Workshop “Deposit Insurance Systems: Addressing emerging challenges”, Panel 2
Risk-based premium models for deposit insurance systems

Speaker: Dr. Ralf Benna / Bernd Bretschneider
Moderator: Harald Podoschek

VIENNA, 30th of November 2017
OUTLINE (Working paper-Content)

I. INTRODUCTION - General principles to run risk-based premium models
   I.1 Considerations on introducing risk-based Premiums Systems
   I.2 Arguments on which general ideas a risk-based premium model of a DIS should be operated
   I.3 Conclusion: Recommendation for a Principle-based Framework

II. Criteria to categorize risk-based premium models
   II.1 Risk characteristics - what risk should be measured and priced?
   II.2 The four Sector Approach

III. Case study: EU Deposit Guarantee Schemes
   III.1 The EU-DGSD’s construction principle and main elements
   III.2 The positioning of the EU-DGSD into the 4-sector matrix
   III.3 “EDIS” – The European discussion to create a single European DIS

IV. Recommendations establishing a risk-based system
   IV.1 The scope of a risk-based system
   IV.2 Practical references to introduce a risk-based premium system
TOP I. - Introduction

General principles to run risk-based premium (rbp-)models
IADI core principles are baseline for DIS‘es worldwide and deliver valuable advices for rbp-models

<table>
<thead>
<tr>
<th>IADI Core Principles</th>
<th>Relevance for risk-based premium approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CP2 – Mandate and Powers</strong></td>
<td>➔ “technical” precondition: The DIS must have the rights to fix and collect the premiums. But it is not necessary that the DIS “determines” the methodology to calculate the premiums (e.g. within the EU with EU-Commission, EBA, and/or other European institutions as standard setter).</td>
</tr>
<tr>
<td>1. The Powers of the deposit insurer include, …</td>
<td></td>
</tr>
<tr>
<td>(a) assessing and collecting premiums, levies or other charges</td>
<td></td>
</tr>
<tr>
<td><strong>CP9 – Sources and uses of funds</strong></td>
<td>➔ very important precondition for any kind of risk-based or differential premium system.</td>
</tr>
<tr>
<td>1. Funding for the deposit insurance system is provided on an ex ante basis. …</td>
<td></td>
</tr>
<tr>
<td><strong>CP9 – Sources and uses of funds</strong></td>
<td>This criteria describes “high level”, basic, non-technical preconditions to collect premiums as long as they are “non-flat.”</td>
</tr>
<tr>
<td>10. If the deposit insurer uses differential or risk-adjusted premium systems</td>
<td></td>
</tr>
<tr>
<td>(a) the system for calculating premiums is transparent to all participating financial institutions;</td>
<td></td>
</tr>
<tr>
<td>(b) the scoring/premium categories are significantly differentiated; and</td>
<td></td>
</tr>
<tr>
<td>(c) the ratings and rankings resulting from the system pertaining to individual deposit-taking institutions are kept confidential.</td>
<td></td>
</tr>
</tbody>
</table>
Based on international standards, recommendations could be extracted for a rbp-system analysis of the operating environment including

- macroeconomic condition,
- financial system structure,
- prudential regulation, supervision and resolution,
- legal and judicial framework,
- accounting and disclosure regime;

- the mandate of the DIS*; and

- mitigating the impact of moral hazard.

* As per IADI Core Principles for Effective Deposit Insurance Systems, November 2014, page 11 et seq.
## EFDI-principles to design a rbp-system

<table>
<thead>
<tr>
<th>EFDI Principles</th>
<th>Relevance for a risk-based premium system</th>
</tr>
</thead>
</table>
| **Accuracy**    | ✓ effective in differentiating banks into risk categories  
|                 | ✓ back testing and validation processes  
|                 | ✓ adequate financial and organizational resources  |
| **Incentives**  | ✓ providing appropriate incentives to reduce risk profile  
|                 | ✓ tackle moral hazard  |
| **Reasonable**  | ✓ information requirement not unduly burdensome member banks  |
| **Affordable**  | ✓ no insolvency due to contribution effect  
|                 | ✓ no negative reinforcement of economic cycle  |
| **Flexibility** | ✓ adaptable to environments and structures, i.e., to different economies, different legal structures, different financial markets and/or different bank-types, different business strategies  
|                 | ✓ no “one-size-fits-all”-approach  |
| **Transparence**| ✓ methodology transparent to stakeholders  
|                 | ✓ comprehensible calculation of premium  |
| **Confidentiality** | ✓ result of risk assessment transparent only to a limited group of stakeholders (e.g., bank, DIS, competent authorities)  
|                 | ✓ too much publicity may cause instability (up to bank-runs!)  |
| **Impartiality**| ✓ fair model – similar risk profiles treated similarly  |
| **Independence**| ✓ power and resources to administer the system – access to data  
|                 | ✓ no undue influence by member banks or third parties  |
TOP II. – Criteria to categorize risk-based premium models

Risk Characteristics & 4-Sector-Approach
What risk should be measured and priced?

- Risk = running into a reimbursement case – soundness of the member bank
  
  How to measure the soundness of banks?

- Risk = running a reimbursement case – soundness of the DIS
  
  Fund volume, liquidity
  Processes, resources
Risk = soundness of the member bank

- To measure risk, three main approaches can be distinguished:
  1. the **quantitative** approach, relying on quantitative data and ratios;
  2. the **qualitative** approach, relying on qualitative factors and criteria; and
  3. a **mix** of quantitative and qualitative factors, combining quantitative data and ratios with qualitative criteria.

- CAMELS approach very common
  - Capital
  - Asset Quality
  - Management Quality
  - Earnings
  - Liquidity
  - Sensitivity to Market Risk

- Is there something such as a one-size fits-all approach?
Risk = soundness of the DIS (IPS)

- Risk-based premium - the „Waterfall-Approach“

  I) Standard Premium = Covered Deposits x Standard Premium Factor (%)

  II) Default Premium = Standard Premium x Default Risk Factor (%)

  III) Risk-based Premium = Default Premium + Exposure Loss Premium

- Everything is fine!???
  - For IPSes (Institutional Protection Schemes) “covered deposit” are NO risk-criteria
The „4-sector-approach“ an assortative model
TOP III. – Case study: EU Deposit Guarantee Schemes

... just a short excursion in „pending topics“
Europe is united in diversity … also in some aspects of deposit protection – but not rbp (!)

- The EU-DGS Directive is a core element of the European Banking Union (EU-BU).
- The EU-BU consists of three pillars:

  - The aspect of calculation premiums is specified in an EBA-guideline on rbp.

\[
C_i = CR \times ARW_i \times CD_i \times \mu
\]

(with some flexibility)

- EDIS (European Deposit Insurance Scheme) as a subject of (ongoing controversial) discussion
TOP IV. – Recommendations

The scope & practical references to introduce a rbp-system
Scope of rbp-models

Application Pyramid

- Dispersion of the risk classes
- Risk classes – fund volume
- Migration analyses
- Stress tests
- Liquidity
- Risk model
- Information
- Back-testing and validation
Implementation process – steps at a glance

- Initialize works
- Establish data base
- Build up model
- Test phase
- Implementation phase
- Normal business operation
- Safeguard system’s permanency (financing)
- Enhancement phase
- “Advanced Model” development
Q (?) & A (!)

Many thanks!

Contact:

Dr. R. Benna  
B. Bretschneider  
r.benna@bvr.de  
b.bretschneider@gbb-rating.eu
Q (?) & A (!)

Many thanks!

Contact:
Dr. Ralf Benna
r.benna@bvr.de
Bernd Bretschneider
b.bretschneider@gbbrating.eu