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Risk Based Deposit Insurance for the Netherlands

Dirk Schoenmaker*

Summary: During the recent financial crisis, deposit insurance cover was increased across the world. While this may stem depositor runs, it increases government protection at the expense of market discipline. This policy brief argues that a risk based premium can counter the moral hazard caused by this expanded layer of government protection. The Netherlands is currently introducing *ex ante* funding for its deposit insurance fund. To get started swiftly, the supervisory risk assessment based framework (FIRM) can be used to set risk based premiums. International evidence (e.g. the US savings & loans debacle) indicates that a flat rate deposit insurance premium can contribute to financial instability, as banks have an incentive to game the deposit insurance fund (gains to the shareholders, and losses to the fund). Risk based premiums can counter this tendency towards excessive risk taking by banks.

Introduction

At the height of the financial crisis, deposit insurance was increased to cover deposits up to € 100,000 for the full 100% across Europe. While this increase may be justified to prevent retail depositors to run on their bank and thus to stabilise the banking system, the large cover of € 100,000 has the undesirable side-effect that depositors will not question the soundness of their bank. Their deposit is anyway guaranteed up to a large amount. This in turn gives rise to moral hazard at banks. Banks have an incentive to take excessive risks: if the risk turns out positive then the shareholders and managers gain; if the risk turns out negative then the deposit insurance fund bears the losses. The incentive for excessive risk taking reduces the stability of the banking sector. The opposite effect of what was aimed for: a stable financial system.

How can we design the deposit insurance system to avoid the negative impact on financial stability? The first, and obvious, route is to reduce the coverage back to the original € 20,000. But political reality is that you can increase consumer protection (voters are always in favour of more protection), but not reduce it. So we are stuck with the € 100,000, which will also be codified in the European deposit insurance directive. The second route is to neutralise the incentive for risk taking. Charging a risk based premium would address that: riskier banks would pay a higher deposit insurance premium. Just as banks (or financial markets) charge a higher interest rate for riskier firms that want to borrow. The purpose of this policy brief is to explain how the Netherlands could introduce a risk based deposit insurance premium.

* Duisenberg school of finance, VU University

1. A short history

The Netherlands used to have a modest deposit insurance system with a cover of € 20,000 up to 2005. This amount was the minimum option chosen from the European deposit insurance directive. The Directive mandated deposit insurance for retail depositors in all EU countries, with a minimum of € 20,000 (either a full 100% cover of € 20,000 or a partial 90% cover of € 22,222). The argument for a low cover is protecting the small savings of “widows and orphans”. So if a bank would go bankrupt, the small retail depositor is protected to avoid hardship. Furthermore, the Dutch deposit insurance system is not pre-funded. When a failure happens, funds are raised *ex post* among the surviving banks. The original argument for *ex post* funding was the low frequency of bank failures.

After the failure of Van der Hoop Bankiers in 2005, the Dutch protection was increased to € 38,000: 100% of the first € 20,000 and 90% of the next € 20,000. The bankrun on Northern Rock in the UK learned that partial protection (less than 100% cover) does not work. The UK deposit insurance system was 100% of the first £ 2,000 and 90% of the next £ 33,000. The 10% own risk caused the depositors to run and withdraw their deposits at Northern Rock, when difficulties emerged in August 2007.

So when the financial crisis erupted in September 2008, deposit insurance was increased to 100% of the first € 100,000 across the European Union (except for some New Member States that increased their level to € 50,000). This increase across the board was meant to ensure that depositors would not run on their bank. The financial stability argument was thus added to the “widows and orphans” argument for deposit insurance. Further negotiations are currently underway in Brussels on the European Deposit Insurance Directive. The new Directive is considering making *ex ante* funding mandatory.

2. Impact on financial stability

What is the impact on financial stability? Sure, the high cover of € 100,000 ensured that retail depositors remained quiet during the financial crisis and did not attempt to run on their bank. So the short term crisis management goal was achieved. But the long term effect of a permanent deposit insurance cover of € 100,000 is that depositors will not discipline their bank, because their deposit is guaranteed. Depositors just look for the highest interest rate promised on retail deposits. This gives the perverse effect that (small) banks which face a high cost of funding in the wholesale market (without guarantee) turn to retail deposits at a lower rate. By just offering a slightly higher interest rate than their less risky competitors, the risky banks can lure retail depositors. Moreover, banks may increase their risk profile in the case of deposit cover with no premium or a flat premium.¹ Theory would predict this moral hazard behaviour of banks. And that is also what we see in practice. Some riskier banks have increased their deposit base by offering higher rates, but below the rate they would have to pay for uninsured funding. The long term stability of the Dutch financial system is thus undermined.

The IMF recommends to move to an *ex ante* funded deposit insurance system in their financial sector assessment of the Netherlands.² However, they stop short of recommending a risk based premium. A flat rate premium would not address the moral hazard problem. There seems to be a hesitance to move to a risk based system as some policy makers fear that a risk based system may be too complicated to implement. They argue that it would be better to start with a

¹ See for US evidence: Gayle DeLong and Anthony Saunders (2011), “Did the introduction of fixed-rate federal deposit insurance increase long-term bank risk-taking?”, *Journal of Financial Stability* 7, forthcoming.

² International Monetary Fund, The Netherlands: Financial Sector Assessment, Preliminary Conclusions by the Staff of the IMF, December 14, 2010.

flat rate premium and then consider a risk based premium at a later stage. However, once you start with a flat rate, changes are difficult to get agreed as the riskier incumbents will lobby to keep the flat rate. Of course, the safer banks will lobby for a risk based rate. But when there is a strong lobby from both sides, political economy tells us that the most likely outcome is the status quo, in this case keeping the flat rate. That would also imply that we keep the inbuilt instability in the financial system.

3. How to set a risk based premium?

An effective risk based deposit insurance system would charge a higher premium when the risk is higher. Risk based pricing is common practice in the commercial world of insurance. In that way, the incentive for risk taking can be neutralised. With sufficient premium differentiation, excessive risk taking can even be discouraged. That would foster the stability of the financial system. A prerequisite for risk based pricing is the appropriate measurement of a bank's risk.

The academic literature provides guidance on risk based pricing for deposit insurance.³ Three methods can be distinguished.⁴ The first is market based using stock prices or interest rates to determine the market price of a bank's risk. The option pricing methodology can be used. But this methodology can only be applied to banks that are listed on the stock exchange, as the net value of the bank (i.e. equity) and the volatility of the stock price are needed as inputs. Not all banks have a listing (e.g. Rabobank, ABN AMRO). So this method has limited value for the Netherlands. Another market based method would derive risk from the yields on uninsured debt. As some banks have very limited amounts of outstanding uninsured debt this method is not very reliable.

The second is fundamental based. Several indicators can be measured to gauge the riskiness of a bank. Examples of useful indicators are capital measure (e.g. tier 1 common capital ratio), credit quality measure, concentration measure, liquidity measure (e.g. liquid assets and funding sources). A long track record on these indicators is needed to develop a reliable risk tool. That is very demanding.

Supervisors are using a mix of qualitative and quantitative indicators to put banks in different risk categories. A well-known supervisory risk assessment method is the CAMELS method applied by US supervisors. In the CAMELS framework, supervisors measure Capital adequacy, Asset quality, Management, Earnings, Liquidity and Sensitivity to market risk. Following an onsite bank examination, bank examiners assign a score on a scale of one (best) to five (worst) for each of the six CAMELS components; they also assign a single summary measure, known as the "composite" rating. In a similar fashion, the Netherlands Bank uses FIRM, the Financial Institutions Risk-analysis Method. Within FIRM, several financial ratios (e.g. balance sheet total, revenues, number of employees, solvency ratio, liquidity ratio, interest income, fee income, actual capital, return on equity) as well non-financial indicators (e.g. management) are measured. Next, the framework to manage each of the different risks is assessed. On the basis of the indicators and the risk controls, banks get a score ranging from one (low risk) to four (high risk).

The third and last method is rating based. Credit rating agencies assess the soundness of a firm. Their judgement is summarized in a credit rating. Investors use these credit ratings to determine the required interest on debt. In a similar vein, credit ratings can be used to derive an appropriate risk premium for deposit insurance. There are two drawbacks. First, some banks do

³ Robert Merton (1977), "An Analytical Derivation of the Cost of Deposit Insurance and Loan Guarantees", *Journal of Banking and Finance* 1, p. 3-11.

⁴ Luc Laeven (2002), "Pricing of Deposit Insurance", Working Paper No. 2871, World Bank.

not have a credit rating. Second, the reputation of credit ratings is seriously dented during the recent financial crisis, when the triple AAA ratings of many CDOs were not reliable. The same happened during the Asian financial crisis when favourable ratings provided misguided comfort. So there is little appetite among policymakers to rely again on credit ratings.

4. How to get started?

The US experience is instructive for the design and sequencing of deposit insurance. Deposit insurance (with a flat rate) was introduced as part of the New Deal legislation in the 1930s. Flat rate deposit insurance was one of the contributing factors to the wide-spread moral hazard leading to excessive risk taking by the Savings & Loans in the 1980s. After the Savings & Loans debacle, the US moved to a risk based premium. The risk categories were based on the CAMELS ratings. Only recently, the FDIC has started to move to a more elaborate system for large banks based on a mix of CAMELS ratings and forward looking indicators.⁵

Reviewing the different risk based methods in the previous section, it is evident that only the FIRM ratings are readily available for all banks in the Netherlands. We propose to start with this simple risk based method.⁶ At a later stage, this method can be refined with an indicator analysis. The key issue is that a risk based framework, even when rudimentary, would set the incentives right. The alternative, a flat rate deposit insurance premium, would invite the banks to game the system and have a negative impact on financial stability.

There are some further design features. What should be the differentiation between the lowest and highest premium? Sufficient large differentiation is crucial to make a mark. International evidence suggests that a minimum differentiation between the lowest and highest premium of 2 to 2.5 is helpful.⁷

Next, there may be a worry that banks may withhold information from their supervisor. Bad information would increase their FIRM rating and thereby their deposit insurance premium. However, that is a general issue. When banks have, for example, a problem with their internal risk model, the supervisor can charge a higher capital requirement under Pillar 2 of Basel II. More capital is also costly. Yet, banks are expected (and required) to tell their supervisor promptly. If not, the supervisor will impose (heavy) sanctions when it discovers that banks are withholding information.

Finally, deposit insurance should not contribute to the pro-cyclicality of the financial system. The deposit insurance fund may want to stop charging (risk) premiums if the target size of the fund (e.g. 1% of the insured deposit base) is reached. But that may imply that at the height of a boom when premiums accumulate in the fund and no pay-outs are done, the deposit insurance fund will lower its fee. This would lower banks' cost of funding and further fuel the boom. Premiums should not be lowered during good times. A well-filled fund is useful to draw upon in bad times.

⁵ Federal Deposit Insurance Corporation, "Assessments, Large Bank Pricing, Notice for Proposed Rulemaking", November 2010.

⁶ There is no need to publish the FIRM ratings. As the insured deposit base of a bank is not exactly known, the premium (and thereby the FIRM rating) cannot directly be derived from the total deposit insurance premium paid by a bank.

⁷ Luc Laeven (2002), "Pricing of Deposit Insurance", Working Paper No. 2871, World Bank.

