10% required by the NBU.
- Complex credit operations outside a bank's balance sheet should be excluded or limited in a way that makes them transparent and the resulting risks are shown in the bank's balance sheet.
- The right incentives have to be set. The sale of mortgage loans to third parties without keeping at least a part of the risk should be prohibited for banks. No liability limitations should be given to borrowers of home loans (non recourse loans).

20 Santomero, A.: Deposit insurance: Do we need it and why, Wharton Financial Institution Center, p. 20, 1997.

21 Economist, p. 47, Aug 23, 2008.

Summary of recommendations: What should be done in the long run?

- In Ukraine, the DGF should be allowed to invest a limited amount in EUR and USD assets.

- Coinsurance of 10% should be imposed and banks should be obligated to issue uninsured subordinate debt.

- In the long run, foreign deposits should be compensated in foreign currency. A deposit insurance system that offers to repay depositors in a foreign currency must have access to sufficient foreign assets or other sources of foreign-currency funding to make this commitment credible.

- The target reserve ratio for the DGF should be set at UAH 4 bn. However, should the fund extend its coverage to all non-bank-deposits incl. corporate deposits the fund should increase its target volume accordingly to ca. UAH 7 bn.

- The private sector should participate in DIS oversight. This ensures a greater independence from politics and a fiscally responsible management of the agency's operations.

- In Ukraine, the DIS should be actively involved in decisions when and how to resolve individual bank insolvencies. The DGF should be assigned additional functions that exceed the paybox function.

- Great efforts should be taken to reduce the time needed to pay out depositors in Ukraine. To put this into perspective, the EU currently plans to shorten the respective deadline from nine months as of today to three days in the future.

- Risk-based premiums should be assessed on banks for funding the DGF. The recommendation is to set different premiums for different rating-classes of banks and to try to add market-based information.

Appendix

Table 3: International Comparison DIS – Administration and Membership

Country	Membership mandatory or voluntary	Membership of branches from other States	Number of members	Administration of the fund (private, government or joint)	Foreign currency denominated deposits, yes or no	Households and companies insured? no=only households, yes=both
Austria	mandatory	yes	85	private	yes	yes
Canada	mandatory	n/a	n/a	government	no	yes
Czech Republic	mandatory	yes	27	government	yes	no
France	mandatory	yes	825	private	only in EEA countries currencies	no
Germany (Deposit Protection Fund)	voluntary	yes	178 (2006)	private	yes	yes
Germany (banks statutory compensation scheme)	mandatory	yes	271 (only private banks)	joint	only in EEA countries currencies	yes
Germany (saving banks and cooperative banks)	mandatory	no	sav.-b. = 448, coop.-b.=1,214	private	yes	yes
Hungary	mandatory	yes	211	joint	only in EU and OECD countries currencies	no
Italy	mandatory	yes	291	private	yes	no
Poland	mandatory	yes	653	joint	yes	yes
Sweden	mandatory	yes	131	government	yes	no
Ukraine	mandatory	yes	150	government	yes	n/a
United Kingdom	mandatory	yes	1,345	government	yes	no
United States	mandatory	n/a	n/a	government	yes	yes
Total (n = 12)*	**mandatory = 11 voluntary = 1**	**yes = 10 n/a = 2**	**Ø 486 n/a = 2**	**government = 6 joint = 2 private = 4**	**yes = 9 no = 1 joint = 2**	**yes = 5 no = 6 n/a = 1**

Source: *own estimations; Deposit Guarantee Systems: EFDI First Report, Annex XI-XXXI, 2006, Demirgüç-Kunt, A.; Karacaovali, B.; Laeven, L.: Deposit Insurance around the World: A Comprehensive Database (World Bank), p. 28-59, 2005.*

** To ensure comparability between the countries only the Deposit Protection Fund (private banks) of Germany`s three-pillar banking system will be considered for the international overview*

Table 4: International Comparison DIS – Coverage

Country	GDP (PPP) in (2007) billions	GDP (PPP) per capita (2007)	Population (2007) millions	Coverage before crisis (June 2008)	Current coverage (October 2008)	Coverage to GDP per capita ratio before crisis (June 2008)	Coverage to GDP per capita ratio (November 2008)	Coinsur-ance in % (2008)	Total amount of guaranteed deposits (2005) in EUR bn
Austria* **	EUR 265	EUR 31,800	8,277	EUR 20,000	EUR 50,000	0.6	1.6	0%	22
Canada*	USD 1,178	USD 35,825	32,882	USD 100,000	USD 100,000	2.8	2.8	0%	n/a
Czech Republic	EUR 172	EUR 16,638	10,321	EUR 25,000	EUR 50,000	1.5	3.0	0%	47
European Union	EUR 12,173	EUR 24,800	491,000	EUR 20,000	EUR 50,000	0.8	2.0	10%	n/a
France	EUR 1,744	EUR 27,600	61,707	EUR 50,000	EUR 60,000	1.8	2.2	0%	1,000
Germany (Deposit Protection Fund)	EUR 2,310	EUR 28,100	82,200	up to 30 per cent of bank's liable capital per depositor		-	-	0%	951
Germany (banks statutory compensation scheme)	EUR 2,310	EUR 28,100	82,200	EUR 20,000	EUR 50,000	0.7	1.8	10%	951
Germany (saving banks and cooperative banks)	EUR 2,310	EUR 28,100	82,200	unlimited institution guarantee		-	-	0%	1594****
Hungary	EUR 132	EUR 13,086	10,066	EUR 25,000	EUR 50,000	1.9	3.8	0%	19
Italy	EUR 1,500	EUR 25,200	58,880	EUR 103,291	EUR 103,291	4.1	4.1	0%	386
Poland	EUR 428	EUR 11,217	38,121	EUR 22,500	EUR 50,000	2.0	4.5	0%	90
Sweden	EUR 231	EUR 25,195	9,170	EUR 25,000	EUR 50,000	1.0	2.0	0%	58
Ukraine*	USD 320	USD6,916	46,192	USD 10,000	USD 25,000	1.4	3.6	0%	20
United Kingdom	EUR 1,847	EUR 28,800	60,836	EUR 40,000	EUR 60,000	1.4	2.1	0%	1,150
United States	USD 13,811	USD 45,737	301,967	USD 100,000	USD 250,000	2.2	5.5	0%	n/a
Average	**-**	**-**	**91,735**	**-**	**-**	**1,8**	**3,0**	**-**	**427**

Source: *own estimations; World Bank http://web.worldbank.org/: Statistic Country Profiles (Canada, United States, Ukraine); Eurostat http://epp.eurostat.ec.europa.eu/ GDP (PPP) per capita*

* Converted in USD at exchange rates of early 2008

** Germany banks statutory compensation scheme. In Germany, the protection level of private banks, saving banks and cooperate banks is already far beyond that

*** In Austria, complete backup of all deposits since October 2008

**** This value is apported to saving banks = EUR 1,106 bn and cooperative banks = EUR 488 bn

Table 5: International Comparison DIS – Funding

Country	Timing of reserve accumu-lation	Deposit insurance contributions				Emergency funding sources (besides member contributions)	Main types of investments of DIS reserves
		Assessment base	Contribution rates - ordinary rate (per annum, percent of assessment base)	Adjustment by risk (no=flat rate)	If yes, rate adjustment		
Austria	ex-post	insured deposits	pro rata	no	-	bond issues, government guarantee	n/a
Canada	hybrid	insured deposits	0.014~0.114%	yes	within the ordinary rate	bond issues, borrowings from the government	n/a
Czech Republic	ex-ante	insured deposits + insiders' deposits	0.05~0.10%	no	-	government guarantee, borrowings from the central bank	government-guaranteed claims, claims on the central bank
France	hybrid	deposits	pro rata plus risk adjustment	yes	0.75~1.25%	borrowings from member institutions	n/a
Germany (Deposit Protection Fund)	ex-ante	insured deposits	0.03%	yes	0.00~0.25%	borrowings from member institutions	n/a
Germany (banks statutory compensation scheme)	ex-ante	liabilities to customers	0.008%	no	-	borrowings from private sources, borrowings from member institutions	n/a
Germany (saving banks and cooperative banks)	hybrid	insured deposits	0.01~0.2%	yes	premiums surcharge of up to 40%	guarantee network	n/a
Hungary	ex-ante	insured deposits	0.0~0.2% plus risk adjustment,	yes	up to 0.3% in total	government guarantee, borrowings from the central bank, borrowings from private sources	government-guaranteed claims, claims on member institutions
Italy	hybrid	insured liabilities	pro rata, 0.4~0.8%	yes	within the ordinary range	borrowings from the central bank	n/a
Poland	ex-ante	risk-w. assets, off-B/S items and deposits	0.0~0.4%(assets), +0.0~0.2%(OBS), +0.0~0.4%(deposit)	no	-	bond issues, borrowings from the central bank	claims on member institutions
Sweden	ex-ante	insured deposits	0.1~0.3% + risk adjustment	yes	0.6~1.4 (coefficient)	borrowings from the government	government-guaranteed claims
Ukraine	ex-ante	total deposits	0.50%	no	-	borrowings from the government	government-guaranteed claims; deposits at NBU (central bank)
United Kingdom	ex-post	insured deposits	pro rata, 0.0~0.3%	no	-	borrowings from private sources	government-guaranteed claims
United States	ex-ante	total domestic deposits (with minor adjustments)	0.02~0.40% + adjustment (+/- 0.03%)	yes	within the ordinary range	borrowings from the government	government-guaranteed claims
Total (n = 12)*	**Ex-ante = 7 Ex-post = 2 Hybrid = 3**			**yes = 7 no = 5**			

Source: *own estimations, IADI-paper: Funding of Deposit Insurance Systems, Discussion Paper, p. 30-41, 2008*

* To ensure comparability between the countries only the Deposit Protection Fund (private banks) of Germany`s three-pillar banking system will be considered for the international overview

Table 6: International Comparison DIS – Competencies of Intervention

Country	Responsibilities	Does the deposit insurance authority make the decision to intervene a bank? yes/no	Does the deposit insurance authority have legal power to cancel or revoke deposit insurance for any participating bank? yes/no	Can the deposit insurance agency/fund take legal action against bank directors or other bank officials? yes/no	As part of failure resolution, how many banks closed or merged in the last 5 years? (2000-2005)	On average, how long does it take to pay depositors in full? in months (2005)
Austria	risk minimizer	no	yes	no	4	3
Canada	risk minimizer	yes	yes	yes	0	1
Czech Republic	paybox	no	no	no	9	3
France	risk minimizer	no	yes	yes	23	n/a
Germany (Deposit Protection Fund)	risk minimizer	yes	yes	no	n/a	n/a
Germany (banks statutory compensation scheme)	paybox	no	no	yes	4	n/a
Germany (saving banks and cooperative banks)	risk minimizer	yes	yes	no	n/a	n/a
Hungary	risk minimizer	yes	yes	no	1	3
Italy	risk minimizer	yes	yes	no	28	0
Poland	risk minimizer	no	no	no	21	4
Sweden	paybox	no	yes	no	0	n/a
Ukraine	n/a	no	yes	no	46	60
United Kingdom GB	paybox	no	no	yes	n/a	6
United States	risk minimizer	yes	yes	yes	n/a	0,1
Total (n = 12)*	**risk minimizer = 8 paybox = 3 n/a = 1**	**yes = 5 no = 7**	**yes = 9 no = 3**	**yes = 4 no = 8**	**14**	**9**

Source: *own estimations, Demirgüç-Kunt, A.; Karacaovali, B.; Laeven, L.: Deposit Insurance around the World: A Comprehensive Database (World Bank), p. 28-59, 2005*

* To ensure comparability between the countries only the Deposit Protection Fund (private banks) of Germany`s three-pillar banking system will be considered for the international overview

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