

Response by author to suggestions and comments made by referee regarding “Expansion of Deposit Insurance Coverage During Fall 2008: Selected Challenges”

The comments and suggestions made by the referee are helpful. Underneath are my reactions to the detailed referee remarks. For convenience, the latter are transcribed here and shown in italics.

The paper provides a useful framework for thinking and analyzing one particular policy response to a recent crisis: the expansion of deposit insurance limits. However, the analysis is missing the discussion of other “context” of such policy response -- the programs implemented or proposed to be implemented to boost banking liquidity, consumer confidence, and restore order in the financial markets. All these programs need to be analyzed together, in my opinion, even if the primary focus of the analysis is about one particular program. Please find some more detailed remarks, intended to improve the analysis of the paper, below.

On page 2, where the author mentions the other historical episodes of financial crises, a list of studies that reached the same conclusion and actually provided some empirical evidence for the statement, needs to be mentioned. Examples of such studies are: “The Aftermath of Financial Crises” by Reinhart and Rogoff, “Output Loss and Recovery from Banking and Currency Crises: Estimation Issues” by Angkinand, “What I read about the Global Financial Crisis in 2007 and 2008” by De Cock, “Understanding the Subprime Mortgage Crisis” by Demyanyk and Van Hemert, “Deciphering the Liquidity and Credit Crunch 2007-08” by Brunnermeier, “An Anatomy of Credit Booms: Evidence From Macro Aggregates and Micro Data” by Mendoza Terrones, “Systemic Banking Crises: A New Database” by Laeven and Valencia, “Did Securitization Lead to Lax Screening? Evidence from Subprime Loans” by Keys, Mukherjee, Seru, and Vig, “Are Weak Banks Leading Credit Booms? Evidence from Emerging Europe” by Tamirisa and Iganand, and many more...

The references listed above are empirical studies of various aspects of the financial crisis, each study pursuing a slightly different question and using a different research approach. For convenience, a brief summary of the questions addressed in these studies in the order suggested above is provided underneath in the form of bullet points:

- Reinhart and Rogoff (2009) provide an empirical assessment of the effects of banking crises on the subsequent development of key economic variables such as asset prices, output, and employment.
- Angkinand (2008) reviews the empirical literature that attempts to quantify the real effects of banking and currency crises in terms of output costs, and the author identifies a preferred methodological approach, as well as a number of shortcomings affecting the preferred and the alternative approaches.
- De Cock (2008) traces the financial crisis through selected quotations (mainly from articles published in the *Financial Times*), which allows the author to create a timeline of events and related comments that convey a measure of the (perceived) severity of the crisis. Incidentally, the author concludes that this exercise builds “up to a crescendo in autumn/winter 2008.”
- Demyanyk and Van Hemert (2008) attempt to measure the quality of U.S. subprime mortgages originated between 2001 and 2007 by adjusting the (ex-post) performance of loans for differences in borrower characteristics, identifying a decline in the thus measured loan quality.
- Brunnermeier (2009) addresses the causes of the crisis as well as the question why the crisis spread so rapidly from the rather small segment of securitized US sub-prime residential mortgages to financial markets more generally and globally.
- Mendoza and Terrones (2008) suggest a methodology to dating “credit booms”, defined as unusually large credit expansions relative to typical business cycle credit expansions. The authors apply that methodology to a pool of cross-country time-series data to identify how other key

economic variables such as asset prices have developed during and subsequent to those credit boom phases.

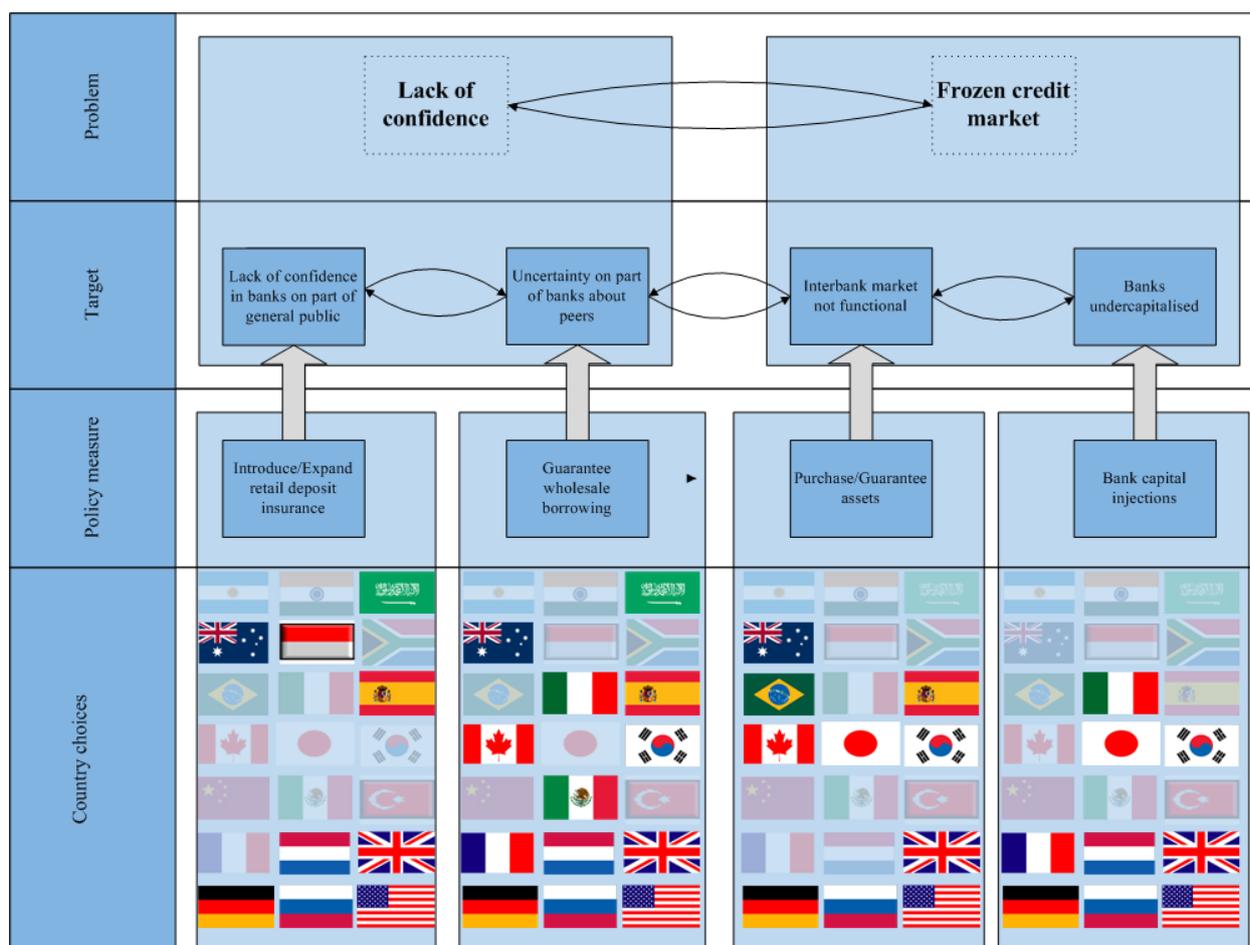
- Laeven and Valencia (2008) develop and describe a new dataset on banking, currency and sovereign debt crises, including information about a large number of different types of containment policy measures. Importantly in the context of the discussion in the present paper, the categories of measures considered include “introduction of blanket guarantees on deposits (and possibly other liabilities)”. The information provided in this regard is consistent with that in the present (refereed) paper and another recent article by the same authors (“The Use of Blanket Guarantees in Banking Crisis”; see *References* for full reference). The focus of the latter is close to the concerns of the current (refereed) paper and is already being referenced.
- Keys et. al. (2008) provide an empirical contribution to the discussion as to whether securitization had an adverse effect on the ex-ante screening effort of loan originators. They compare adjusted ex-post performances of portfolios of loans with virtually identically credit quality, which only differ as to whether the borrowers’ FICO scores lie on either side of a credit score threshold (here a FICO value of 620, defined by the widely used rule of thumb which is not to lend to borrowers with FICO scores below 620). Incidentally, the authors find that for some classes of loans, loans originated above the credit threshold tend to default at a higher rate than the mean default rate, which the authors interpret as evidence of limited screening efforts.
- Tamirisa and Igan (2008) use bank balance sheet data for central and eastern European countries from 1994 to 2004 and find that credit growth in the latter part of the sample is driven by credit expansion on the part of relatively weak banks to the same extent or, in some segments even to a larger extent, as it is by that of stronger banks.

A common thread in many of these articles is the attempt to provide an empirical measure of the build-up of imbalances prior to and/or the severity of the current crisis, e.g. in terms of its effects on other key economic variables. This attempt is relevant in the context of the discussion in the present paper and references to several of these articles could indeed be usefully added to a revised version of the paper.

On page 4, where the author describes two sets of ‘emergency policy measures.’ Why stop at two? There are more measures than the two listed in the paper. If the author meant to make the broad distinction and the two above mentioned measures include all currently available, this needs to be carefully described.

The paper indeed notes that government responses to the crisis changed in fall 2008 from the earlier case-by-case approach to a more systematic approach, whereby the lack of confidence and frozen credit markets were tackled by two broad *sets* of measures. One set of measures aimed at ensuring continued bank funding through the provision of guarantees (either retail or wholesale). The other set of measures aimed at addressing bank undercapitalization by injecting capital, purchasing specific assets and/or extending excess loss guarantees on assets. Clearly, this distinction of broad sets of measures is just one of several possible categorizations of the different policy measures taken. Another one is as follows. If one adopted the structure of bank balance sheets as reference (for categorising policy measures), one could distinguish measures that either target i) assets, ii) liabilities, or iii) capital. This distinction is implicit in the visualization of policy measures in Figure 1 in the paper. For convenience, an expanded and updated version of that Figure is provided underneath (this time based on information collected by the IMF):

Figure: Overview of policy measures taken by G-20 plus Netherlands and Spain



Source : IMF (March, 2009) and authors' updates.

The figure visualises the three sets of measures distinguished above, with measures related to liabilities shown under the first two columns (counting from the left), those related to assets under the third and to capital under the fourth column. The main idea of this form of visualisation is to show that expansion of guarantees of bank liabilities has been a key element of the policy response in several G-7 countries. A more granular categorization of policy measures, such as e.g. the one provided in Laeven and Valencia (2008, “Systemic Banking Crises”) appears to be less helpful for that particular purpose, although such an alternative approach of categorizing policy measures could be referenced in the paper. Incidentally, expanding the approach taken in the present paper from the example of the G-7 countries as was considered in the paper to the example of the G-20 countries plus the Netherlands and Spain (shown here) confirms that some form of expanded government-provided bank liability guarantee has been a common feature of many policy packages.

On page 5, on the diagram, a measure labeled “Bank Capital Injections...” Is this a broad enough term? If so, an extensive explanation and/or discussion is needed. For example, the author may refer to a study by Barth et al “The Rise and Fall of the U.S. Mortgage and Credit Markets: A Comprehensive Analysis of the Meltdown” that offers a reader a comprehensive list of US emergency policies, their timing, goals, and an analysis of each.

The term appears to be appropriate. As to the second point, a reference to the forthcoming full-length book version of “The Rise and Fall of the U.S. Mortgage and Credit Markets: A Comprehensive

Analysis of the Meltdown” by Barth, J.R., T. Li, W. Lu, T. Phumiwasana, and G. Yago (2009), especially to the overview in Table 3, could be added.

On page 7, Figure 2, the author demonstrates the deposit insurance coverage limits for different countries, using exchange rates for two dates. I would suggest using a purchasing power adjustment for the more meaningful comparison across countries. For example, 100 US dollars can buy very different amounts of goods and services in Russia, Italy, and Austria.

The purpose of the chart is to show that deposit insurance ceilings have been lifted during fall 2008 in a large number of the countries under consideration. The referee rightly points out that the choice of variable to make the observed changes (reported in national currencies) comparable across countries is necessarily somewhat arbitrary. In the chart, to make data reported in national currencies comparable with each other, all national currencies are divided by US dollar exchange rates. Current exchange rates are used so as to avoid that changes in bilateral exchange rates are confused with changes in these ceilings in national currencies. Using a set of purchasing power adjustments instead would imply a linear transformation of the data, the result of which would not be easy to understand. Also, such an approach would raise a host of other issues, such as what basket to use, etc.

On or around page 8, I would recommend the author to mention and analyze the example Germany in 2005, where increased guarantees caused excess liquidity (via bonds creation); this excess resulted in subsequent ABS securities purchases (as investment opportunity); big fraction of these securities, in turn, defaulted and led to massive problems thereafter.

The gist of this remark by the referee, according to my interpretation, is as follows: Government-provided guarantees can create a risk of moral hazard even if the guarantees introduced are not a response to threats of potentially systemic dimensions. I fully agree with the referee and would like to add that the temptation by policymakers to resort to the use of guarantees is particularly strong when financial system problems seem to take on systemic dimensions. Indeed, when policymakers are confronted with financial system developments that suggest that institutions are spiraling out of control, the response typically taken (perhaps because it triggers the least political resistance) is to expand government-provided guarantees for the liabilities of financial institutions, sometimes even without limits, until the crisis abates. The upfront fiscal costs of such guarantees are limited, making this course of action attractive relative to other policy actions. But, as the present paper argues, these guarantees are not costless. Further to the contingent fiscal liabilities they create, they tend to distort incentives. The specific example cited by the referee appears to be just another example of the effects that such distortions can have on behavior.

On page 9, around the moral hazard argument: banks with insured deposit insurance are normally monitored and regulated... An analysis that specifies what monitoring and regulation can and/or cannot cover, why and in what particular cases unlimited deposit insurance can lead to moral hazard needs to be made.

The existence of deposit insurance calls for capital-adequacy regulations; among other things, requiring banks to hold a minimum of capital as a buffer against unexpected losses can be seen as a means of ensuring that banks have “skin in the game” (Acharya, V., “Causes of the Financial Crisis, created 8 April 2009, forthcoming in *Critical Review*). More generally, the need for regulatory and prudential supervision increases with the availability of government-provided guarantees. In the case of costless and unlimited deposit insurance, the issue of moral hazard becomes very “real” and an issue under rather general circumstances. Insured depositors have no incentives to monitor the bank and, recognizing this situation, bank management do not have to fear adverse repercussion on their deposit base from adopting riskier strategies. Extending costless unlimited guarantees invites so-called “gambling-for-redemption” on the part of managers of stressed financial institutions.

On page 11, second paragraph: new lending facilities need to be mentioned and analyzed alongside the credibility of the guarantees discussion. Again, deposit insurance is not the only policy that signals to the market participants about how credible the government is.

A summary overview of lender-of-last-resort actions in major markets can indeed be usefully added to the discussion. Some related work is already available in this context. For example, a helpful overview of such measures, in the case of the United States, is provided in the latest TARP oversight panel showing "Resources Designated for Financial Stabilization Efforts" in "April Oversight Report", available at <http://cop.senate.gov/documents/cop-040709-report.pdf> and in "Fed Confronts Financial Crisis by Expanding Its Role as Lender of Last Resort", available at <http://dallasfed.org/research/eclett/2009/el0902.html>.

During the recent crisis, extensive use of the lender of last resort function (LOLR) has indeed been another key element of the financial safety net. Like any element of the financial safety net, the LOLR function has to strike the right balance between achieving stability and generating moral hazard. Also, there are additional issues arising from the interactions of the different elements of the financial safety net. Conceptually, the allocation of responsibilities between the LOLR and deposit insurance is straightforward, as long as illiquidity and insolvency can be clearly separated. In practice, however, this situation is not a realistic suggestion. In situations where it is difficult to distinguish between illiquidity and insolvency, if the LOLR intervened to lend against good collateral to an institution that might eventually become insolvent, the central bank would effectively reduce the collateral available for depositors and other creditors. These and other aspects could be mentioned (see also Schich, 2008b in the references to the paper).

I would suggest the author to say "Author's estimates" instead of "Own estimates" for the legend of the Figure 4.

Point taken.

On page 12, the paragraph that starts with "conceptually, the value of an unlimited deposit and broader debt guarantee is..." is confusing. It needs to be either deleted, or rewritten and explained.

The current sentence "Conceptually, the value of an unlimited deposit and broader debt guarantee is greater, the more reliant banks are on deposits and wholesale funding and the more they are exposed to the risk that these deposits might be withdrawn and/or that wholesale funding will not be rolled over." could be simplified as follows: "Conceptually, the value of an unlimited deposit guarantee is greater, the more reliant banks are on deposits and the more they are exposed to the risk that these deposits might be withdrawn."

In summary, the paper can potentially be of interest to many readers if it a) carefully outlines and summarizes what is going on in terms of all available and proposed emergency policy responses and then, in the context of the broader picture, analyzes the deposit insurance issues; b) proposes some analytical or economic framework, that is based on either original author's study or past studies widely available in the growing body of economic research about the crisis and policy responses.

Taking the various comments and suggestions above into account should facilitate the understanding on the part of the reader of the "wider context" of discussions and analyses in which the present discussion takes place.

Sebastian Schich

Paris, 20 April 2009