Capital Adequacy Rules and Insolvency Risk: An Empirical Study, Presented by Dr. George Sheldon

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1. INTRODUCTION

Let me begin with some general, more formal reasons against any fundamental change of the Swiss banking capital adequacy rules in the near or medium-term future, which are not related to the material content of Dr. Sheldon's alternative proposals:

1. We have just accomplished a total amendment of the capital adequacy rules in the Banking Ordinance, which was adopted by the Federal Council on 12 December 1994 and has to be implemented by all banks by the end of 1995. Apart from the irrelevant fact that it would hurt our technocratic pride to abandon this masterpiece of regulatory engineering so quickly, there are natural limits to the regulatory stress which a system can bear. It is better to have imperfect rules than to subject banks to a permanent process of regulatory change in search for perfection. We are in the middle of a demanding process of a comprehensive re-regulation of large parts of the financial sector and we risk to neglect the practical implementation of all this paperwork. What is the use of well-designed rules, if adequate resources to implement, audit and supervise are lacking?

2. Capital adequacy is only one, although important, cornerstone of financial regulation and is closely interrelated with e.g. large exposure limits. The joint working party, which I have the honour to chair, has just finished its proposal for a total amendment of the Swiss large exposure rules. This proposal is essentially based on the risk-weighting system of the recently adopted capital adequacy regime, hence the RAR-approach criticized in Dr. Sheldon's paper. If you remove the foundation-stone from the wall to replace it by another, differently shaped piece, the whole wall has to be rebuilt or otherwise collapses.

3. We are just about to embark on the next heavy course of the BIS-menu, the national implementation of the 1995 Supplement to the Basle Accord on capital adequacy for market risk. Already the standard method is not easy to digest, and the VAR-models approach is definitely a major regulatory challenge, if not a supervisory nightmare. The recognition of banks' internal models has far reaching consequences, to which I will turn later. Hence, there are good reasons not to rock the boat by jumping too quickly to a comprehensive models approach embracing all banking risks, before some experience has been gained in the field of market risks. Otherwise we might

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land a bridge too far. It comes as no surprise, that the securities regulators are much more reluctant to adopt the models approach for market risks, because market risks are the dominating risk factor in their industry. We as banking supervisors should be equally cautious if we merely had to rely on banks' internal models for the hard core of credit-risks.

4. Of course, one could argue that the ideal occasion for a more radical change has come right now, before an additive system for credit and market risk has been firmly established. But that brings me to the last formal, yet very important argument from a Swiss perspective. We certainly couldn't do this in isolation and should not attempt to unnecessarily create yet another Swiss special case. On the contrary, the main purpose of our recent amendment of the Swiss capital adequacy rules was to bring them in line with the system of the Basle Capital Accord including its recent amendments and the relevant EU-directives. They still have the added charm or complication of a particular Swiss finish, mostly above the international minimal standard and occasionally below. We as regulators as well as our internationally active banks acknowledge the benefits of international harmonization of supervisory regimes. If there was to be a radical change, it should therefore be decided in the appropriate international forum, i.e. the Basle Committee, and that could be a lengthy procedure.

2. ASSESSMENT OF THE BASLE COMMITTEE GUIDELINES

Dr. Sheldon's criticism of the Basle Guidelines mutatis mutandis also applies to the essence of the present – and presumably future (market risk related) – Swiss capital adequacy rules. As I cannot commit the Basle Committee, I can at least accept some blame for our own identical rules.

1. I didn't know that the risk asset ratio (RAR) approach dated back to 1956. I only remember that we must have re-invented it in Switzerland in 1980 and certainly felt very modern, being unaware of the advances in finance and portfolio theory. I can accept that the level of capital charges in the RAR-approach is essentially arbitrary, as these charges do not indicate the level of soundness they engender. I also understand that the RAR-approach too narrowly focuses on the volatility of returns. Nevertheless, one can live with an arbitrary level, provided the system is (1) at least in itself relatively consistent and (2) produces a moderate proportion of insolvencies over time and (3) no large bank becomes insolvent. The Swiss experience of the first half of the nineties raises some doubts about the latter two conditions, considering the number of regional banks, two cantonal banks and even Swiss Volksbank having virtually reached a state of insolvency, although with one exception (Savings & Loan Bank Thun) they were all rescued by other banks or the relevant canton (Berne), without losses for depositors. The significantly higher risk weightings for mortgage
loans under the new regime are based on this negative experience. But admittedly, this amounts to nothing more than trial and error. Basically, what we have done in the chain of amendments of our credit-risk capital adequacy rules since 1980, was a fine-tuning of the weightings and credit-risk-equivalents, however never touching the sacred 8% ratio. If we were to raise it from 8% to e.g. 10%, this would certainly be more sound, but naturally just as arbitrary.

2. According to Dr. SHELDON, the RAR-approach is easy to apply. I shall gladly quote him on every occasion when bankers and auditors complain about the complexity of the new Swiss rules, which now cover almost 14 pages in the Banking Ordinance. But beforehand, I would also invite him to have a look at the new capital adequacy statement form and its almost 20 pages, which we have created together with the Swiss National Bank. Nevertheless, I agree that this is just peanuts compared with the coming market risk rules.

3. Our own main objection to the Basle risk classes refers to the irresponsibly low uniform weighting of 20% for claims against OECD-banks, irrespective of the residual maturity or the quality of the counterparty. This privileged treatment of interbank-claims simply overrates the benefits of supervision and above all increases the systemic risks. After a hard battle with our banks, we have barely managed to prevent a progressive dilution of our tougher standards. This brings us to another idea, which came up in that discussion, but was finally rejected: the use of agency ratings as a more market-orientated distinction than the five broad risk classes in the Basle Accord.

4. I am less preoccupied by the second line of criticism in Dr. SHELDON's paper, that the imposition of risk-specific capital charges leads to «double charging», especially with regard to the additive charges for credit risk and market risk in the 1995 Basle Supplement. This may not be perfectly justified or accurate, but hopefully errs on the safe side and somewhat compensates for all the risks that are not accounted for in either the Basle system or even the alternative proposal. To give a few examples for nil-charged risks: internal fraud, costs of involvement in money laundering cases of customers, compensation for mismanagement of customer funds, legal risks, failure of EDP-systems and last but not least settlement risks. Especially with regard to the strong position of Swiss banks in private banking, one could very well imagine an additional capital charge related to the size of managed customer funds. After all, who would want to entrust the custody and management of his assets to a poorly capitalized bank?

3. THE ALTERNATIVE LIMIT-RISK-BASED APPROACH

Let me begin with the positive aspects that I can see in Dr. SHELDON's proposal, without entering into its theoretical foundations:
1. This comprehensive approach overcomes the dichotomy in the Basle System between
the relatively primitive RAR-approach of the 1988 Accord for credit risks and the
sophisticated 1995 Supplement for market risks. It clearly looks more balanced, takes
account of a large variety of insolvency-factors and avoids the unconvincing distinc­
tion between the sophisticated trading book and the underdeveloped rest of the
banking activity.

2. The inclusion of overheads as a determining factor for the insolvency risk could be
particularly adequate for securities firms and banks with similar characteristics, i.e. a
large part of brokerage business, but little credit or market risk. There is a similarity
with the so called base requirement, which securities regulators impose as an
additional capital charge, based on the overheads of the previous period, as a cushion
to cover the fixed expenses in case of a sudden slump in market activity.

3. It gives a clearer picture of the level of systemic risks. I am especially attracted by the
idea (p. 787), that in order to lower the risk of contagion it could be more efficient to
have larger banks hold additional capital than to require this of all banks by lowering
the uniform insolvency risk. This would allow to minimize the risk, that the implied
state-guarantee for our three major banks, which are supposedly too big to fail, would
ever have to be called upon. One could then generously renounce on imposing a fair
fee on them for this alleged guarantee. Unfortunately, the idea has little chance to get
implemented, because these are the very same banks which are most dependent on
competitive equality with their peers on an international level.

4. The figures on the determination of the socially «optimal» level of insolvency risk
(p. 790) make me feel more relaxed about the potential damage that Swiss supervisors
could cause by choosing a higher level of protection. The total cost curves look quite
flat under all three scenarios, which relativates the importance of the real size of the
risk premium for Swiss banks, whether it is 5% or 10%. If I read between the lines
on p. 787, in view of the MODIGLIANI/MILLER proposition Dr. SHELDON does not
seem to be convinced that there is a risk premium at all.

Now let's move to the disadvantages of the alternative proposal from a supervisory
perspective:

1. The practical implementation is obviously extremely complex. Until proof of the
contrary, I don’t share Dr. SHELDON'S optimism, that banks should certainly be
capable of implementing such a multi-stage limit-risk-based scheme. Only the top
brass, maybe a dozen banks in Switzerland, might be able to apply the value-at-risk
methodology for market risks. And even those banks will have great trouble extending
this approach to all on and off-balance-sheet assets, let alone on a consolidated basis.
For the vast majority of the existing 433 banks this prospect looks light-years away.

2. The subdivision of on and off-balance-sheet items into categories of assets with
roughly identical expected values and volatility (p. 794) and the assessment of
liquidation values (p. 794) depends on highly judgmental decisions. Arbitrariness
simply comes back through another door, namely the bank’s internal model.
3. This brings us to the intricate issue of qualitative and quantitative criteria for the use of banks' internal models and the implications of their recognition for capital adequacy purposes. A paper to be published by IOSCO illustrates these consequences very well.\(^1\) I can only summarize them briefly:

a) Supervisory recognition changes the rationale for using models. Their primary use is no longer the internal objective of better risk management, but the prospect of lower capital requirements, and therefore an incentive to seek out models which deliver lower requirements rather than improved risk management.

b) VAR-models address what is likely to happen in normal circumstances, whereas regulators are most concerned about what might happen in face of an unusual event or when the unexpected happens. Consequently there will always have to be a cushion of capital over and above that implied by the model, but its amount will be the subject of regulatory judgement (e.g. the multiplication factor of 3 and plus factor in the April 1995 Basle proposal or an approach based on stress testing).

c) As supervisors will want to set standards for acceptable parameters to narrow the disparity of results between the different models, banks may still find it necessary to undertake two separate calculations of value at risk – their own calculation for internal risk management using their preferred parameters and a regulatory calculation using standardised parameters. So we are back to one of the main criticisms against the standard method of the 1993 Basle consultative paper, i.e. the burden of double calculations. To push this argument to the extreme, one could ask, whether it might then not be more honest and straightforward to impose an integral standardized value at risk model.

d) The recognition of internal models and the individual setting of capital cushions related to the quality of a model will require high skills, additional resources and increased responsibility for regulators. In another talk, I have illustrated the particular implications for the Swiss supervisory system.\(^2\) Clearly, the Banking Commission will not be able to rely exclusively on the assessment of a bank's external audit firm for such delicate decisions. We have to look for alternative tools, such as a joint task force of the audit profession, specialized model-assessment institutions or building up our own team of experts, with a possible combination of these various tools. Whatever the solution will be, it results in a much more direct involvement of the Banking Commission and thus changes the nature of supervision. This could just be the beginning of a general trend and consequently risks to blur the boundaries between mere supervision and intrusion into business policy. Bankers should therefore read the writing on the wall: they might be

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entering into a *pact with the devil* by their enthusiastic call for the supervisory recognition of their internal models!

What has all this to do with Dr. SHELDON's alternative proposal? A lot, because his comprehensive model approach multiplies the afore mentioned problems and subjects the whole bank to the risk of supervisory infection.

4. CONCLUSION

Let me conclude by referring to an old rule of thumb, which I presume has its equivalent in the economic law of diminishing returns, the *80 : 20-Rule*. It means that in order to reach the first 80% of the desired objective, in our case the socially optimal protection against insolvency, only 20% input are needed, whereas the last 20% to the top level will require 80% input.

The alternative proposal is certainly fascinating, but in view of the pros and cons, I am not unhappy if we did not have to implement it. I prefer living with a less perfect system of capital adequacy rules. As the 80 : 20-Rule demonstrates, the search for perfection can be disproportionately costly.