Financial Turbulence: Some Lessons Regarding Deposit Insurance

Sebastian Schich*

One specific aspect of financial safety nets that has been in the spotlight of late is deposit insurance. As events in markets are still unfolding, it is too soon to draw definitive conclusions regarding the effects of the crisis and the adequacy of financial safety nets, including deposit insurance arrangements. Nonetheless, preliminary suggestions for policy are emerging and the article singles out four areas for special attention. First, as regards coverage, deposit insurance systems with low levels of coverage and/or partial insurance may not be effective in preventing bank runs. Second, for an explicit deposit insurance system to be effective, depositors need to understand the extent of and limits to existing deposit protection schemes. Third, when different institutions are entrusted with responsibilities that are relevant in a crisis situation, ex ante arrangements delimiting the scope of the different responsibilities as well as the respective powers may not be sufficient to ensure co-ordination that is as close and smooth as needed. Fourth, the question as to whether a specific bankruptcy regime for banks is needed remains an important issue.

* Sebastian Schich is Principal Administrator in the Financial Affairs Division of the Directorate of Financial and Enterprise Affairs. The present article is a revised version of a document prepared and presented by the author and discussed by the OECD’s Committee on Financial Markets (CMF) at its meeting in April 2008. The current version takes into account the comments made at the meeting and received in writing. The article has also benefitted from comments received by the author at a presentation of the document at the Financial Stability Seminar organised by the OECD’s Economics Department in December 2007.
Executive summary

The recent financial turbulence provides supervisory, regulatory and other financial policy authorities with a timely opportunity to review existing regulatory structures underlying the operation of financial markets, including those related to the financial safety net. One specific aspect of financial system policy that has been in the spotlight of late is deposit insurance. Episodes of bank runs have been rare since the advent of deposit insurance, the specific aim of which is to protect retail depositors and prevent bank runs. Thus, the run by depositors in the United Kingdom on the country’s fifth-largest mortgage bank in 2007 provides a timely opportunity for policy makers in OECD countries to revisit the design of deposit insurance systems. The issues to be discussed in this context are germane to the design of deposit insurance systems, and, thus, are relevant for the systems in place or under study in other countries.

The present article revisits the issue of deposit insurance and provides a brief overview of some of the key challenges related to the design of explicit deposit insurance systems. These challenges include issues related to coverage, funding and premium setting, membership, safety net interrelations, and bank failure resolution mechanisms. In addition, the note identifies some preliminary findings that could be drawn from the recent financial turmoil.

As events in markets are still unfolding, it is too soon to draw definitive conclusions regarding the effects of the crisis and the adequacy of regulatory and policy frameworks. Nonetheless, preliminary suggestions for policy are emerging and the article singles out four areas for special attention.

First, as regards coverage, deposit insurance systems with low levels of coverage and/or partial insurance may not be effective in preventing bank runs.

Second, for an explicit deposit insurance system to be effective, depositors need to understand the extent of and limits to existing deposit protection schemes. Consumer surveys show, however, that such knowledge can be limited.

Third, when different institutions are entrusted with responsibilities that are relevant in a crisis situation, ex ante
arrangements delimiting the scope of the different responsibilities as well as the respective powers may not be sufficient to ensure coordination that is as close and smooth as needed. Delimiting responsibilities without establishing a hierarchy in the event of a crisis may not always be effective in dealing with events that were not envisaged in the *ex ante* arrangements. In this context, it should be noted that deposit insurers have extensive failure resolution powers in some countries.

Fourth, the question as to whether a specific bankruptcy regime for banks is needed remains an important issue.

I. Introduction

The recent financial turmoil provides supervisory, regulatory and other financial policy authorities with a timely opportunity to review existing regulatory structures underlying the operation of financial markets, including those related to the financial safety net. For one, recent developments help identify areas in which the effectiveness and efficiency of structures could be improved. As events in markets are still unfolding, it may be too soon to draw definitive conclusions regarding the effects of the crisis, its causes, and its amplifiers. Nonetheless, first lessons are emerging, even if national and international deliberations on the appropriate policy measures, including those affecting the financial safety net, are not yet completed.

Implementing changes to existing regulatory and policy frameworks in some areas, where significant shortcomings are identified, may be facilitated during and in the close aftermath of a crisis, given that a sense of urgency for action tends to be widely shared. In other areas, however, changing the existing frameworks may be more difficult, especially if the changes foreseen have direct implications for the losses incurred by different market participants. Changes in frameworks could also affect risk perceptions, perhaps exaggerating existing concerns. In any case, it is important on efficiency grounds for policy makers to carefully assess the potential benefits against the likely costs of policy intervention and to refrain from unnecessary activism.

The recent financial turmoil and the incidence of significant losses on the part of many commercial and investment banks, as well as other financial institutions, have led to heightened interest on the part of both the general public and policy makers in key aspects of the financial safety net. One specific aspect that has been in the spotlight of late is deposit insurance, which aims to protect retail depositors against bank insolvencies and, thereby, prevent bank runs.
Episodes of bank runs have been rare since the advent of deposit insurance. Thus, the run by depositors in the United Kingdom on the country’s fifth-largest mortgage bank in 2007 provides a timely opportunity for policy makers in OECD countries to revisit the design of deposit insurance schemes. In the United Kingdom, policy makers have started a broad review of the existing crisis resolution system, including areas such as the legal framework for dealing with banks in financial distress as well as compensation arrangements for bank depositors. A consultation document setting out the views of UK policy authorities was published at the beginning of 2008. Many of the issues discussed in this context are germane to the design of deposit insurance systems, however, and thus they are relevant for the systems in place or under study in other countries.

For instance, in countries where no explicit deposit guarantee exists or where guarantees are relatively limited, the question arises as to how effective the safety net is. And where explicit guarantees do exist, the question is whether coverage is deemed to be adequate and how credible relatively limited levels of coverage may be. Clearly, the more complete is the insurance coverage, the more likely is market discipline involving both deposit-taking institutions and their depositors to break down.

The purpose of the present note is to draw attention to the issue of deposit insurance and to provide a brief overview of some of the key challenges related to explicit deposit insurance systems. In addition, the note identifies some preliminary lessons that could be drawn from the recent financial turmoil in an attempt to stimulate a policy discussion. This discussion will also inform the CMF’s ongoing work on accession, as issues related to this subject area will certainly be explored in that context.

The remainder of the note is organised as follows. The second section elaborates on some of the basic issues related to the establishment of explicit deposit insurance systems, while the third section focuses on specific issues and findings related to various elements of the design of explicit deposit insurance systems. The fourth section repeats some of these findings before it singles out for special attention some preliminary lessons that emerge from the recent financial market turmoil with regard to the design of such systems.
II. Explicit deposit insurance systems

*Desirability of deposit insurance remains controversial among economists*

The desirability of deposit insurance remains a matter of controversy. In particular, several economists question the usefulness of deposit insurance on the grounds that it could involve moral hazard problems. These could result in excessive risk taking on the part of depositors as well as the banks accepting the deposits.

Some cross-country empirical studies provide support to this hypothesis. For example, a study of banking crises from the beginning of the 1980s to the mid-1990s found that the presence of an explicit deposit insurance scheme tends to increase the probability of such events. In addition, a more recent related study finds that poorly designed deposit insurance, in institutionally weak environments, tend to increase the probability of systemic banking problems. Other researchers have criticised the validity of some of the assumptions underlying these results, however.

An interesting observation is that the Basel Committee does not include deposit insurance as a key principle in its 1997 Core Principles of Effective Banking Supervision. The Principles refer to deposit insurance in a short separate appendix, however, which briefly discusses arguments in favour of and against such insurance.

Deposit insurance can increase public confidence in banks and thereby make the financial system more stable. A safety net may also limit the effect that problems at one bank might have on other, healthier, banks in the same market, thereby reducing the possibility of contagion or a chain reaction within the banking system as a whole. Furthermore, a key benefit of deposit insurance is that, in conjunction with logical exit procedures, it gives the banking supervisors greater freedom to let troubled banks fail.

Deposit insurance can however increase the risk of imprudent behaviour by individual banks. Small depositors will have less incentive to withdraw funds even if the bank pursues high-risk strategies, thus weakening an important check on imprudent management. Government officials and supervisors need to recognise this effect of a safety net and take steps to prevent excessive risk-taking by banks. One method of limiting risk-taking is to utilise a deposit insurance system consisting of "co-insurance", in which deposit insurance covers less than 100 per cent of individual deposits and/or provides cover only up to a certain absolute amount so that depositors still have some funds at risk. Other methods include charging risk-based premiums or withholding deposit insurance from large, institutional depositors.
Growing adoption of explicit deposit insurance systems

This controversy notwithstanding, most CMF members have explicit deposit insurance systems in place (Figure 1), and several of them have been either established (or revised) within the past decade. Recently, for example, Singapore and Hong Kong, China established such systems. In Australia and New Zealand, explicit deposit insurance systems do not exist.

Explicit deposit insurance involves the creation of a deposit guarantee scheme by law, with specific rules concerning the extent of the protection, the operation and funding of the scheme, and the type of deposits or depositors protected.

Figure 1. Explicit deposit insurance systems around the world

Note: CMF denotes the OECD Committee on Financial Markets, with membership comprising all OECD countries and, as observers, Russia, Singapore and Hong Kong, China.

Such schemes have been adopted to (i) support the stability of the banking system and (ii) protect bank retail depositors from incurring large losses due to bank failures.

The first objective is motivated by the view that the banking system is inherently fragile. Liabilities are of a first-come-first-serve nature, while assets are illiquid and worth less at liquidation than on a going concern basis. Thus, it can be rational for depositors ‘to run’ at the sign of problems at the bank. Moreover, bank failures can be highly contagious and spread from one to several banks.

The second objective relates to the presumed inability of ordinary retail depositors to assess and monitor on an ongoing basis the riskiness of the institutions that are holding their deposits. The costs to such ordinary depositors of losing the money they keep in deposit accounts could be potentially very severe.

**Demarcation line of financial safety net**

An explicit deposit insurance scheme is helpful in defining the outer limit of the financial safety net. In particular, it limits the guarantee to a specific type of creditor, in this case “insured depositors”. Thus, uninsured depositors, other creditors, shareholders and managers are not protected. By limiting the protection to “insured depositors”, explicit deposit insurance exposes uninsured depositors, creditors, shareholders, and managers to increased risk exposure, thereby encouraging them to monitor and limit the riskiness of the bank. These positive aspects were cited as part of the motivation for the recent establishment of explicit deposit insurance in Singapore.

By contrast, in a situation where deposit insurance is not explicit, the demarcation line of the safety net is less clear. As a result, a perception could arise that there will be intervention by the government to bail out any depositors, as well as perhaps, general creditors and shareholders, thus distorting the incentives to monitor and limit risk on the part of these groups.

The perception that retail depositors would be bailed out may have been reinforced by recent trend shifts in risk allocations, especially in relation to personal retirement financing risks, which essentially consist of individual households bearing an increasingly larger share of risks themselves. Under those circumstances, it may be politically more difficult for governments to resist pressures supplying guarantees or “insurance *ex post*”.

In Australia and New Zealand, explicit deposit insurance arrangements do not exist but have been under study. As part of the debate, in September 2007, the Australia-New Zealand Shadow Financial Regulatory Committee issued a statement, encouraging
Australian and New Zealand authorities to finalise and implement existing proposals regarding failure management arrangements, stressing in particular that such arrangements would help to clearly delineate the safety net boundary. An earlier report commissioned by the Australian government (Davis Report) concluded that the costs and benefits of adopting such a scheme in Australia are finely balanced. Consistent with the reports terms of reference, it did not make recommendations for or against the establishment of such a scheme; it did catalogue however the broad range of issues that would need to be considered in designing any such scheme to suit Australia’s circumstances. More recently, in 2006, the country’s Council of Financial Regulators reviewed crisis management arrangements and concluded that there is a strong case for the introduction of a scheme to provide depositors in a failed deposit-taking institution with timely access to at least some of their funds. In this context, the Council cited evidence from a Reserve Bank survey which suggests that despite the absence of an explicit deposit insurance system most Australians believe that the Government would step in to ensure either full or partial repayment of their deposits.

Currently, the Australian Government is considering the establishment of an ‘Early Access Facility’ recommended by the Council of Financial Regulators, which will complement the existing depositor preference arrangements that exist in that country. Such an early access scheme is not identical to an explicit insurance deposit scheme however. Importantly, there would be no ex ante funding and current depositor preference rules, which are important in the eventual distribution of assets, would not change. Indeed the early access scheme under consideration would be complementary to existing arrangements.

Deposit insurance increases need for proper oversight

Deposit insurance is only part of the financial safety net and there are other official measures which are designed to protect bank depositors from the risk of loss or to contain that risk. Deposit insurance is not a substitute for, but a complement to those measures.

In fact, by providing deposit insurance and other safety net features, there is an even greater need to ensure proper oversight of deposit-taking institutions to defend those safety nets and to contain moral hazard. Moral hazard is a feature commonly associated with financial safety nets and deposit insurance in particular. One important method to minimize moral hazard while preserving the benefits of deposit insurance involves promoting good governance practices for banks and ensuring that there is a sound regulatory and supervisory (and legal) framework in place to deal with excessive risk-taking by banks.
In this context, the FSF Working Group on Deposit Insurance (FSF, September 2001), stressed that a financial safety net consists of three elements: prudential regulation and supervision, a lender of last resort, and deposit insurance. The report concluded that if a country has established a well-developed mechanism in only one or two of these three areas, it is still likely to face difficulties in finding effective solutions for preventing or resolving serious problems in its banking system.

Indeed, there are numerous interrelations between these three elements. For example, as already mentioned, the issue of moral hazard creates a link between prudential regulation and oversight and deposit insurance. Also, there are interactions between the liquidity provision by the lender of last resort and the likelihood of a bank run (see e.g. Box 1). Thus, while each of the three elements can be discussed separately one from another, as the remainder of this note does, the close interrelationships should be kept in mind. Figure 2 illustrates the situation in the case where all three elements of the safety net are present.

Figure 2. **Interrelations between elements of financial safety nets**

Source: OECD.
Box 1: Deposit insurance and lender of last resort functions

By providing temporary lending to the market in general at a time of financial distress, the central bank can relieve tensions in core funding markets and limit the potential fears that might prompt bank runs. Actually, the existence alone of a lender of last resort (LOLR) could already have this effect, as it may stabilise expectations without necessitating any particular course of action.

Monetary policy interventions during the second half of 2007 and the first quarter of 2008 could be interpreted as conceptually close to the concept of LOLR, as defined by the 19th century British economist Walter Bagehot. The classic interpretation of that function, following Bagehot, holds that the LOLR has a role in lending to solvent but illiquid financial institutions. It should prevent temporarily illiquid but solvent banks from failing, lending as much as necessary, but at a penalty rate (so that financial institutions cannot use the loans to fund their current lending operations) and against acceptable collateral. These loans are provided against acceptable collateral (valued at pre-panic prices). The LOLR must make clear in advance its readiness to lend any amount to any institution that fulfils the conditions on solvency and collateral. The support should be vis-à-vis the entire market and not to specific institutions and it must be credible. There is widespread agreement that LOLR loans should be short-term loans and be extended only to solvent but illiquid institutions. Any extended lending is an indication of insolvency rather than of mere illiquidity of the institution(s) receiving the loans, and any delay in closing an insolvent institution is likely to increase the costs associated with bank resolution. A bail-out of insolvent banks raises severe moral hazard issues.¹ Having said that, in practise it is notoriously difficult to distinguish between illiquidity and insolvency.²

In situations where it is difficult to distinguish between illiquidity and insolvency, there exists another link between deposit insurance and the function of lender of last resort to the extent that the latter focuses on an individual institution rather than on the market at large (thus differing from the classic interpretation of that function that is outlined above). In particular, if the lender of last resort intervened to lend to an insolvent institution against good collateral, the central bank may effectively reduce the collateral available for depositors and other creditors. Thus, such lending, if publicly known, could actually raise the likelihood of a run by depositors on that bank.

In any case, lending of last reserve against good collateral tends to reduce the funds available to depositors and other creditors, which include (in some countries) the deposit insurer. Thus, extensive lending of last resort can expose the deposit insurer to greater losses compared to a situation without such lending.

¹ In addition, it could even violate competition law, as there exists an inherent subsidy in central bank lending to an insolvent institution. For example, under the EC rules on state aid, the granting of emergency aid to banking institutions can be considered illegal in some cases, given that the Luxembourg Court of Justice recognised that EC competition rules are also applicable to the banking sector. See Lastra, R.A., Legal Foundations of International Monetary Stability, p.121, 2006, Oxford. In this context, note that the European Commission is expected to open a formal investigation into the restructuring aid package devised by the United Kingdom government for Northern Rock.

III. Selected issues related to the design of deposit insurance schemes

The specific design of deposit insurance regimes differs across OECD countries. There is no generally agreed standard for such systems, and the Core Principles of Effective Banking Supervision note that the actual form of such programmes should be tailored to the circumstances in, as well as historical and cultural features of, each country. In particular, the special banking environment of the country that proposes to establish such a system will have to be taken into account at the design stage. While there exist no generally agreed templates for the design, the International Association of Deposit Insurers offers guidance to policy makers wishing to establish a deposit insurance system or reform their deposit protection arrangements however. The organisation has developed a set of “Core Principles for Effective Deposit Insurance Systems” (published on 4 April 2008), which are intended as a voluntary framework for effective deposit insurance practices.

To establish a credible and effective deposit insurance system, there must be internal consistency between the goals of the system (in particular the mix between consumer protection and financial stability objectives) and the system’s design. The latter has many features, including:

- coverage,
- funding and premium setting,
- membership,
- financial safety net interrelationships, and
- bank failure resolution.

Coverage

One of the important aspects in the design of a deposit insurance system is the specification of a maximum insurance coverage, which is the maximum amount a depositor can claim from the deposit insurer in the event of bank failure. Noticeable differences exist in that respect (Figure 3 shows limits in USD equivalents, based on the data shown in Table 1). In the United States, for example, the amount covered is high in absolute terms; the Federal Deposit Insurance Corporation in the United States covers up to USD 100 000 per account. In Canada and Mexico, the amount covered is broadly similar, while it is even higher in Italy and Norway. Elsewhere, maximum coverage is more limited in absolute terms, but could be higher in relative terms (e.g. as measured by coverage to deposits per capita ratio or in relation to household balance sheets).
### Table 1. Coverage limits in constituencies of CMF participants

<table>
<thead>
<tr>
<th>Country Name</th>
<th>Explicit deposit insurance coverage limits</th>
<th>Limits to full coverage (in USD at exchange rates as of early 2008, rounded)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>No explicit deposit insurance system</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Austria</td>
<td>EUR 20 000, 10% co-insurance for non-individuals (companies etc.)</td>
<td>29 000</td>
</tr>
<tr>
<td>Belgium</td>
<td>EUR 20 000</td>
<td>29 000</td>
</tr>
<tr>
<td>Canada 1)</td>
<td>CAD 100 000</td>
<td>99 000</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>EUR 25 000, 10% co-insurance</td>
<td>37 000</td>
</tr>
<tr>
<td>Denmark</td>
<td>DKK 300 000</td>
<td>60 000</td>
</tr>
<tr>
<td>Finland</td>
<td>EUR 25 000</td>
<td>37 000</td>
</tr>
<tr>
<td>France</td>
<td>EUR 70 000</td>
<td>104 000</td>
</tr>
<tr>
<td>Germany 2)</td>
<td>Private: not to exceed 30% of bank’s equity capital. Public: no coverage limit; Obligatory minimum of EUR 20 000 is generally exceeded</td>
<td>&gt; 29 000</td>
</tr>
<tr>
<td>Greece</td>
<td>EUR 20 000</td>
<td>29 000</td>
</tr>
<tr>
<td>Hong Kong, China 3)</td>
<td>HKD 100 000</td>
<td>13 000</td>
</tr>
<tr>
<td>Hungary 4)</td>
<td>100% for up to HUF 1 million. 90% for the amount in access of it, up to maximum of HUF 6 million</td>
<td>34 000</td>
</tr>
<tr>
<td>Iceland 5)</td>
<td>EUR 20,887 (equivalent to ISK 1.7 million as of 01/05/99)</td>
<td>&gt; 31 000</td>
</tr>
<tr>
<td>Ireland</td>
<td>90%, not to exceed EUR 20 000</td>
<td>29 000</td>
</tr>
<tr>
<td>Italy</td>
<td>EUR 103,291.38</td>
<td>153 000</td>
</tr>
<tr>
<td>Japan</td>
<td>JPY 10 million</td>
<td>93 000</td>
</tr>
<tr>
<td>Korea</td>
<td>KRW 50 million</td>
<td>53 000</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>EUR 20 000</td>
<td>29 000</td>
</tr>
<tr>
<td>Mexico 6)</td>
<td>MXP 1,602,844.40</td>
<td>148 000</td>
</tr>
<tr>
<td>Netherlands 7)</td>
<td>100% up EUR 20 000; 90% of next EUR 20 000, i.e. from EUR 20 000 to 40 000</td>
<td>29 000</td>
</tr>
<tr>
<td>New Zealand</td>
<td>No explicit deposit insurance system</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Norway</td>
<td>NOK 2 million</td>
<td>375 000</td>
</tr>
<tr>
<td>Poland</td>
<td>100% of up to EUR 1 000; 90% of EUR 1 000 to EUR 22,500</td>
<td>33 000</td>
</tr>
<tr>
<td>Portugal</td>
<td>EUR 25 000</td>
<td>37 000</td>
</tr>
<tr>
<td>Russia 8)</td>
<td>RUB 190 000</td>
<td>16 000</td>
</tr>
<tr>
<td>Singapore 9)</td>
<td>SGD 20 000</td>
<td>14 000</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>EUR 20 000, Co-insurance 10%</td>
<td>29 000</td>
</tr>
<tr>
<td>Spain</td>
<td>EUR 20 000</td>
<td>29 000</td>
</tr>
<tr>
<td>Sweden</td>
<td>SEK 250 000</td>
<td>40 000</td>
</tr>
<tr>
<td>Switzerland</td>
<td>CHF 30 000</td>
<td>28 000</td>
</tr>
<tr>
<td>Turkey 10)</td>
<td>NTL 50 000</td>
<td>41 000</td>
</tr>
<tr>
<td>United Kingdom 11)</td>
<td>GBP 35 000</td>
<td>68 000</td>
</tr>
<tr>
<td>United States 12)</td>
<td>USD 100 000</td>
<td>100 000</td>
</tr>
</tbody>
</table>

**Notes:** see next page.

**Source:** OECD Secretariat estimates based on information available from deposit insurance websites, updating information available from Demirgüç-Kunt, A., B. Karacaovali, and L. Laeven (2005), *Deposit Insurance around the World: A Comprehensive Database*, World Bank, April 2005.
Notes for Table 1:

CMF denotes the OECD Committee on Financial Markets, with membership comprising all OECD countries and, as observers, Russia, Singapore and Hong Kong, China.

1) In Canada, the coverage limit was CAD 60,000 in 2003, but it has been raised since then.

2) In Germany, widespread voluntary arrangements provide additional coverage as compared to official, obligatory coverage limits. Full protection of clients’ deposits at German public banks is provided through member banks’ viability guarantee on behalf of public bank associations. The obligatory arrangement is coinsurance up to 90% of EUR 20,000 (or USD 28,367 as shown in the right-hand column). In practice, the coverage limit depends on institute in question, and coverage limits are typically much higher than that reference value. See also Deutsche Bundesbank. Monthly Report, July 2000.

3) The Hong Kong Deposit Protection Board (HKDBP) launched the Deposit Protection Scheme on 25th September, 2006. All licensed banks, unless otherwise exempted by the HKDBP, are required to participate. The compensation limit of the deposit insurance scheme, launched on 25th September, 2006, was set at HK$ 100,000 per depositor per scheme member, and both Hong Kong dollar and foreign currency deposits are protected.

4) Hungary raised the coverage limit from HUF 3 million to HUF 6 million in May 2004.

5) The number for Iceland is actually not a ceiling, but rather a floor. In the event that the assets of the Icelandic Fund are insufficient to pay the total amount of guaranteed deposits in member companies concerned, payments shall be divided among the claimants as follows: each claim up to ISK 1.7 million shall be paid in full, and any amount in excess of that shall be paid in equal proportions depending on the extent of assets. This amount shall be linked to the EUR exchange rate of 5 January 1999."

6) Mexico transitioned to a limit which is set at 400,000 UDI ("Unidades de Inversión", an index which basically reflects inflation and which is constantly updated). As of April 25, 2008, one UDI was equivalent to 4.0071 pesos, corresponding to USD 153,824.

7) This new coverage level (previously only up to EUR 20,000) and the introduction of co insurance were implemented in January 2007.

8) The maximum insurance coverage was raised to RUR 400,000 from its previous level of RUR 190,000.

9) Following the enactment of the Deposit Insurance Act in 2005, the deposit insurance scheme commenced on April 1, 2006. The deposit insurance scheme provides (limited) compensation for deposits held by individuals and charities, in the event of the failure of a bank or finance company.

10) The deposit insurance guarantee was unlimited in 2003, but as of July 2004, it became limited. NTL stands for New Turkish Lira.

11) The Financial Services Authority (FSA) announced changes to the rules governing the Financial Service Compensation Scheme. The new rules specify a 100 per cent guarantee of a depositor’s first GBP 35,000 in a bank account if the bank goes into default. Before 1 October 2007, compensation was limited to the first GBP 2,000 plus 90 per cent of the deposit between GBP 2,000 and 35,000. The limits are being reviewed.

12) Recent changes made to the FDIC deposit insurance system include the expansion of coverage of individual retirement accounts to USD 250,000 and (future) indexation of coverage limits.
Figure 3. *Explicit deposit insurance coverage limits*
USD equivalents, as of early 2008

*Source: OECD Secretariat estimates. For qualifying notes and sources see Table 1.*

Figure 4. *Incidence of specific explicit deposit insurance coverage limits*
Numbers of constituencies, ranges in USD equivalents, as of early 2008

*Source: OECD Secretariat estimates. For qualifying notes and sources see Table 1.*
In the European Union, the EC Directive on Deposit Guarantee Schemes of 1994 specifies a minimum coverage of EUR 20 000, although exemptions existed in the past. Grouping the observations of explicit deposit insurance coverage limits into ranges, with widths of USD 25 000 each, shows that most constituencies specify coverage limits that lie between the equivalent of USD 25 000 and USD 50 000 (Figure 4). Thus, an important aspect of the design of deposit insurance systems differs across countries in the European Union, where banking systems have become increasingly integrated. This situation may create some challenges in situations when the stress experienced by one bank has a significant cross-border dimension (e.g. when the troubled institution has branches in other countries). 8

There are at least two, partly opposing, considerations affecting the choice of the level of coverage.

- Conceptually, the higher the extent of guarantee the greater is the risk of moral hazard on the part of depositors and deposit-taking institutions. Indeed, the risk of any insurance system – besides that of being ineffective or insufficient – is that it encourages moral hazard. One feature of such systems that can and should mitigate the occurrence of moral hazard is that the amount of deposit insurance coverage for retail depositors should not be set so high as to encourage irresponsible behaviour by banks or depositors, or both, by stimulating the growth of deposits at low-quality and high-risk banks. 9

- By contrast, specifying a too low coverage rate partly contradicts one of the purposes of deposit insurance, which is to protect small depositors who lack the resources to assess the soundness of banks. Also, low coverage tends to be less effective in instilling confidence on the part of such depositors, and it runs the risk of undermining the credibility of the deposit insurance arrangement, thus increasing the likelihood of bank runs.

In most deposit insurance systems the response to this trade-off has been to establish coverage limits which gravitate towards covering the vast majority of small depositor’s balances while ensuring that large, especially corporate and interbank, deposits are exposed to market discipline. For example, in Canada, the CDIC’s coverage limit of CAD 100 000 per institution per depositor is estimated to fully protect around 90 per cent of individuals while leaving the majority of deposits by value exposed to market discipline. The current (new) compensation level of GBP 35 000 in the United Kingdom covers an estimated 96 per cent of depositors and 50 per cent of the value of deposits. In Singapore, the coverage limit of 20 000 Singapore dollars protects an estimated 86 per
cent of depositors. Coverage limits may need to be adjusted periodically to reflect the effect of inflation and other factors.

Co-insurance arrangements also exist. Co-insurance, by specifying a proportional deductible for claims beyond a specific threshold, requires depositors to bear part of the cost in case of a banking failure (e.g. 10 per cent of the losses beyond the specific threshold, and up to a specific ceiling). The method of co-insurance aims to reduce moral hazard risk on the part of depositors and banks. However, the very purpose of the insurance system to instill confidence could be undermined if there is a perception among depositors that adequate coverage is not available. Such a perception may partly reflect the fact that co-insurance arrangements are somewhat more complex and perhaps not properly understood.

Effective consumer protection requires that the public properly understand existing arrangements and is aware of the extent of and limits to existing compensation arrangements. Consumer surveys have shown however that depositors’ knowledge of such arrangements can be limited. Thus, simplicity is valuable in making the public understand the arrangements.

The speed of reimbursement of depositors in the event of bank failure is another element of the extent of coverage. In this respect, there are important differences between some OECD countries. In the United States, for example, arrangements are in place that give depositors near-immediate access to the par value of their insured deposits. By contrast, in many European countries, it would take several months for depositors to receive a pay-out. Liquidity concerns could however be an important consideration for depositors in withdrawing deposits. Recent proposal in the United Kingdom specify that compensation should be paid within one week of a bank being closed. In Australia, where the establishment of a scheme to repay depositors up to AUD 20 000 in a failed deposit-taking institution is currently under consideration, considerable emphasis is placed on the issue of the timeliness of the payments to be made.

A consensus seems to be emerging that one of the lessons from the run on mortgage lender Northern Rock in the United Kingdom is that deposit insurance systems with low levels of coverage and partial insurance, together with likely delays in repayment, may not be effective in preventing bank runs. One example supporting this assessment is that the President of the ECB, in the context of a discussion of ways to foster European financial integration, made the explicit recommendation that “partial insurance, or the so-called co-insurance, for smaller deposits could be removed where it still exists, as recent experience seems to suggest that it may reintroduce incentives for retail investors to run (on) a bank.”
In response to the run on Northern Rock, the UK Chancellor announced that arrangements would be put in place to guarantee all existing (retail and wholesale) deposits in Northern Rock during the period of market instability, with no co-insurance. These arrangements were to apply, “during the current instability in the financial markets”, to any other bank that arranged an emergency lending facility with the Bank of England while being assessed solvent by the Financial Services Authority (FSA). They essentially replaced the deposit insurance system that was in place. In the United Kingdom, deposit insurance previously fully covered only the first 2 000 GBP and 90 per cent of the next 33 000 GBP. By contrast, the new arrangements specify a 100 per cent guarantee of a depositor’s first GBP 35 000 in a bank account if the bank goes into default. The UK government launched a consultation process regarding these arrangements (see also section III).

**Funding and premium setting**

The differences in deposit insurance systems also include those related to the funding and premium setting arrangements. Explicit deposit insurance systems can be either funded or unfunded. Many deposit insurance systems are based on *ex ante* funding, using periodic contributions by member institutions of the scheme to build up resources for payouts to depositors during bank failures. In a few countries there are unfunded systems, while arrangements with both *ex ante* and *ex post* funding features also exist.

In systems with *ex post* funding, the issue arises as to how funds should be collected after bank failures. This issue can be complicated by a difficult market situation after the time of the bank failure(s), especially if the failure(s) was not an idiosyncratic event but instead involved more than one bank. In such situations, *ex post* funding would be confronted with the risk of reinforcing (downward) cyclical developments.

*Ex ante* funding involving a stand-alone deposit insurance fund ensures that funds will be available for depositor compensation when needed, provided premiums charged reflect appropriate assumptions regarding potential losses and other deposit insurance costs. In this context, it is important to maintain an appropriate ratio between the size of the fund and the amount of total insured deposits; the “adequacy” of such a ratio depends on the goals of the deposit insurance system, that is, on the specific mix of consumer protection and financial stability objectives. Opportunity costs are likely to arise as the funds would need to be invested in liquid securities with potentially lower returns.

One issue related specifically to *ex ante* funding is that of insurance premium determination. While many countries charge flat rate premiums uniform for all insured institutions of the same type,
some countries charges risk-adjusted premiums, meaning that premiums vary according to proxies of the riskiness of the member institution. For example, in the United States, since 1993, premiums are related to the estimated risk category of the member institution. In Singapore, the Monetary Authority of Singapore is currently reviewing the introduction of a risk-based framework, which would also take into consideration the results of supervisory risk assessments. Newly established schemes often specify flat premiums. In cases where the insurance fund is being built up, substantial premium payments are typically required by all institutions, including the safest.

In theory, risk-based premiums should tend to discourage insured banks from taking excessive risks because undertaking risky activity would imply that a bank faces higher premiums. By contrast, flat insurance premiums for different financial risks stimulate the (deposit) activities of the weaker banks. The specification of risk-based premiums is another important feature (besides the specification of limits to the deposit insurance coverage for individual depositors) of deposit insurance systems that can and should mitigate the occurrence of moral hazard. In practice, the identification of a proxy for risk represents an important challenge however.

Whatever funding and premium setting method is chosen, funds must be available when needed, and arrangements must be credible. Sound funding arrangements are critical to the effectiveness of the deposit insurance system and the maintenance of depositor confidence. By contrast, inadequate funding can lead to a loss of credibility of the deposit insurance system.

**Membership**

As a general rule, membership criteria should ensure that the deposit insurance scheme remains viable on an ongoing basis. Also, to ensure that the potential exposure of the system remains under control, it is important to include as members in the system only those institutions that are subject to strong prudential supervision and regulation.

Most existing deposit insurance guarantee schemes are public, while private deposit schemes or those jointly publicly and privately administered are also available in some countries. A strength of the government’s involvement arguably is that it is more successful than a purely private alternative in generating strong public confidence in the safety of deposits. In most public schemes, participation is compulsory, thus ensuring that all depositors have a designed amount of protection and avoiding adverse selection among deposit-taking institutions.
**Financial safety net interrelationships**

Recent developments have drawn attention to the issue of effectiveness of the institutional set-up of crisis management. To the extent that different institutions are entrusted with responsibilities that are relevant in a crisis situation, delimiting the scope of different responsibilities as well as powers in a crisis situation is important. Numerous links exist in this context, involving the deposit insurance, supervisory and lender of last resort functions.

Compared to a situation in which supervisory and deposit insurance functions are assigned to a single organisation, in a situation when these functions are assigned to different organisations, issues related to information sharing and co-ordination of actions can be quite complex. But even when these functions are combined in the same organisation, the smooth functioning of the financial safety net depends on the existence of clearly defined roles and responsibilities of the respective players in that organisation.

Whether and to what extent the deposit insurer should play a role at all in crisis management is a relevant question. For the entity in charge of deposit insurance to play such a role, it must be given some specific intervention powers (or the authority to request certain actions from the supervisor), which would allow it to play an active role in attempting to minimise the costs to the deposit insurance scheme. Such powers could be related to the restructuring of the deposit-taking institution, such as the authority to transfer deposits, provide guarantees, take control of the institution, or to provide liquidity. Another one is the power to close an institution and begin payout. Some deposit insurers have extensive failure resolution powers, such as in the United States, Japan, Canada, and Korea, while others have little or no authority in this area.

To the extent that the deposit insurer possesses some of those capacities, close co-operation and co-ordination among different safety net participants needs to be ensured, so as to avoid an outcome where any potential conflict in the mandates undermines the effectiveness of the financial safety net. While overlap and duplication should be avoided, giving deposit insurers some of those capacities just mentioned could provide a check against forbearance on the part of the regulator.

Indeed, there is widespread agreement that the need for such close co-ordination exists in any institutional setting and that information sharing among the different institutions that are entrusted with responsibilities that are relevant in a crisis situation is essential.
There is also a need for co-ordination on an international level. In this context, it has been stressed that it is vital to ensure, firstly, the appropriate composition of any (national) safety net and then, secondly, appropriate international co-operation and co-ordination among countries and among the national mechanisms (FSF, 2001). The recent financial turmoil has revealed significant weaknesses, however. Co-operation, including the exchange of information, was not as good as needed. Against this background, the FSF has called on policy authorities to improve co-operation at the international level.18

The potential cross-border dimension of stress in the banking sector has received particular attention in the European Union (EU). The EU Commission and Parliament have been fostering the information sharing and other close co-operation of European schemes in recent official announcements following the completion of a 2-year long review process of the relevant EU Directive.

Arguably, the larger the number of parties involved, the more relevant is the issue of co-ordination. In some circumstances, co-ordination requirements or efforts may limit the speed of policy response, compared to a situation in which a single institution performs all of the safety net functions. In some situations, ex ante specifications of such co-ordination arrangements may be of limited usefulness if crises develop considerably differently from expectations and contingency plans.

**Bank failure resolution**

The key aspect of bank failure resolution is speed: The timely and quick resolution of failed insured institutions reinforces systemic stability and promotes public confidence in the banking system.

Operationally, there are a number of different resolution techniques. The choice of the specific technique used depends in part on the underlying cause of financial distress (e.g. microeconomic, macroeconomic, or institutional and/or system-wide or idiosyncratic), although it is often difficult to define the exact mix between the different causal factors. Moreover, there is no one-to-one mapping between causal factors and resolution techniques. However, the observation that there is no single best resolution technique should not be interpreted to mean that all instruments are equally effective in all circumstances, or that they result in the same (fiscal) costs. Indeed, historical experiences across countries suggest that certain resolution tools – those that permit impaired institutions to continue to operate for extended periods of time – can significantly increase the (fiscal) costs of resolving crises compared to those tools that allow a very timely and quick resolution.19
Law and regulation should facilitate an orderly and timely exit of failing banks. In this context, bankruptcy procedures need to be conducive to quick resolution efforts. In particular, they need to prevent failing institutions from continuing to operate for lengthy periods and possibly deteriorate further, perhaps depleting the remainder of their capital.

In this context, explicit crisis resolution procedures such as prompt corrective action (PCA) requirements, which automatically would trigger supervisory action in the event an institution began to encounter financial difficulties – even before the institution becomes technically insolvent – can be helpful in ensuring an early intervention before all asset values of the failing institution are lost. PCA frameworks entrust supervisors with tools to turn troubled banks around and, if such measures fail, require the legal closure of a bank before its capital deteriorates to some specific (and, ideally, well publicised) minimum capital level.

PCA frameworks can be an important part of the supervisory-deposit insurer nexus, as they help establish a hierarchy among the different institutions in situations of extreme stress. Where such frameworks do not exist, early intervention may occur however on an ad hoc basis by special award of powers.

As for bank insolvencies, in many countries there are no separate statutory regimes but bank resolutions are covered under general bankruptcy proceedings. These can drag on for long periods of time, however. Some countries, such as the United States, have developed specific regimes for banks. These typically give bank supervisors and/or deposit insurers greater powers and remove banks from the scope of normal corporate insolvency proceedings.

There exists a considerable diversity of approaches among CMF members regarding bank resolution regimes. The recent financial market turmoil has highlighted that these regimes can play an important role. Thus, these events provide a good opportunity for each country to see whether they need to refine or change the approaches that they are currently using.

**III. Preliminary lessons emerging from the recent turmoil**

The present note revisits the issue of deposit insurance to provide a brief overview of some of the key challenges related to explicit deposit insurance systems, the understanding of which is considered helpful for the discussion of the current situation. In this context, the note recalls some of the widely agreed findings related those challenges for the purpose of facilitating the discussion of preliminary lessons from the current situation. These challenges include issues
As regards coverage, the higher the extent of guarantee the greater tends to be the risk of moral hazard on the part of depositors and deposit-taking institutions. Low coverage tends to be less effective in instilling confidence on the part of depositors, however. In most deposit insurance systems the response to this trade-off has been to establish coverage limits which gravitate towards covering the vast majority of small depositor’s balances while ensuring that large, especially corporate and interbank, deposits are exposed to market discipline. Funding, both ex ante and ex post, raise challenges. For example, ex post funding could be confronted with the risk of reinforcing downward cyclical developments, while ex ante funding gives rise to an opportunity cost. In the case of ex ante funding, the specification of risk-based premiums can and should discourage excessive risk-taking. As regards membership, membership criteria should ensure that the deposit insurance scheme remains viable on an ongoing basis, and it is important to include as members in the system only those institutions that are subject to strong prudential supervision and regulation. To the extent that different institutions are entrusted with responsibilities that are relevant in a crisis situation, delimiting the scope of different responsibilities as well as powers in a crisis situation is important. Close co-ordination and information sharing among the different institutions is essential in any institutional setting, both on a national and international level. Another finding is that bank failure resolution arrangements matter. The key aspect here is speed: The timely and quick resolution of failed insured institutions reinforces systemic stability and promotes public confidence in the banking system.

Where explicit deposit insurance systems exist, reviews of such systems are being conducted. Once the reviews are completed, specific features of the design of these systems may need to be changed. In the United Kingdom, for example, the review process has advanced significantly. In particular, in the consultation document published in January 2008, the Government proposes to bring forward legislation after consultation, alongside actions by the FSA and the Bank of England, to address five key issues, one of which is to ensure the existence of effective compensation arrangements in which consumers have confidence. As part of such efforts, the document proposes to consult on a potential increase to the compensation limit for deposits, and the coverage of certain balances above the limit;
make changes to enable the Financial Services Compensation Scheme to make payments within one week of a bank failing; and (iii) increase consumer awareness of the scope and operation of the compensation scheme. The review in the United Kingdom should provide useful lessons for the reviews of such schemes elsewhere and for the discussion regarding the establishment and design of such schemes.

Four areas in which some preliminary lessons are emerging from the recent financial turmoil are singled out here for special attention: First, coverage; second, public awareness; third, financial safety net interrelations and, fourth, bank failure resolution.

First, as regards coverage, deposit insurance systems with low levels of coverage and/or partial insurance may indeed not be effective in preventing bank runs.

Second, for the explicit deposit insurance system to be effective, consumers need to understand the extent of and limits to existing deposit protection schemes. Such knowledge can be poor, however. In this context, co-insurance arrangements are somewhat more complex than arrangements with full coverage (up to a pre-specified ceiling) and perhaps not properly understood. But even when they are understood, they could be ineffective in preventing bank runs given that they may imply that the depositors would share a substantial part of the losses.

Third, when different institutions including the deposit insurer are entrusted with responsibilities that are relevant in a crisis situation, *ex ante* arrangements delimiting the scope of the various responsibilities as well as the powers in a crisis situation may not be sufficient to ensure co-ordination that is as close and smooth as needed. Delimiting responsibilities without establishing a hierarchy in the event of a crisis may not be effective in dealing with events that were not envisaged in the *ex ante* arrangements. In this context, it should be noted that deposit insurers have extensive failure resolution powers in some countries.

Fourth, the question of whether a specific bankruptcy regime for banks is needed remains an important issue. In this context, note that bank resolution frameworks differ considerably across constituencies of CMF members, implying differences in the speed of bank failure resolution and/or payouts for insured depositors.
Notes

1. For instance, European finance ministers agreed in October 2007 on a roadmap to protect financial markets against future turmoil by establishing new guidelines on transparency, valuation standards and risk management. One of the four proposed steps in this context is to reinforce the prudential framework, risk management and supervision of the financial sector, partly by “reviewing possible enhancements of deposit guarantee schemes in the EU.”


3. This observation has been made by Lastra (2006), on which parts of the discussion in the present note draws. See Lastra, R.A., Legal Foundations of International Monetary Stability, p.121, 2006, Oxford. The observation may reflect that there is no strong consensus as to whether or not establishment of deposit insurance is desirable. It may also just reflect that it is understood that deposit insurance arrangements are not part of banking supervision per se, but is part of the broader financial safety net.


5. There exist many initiatives that aim at enhancing household financial literacy. One key benefit of enhanced financial literacy is that households can evaluate more sensibly the risk-return tradeoffs of their deposits. Such capacity is particularly relevant when the adverse effect on households of the materialisation of risk is not or only in a very limited way cushioned by existing guarantees. Implementing effective strategies to enhance financial literacy is difficult, however. Moreover, results take time to materialise. The OECD has undertaken a review of existing schemes across OECD countries and developed guidelines for the design of such schemes. Some of the lessons from the review and the guidelines are probably relevant for financial literacy programmes in relation to household deposits, although the latter are not mentioned explicitly in the study or the guidelines. See OECD Good Practices for Enhanced Risk Awareness and Education on Insurance Issues (available on www.oecd.org/daf/financialeducation).


7. Reserve Bank of Australia, Financial Stability Review, September 2006 (pp.44-45) and March 2008 (pp. 65ff).

8. For example, under current EU rules, depositors of a banks’ foreign branch (rather than subsidiary) are protected under the laws of the home country of that bank. Note that the European Shadow Financial Regulatory Committee, a group of academics and other experts in the fields of banking and finance, has recently reiterated its call for a similar level of deposit insurance in all European countries in its statement regarding the recent financial crisis. See European Shadow Financial Regulatory Committee, Statement No. 27, “Resolving the current crisis and preventing its return”, 10 March 2008.

9. Full coverage is rather rare. Some countries provided unlimited coverage in response to banking crises. Often, they revoked full coverage after the crises seemed to abate.

10. The International Association of Deposit Insurers (IADI) has issued a discussion paper to examine public awareness issues for deposit insurance systems in October 2007 and proposed research to develop comprehensive guidance for related public awareness programs.


12. While the medium-sized mortgage bank Northern Rock PLC had relatively limited direct and indirect (through CDOs) exposure to US sub-prime mortgage debt, the firms’ business model involved a heavy reliance on raising money in short-term funding markets to finance its mortgage lending. This model seemed to have been successful while these markets were liquid, but the disruptions in those markets
resulted in the bank requiring liquidity facilities with the Bank of England. The latter initially did not provide additional liquidity to the banking system in reaction to tight money market conditions. It did, however, provide liquidity assistance to Northern Rock, widening the collateral base it was prepared to accept from the bank in exchange for providing it with short-term funds. The public interpreted these developments as signalling that the bank may become insolvent, which resulted in a run on deposits.

13. The UK government called for private bids for Northern Rock. In January 2008, however, the government came to the conclusion that the only two private bids made were inadequate, and the government took the unusual step of fully taking over the bank itself.

14. In this context, it is interesting to note that the OECD Guidelines on Funding and Benefit Security in Occupational Pension Plans request that “Insolvency guaranty schemes should rely on appropriate pricing of the insurance provided in order to avoid unwarranted incentives for risk-taking (moral hazard).”


16. For example, in Germany, voluntary private deposit insurance schemes have existed for decades. The existing private deposit insurance system was supplemented however by a statutory depositor compensation system with the implementation of the 1994 EU Deposit Guarantee Directive in the form of the German Federal Deposit Guarantee and Investor Compensation Act of 1998. Given the positive experience of the system of private insurance in Germany, the German legislator, in implementing the EU Directive, also wished to retain the voluntary deposit insurance system to ensure extra cover over and above the minimum cover provided by the statutory compensation system. The supplementary deposit protection provided by the banking associations’ own insurance schemes depends, however, on the institutions voluntary membership of the association in question. In practice, nearly all banks have signed up to the voluntary deposit protection schemes for competitive reasons.

17. For example, this assessment was reflected in the guidance on the issue of the inter-relationships among safety net participants provided in September 2001 by the Financial Stability Forum (“Guidance for developing effective deposit insurance systems”). Also, in January 2006, the International Association of Deposit Insurers published some practical advice to safety net participants on how to promote effective inter-relationships, stressing again the importance of information sharing.


20. See e.g. the discussion in Box 8 of Bank of England, Financial Stability Report, April 2007.