European Forum of Deposit Insurers

# WORKING GROUP III

## DEVELOPMENT OF COMMON VOLUNTARY APPROACHES TO INCLUDE RISK BASED ELEMENTS FOR DEPOSIT GUARANTEE SCHEMES

# FOREWORD

1. EFDI is an international non-profit association, incorporated in Belgium. It has 52 members, representing depositor insurers across Europe.

2. Working Group Reports

In its communication of 28 November 2006, following a review of Directive EC/94/19, the European Commission (EC) identified the possibility of improvements by self-regulatory measures of deposit guarantee schemes (DGS), rather than legislative reform.

The EC requested the contribution of DGS to this work via the European Forum of Deposit Insurers (EFDI) on the following six issues:

I. A survey on savings products covered by national DGS.

II. Development of a non-binding "master agreement" for topping up arrangements.

III. Development of a non-binding "model agreement" on the exchange of information between DGS.*

IV. Development of common, voluntary approaches to risk based funding elements of DGS.*

V. Improvements of comprehensible information about DGS coverage to consumers – the identification of deficiencies and agreement and promotion of best practice.

VI. Improvement of payment delays to depositors – survey of DGS and best practices.

3. Working Groups

EFDI has an "EU Committee" that is composed of all of the EU Full members of EFDI (List of all Members of the EU COMMITTEE is attached to each report).

In the EU COMMITTEE the working groups were established on a voluntary basis in 2007. Five groups were set up, as issues II and III were combined. The members of the working groups are representatives of EFDI member schemes (lists of all members of the relevant working group are attached as an Annex to each report).

* Additional hint: We combined the primary Working Groups II and III to one, and therefore renumbered the WG IV to WG III.

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*** since April 2009 /** until March 2009**

# WORKING GROUP III

RISK BASED ELEMENTS FOR DEPOSIT GUARANTEE SCHEMES

**CONTENTS**

# Executive Summary and Main conclusions

- The inclusion of risk based elements (rbe's) for Deposit Guarantee Scheme (DGS) funding is in principle recommendable and preferable. However the model chosen and the transition to rbe's depends on the goals the system, or the country wants to reach. There is no "one model" solution.
- Across Europe app. 20 % of all DGS's already have risk-oriented elements as part of their funding arrangements or are currently in discussions to introduce risk-based funding (see Chapter B.). However there is no clear agreement amongst member state DGS's of the need to introduce a model for risk based funding and the EFDI working group is in agreement any model recommended by the Commission must be introduced on a voluntary basis.
- A DGS needs a special framework and surrounding conditions in order to introduce and administer rbe's; described in Chapter C.
- As a first step the methodology to introduce rbe's in a DGS should use a small number of quantitative elements as described in chapter B.III. and D.I.
- If a system intends to use the rbe's for preventive measures the system needs to be developed which also considers qualitative elements. The quantitative base for the rbe's may need to become more differentiated and is likely to require additional financial ratios. It is also recommended to include different bank-types (e.g. retail banks vs. investment banks vs. mortgage banks).
- When the rbe system is more developed it may be necessary to add more quantitative elements to it as mentioned in chapter D.II. and III.
- Finally this report focuses on the transition process for a DGS which intends to introduce rbe's; our conclusion is that the process of testing and implementation will take a number of years.
- An important additional point needs further investigations: the financing mechanism of the scheme. There is a strong (but not unique) opinion in WG III that the member banks have to pay (at least a part of) their contribution as long as they are able to pay – which means that it should be an ex-ante-way. In a crisis situation there may be no possibility of collecting the premiums – and the risk-based idea will fall ad absurdum!

# A. Introduction

## *I. The task of the Working Group*

As part of the review of the EU-directive 94/19 in 2005/6 the European Forum of Deposit Insurers (EFDI) accepted a request from the European Commission for assistance in providing more detailed information about risk based-elements of the DGS-Directive.

In March 2007 the EFDI established working groups who have subsequently completed and submitted to the European Commission reports on the issues of (i) the scope of protection and the definition of deposit and depositors, (ii) a cross-border Memorandum of Understanding and (iii) issues as to the exchange of information, (iv) consumer information and awareness, and (v) payment delays.

A working group was also set-up with the task of "Development of common voluntary approaches for the inclusion of risk based elements for DGS" (hereafter referred as "WG III").

The Commission supports the introduction of risk based elements in the funding arrangements of DGS's and recommended that the determination of 'risk' should be based on already available and harmonised tools e. g. such as those within the CRD framework. The introduction of risk-based contributions to DGS could be a desirable enhancement to the existing regulatory framework and may facilitate the transferability of contribution between schemes (particularly in case of cross border activities).

The work of WG III has resulted in this report. The original timeframe given to produce this work was about 2 ½ years, and the deadline for the report was delivery at the end of 2009. The relatively long period is necessary because this topic is very complex and very sensitive for all existing DGS in Europe.

## *II. Cooperation with the EU-Com JRC*

From the beginning of its work WG III has cooperated closely with the Joint Research Centre (JRC) of the European Commission who was asked by the Commission to develop a standard risk-based model for DGS funding.

Against this background the first step of the WG III was to include in the European Commission's 2007 survey questions relating to existing funding arrangements. This survey was conducted by the JRC in August 2007; the results of this survey are part of a Report of the JRC dated June 2008. The main points are summarised in Chapter B.I.

The second stage of the cooperation between WG III and JRC was a discussion about quantitative approaches to the introduction of rbe's in a DGS. The JRC survey requested relevant information about the main principles from some DGS's across Europe who already have some kind of differential elements in their contribution system. In workshops attended by the members of WG III and the JRC these elements were discussed further; an own report of the JRC will be published soon. The main points are summarised in Chapter B.II.

To accompany the more quantitative work of the JRC, this report of the WG III focuses on the more qualitative aspects of rbe's in a DGS. The WG III sent a further short questionnaire to all European DGS's asking detailed questions about existing funding arrangements and also to see whether, in light of the recent financial crisis, DGS's were considering changes to their funding arrangements. The results are summarised in Chapter B.III.

As the second main pillar of its work the WG III has developed a model on how to implement rbe's and which characteristics are highly relevant for a scheme when using such elements. The results are the main part of this report (see Chapter D.). In Chapter C. we address some surrounding conditions for a DGS to be considered if a scheme introduces rbe's; this work is necessary as a kind of "link" between the risk-based-part of the system and the "world" in which the DGS is working.

## *III. Current developments*

As a result of the recent financial turmoil the EU-Commission has – among other things – proposed an amended Directive 94/19/EC. The European Parliament and the Council have approved the Directive on Deposit Guarantee Schemes in March 2009; the implementation in the European countries is ongoing. In article 12 lit. (c) of the new DIR 2009/14/EC is defined that the EU-Com shall submit a report on possible models for introducing risk-based contributions by the 31st of December 2009. To fit into the revised timetable of the EU-Com this report now has to be delivered to the EU-Com before their summer break app. mid of July 2009.

# B. Current situation across Europe

The global financial crisis which occurred during 2008 and which continues to affect markets has highlighted the need for effective deposit guarantee schemes.

The ongoing critical situation in the European financial markets and its consequences for deposit insurance systems highlights the question of how such crises (and especially the reasons and "drivers") may be identified earlier. One "building block" may be the introduction of a kind of early warning system for deposit insurers to measure a banks risk appetite and the consequence of a deposit failure for customers and the deposit insurance scheme. Certainly, many countries in Europe have considered this question and an appropriate answer could contribute to the stability of the financial markets in each country and the trust of bank customers in their banks.

For an overview of the current situation in different European countries, a brief summary of two reports from the JRC will be given; for more details you may wish to refer back to the original reports.

## *I. JRC-Report June 2008*

With the objective of developing potential models for adjusting DGS contributions, especially the voluntary introduction of risk-based contributions in EU DGS, the European Commission Directorate-General for Internal Market and Services asked the Joint Research Centre to investigate current practices across EU Member States (MS). The JRC-report, produced with the cooperation of the European Forum of Deposit Insurers (EFDI, WG III), describes the risk-based models and monitoring systems applied across the EU MS. On the one hand, the report broadly illustrates systems currently applied across the EU to highlight the fundamental principles underlying risk determination; on the other, it provides more technical details of each method, including a description of the mathematical tools employed. Moreover, a numerical example of each risk-based methodology is discussed in order to reproduce the individual steps of the calculation.

The main results are:

- ⇨ In general, risk-based systems and mere monitoring systems use one or more indicators reflecting different aspects of their members' activities.
- ⇨ Although the ratios currently applied across MS are quite heterogeneous and the variables taken into account to define them are not identical, they are built in terms of ratios using balance-sheet data, financial statement data or other types of accounting data.

- ⇨ Indicators can be grouped into three main classes, each related to one particular aspect of banks' activities.
  - o The first class reflects their capital structure and solvency profile;
  - o The indicators in the second class measure the riskiness and/or exposure of the banks;
  - o Finally, the third set of indicators covers the profitability/income profile of the DGS members.
- ⇨ Additionally it was decided in discussions between the JRC and the EFDI-WG III to include an indicator for liquidity; the 2009 report of the JRC will also take this factor into account.
- ⇨ Eight EU DGS adjust the contributions of all their members, taking into account information obtained by means of indicators (only one scheme adopts an ex-post funded system).
- ⇨ Concerning monitoring systems, nine DGS currently monitor the activities of their members, by collecting quantitative and qualitative information on their financial situation and trends.
- ⇨ Some of the approaches taken by risk-based schemes to adjust their contributions are quite simple, but others can be more technical. However, a common principle can be seen behind the various adjustment procedures: the contributions are adjusted by decreasing or increasing them by a percentage obtained by classifying DGS members into scoring classes, linked to scores from a set of indicators. The variation ranges from a minimum contribution of 75% to a maximum of 140% of the standard amount.
- ⇨ The report also gives details of which data are currently accessible to the schemes and from which sources. Notably, one third of the schemes have access only to data referring to deposits. Around half can retrieve information on financial statements, capital adequacy ratios and risk-weighted assets. Further information, such as full balance sheets, income statements and/or other supervisory reports, is disclosed to only a few schemes.

## *II. JRC-Report May 2009 (draft)*

Based on the results of the 2008-report the JRC continues their work on defining a model for risk-based contributions in EU-DGS's. The 2008-report was an investigation on current practices which will be followed by a model proposal with preliminary quantitative assessment originally planned for mid June 2009 (not yet published), and should end up in a complete impact assessment by the 31st of July 2009.

The features of the risk-based model proposal are defined as follows (unpublished draft May 2009):

| Model-type | Risk Based Component | Type of data model relies on |
|---|---|---|
| I. Single Indicator | ONE indicator (financial ratio) | Financial Statement |
| II. Multiple Indicators | MULTIPLE Indicators (financial ratios) | Financial Statement |
| III. Default risk | "Default Probability" (default = bank failure) | Financial Statement + Market Prices |

The first two models are based on approaches currently applied by some of the DGS in the EU and rely on the use of accounting-based indicators to assess the risk profile of the DGS members. More precisely, 8 indicators are proposed for the first two models, covering 4 key areas (risk classes) commonly used to evaluate the financial soundness of a bank: capital adequacy; asset quality; profitability; and liquidity. All existing DGS adjusting contributions by the riskiness of banks use accounting-based indicators.

Numerical experiments focus on these two models and compare estimated current contributions paid by a sample of banks in certain EU Member States with estimated risk-based contributions. Although the sample of banks used for the experiments only covers a small subset of the entire banking system of the respective MS, evidence shows clearly an advantage for the second model.

Proposed Model III. is a mathematically more sophisticated way to combine accounting and market price information in calculating risk based premiums Such a system is currently not in place anywhere across Europe, and as far as we know anywhere else in the world. This "default risk-Model" would be highly complex and may only be suitable for a small number of banks with a broad range of public information, e. g. "systemic relevant banks" with public listing on a stock exchange. Even then, not all relevant information will be "public" – and for this reason WG III do not consider Model III to be a realistic alternative.

The JRC note at the end of their executive summary that a certain number of assumptions had to be made to conduct the experiments for both models. These mainly cover how risk ratings are assigned to banks, and how differences in risk profiles should be reflected in terms of contributions. These assumptions can in practice differ for different DGS, depending for instance on a member states banking system, on the specific banking sector covered by a DGS and on the behavior of financial markets as a whole.

Taking into consideration all of the above points, the cooperation between the JRC and the EFD WG III, as well as input from EFDI members, highlights how difficult it would be to recommend one deposit guarantee system with a unique way of calculating risk based premiums.

## *III. Consolidated findings from the WG III-questionnaire 2009*

In addition to the more quantitative analysis which was primarily done by the JRC in cooperation with the EFDI WG III, EFDI members felt it was important for the WG to consider more qualitative aspects of Deposit Guarantee Systems which have risk based funding models as well as considering whether other MS DGS have considered introducing rbe's and decided not to proceed. To collect this and other information a short questionnaire (see annex 1) was distributed to all EFDI-Member systems. In doing so we intentionally did not preselect the systems in any way or give any kind of "multiple choice answers", because we wanted to get "unfiltered" information from a range of systems and collect all possible views on the topic of rbe's.

### 1. Answers in detail

Q1/2: Reasons and arguments to introduce such a system?

- ⇨ Higher risk of a bank failure because the bank conducts more risky business.
- ⇨ The premiums are related to the risk weighted assets because the assets may result in losses and might therefore cause bankruptcy.
- ⇨ One of the main advantages in adopting a risk-based contribution system is the fact that it ensures fair treatment of member institutions, by increasing the contribution for credit institutions at more risk and reducing it for those at less. The basis of this system is the idea that members who engage in more risk have a higher probability of being in a situation of needing to reimburse deposits than members with less risk. This kind of system also provides incentives for better risk management by the members.
- ⇨ One DGS who responded advised they had introduced risked based premia as they were required to do so by their national banking supervisory authority, as a result of specific circumstances not transferable to the rest of Europe.
- ⇨ The main rationale for risk-based premia would be that risk-based premia act as an incentive to banks to reduce risks and they go in line with market principles, i.e. they are linked in one way or another with pricing.
- ⇨ One country advised there had been detailed consultation on risk-based premia. Responses to this consultation on risk-based levies were mixed. While some saw advantages in risk-based levies in giving incentives to banks to improve risk management, there were concerns about maintaining the confidentiality of risk assessments, about possible duplication of arrangements for prudential regulation and about adverse effects on competition if risk-based levies inhibited the ability of smaller banks to compete.
- ⇨ One DGS stated that risk-based elements are much more justified than charging the member banks in relationship to the covered repayable deposits. The rationale: the more risk a bank takes the more burden should be borne, because all bank failures in the past had been caused

by too much risk taking (sometimes without knowing the inherent risks of their business and products in full). The DGS argues the recent financial markets turmoil is proof of this theory.

- Some DGS raised specific reasons as to why they thought now was not the right time to introduce rbe's and these reasons ranged from: the national banking market is highly concentrated with only a small number of good banks; burden of loans for the DGS because of a big failure/s in the past, to general uncertainty in the market.
- Another DGS asked for the following points to be considered:
    - past data on banks (used for the figures) are assessed and currently the situation of any bank might change quickly so that assessment doesn't reflect the real state of particular bank,
    - duplicity of assessment (e.g. beside banking supervision),
    - costs for assessment might be higher than effect,
    - probably not appropriate for the DGS with small number of staff.
- The main reason for the introduction of a risk based approach was to penalise credit institutions with poor capital adequacy ratios and give incentives to credit institutions adequately or well capitalised; the figure used to measure this point is the average solvency ratio over the previous year.
- A well experienced DGS stated that the introduction of a rbp-system (in 1998) was justified by moral hazard, efficiency, and the idea of a level playing field.
- And a further experienced DGS (introduction in 2003) named as main reasons the fairness of the contribution and to discourage banks from excessive risk taking.
- Overwhelmingly it was agreed any proposed DGS risk-based model should be voluntary.

<u>Q3: Introduction process? And effect of the recent financial market turmoil?</u>

- Assessment of different ways in order to select the best country solution for the expected purposes
- One scheme answered that they not yet started because the results of the EFDI-EU WG III should be part of the decision-making process
- The most common elements used as the basis for rbp's are the measurement base for the capital adequacy requirements (risk weighted assets) or the solvency ratio.
- One scheme stated that especially for smaller countries the process of developing, implementing, and running a DGS-system with rbe's …
    - is too complicated,
    - available resources are very limited to effectively implement such a system,
    - bank supervisory staff will have to be involved – extra burden for them, and
    - not easy to assess the level of riskiness per bank once they meet existing capital requirements.
- Schemes argued that in terms of priority the introduction of risk-based contributions should come at a later stage. It was felt to be more important for the DGS's, member states and the

EU to satisfactorily deal with issues like operational adequacy, sources of funding and liquidity and implementation of the reduced pay-out period (under the new amendment in the DGS Directive).

- ⇨ A number of schemes – the majority of the incoming answers – do not consider there is a need to change their systems in any way and others have not yet seriously considered introducing risk adjusted contributions.
- ⇨ In one country there has been detailed consultation on existing banking legislation (incl. DGS's). Concerns were raised about introducing any new system during the current financial crisis there "only" will be a kind of "permanent crises management", but the work on pre-funding and risk-based levies may be undertaken some time in the future.
- ⇨ Some private DGS systems raised a concern about their ability to obtain the necessary majorities to introduce a risk based premia system from their members who would have to vote in favour of such a change.
- ⇨ Especially for the "new members states in CEE" is important that the most deposit insurance systems are newly established or in a fundamental transitional process. Therefore it is important that the system of flat rate premium is easy to administer – but the process of setting the premiums to reflect an institutional risk can be complex. At the first stage of a new DGS it was argued it was reasonable to have a system that was easy for the consumers and the markets to understand.
- ⇨ The government of one Non-EU27-state is in the process of implementing risk-based premiums as a direct result to the recent financial market turmoil. It is most likely that the calculation of such premiums will consider (i) the total amount of the preferential ("eligible") deposits held by the bank and (ii) the risk of a failure of the bank. For the calculation of a failure, the following will be considered: (i) equity capitalization, (ii) leverage ratio, (iii) guarantees of third parties (in particular state guarantee for special regional banks), (iv) the development of the preferential deposits, and (v) an exemption granted under the 125% provisions; under this provision, banks must maintain assets in the home country.
- ⇨ The recent financial turmoil intensified the need to address the contribution system in a risk sensitive way, one EU-member state answered. The rationale behind the effort is that the new framework should take into account (i) the overall risk that each bank undertakes with it's everyday operations, (ii) it's risk appetite and (iii) the efficiency and quality of its risk mitigants (capital and internal systems and controls including risk management systems).

<u>Q4: Practical experiences with rbp's?</u>

- ⇨ The schemes mainly presume that a higher reliability of a bank leads to a less risk for bankruptcy.
- ⇨ Two schemes presume that it will be most effective with risk-based fee. But of course this requires ex-ante contribution; there is a direct link between these two topics. There has to be a direct incentive in the P+L of the bank.

- As a result of the current crises some schemes took into consideration that e.g. liquidity measurement might supply solidity measures.
- It is important the reasons for higher premiums/increase in premiums are, and are seen to be, impartial. Consequently, the best way to build a system is that it should be based on quantitative targets instead of qualitative.
- One DGS responded their risk-based contribution system has been serving its purpose and was well accepted and understood by the member institutions.
- One scheme asked if we should consider this topic through the eyes of a depositor – and then it is likely this topic would become meaningless.
- It was noted that the determination of "just and fair" risk-based premiums is a difficult task: if too simple, they are not adequate; if too complicated they are difficult to handle - in any case more resources and a higher level of confidentiality (trade secrets) are required.
- To achieve a bigger differentiation between the banks, some well experienced schemes start to develop their system by adding new risk factors (e. g. in addition to the capital adequacy some figures for the asset quality, profitability, liquidity, or other risk factors typically for the particular country).

The introduction of a risk based premia (rbp) system with only a very few risk-measuring figures is not likely to provide a base for a prevention management system at the same time. If the figures are to be used for prevention management they may have to look more into the future development of a bank and possibly more qualitative aspects need to be introduced.

Q5: Documentations?

- The majority of the schemes have no English versions of their documentation
- If a document was available, it is listed (see "recommended literature") or mentioned in the table of annex 1.

Other results

- Some DGS's are dependent on the information they receive from the supervisory authorities. They are not directly in contact with banks covered by their system. If this is a case, very close cooperation between the supervisory authorities and the DGS is necessary.
- In some countries the DGS is a part of the banking supervision department of the national central bank, which has own supervisory tools for assessing risk profile of each member credit institution – which may lead to the result that a rbe system for the DGS is not necessary.
- It was recommended to use already available indicators and data (e. g. rely on the use of supervisory information) for building a DGS own model (based on EU framework) with rbe's.

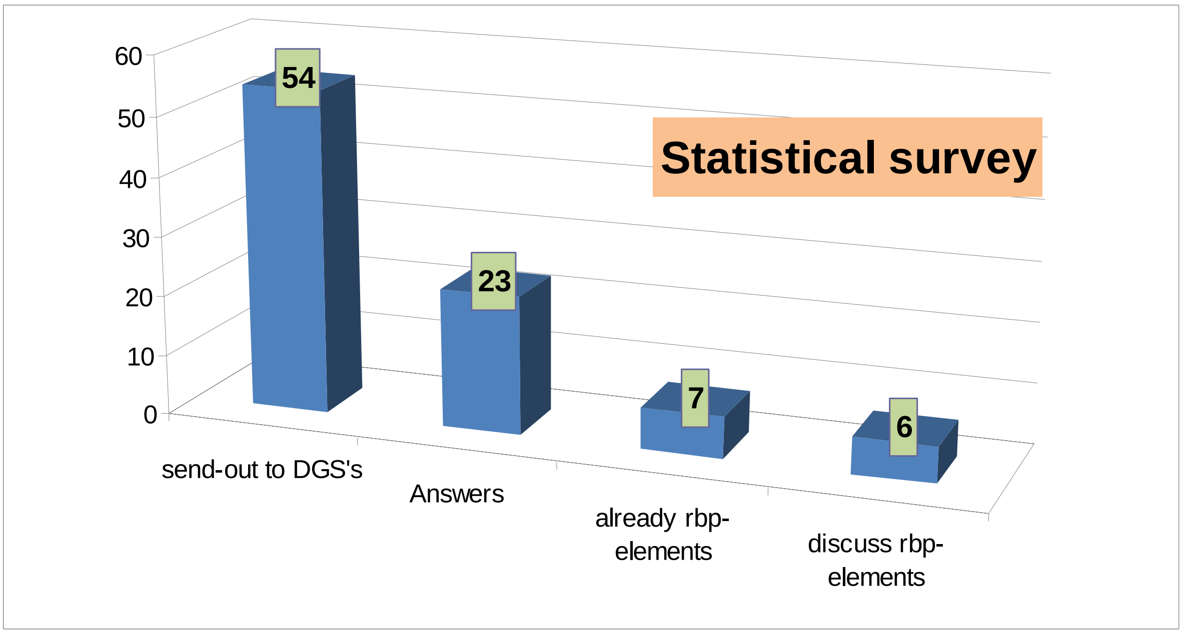
- ⇨ One DGS advises that it uses a monitoring system on the basis of which the member credit institutions engaged in risky and unsound policies, proven by the impact on their economic indicators, could be sanctioned by increasing their annual contribution.
- ⇨ Once a rbp system for a DGS is in place, this is not "the end of the story". The practical experiences of some DGS (e. g. in Finland and Cooperative or Private Banks in Germany) will lead to further developments in changing e. g. the figures used or the way the contribution is calculated.

## 2. Summary of the main results

(1) Statistic:

- We sent out the questionnaire to all 54 EFDI-Members.
- We received answers from 23 systems in 20 different countries.
- Seven systems already have introduced a kind of risk-adjustment in their contribution base.
- A further six DGS's are in the discussion phase about the introduction of risk-based elements in their DGS-contribution system; and it was clearly stated that surely not all of them will do so.

(2) Graphic:




(3) Results:

- ⇨ There is a clear relationship between risk measures and DGS-premiums – and the banks in those schemes with rbp's accepted this in paying higher contributions.
- ⇨ DGS's report mainly good experiences with rbp's if they were implemented – they meet the objectives if they are accepted and understood.

- ⇨ The number of elements used to measure the risk and to calculate the contribution is low (max. two by the majority).
- ⇨ The sum of the risk-weighted assets, based on the Capital Adequacy Directive, is very often one of those figures.
- ⇨ But for use as preventive reasons, a small number of figures may be not adequate.
- ⇨ If a rbp-system should bring out its full incentive effects, an ex-ante levy should be considered, even if only a minimal contributions is collected up-front.
- ⇨ The development of an rbp-system is dependent on specific national circumstances.
- ⇨ Smaller countries express their reservations because of the assumed complexity of such a system, the high costs, the smaller number of bank, and the relative low impact on the sum of the contributions.
- ⇨ Another consideration: the favoured effects of priced risks can only occur if the premiums are high enough – OR an efficient escalation mechanism is in place!
- ⇨ The escalation mechanism should define (quantitative and qualitative) thresholds which gave the DGS the right to intervene in a special way, e. g.:
  - (i) the right to constitute a higher premium if a specific risk-number (probability the RWA's) is outlined,
  - (ii) the right to comment on and by this the attempt to influence the business policy (non-binding), and lastly
  - (iii) the right to issue some obligation or actions on the member banks (binding). (WG III acknowledges that for the last two points it may be another authority, such as the regulator, who issues guidance or binding requirements on DGS member banks).
- ⇨ To avoid damaging consumer confidence in individual banks and the market it is recommended the results of risk based assessment keep a high degree of confidentiality.

From the results of its survey WG III concludes there is no consensus amongst member states, regulators or DGS's about the introduction of risk based elements in European DGS's.

WG III – by weighting all arguments – is of the majority opinion that the introduction of rbe's is desirable for a DGS, especially if the DGS is intend to fulfill some preventive activities.

And there are some topics of further interest which could be addressed in the future to the JRC or a new EFDI-WG (e. g. ranges for the used indicators, weighting of the used figures in a multiple indicator model, possible qualitative indicators, etc.).

In the next two chapters the most relevant issues for introducing rbe's will be discussed.

# C. Framework / Surrounding conditions

## *I. Organisational framework for the DGS itself*

The practical experiences of the members of the Working Group and the discussions in the WG itself come to the conclusion that any kind of risk based elements in a DGS can only successfully be implemented if some elementary surrounding conditions are fulfilled. The reports of the JRC show (see chapters BI./II.), that the way to implement risk based elements in a DGS might be complex, theoretically challenging, and burdened with some practically obstacles.

Therefore, the following framework should be noted:

- <u>Independence of the model makers</u>
  The rbe-Model should be developed with an adequate degree of independence from the banks that should be assessed by the model and who will be "weighted" within the rbe-model. Of course the DGS will wish to seek the input of its member institutions when designing the risk-based model and it will be reliant on data from the banks to model the correct premia. The participation of banks during the development of a rbe-model could be an advantage because of their experience and expertise of industry specifics. However it will wish to avoid any negative influence e. g. one or a small group of influential banks may influence by which figures the risk will be measured which might result in a low risk rating for certain banks. So a balanced independence of the DGS itself is an important success factor for the whole model. This does not exclude the possibility of using the expertise of some of the member banks while implementing the model, e.g. as a review-partner or test-case.

- <u>No influence of the DGS-Members on the results of the risk-based model</u>
  Once a DGS has introduced rbe's, it is important that the results lead to the consequences which must be defined clearly and communicated to all DGS member banks at the outset and before a possible critical situation occurs. Such consequences might be
  - ⇨ A higher contribution
  - ⇨ A special report to responsible authorities (like supervisor)
  - ⇨ Recommendations (non-binding) with regard e. g. to deposite volume, financial strength, risk appetite, organisational structures, business concept, etc.
  - ⇨ Binding recommondations (e.g. as mentioned above).

- Freedom of direction for the DGS
  The DGS as the "Re-Insurer" of the risk for the depositor has to have certain rights to influence the risk-behaviour of the conspicuous bank, e. g. to stop a specific negative development of the bank (consequences as mentioned above), identified by the DGS with the figures of the risk-based-system. The power to change or influence member banks behaviour may also belong to the supervisory authorities, depending on the mandate of the DGS.

- Financing mechanism of the scheme
  To introduce rbe's means the "less-riskier banks" have to pay less, and the "more-riskier banks" have to pay more. Otherwise the monetary steering function of the risk-elements may not be effective enough in the perception of the relevant bank. [Moral hazard aspects; the banks have to pay their contribution as long as they are able to pay. In a crises-situation there may be no possibility of collecting the premiums – and the risk-based-idea will fall ad absurdum! But this specific topic is not object of the work of this WG III, it's a more or less political discussion.]

- Special rights for the DGS
  - To become more effective the DGS must have the right to collect, store, and analyse all relevant information from each bank which is part of the DGS.
  - For new members in a DGS there have to be special regulations (e. g. a kind of entrance examination, a special test to check the "risk level" of a new member bank in the DGS; this should be independent from a mutual or a voluntary DGS). This would mean a firm cannot operate in the market until the relevant regulatory authorities and DGS confirm the bank is acceptable.
  - The DGS must have the right to receive relevant information from its member banks and from relevant third parties e. g. the auditors of the bank. No bank may refuse to answer any kind of request from the DGS concerning this topic and the provision of information to the relevant DGS should be a regulatory requirement.
  - The DGS should have the power to fix the relevant set of figures which are necessary to measure if there are any kinds of development within the bank which may lead to a possible insolvency of the bank.

- Confidentiality
  Confidentiality and reliability are crucial for a rbe-system. A rbe-system has to consider this issue in the organisational structures as well as in the work flow management. It is very important that there should be no public awareness concerning a banks individual result in order to avoid any kind of rumours which may lead to a bank-run or general instability in the market. It may not even be necessary for the DGS itself to need to know

the results of the rbp system, for example if the state and/or the national bank and/or the supervisor calculates the contributions and is as "lender of the last resort" responsible for the stability of the banking system as a whole (e. g. in France); the DGS may simply act as the collector of the risk-based premiums.

## *II. Conceptual framework for the Risk-Based Elements themselves to be introduced*

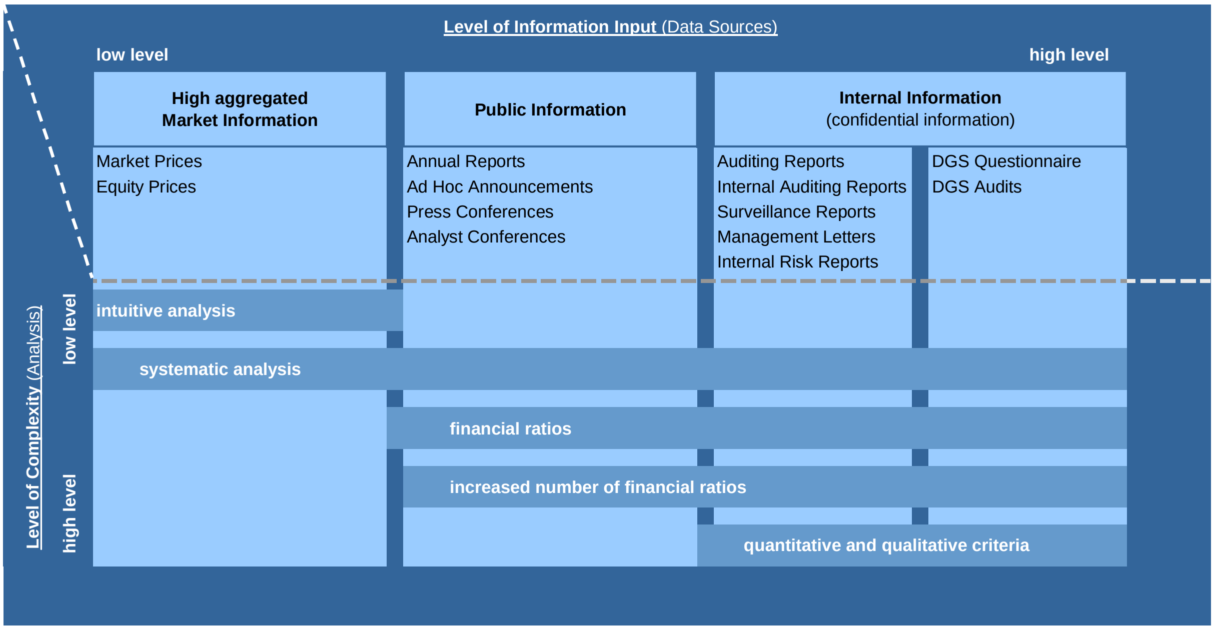
WG III agreed if a DGS decides to introduce rbe in its system, whichever model is decided upon, it should fulfil the following list of desirable principles/features:

- ⇨ SIMPLE:
  The model needs to be understandable by the DGS members (e. g. no complex formulas).
- ⇨ ACCURATE:
  The model should accurately reflect the relative risk that the DGS members pose to the insurance fund (that is the model should be effective at differentiating banks into appropriate risk categories).
- ⇨ REASONABLE:
  In terms of amount of information required, i.e. the collection of the inputs for the model should avoid unduly burdening DGS members.
- ⇨ AFFORDABLE/SUSTAINABLE:
  The model should not cause insolvency to any DGS members, i.e. the costs resulting from the model should be met by the members. In this sense any kind of a maximum rule (e.g. concerning the amount of contribution) might be embedded in the model.
- ⇨ FLEXIBLE:
  The model should be adjustable to different countries, i.e. to different economies, different legal structures, different financial markets and/or different bank-types, different business strategies.
- ⇨ OPEN and TRANSPARENT:
  The DGS members should know why they fall in one class and should be able to verify it (but any kind of "manipulation" of the system must be avoided, that is members must not be allowed to take advantage by adjusting technical details).
- ⇨ IMPARTIAL:
  The model should be fair (but has to produce clear signals identifying "risky banks"). In other words, banks with similar characteristics should be treated similarly.

When developing a model for a DGS with risk-based elements these two different groups of surrounding conditions (organisational and conceptual framework) should be taken into consideration.

# D. Proposal for a procedure model to introduce risk based elements into the funding mechanism of a deposit guarantee system

The core idea of the following procedure model is that risk-based elements should be introduced in a "step-by-step"-approach. The way is based on qualitative principles depending on the level of information available, and the complexity of the implementation itself. The level of information input is strongly linked to the level of complexity targeted by DGS vice versa.




Each DGS should autonomously decide which information level and complexity level is adequate for their country specific environment, although to reach the highest levels is an advantage and recommendable.

Up-front it is important that this model makes no pre-conditions concerning:

- ⇨ a special legal form of organisation (private or public),
- ⇨ the way of financing the system (ex-ante, ex-post, mixed),
- ⇨ any way of sovereign power/external influence in the financial markets, or
- ⇨ any boundaries concerning the business of a bank.

## I. *Information Input (data sources)*

This part of the concept considers different levels or information (data sources). The decision which level of information is adequate depends on the effort banks should be burdened with (data collection, time, cost) and the targeted complexity of the risk based system.

- **Level i) – High aggregated Market Information**

A risk based system based solely on high aggregated market information such as stock prices should take following aspects into account:

- ⇨ Market efficiency: do market prices at any given time fully reflect all available information on a particular stock and/or market?
- ⇨ Black box: market mechanism is not fully transparent.
- ⇨ Listed banks: not all banks are listed on a stock exchange.
- ⇨ Market segments: differences among market segments within a stock exchange in respect of quality of information, liquidity and market supervision.
- ⇨ Credit risk systems – modelled in a theoretical framework under adoption of an option-pricing-model – are due to above mentioned restrictions and the need of high data processing power may be difficult to implement and operate.

The use of high aggregated market information is not trivial because of the above mentioned restrictions.

- **Level ii) - Public Information**

Public information is easily available for all interested parties. Annual reports and market announcements are useful sources.

Disadvantages of public information are inherent marketing aspects and an information level often remaining on the surface.

- **Level iii) - Internal Information**

The handling of Internal Information requires a confidential environment. The entire organisation of the DGS must be directed to this focus (structure, processes, systems, staff).

Within level iii) we distinguish information issued on internal or external reasons other than DGS such as management letters, internal risk reports, etc., and information exclusively issued for DGS (questionnaire), ascertained by DGS or on behalf of DGS (audits).

As an instrument of early warning function and/or risk oriented contribution respectively a forward-looking perspective is indispensable. That means earning forecasts, information about risk structures, risk controlling and, risk management, must be an essential part of the information needed in this context. To consider current financial conditions is a limited predictor of future developments. For this reasons internal and forward-looking information should be an integral element of a sophisticated risk based system.

## II. *Complexity (analysis)*

The more complex a risk based system might be the higher should be the level of information input. We recommend consolidated data supplemented by unconsolidated data as the monitoring item. Due to the frequency of bank assessment we recommend annual assessments and additional assessments in the case of substantial changes (shareholder, risk situation, earnings, etc)

- **Level i) Intuitive Analysis**

Intuitive analysis in this context means an assessment of risk indicators on basis of an expert opinion without a fixed catalogue of criteria's, rules and validation. An intuitive analysis can be based on each level of information. However market information (stock prices, newspapers) and partly public information seem to be sufficient sources of this approach. The disadvantages of intuitive analyses are the missing comparability among analyst-opinions and a high degree of subjectiveness.

- **Level ii) Systematic Analysis**

A risk based monitoring system should emphasise systematic analyses. Aside from models and statistical analyses a significant part of the risk assessment should nevertheless be based on intuition and good (professional) judgement.

- **Level ii a) Financial Ratios**

Financial Ratios have been found useful in predicting default as early Altman´s original z-score model published on 1968. However the definition of "probability of default" for the banking industry with regard to banks and financial ratios is quite difficult, as demonstrated by the recent crisis in the world banking market where seemingly sound financial firms have found themselves in need of assistance.

As a first step one can start with few ratios. The higher the complexity of a risk based monitoring system the higher should be the number of ratios. A single indicator model can hardly assess the complexity of bank business. A multiple indicator model is therefore preferable. To develop financial ratios we recommend the paper of the JRC "Possible models for risk-based contribution to EU DGS" and the "Financial soundness indicators" by the International Monetary Fund (IMF).

To implement a financial ratio model one has to make a decission about crucial cornerstones. Examples:

- bank data vs. consolidated data,
- IFRS vs. domestic acounting standards (could be relevant with regard to volatility of capital or profit/loss),

- short time horizon of historical data (three to five years) vs. long time horizon of historical data (five to ten years).

Decisions have to be made respectively country specifics have to be considered, e.g.:

- using capital adequacy (Basel II) the model maker has to consider the various options within the Basel II approach (e.g. standardised approach vs. IRB approach),
- country specific definitions of non performing loans.

The relevance of ratios respectively the range of outcome have to be considered, e.g.:

- for commercial banks an NPL ratio or loan loss provision can be more relevant than for an investment bank with a focus of M&A business or asset management,
- the range of of a cost income ratio could be different between a wholesale mortgage bank or a retail bank with a strong branch network.

- **Level ii b) Quantitative and Qualitative Criteria**

At this level a risk based monitoring system combines financial ratios (quantitative criteria) with the assessment of qualitative criteria like internal control systems, risk strategy, risk management, etc.

To support the assessment of qualitative criteria the use of internal information (e.g. internal auditing reports, auditing reports of the supervisory authorities, etc.) is an advantage.

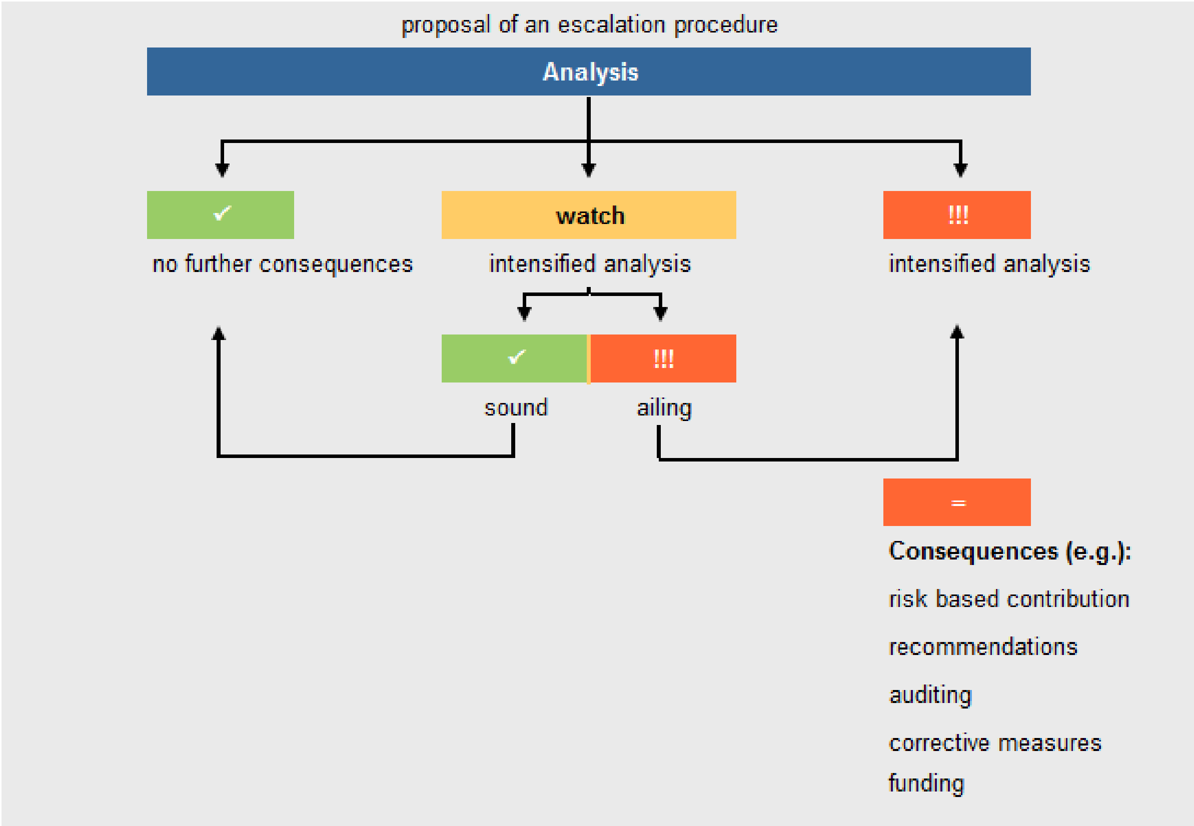
The system should comprise the well known "camels" factors (capital, asset quality, management, earnings, liquidity, and sensitivity to market risk).

A risk based monitoring system could be organised in sectors ("cluster"), as we have different groups of banks which follow various business models. For example banks can be divided as regards their legal form, into public-sector banks, cooperative banks and private commercial banks. Especially the last-named group comprises a high level of heterogeneity (e.g. big international banks, regional banks, private bankers, foreign banks (branches), commercial banks, investment banks, specialist banks, mortgage banks, retail banks, wholesale banks, etc.) A highly sophisticated risk based monitoring system should take these different legal structures and business concepts into account.

## *III. Consequences (output)*

If a bank assessment comes to the conclusion a bank is sound and low-risk the analysis can be brought to a close. In case of a negative or inconclusive result the analysis should be intensified with resulting close contact with the bank.

To limit moral hazard aspects the risk monitoring system should include a range of consequences. We distinguish a bank specific area and a DGS related area.




- **i) Bank Specific Consequences**

As a result of the analysis - as far as soundness of the bank is put into question – the DGS could give (non-binding) recommendations as the initial form of reaction.

Audits could support bank assessment.

Binding corrective measures like changes within the organisation/procedures, limitation of certain risk bearing businesses, deposit limitation, increased capital requirements, improved provision policy, etc. are consequences worth to think about.

- **ii) DGS Related Consequences**

A highly recommendable point to discuss is risk based contributions to the deposit insurance fund. As far as the risk based monitoring system generates a risk related ranking (scoring-system) this ranking could be mapped into corresponding contribution classes. The higher the risk the higher the surcharge has to be.

Another important point to discuss is the target level of the deposit insurance funds. The funds volume could be oriented to the historical default respectively demand level.

Another possibility could be a Basel II analogous approach as a function of probability of default, exposure at default and a corrective factor. In this case the risk based system has to generate a probability of default (rating system).

## *IV. Recommendations for an implementation process*

Based on the experiences of some members of the WG, the following last chapter in this report focuses on the description of a possible phase-model to implement rbe's in a DGS. A sample for an introduction process could be outlined as follows:

- **Initialization phase:**
    - Creation of a common understanding of the main aims, tasks, and rights of the DGS, as far as the duties of the member banks
    - Confirmation of confidentiality
    - Verification of the preconditions and framework requirements for the design of the rbp-system (e. g. number of members, responsible body of the system, financing mechanism of the DSG, premium payments ex-ante or ex-post or mixed, management of the collected and not used premiums, seed capital for the DGS in the beginning if rbp's will be introduced, check-up of the legal preconditions to introduce a rbp-systems in a country, handling with non-domestic-banks and special banks)
    - Development of a step-by-step-action plan to introduce rbe's
    - Buildup of the needed resources (people, IT-systems, organizational frame and structure)
    - Definition of the addressees of bank-specific reports and system-summarized reports
- **Build-up of the data-base**
    - Review on the existing, the available, und needed data from each bank
    - Clear definition of the data-sources
    - Decision to use a market-system or to develop an own system
    - Decision to use own-created questionnaires or other ways to collect data
    - Safeguarding of the required data-quality (e. g. use of international accounting standards, single- or group accounts, dimension and currency of the numbers)

- **Build-up of the model itself (partial parallel to data-base-creation)**
  - Collection and build-up of adequate data time course (recommended are minimum five years)
  - Decision of general principle: empiric foundation or expert-system
  - Quantitative modeling ("core" of the system with the definition of the figures, their weighting, and consolidation)
- **Test phase**
  - Inform the Banks about first result
  - Discussion with banks and amendments
  - Re-definition of the model
  - Probably a second (or more) tests
- **Implementation phase**
  - Presentation of the new system to the covered banks / financial institutions ("roadshow"/on-site visits, written information, intranet)
  - Confidential communication of the result so the banks (written/on-site)
  - Help-desk / Hotline for requests
  - Build-up of the operational contribution system
- **Going concern phase / normal business operation phase (DGS-internal)**
  - Safeguarding of "keep-the-system-running" (e. g. collect the contributions)
  - Definition of documentation duties
  - Data security and confidentiality
  - Back testing and validation of the model
  - Definition of the organizational structure (IT, employees)
  - Internal and external auditor (e. g. auditing company, supervisor, central bank)
  - Map exercise how to handle with incorporated systemic relevant banks in case of a real crises and juridical responsibility of owners
- **Safeguarding of permanent going concern of the system / normal business operation phase (for the secured DGS-members)**
  - Definition of reporting-contents are depended on the recipient of the information
  - Servicing of the defined report-addresses with bank-individual and summarized results
  - Communication of the results to the banks (written/on-site)
  - Catalog of bank specific and individual measures (e. g. calculation of the rbp itself for the bank, hints, obligations)
  - Definition of escalation mechanism (in the case a bank doesn't accept the output of the system)
  - Definition of a arbitral procedure

- **Enhancement phase**
  - Impact of external effects (markets, laws, etc.)
  - Impact of DGS-internal effects
- **„Advanced Model" development**
  - Decision to expand the running rbp-system
  - Additional figures
  - Qualitative elements

It depends on the complexity of the system which a country would prefer to introduce. But to everyone who tries to introduce a rbp-element in a DGS it should be clear that the time needed to build up and run such a system – especially it should be a preventive system – will last years and not months.

## Recommended literature (Short list)

*Bank of England/HM Treasury/FSA,* Financial stability and depositor protection: (i) strengthening the framework, (ii) further consultation, January / July 2008, http://www.hm-treasury.gov.uk/financial_stability_framework.htm, http://www.hm-treasury.gov.uk/financial_stability_depositor.htm

*Basel Committee on Banking Supervision BCBS / International Association of Deposit Insurers IADI*, Core Principles for Effective Deposit Insurance Systems (Consultative Document), March 2009.

*BVR National Association of German Cooperative Banks,* Protection Scheme of the BVR, http://www.bvr.de/coop/download/consolit_annual_accounts_07.pdf (pages 47-51).

*Federal Deposit Insurance Corporation FDIC*, Risk-based assessment system, Effective Date January 1st 2007, www.fdic.gov/deposit/insurance/risk.

*Finnish Deposit Guarantee Fund,* http://www.talletussuojarahasto.fi/?page=1.

*Garcia, Gillian G. H. (Worldbank)*, Deposit Insurance – Risk-adjusted pricing (Slide-presentation), April 2005.

*GBB Rating,* Gesellschaft für Bonitätsbeurteilung mbH, www.gbb-rating.de.

*HM Treasury,* Reforming financial marktes, July 2009.

*International Monetary Fund IMF*, Cross-border coordination of prudential supervision and deposit guarantees, Working Paper WP/08/283, December 2008.

*International Monetary Fund IMF*, Financial Soundness Indicators, Compilation Guide, 2006.

*International Association of Deposit Insurers IADI*, General Guidance for developing differential premium systems, February 2005.

*Joint Research Centre of the EU-Commission,* Investigating the efficiency of EU Deposit Guarantee Schemes, May 2008.

*Joint Research Centre of the EU-Commission,* Risk-based contributions in EU Deposit Guarantee Schemes – current practices (FINECON report), June 2008.

*OECD, Directorate for financial and enterprise affairs, Committee in financial markets,* (1) Selected issues regarding deposit insurance, (2) Challenges related to financial guarantee insurance, April 2008.

*Simpson Prescott, Edward*, Can risk-based deposit insurance premiums control moral hazard?, Federal Reserve Bank of Richmond, Economic Quarterly, Volume 88/2, Spring 2002.

# Annex

1. WG III - questionnaire
2. Abbreviations

## *Annex 1 – WG III-questionnaire (incl. answer-overview)*

Dear all in the "EFDI-world",

As you know EFDI has established in 2007 a few working groups on specific topics relevant for the further development of the EU-directive 94/19. One of these WG's is focused on the development of common voluntary approaches to include risk based elements for DGS'es; the WG III agreed to submit a report until June 2010. Speeded up as a consequence of the recent turbulences on the financial markets the EU-Commission published the new DIRECTIVE 2009/14/EC amending DIR94/19 on DGS. In Article 12 (1) (c) the COM is addressed by the EU-Parliament to submit a report on "possible models for introducing risk-based contributions" by the 31 Dec 2009. The EFDI-WG III is from the beginning in a close cooperation with the JRC. Now the JRC has to re-schedule the timesheet because the EU-COM needs the report until end of July 2009 (!). In a WG-meeting last week in London we agreed to split the work in two main pillars – a more quantitative part which is primary done by the JRC ("development of a model"), and a more qualitative part which is primary to be done by the WG. And we agreed with the EU-Com in London to collect the view of all DGS'es across Europe concerning the topic of risk based-contribution. An important signal of the EU-Com is that there is no pre-decision for an obligation to introduce risk-based contributions.

In this context we ask for your help which is very much welcome by the EU-Com and the WG III. The following questions should bring us in your answers a lot of arguments and point of views in the context of risk based-premiums:

1. Are there risk based-elements in your DGS-contribution system?
2. If YES – what are your reasons and arguments to introduce such a system? And what kind of elements do you use? (NOT the parameters of your model and the mathematical side! We are interested in the more "soft arguments" for such a system!)
3. Has your system / your country ever considered the possibility to introduce risk-based elements?
    a. If YES, please let us know the rationale behind your decision! Please describe the conclusions of your analysis. Have you given up to the introduction of such a system / postponed it / started the process of implementing risk-based premiums?
    b. If your answer is negative – please let us know what are your reasons and arguments NOT to introduce such a system / for not considering up to now the introduction of risk-based contributions?
    c. According to the recent financial markets turmoil – will there be a change in your argumentation?
4. If any, please describe your experiences with risk based-elements – positive and negative impressions and meanings are welcomed!

5. Could you submit us any kind of documents published by your system, our central bank, your supervisor, or any other competent organization has published concerning this topic (in English please)?

Please add any other comment you want to make related to the above mentioned terms of reference. We want to get a broad as possible view on this topic to be reported to the EU-Com.

THANKS a lot in advance for your answer. Please add the name of your system/country to your answer which we need till the 30th of April 2009 (in-box: 4th of May 2009) to the following Email-address r.benna@bvr.de and add a copy to dpoli@efdi.eu .

Best regards!

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**ANSWERS to WG III-questionnaire April 2009**
(Stand der Auswertung: 08. Juni 2009)

| No. | Country | System | Q1 / Q2 | Q3 | Q4 | Q5 | Sonstiges |
|---|---|---|---|---|---|---|---|
| 1 | Lithuania | Deposit and Investment Insurance | no | no | - | - | - |
| 2 | Hungary | NDIF of Hungary | yes | yes | - | - | see Mail for details |
| 3 | Norway | Norwegian Banks Guarantee Fund | yes | yes | yes | - | see Mail for details |
| 4 | Portugal | Mutual Agricultural Credit Institutions | yes (1999) | yes | yes | - | see Mail for details |
| 5 | Germany | VÖB | No | yes | - | - | see Mail for details |
| 6 | Cyprus | Central Bank of Cyprus | no | yes | - | - | see Mail for details |
| 7 | Netherlands | De Nederlandsche Bank / Dutch DGS | no | no | - | - | |
| 8 | Danmark | Guarantee Fund for Depositors and Inves | no | no | - | - | |
| 9 | Austria | Sparkassen Haftungs-AG | no | no | yes | no | see Mail for details |
| 10 | Great Britain | FSCS | no | n.a. | yes | yes | see Mail for details |
| 11 | Austria | Banken & Bankiers GmbH | no | yes | no | no | see Mail for details |
| 12 | Slovakia | Deposit Protection Fund | no | no | yes | - | see Mail for details |
| 13 | Finland | Finnish Deposit Guarantee Fund | yes (1998) | yes | yes | yes | see Mail for details! |
| 14 | Slovenia | Bank of Slovenia (for DGS) | no | no | - | yes | SRP from "Basel II" |
| 15 | Portugal | Deposit Guarantee Fund | yes | yes | - | yes | DGS-law |
| 16 | Estonia | Guarantee Fund | no | no | yes | - | see Mail for details |
| 17 | Czech Republic | Deposit Insurance Fund | no | no | - | - | see Mail for details |
| 18 | Romania | Deposit Guarantee Fund in the Banking S | no | yes | - | - | see Mail for details |
| 19 | Germany | BVR Protection Scheme (Cooperatives) | yes (2003) | yes | yes | yes | see Mail for details! |
| 20 | Schweiz | Swiss Bankers Association (SBA) | no | yes | - | no | see Mail for details! |
| 21 | Greece | HDIGF / Bank of Greece | no | yes | - | no | see Mail for details! |
| 22 | Poland | Bank Guarantee Fund | no | no | - | - | - |

## *Annex 2 – Used abbreviations*

| | |
|---|---|
| DGS | Deposit Guarantee Scheme / System |
| rbe | risk based element |
| rbp | risk based premium |
| JRC | Joint Research Centre of the EU-Com |
| WG | Working Group |
| EU MS | Member States of the European Union |