Capital Adequacy Regulation: There is Hardly an Alternative

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1. INTRODUCTION

In a paper presented in 1992, DANIEL ZUBERBÜHLER, of the Swiss Federal Banking Commission (FBC), wrote:

«A bank supervisor or a securities regulator basically has to deal with the same inherent risks as the financial institutions which he is supposed to supervise. To a large extent, the interests of supervisors and supervised overlap indeed: the protection of depositors and investors as well as the integrity of the financial system should be a common concern of the financial community. Conflicts of interest rather arise on the issue of the appropriate path to common objectives, the intensity and adequacy of the regulation, and of course if enforcement actions have to be taken in individual cases.»¹

To a large extent I can accept this statement. But what ZUBERBÜHLER terms as «conflicts of interest» between the regulators and the regulated represents more. In my view, these so-called «conflicts of interest» stem from a fundamental uncertainty. Nobody can deny that it is difficult to construct an economically efficient system of financial markets regulation. To implement it practically is even more difficult. The questions are: First, do financial markets indeed need to be regulated? Second, which are the efficient instruments? Third, what are the practical results of a given system of regulation. Fourth, should the existing regulatory system be corrected or developed further?

Since these questions are difficult to answer, there is room for «judgement» and «pragmatism» on every side. This may lead to what ZUBERBÜHLER calls «conflicts of interest». Regulators tend to overregulate, sometimes in line with the regulated who yearn for «a quiet life».² Markets tend to punish anything which leads to an excessive regulatory burden. Economists who try to assess the quality of what is going on are caught

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2. BENSTON, KAUFMAN (1996, p. 694) summarize their historical investigations of the reason why banks have been regulated in most countries and for many centuries as follows: «We identify two related reasons: (a) to limit competition; and (b) to provide revenue and power for government officials.»
in the middle and usually experience considerable difficulties when formulating recommendations.

This paper, which is devoted to the alternatives to the regulation of capital adequacy, reflects this state of affairs.

I shall start with a critical summary of the legal and theoretical justifications for the capital adequacy regulation of banks. I shall then describe what place capital adequacy regulation assumes in the system of banking supervision in Switzerland. Since the Basel Committee on Banking Supervision cares effectively for an ever stronger common tradition of regulation, the number of Swiss idiosyncrasies is limited so that the discussion of the Swiss case should not limit unduly the interest of the non-Swiss reader. The survey of the Swiss regulatory system shows that capital adequacy regulation is but one instrument in a large group of regulatory instruments which traditionally are all justified by the same supervisory objectives. This leads me to ask in which sense the Tinbergen Rule for economic policy («one goal, one instrument») also applies to the regulation of banks. If it does, a more parsimonious supervisory system might be called for. Finally, I venture some conclusions on how to improve the regulation of banks in Switzerland and to some extent elsewhere.

2. THE JUSTIFICATIONS FOR THE CAPITAL ADEQUACY REGULATION OF BANKS

In the passage quoted, ZUBERBÜHLER mentions two objectives for the regulation of banks. The first is the protection of depositors and investors and the second is the integrity of the system. These objectives serve as justifications for the totality of the prudential regulation and supervision of banks in Switzerland, including capital adequacy regulation.

The inclusion of investors in the group of those to be protected may seem a particularity of the Swiss system. It reflects the realities of universal banking in Switzerland. In this country banks are free to offer all kinds of financial services, from deposit taking and credit lending to brokerage in the securities markets, from wealth management to advisory services to investors, and banks can act as custodians. They may also offer insurance services. Apart from this banks are allowed to act as lead-managers and underwriters in primary markets, and they are not excluded from proprietary trading in securities and derivatives. Banks can also advise firms in their restructuring operations and help to finance takeovers and mergers. Hence, the supervisor of banking in Switzerland, the FBC, is necessarily also the supervisor of securities markets and, naturally, in charge of the protection of investors and not only of depositors. The new Federal Law on the Stock Exchanges and Securities Trading, which will be effective, most probably, as of 1997 onwards, recently confirmed this all-embracing responsibility of the FBC.
The second objective quoted, the protection of the integrity of the financial system, is the consequence of the legal and practical interpretation of the Federal Banking Law over many years. Recently, it was explicitly incorporated into the Stock Exchange Law in terms of the «workability» («Funktionsfähigkeit») of the financial markets which is explicitly mentioned as an additional purpose of the law apart from the protection of investors. But, when the FBC speaks of «integrity» and when the law refers to «workability», what is meant is the protection of the quality of the Swiss financial centre in terms of its «safety and soundness». Bank fraud, money laundering, insider trading and price manipulation in securities markets should be prevented or prosecuted and the international co-operation among supervisory authorities should be enhanced.

Nowhere in the legal documents is there any explicit reference made to systemic risk as a justification of supervisory action. The understanding obviously is that the goal of the protection of depositors also covers, by implication, the prevention of systemic risk.

The Swiss National Bank (SNB), which is responsible for monetary stability, is not directly involved in the supervision of banks and securities markets. However, since systemic risk also threatens monetary stability and since the SNB might feel required to act as a «lender of last resort» in case of liquidity shortage, the SNB is a regular partner of the FBC in all regulatory discussions and, together with the FBC, represents Switzerland in the Basel Committee.

For economists the public good to be protected is not the wealth of depositors or investors or the integrity of a financial centre but the well-functioning of financial markets. Nevertheless, the arguments of the economists can be taken as a justification for public regulation as long as the proposals ensuing from their analysis are also covered by the objectives of the law.

In the economics literature the justifications for prudential regulation is usually linked to market failure. A first point is related to incomplete and asymmetric information, which is said to make it difficult for depositors to assess the quality of their assets once they are placed in banks. A second point is a consequence of externalities which may arise because of under-informed depositors. Ill-informed depositors are likely to over-react to rumors. This may lead to bank-runs and eventually trigger epidemic withdrawals of deposits from more than one bank, i.e. to systemic risk. This is all the more likely as banks are tied together by inter-bank credits and the less transparent these relationships are. These two justifications for regulatory action are included easily into the existing legal framework, since they are directly linked to the legal objective of depositor protection.

A third point comes directly from industrial economics. If financial markets are characterized by natural monopolies, effective competition may be impossible. Price or entry regulation may be warranted. This justification for regulation as well as others
that are related to resource allocation objectives\(^5\) cannot however be brought under the existing legal umbrella.

In his recent contribution to the controversy on whether or not we ought to regulate the financial system, DOWD (1996) criticized every single one of the above and more arguments in favour of the prudential regulation of banks. Interestingly enough, DOWD's position is in line with an important part of ZUBERBÜHLER's statement quoted above, namely where he notes that banks have themselves reason to be very much interested in the protection of depositors and in the integrity of the financial system.

However, apart from the basic interests of banks, there is very little common ground between DOWD and the regulators. DOWD argues that «free», i.e. unregulated banks would «understand that their long-term survival depended on their ability to retain their depositors' confidence. They would therefore pursue conservative lending policies, submit themselves to outside scrutiny, and publish audited accounts. They would also provide reassurance by maintaining adequate capital (p. 681).» This self-interest of banks to retain their customers' confidence would also make sure that there was no contagion through «excessive» competition from weak, i.e. more aggressively operating banks, to strong ones. «Indeed, if a bank believes that its competitors are taking excessive risks, the most rational course of action is for it to distance itself from them – perhaps to build up its financial strength further – in anticipation of the time when they start to suffer losses and lose confidence (p. 682).» Equally, DOWD sees no justification for fearing contagious bank-runs in the wake of difficulties of one or of a group of weak banks. He rather expects «a flight to quality, with substantial inflows of funds to the stronger banks», and he mentions that «there is little evidence that runs are contagious (p. 682).»

With respect to entry regulation, DOWD summarizes the empirical evidence correctly when he points to extensive economies of scale but denies the existence of a natural monopoly. Hence, this justification for regulation is rejected, too.

Finally, DOWD does not deny that in banking asymmetries in information might exist. But he argues that the usual remedy, i.e. depositor insurance, makes things worse, not better. He argues that if depositor insurance is provided, banks tend to reduce their capital, «since the point of maintaining capital strength – to maintain depositor confidence – no longer applies.» DOWD goes on to say: «the claim that banks reduce their capital ratios is confirmed by the observation that US bank capital ratios more than halved in the 10 years after the establishment of federal deposit insurance, and there is abundant evidence that US deposit insurance has increased failure rates and associated losses (p. 683f.).»\(^6\) DOWD clearly sees deposit insurance and similarly lender of last resort facilities as part of the problem and not of the solution. For DOWD there is no alternative to «free», i.e. unregulated banking in competitive markets.

5. For a recent discussion of these aspects see EDEY, HVIDING (1996). For a related discussion of security market regulation, see WHITE (1996).

6. The Canadian case points in the same direction. «The history of Canadian banking provides a compelling case against the view that deposit insurance is a prerequisite for banking system stability.» (CARR, MATHEWSON, QUIGLEY, 1995, p. 1138)
In another attempt, unfortunately not considered by DOWD (1996), to cover the prudential regulation of banks in the perspective of economic theory DEWATRIPONT, TIROLE (1994) focus on the problems of bank monitoring experienced by alternative claimholders and rapidly come to the core issue, also of this paper, the justification of capital adequacy regulation.⁷

DEWATRIPONT, TIROLE write, that in order to protect themselves from insolvency risk, depositors would have to perform extensive and expensive monitoring which in itself is a natural monopoly.⁸ Therefore, it may be economically efficient for depositors to be represented by a public (or private) agent which would help to prevent and sanction poor performance.

DEWATRIPONT, TIROLE go on to ask under what circumstances centralized monitoring is particularly needed. In order to find an answer, DEWATRIPONT, TIROLE make use of some elementary insights of agency theory, i.e. they draw our attention to the problem of corporate governance. In doing this they depart from the assumption of optimal managerial incentive schemes which are a prerequisite for the irrelevance of the financial structure as claimed by MODIGLIANI, MILLER (1958). Solvency depends on the relation between equity, debt, and the riskiness of assets. Since management owns almost no equity, its behaviour primarily depends on rules internal to their organization. Control from outside, i.e. from shareholders and depositors depends on the incentives particular to these two groups of stakeholders. Shareholders, especially large ones, tend to intervene when the value of the bank declines. Depositors, especially small ones, have only little reason to engage themselves in costly monitoring. More generally, a decrease in the debt-equity ratio (capital structure) shifts the balance in favour of a closer control of managers by shareholders while an increase in the debt-equity ratio reduces the likeliness of effective shareholder control over managers. In this perspective, depositors are less protected when the debt-equity ratio is high and more secure when the debt-equity ratio is low.

In the DEWATRIPONT, TIROLE perspective capital adequacy rules appear helpful to depositors by improving the otherwise under-performing market for corporate control as an instrument to control managers in their risk-taking. At the same time smaller debt-equity ratios reduce solvency risk which amounts to an additional benefit for the depositors.

Seen in this light, prudential capital adequacy minima not only contribute to depositor protection in a direct way by increasing the amount of capital available to cover losses. In addition they contribute to an improved performance control of the bank management, which may be an even more important justification for capital rules. As a consequence capital adequacy regulation can be taken as a substitute for some other forms of prudential regulation which, as we shall see presently, are plentiful and all of which are usually justified by pointing to the necessity to protect depositors.

Before closing this chapter it may be helpful to recall that from the economics' point of view the justification for any capital adequacy regulation of banks crucially depends not only on failures in the market for corporate control, but also on distortions introduced through explicit or implicit pre-existing other regulatory action. According to DEWATRIPONT, TIROLE an underperforming market for corporate control might lead to excessive risk-taking by managers. This in itself would not be a sufficient explanation for the fact that capital adequacy regulation applies above all to banking and to some extent to insurance, but is absent in all the other industries most likely to suffer from similar control failures. Here, industry-specific distortions introduced through other regulation in the form of «lender of last resort»-facilities, explicit deposit insurance or implicit government guarantees along the line of «too big to fail»-provisions help to understand what happened to banking (and insurance). BENSTON, KAUFMAN (1996) even « ... find only one economic justification for regulating banks - the reduction of the negative externalities from moral hazard and agency costs that accompany poorly structured government-provided deposit insurance (p. 695).» But if the government, for better or worse, effectively co-insures bank (or insurance) deposits, it is natural for the government to care for a more «even» distribution of total insurance risk by increasing the proportion of eventual losses borne by the private shareholders.9

3. A BRIEF SURVEY OF THE SWISS REGULATORY SYSTEM

The discussion of the Swiss regulatory system – presented in a very condensed form in the Table – takes place in the perspective developed above, i.e. I presume that capital adequacy regulation, in so far as it reduces the overall debt-equity ratio in a bank, tends to improve the performance of the market for corporate control. The better this market performs, the less bank managers can indulge in excessive risk-taking. As a consequence, self-interested shareholders effectively act as the depositors' private representative agents. It follows that, at least to some extent, capital adequacy regulation is a substitute for other instruments of prudential regulation.

9. This point is to some extent also accepted by DEWATRIPONT, TIROLE (1994), p. 31.
### Table: Banking Regulation in Switzerland

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<th>FBC</th>
<th>SNB</th>
<th>SBA</th>
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### PROTECTIVE INSTRUMENTS

#### Withdrawal of Banking Licence
If licencing conditions are seriously violated and/or bank is insolvent; as a consequence all payments are interrupted.

#### Committee on Banking Structure
Arranges takeovers between banks in order to protect clients from the negative effects of a mandatory closing.

#### Depositor Protection Agreement
In case of forced liquidation customers benefit from early pay out of deposits enjoying bankruptcy privilege (max. SFr 30'000 per customer).

#### Liquidity Agreement
During the period of takeover bargaining, delay of payment and/or liquidation liquidity can be granted to banks at market conditions against collateral.

#### Lender of Last Resort Facility
Solvent but illiquid banks can borrow liquidity at market conditions against collateral.

### PREVENTIVE INSTRUMENTS

#### Licencing Requirements
Licencing conditions have to be fulfilled permanently and cover requirements of proper conduct, internal control systems and procedures including internal auditing, etc.

#### Capital Ratios
Stringent risk-weighted capital ratios, for balance and off-balance positions, are applied; further developments in line with Basel Committee Accord and Recommendations.

#### Large Exposure Limits
Lendings to single customers must not exceed certain proportions of capital.
**Liquidity Ratios**
Ratios between short-term assets and liabilities have to be observed permanently.

**Self-regulatory Guidelines**
Internal control, foreign exchange trading, trust banking/portfolio management, traded options and financial futures, due diligence/money laundering, credit evaluation/mortgage credits, risk management for trading and use of derivatives, etc.

**Auditing**
External auditing by independent auditing firm licenced by the FBC and reporting to the FBC and to the bank takes place annually. Extraordinary investigations by other auditing firm can be demanded by the FBC.

**Financial Reporting**
Public and audited statements have to fulfill a number of requirements contributing to the customers' assessment of the solvency of their bank.

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<table>
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<tr>
<th>RELATED REGULATION</th>
<th>FBC</th>
<th>SNB</th>
<th>SBA</th>
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<tbody>
<tr>
<td><strong>Investment Funds</strong></td>
<td>X</td>
<td></td>
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<tr>
<td>Licensing requirements and categories of funds, capital ratios, etc. are applied.</td>
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<tr>
<td><strong>Stock Exchanges</strong></td>
<td>X</td>
<td></td>
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<tr>
<td>Licensing requirements for stock exchange traders, listing requirements, provisions to enhance transparency, etc. are applied.</td>
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FBC = Federal Banking Commission  
SNB = Swiss National Bank  
SBA = Swiss Bankers’ Association

This gives rise to the following questions: Does the regulatory portfolio in Switzerland actually reflect this possibility? Is the regulatory system governed by the principle of substitutability, which would lead to a dominating position of only one type of regulatory instrument, e.g. capital adequacy regulation? Or is the system rather composed according to the principle of complementarity, which would imply a «fair» balance between e.g. capital adequacy regulation and some other instruments the presence of which would be justified by their contribution to the increased effectiveness of capital adequacy regulation? Or, finally, is the instrumental mix reflecting the presumption of independence, in the case of which the portfolio of instruments would be quite heterogenous. A portfolio of this type would reflect the conviction that the inclusion and the expansion of any single regulatory instrument, ranging from capital adequacy regulation to self-regulatory rules of conduct, independently contributes to the fulfillment of the regulators’ objectives.

Before answering these questions it is worthwhile to address a number of institutional and more general issues.

The main regulatory bodies are the Federal Banking Commission (FBC) and the Swiss Bankers’ Association (SBA). The FBC-column in the Table stands for the totality of the public part of banking regulation. To some extent the FBC is directly competent. In other instances the responsible institution is the Federal Council, i.e. the Government itself, and the FBC is executing its authority by way of delegation.

The SBA is a private association, founded in 1912, and has traditionally represented the political and economic interests of the Swiss banking sector. For many years the market forces have suffocated almost all of the cartel agreements that used to be typical for the SBA. Today, the SBA is increasingly acting as a «self-regulatory organization». In this capacity its authority is «borrowed» from the FBC. As a private association, the SBA is not able to enforce the Guidelines it issues. The FBC can, however, include these Guidelines in the set of rules and regulations the application of which is controlled in the course of the banks’ annual external audit. In this way the FBC effectively transforms private into public rules and regulations.

The Swiss National Bank (SNB) has no direct legal responsibility in the area of prudential regulation and supervision. Its main responsibility is monetary policy, where it strictly observes the objective of price stability. The SNB interprets its «Lender of Last Resort»-function restrictively. This is in line with the absence of its legal authority to supervise banks. On the other hand, the SNB carries fundamental responsibilities in the area of the payment system. This and the potential extension of the «Lender of Last Resort»-function in case of a major banking crisis justifies the permanent participation of the SNB in the most important discussions on the regulations of banks in Switzerland.

The Ministry of Finance (MoF) is absent from the Table. This is not really satisfactory. Not only is the MoF responsible for adapting existing banking law to changing conditions and for developing new law in the area of financial markets. Like the SNB, and much more so, the MoF is a latent co-insurer of bank depositors. Liquidity alone can never resolve a bank crisis. Eventually the government might be unable to avoid using taxpayers’ money in order to limit depositors’ losses. This observation is based on
historical evidence. In 1933 the Swiss Volksbank needed to be bailed out by the Federal government. In 1934 the Federal Banking Law came into existence. The logic is obvious: the introduction of this law on banking regulation and supervision reflects the government's painful experience of having to act as a co-insurer independently of the absence of any formal public commitment. It is quite natural, therefore, that the MoF is also represented in the Committee on Banking Structure. This Committee was created in a common effort under the auspices of the FBC after the closing of the Spar + Leihkasse Thun in 1991.

Similar cases have been extremely rare since. The Federal government has never been asked to step in again. The next time the Swiss Volksbank experienced problems, i.e. in 1993, it was taken over by Credit Suisse Holding. Also since 1991 a large number of Regional banks, suffering from a steep rise in interest rates, were not closed, but taken over by stronger and larger other Regional banks or by Cantonal or Big banks. The Committee on Banking Structure, which incorporates all the «players», i.e. the FBC, the SBA, the SNB and the MoF, has proved very effective in past years. However, because the depositors of Cantonal banks are usually fully protected by Cantonal state guarantees, it has been impossible to discharge the taxpayer completely from his burden as a virtual co-insurer. In the Canton of Berne the government is currently paying fair amounts of taxpayers' money into its Cantonal bank in order to assume the Cantonal government's responsibilities as a guarantor.

The Table shows that the main objective of banking regulation in Switzerland is depositor protection. This is so in the case of both classes of instruments, protective and preventive ones. The other objective relevant in a system of universal banking, i.e. investor protection, is prevalent in related regulation, i.e. in the area of investment funds and stock exchanges.

Particularly in the area of stock exchanges but also under the heading of self-regulatory guidelines (so-called «rules of conduct», e.g. in the area of money laundering) we find rules and regulation that are especially devoted to the integrity objective. Nevertheless, the measures to assure the integrity of banking and financial markets are not sufficiently reflected by the Table. It does not include Courts, i.e. it does not take into account the application of Criminal law which unfortunately has constantly a role to play in many respects.

Neither does the Table adequately reflect the high degree of differentiation in Swiss rules and regulation. Probably in other countries the degree of differentiation is even higher. Nevertheless it is increasing, and certainly also in this country banking regulation is one of the few sectors which still show «healthy» growth. In common with in many other places we are experiencing a wave of re-regulation, not least in the self-regulatory domain, which is handled more flexibly and, therefore, not rarely preferred also by the FBC.  

10. ALBISETTI et al. (1987), p. 120.
11. For an assessment of the situation by the FBC, see ZUBERBÜHLER (1996).
As everywhere, «events» like stock exchange crashes, the coming down of BCCI, Barings and Daiwa might trigger off new regulation also in Switzerland. More important driving forces are the recommendations of highly respected international institutions like the Basel Committee on Banking Supervision, the International Organization of Securities Commissions (IOSCO), or the Group of Thirty, which incidently is a private and not a public body. But it would be unfair not to mention a certain preference for flexible «ad hocery» in this country. The authorities also fully support «case-by-case» solutions. By creating the Committee on Banking Structure, public and private agencies have, since 1991 and so far, been able to protect effectively bank depositors whenever the closing of a bank was imminent.

The Table shows that there is no explicit, i.e. formalized deposit insurance in Switzerland. Effective «Lender of Last Resort»-facilities are equally absent, since the SNB is only prepared to lend liquidity to solvent banks and only against collateral and at market rates. Also at the level of Federal government there is no explicit government guaranty and there is only a dim memory of bail-outs along the «too big to fail»-argument in the Thirties. Under such circumstances and thinking along the lines of DOWD, «free» banking, i.e. the theoretical first-best solution could in principle apply.

This is not the case, however. Clearly, the authorities fear their implicit role as a co-insurer.

This interpretation of the motivation of banking regulation in Switzerland is only apparently shaken by the following observation. As I said before, the customers of Cantonal banks benefit from explicit government guarantees. In the light of our theoretical considerations this ought to have produced stricter rules and supervision for Cantonal banks. As a matter of fact, Cantonal banks still «benefit» from preferential treatment in terms of capital requirements and external auditing. Considerable losses in some Cantons made a large number of them renounce their existing federalistic supervisory «privileges». Two Cantons even decided to sell-off their banks to one of the big private ones in order to get out of their «insurance contract». This confirms the initial hypothesis. During a long period of fair weather after the Second World War Cantons tended to underestimate the price of their obligations as guarantors. Due to their new experience since then at least some of them are now engaged in a learning process.

Finally, which principles govern the regulatory mix in Switzerland? This is the question that interests us most in this chapter. Obviously, it is not possible to claim much evidence for the importance of substitutability considerations with respect to capital adequacy regulation. Capital adequacy regulation is prominent but in no way dominating. Other types of regulation are of considerable and even growing importance.

There is some evidence for complementarity considerations, however. The recent strengthening of Protective Regulation, particularly in the form of the Committee of Banking Structure, is the most important example. As long as it remains possible to absorb structural change in Swiss banking by arranging takeovers of banks, the closing of which would be unavoidable otherwise, further measures to strengthen depositor protection do not appear necessary.
Nevertheless, the overall impression is that in Switzerland as elsewhere regulation is driven by «events» and by area-specific international recommendations. Consequently it moves in a piecemeal, often unco-ordinated step-by-step manner. As a result the system reflects practically no substitutability and only some complementarity. In other words it is impossible to deny the regulators' presumption of independence between quite a large number of regulatory instruments.

On the whole, and with all due respect for the exemptions in terms of complementarity, when interpreting the history and the actual state of banking regulation in Switzerland I am tempted to use the famous analogy of the «drunken man on his way back home». This story is regularly told by exchange rate analysts explaining their «random walk»-hypothesis: in the short run exchange rates move at random, while in the long run rates obey fundamental market forces. With respect to banking regulation the suspicion remains that the theoretical «fundamentals» that justify regulation might be experiencing even more difficulties than the «fundamentals» in determining exchange rates. Let us hope that our «drunken man» reaches home all the same.

4. AN ASSESSMENT OF THE SYSTEM

The analogy of the «drunken man» might be much too pessimistic. On the other hand when assessing the quality of the Swiss system of banking regulation I cannot help observing that there is little evidence for any thorough ex ante and ex post policy evaluation to guide the shaping and developing of the system as a whole. In particular, existing rules and regulation are modified and new rules are regularly introduced without explicit reference to existing, sometimes only recently introduced other regulation. This applies to all the instruments, i.e. to capital adequacy as well as to rules for internal risk management, to auditing as well as to financial reporting, etc.

This lack of respect for the efficiency and logic of the regulatory system as a whole does not preclude that the same international and national authorities spend enormous effort when they pursue innovations like the capital adequacy regulation of market risk. As often in economic policy we cannot exclude persistent suboptimization.\(^{12}\)

As I said before, the dominant impression is that the regulators almost completely disregard the possibility of substitutability of instruments. Implicitly they seem to show some respect for a certain complementarity between the instruments. Most often they act as if they thought that the instruments were virtually independent of each other. More of any one of the instruments, independently of the availability of other instruments, appears to reflect the preferences of the regulators best, in Switzerland and probably elsewhere, too.

Of course this preference for a «higgledy-piggledy» piling-up of rules and regulation might have its foundation in the agencies' conviction that in banking we are so far away

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\(^{12}\) This criticism also transpires in ZUBERBÜHLER (1996).
from any optimum system of regulation that more of any one item on the «shopping list»
can never do any harm. But again: even if this position were correct, it would require to
be proven by hard theoretical and empirical evidence. So far nothing of the sort has been
produced.

On the contrary: to the extent the theoretical proposition on the substitutability of
capital adequacy regulation as compared to other rules and regulation (and vice versa)
is correct the diagnosis that follows is one of overregulation. Specifically, and without
going into the details of capital adequacy regulation now, regulators either do not believe
in the function of shareholders as the depositors’ private representative agents or they
simply overlook the potential benefits of keener corporate governance. Otherwise they
would particularly foster the performance of the market for corporate control, i.e. they
would concentrate on capital adequacy regulation and would restrict the development of
other instruments or even dismantle some of them.

From the theory of economic policy we know that we need at least as many policy
instruments as there are policy objectives. This is the so-called Tinbergen Rule.13 There
is no reason why this rule should not also apply to the regulation of banks. The Table
shows a multitude of instruments that are all geared to serve the depositor protection
objective. The Tinbergen Rule does not exclude that it may be justified to use more than
just one instrument for any one policy goal. But it sheds doubt on whether the cumulation
of instruments is a good thing. This is so because the Tinbergen Rule raises the possibility
that we could either concentrate on capital adequacy regulation or on another class of
instruments in order to optimally achieve depositor protection. Other instruments could
serve other policy goals, e.g. investor protection could be served by increased trans­
parency in stock market transactions and the integrity of the markets could be served by
Criminal law and by the Courts.

Whether or not the concentration on just one instrument, i.e. capital adequacy
regulation, is a valid recommendation depends on a number of intricate factors, of course.
They are linked first to the performance of the market for corporate control. If the market
for corporate control is not working well in the first place, it would be futile to hope for
a significant contribution of capital adequacy regulation to depositor protection. There
is reason to think that this market is not yet sufficiently developed in Switzerland to
permit reliance solely on shareholder control in banking regulation.14

Secondly, the concentration on capital adequacy regulation would only be preferable
if its cost-effectiveness in comparison to other regulatory instruments was at least as
great as that of any alternative. As a matter of fact, there is a glaring lack of information
on the cost-effectiveness of alternative regulatory instruments. This type of investigation
has not yet been taken up seriously. Nevertheless, some research has recently been done
in this domain but exercises of empirical policy evaluation are still particularly rare.

From the theoretical point of view there are some reasons to expect capital adequacy regulation to show the best results. Capital adequacy regulation in principle permits the use of existing control mechanisms, i.e. it does not require the introduction of rules and regulation that directly influence activity specific decision-making in banks. This, however, would demand a fundamental restructuring of capital adequacy regulation towards a generalized value-at-risk commitment and away from the ever popular standard approach to capital underlying. I shall come back to this in the following chapter. Suffice to say here that in spite of a much less than comfortable theoretical and empirical basis there is room for high expectations in favour of capital adequacy regulation as the dominating regulatory instrument.

In the case of an «ideal» form of capital adequacy regulation the situation is similar to that in taxation. As we know from MUSGRAVE (1959, pp. 157-9), who refers to PIGOU (1951), in public finance «The problem is one of finding «handles» to which one may attach taxes that are neither inequitable nor burdensome.» In public finance we tend to give preference to a «head tax» since it carries no «excess burden». Any other tax interferes with the otherwise efficient allocation of resources; e.g. progressive income taxation reduces the supply of labour, etc. We also know that the «excess burden» is larger in the case of more specific taxes and smaller when taxes are more general. Nevertheless, we know of no government that only relies on a «head tax» – if it utilizes this tax at all. The well-known reasons for this reluctance to use the «most efficient» type of tax are the following: markets are considered inefficient in the first place, secondly, the distributional effects of such a tax are deemed inacceptable, and finally, like it or not, governments sometimes patently want to interfere with allocation.

In spite of these more or less acceptable reservations vis-à-vis a «head tax» it still is true that not using it implies a cost. In the area of banking regulation, the cost of not concentrating on the use of a potentially ideal type of capital adequacy regulation consists of efficiency losses in financial intermediation. In addition, given international regulatory arbitrage, it also reduces the attractiveness of the less-efficiently regulated financial centres. This is what KANE (1991) refers to when he discusses the consequences of an excessive «net regulatory burden».

Now it is high time to admit that the development of an efficient system of banking regulation is an extremely demanding task. But given the importance of banking to modern economies and respecting the size of the first and still very incomplete estimates of the direct and indirect cost of regulation it would be a mistake not to invest more effort in the critical analysis of the existing systems and in their improving.

This effort is all the more justified when we recall the state and development of the real-world systems of banking regulation. To me they do not look convincing, neither in general nor in particular, e.g. in the case of real-world capital adequacy regulation. The state of affairs can be summarized as follows:

1. The regulatory systems contain a wealth of highly differentiated rules and regulations of which nobody has ever assessed systematically the costs and benefits.

2. The piecemeal, «pragmatic» development of the systems implies the presumption that to a large extent the system's elements exert their effects independently of each other. In the light of elementary theoretical consideration this presumption appears basically untenable.

3. Empirical results are extremely scarce. When they are consulted, they can be disconcerting. So, in a recent study, SHELDON (1995) was not able to detect any strong relationship between real-world capital ratios and the probability of bank failure in Switzerland. Also his new results are not likely to prove consoling to those who are willing to defend existing capital adequacy regulation. (SHELDON, 1996)

5. HOW TO IMPROVE THE SYSTEM

So far I have contended that capital adequacy regulation is particularly useful in order to achieve the objective of depositor protection. I favour capital adequacy regulation because it works on the basis of the existing, theoretically and empirically comparatively well-known market for corporate control. Therefore and under certain conditions I expect capital adequacy regulation to be the most cost-effective type of preventive regulation serving depositor protection.

Nevertheless there are other instruments that are also discussed currently and that deserve mentioning. In a theoretical perspective, deposit insurance and «narrow» banks can perhaps play best the role of potential alternatives to capital adequacy regulation. Other approaches, like the ones proposed by GOODHART (1995, 1996), essentially imply improved incentives in existing regulatory systems and rather appear as complements to capital adequacy regulation than as its substitutes.

Regarding deposit insurance the outlook is gloomy. Given practical experience it is virtually impossible to see how the potential benefits of deposit insurance might be realized. In spite of recent reform BENSTON, KAUFMAN (1996, p. 695) still regard «poorly structured government-provided deposit insurance» as the sole economic justification for regulating banks in the United States of America. On the other hand, there is a need for banking regulation for reasons not related to explicit deposit insurance: the government is a co-insurer of banks' depositors independently of what is written down in some deposit insurance act or law. Hence, it is still worthwhile to think about a more efficient kind of deposit insurance, avoiding moral hazard and agency costs, to the financing of which shareholders of banks and depositors would effectively contribute. There is always a theoretically efficient way of insuring. Most probably private deposit insurance would have a role to play. But, as hinted before, some evidence on the practical effects of real-world deposit insurance systems is disastrous. As long as there is no convincing proposition of how incentive problems might be resolved practically there is no reason at all to complain about the non-existence of formal deposit insurance in Switzerland.
Another proposition that is made frequently is the so-called «narrow» bank. Several proposals exist. In one of them the «narrow» bank would concentrate on only two activities. Firstly, it would take in deposits which it could only place in highly liquid and extremely safe investments like treasury bills. Secondly, it would be the only bank that could also provide payments’ services. This would provide safe services to those clients who value safety highly enough to be willing to forego higher returns. Insofar as they would be willing to run larger risk they could still use the services of other banks, so-called «broad» banks, which could offer a much larger range of services, at higher returns, but without the safety that would be typical of the «narrow» banks. In an extreme case the «broad» banks would not need to be regulated at all, i.e. they would qualify as «free» banks.

GOODHART (1995, p. 21-2) sees the drawback of such a compartmentalized banking system in its virtual instability. He writes that «... in <good> times all depositors will want to be in the <normal> banks, and in <bad> times in the <super safe> banks. The contagious transfers of funds between banks would actually be exacerbated.» Although this might be rational from the point of view of depositors, it could spell doom in credit markets which after shocks would become virtually depleted of capital supply. However, independently of the creation of two or more categories of banks, credit markets can never be isolated from adverse shocks. As DOWD (1996) mentions there have always been flights to quality in «bad» times. Hence, GOODHART’s reservations cannot really damage the basic validity of the proposals for «narrow» banks. «Narrow» banks make the cost of depositor protection more transparent. They make the depositors pay for the protection they demand. And they reduce the «net regulatory burden» in the less-regulated areas of banking, which is potentially a large advantage. Since in reality there always remains a certain risk of co-insurance by government in the case of financial distress in «broad» banks, it would, however, be unrealistic to expect that «broad» banks need not be regulated at all.

So, «narrow» banks present themselves as an alternative that will have to be analyzed further. But, as I have just said, it is very unlikely that government can afford not to regulate the large segment of the remaining «broad» banks at all. It follows that even in a compartmentalized banking system there will be scope for capital adequacy regulation.

This brings me back to the discussion of the alternatives to the actual capital adequacy regulation, which, as I mentioned before, is still far away from what it actually should be in the light of theoretical considerations. Real-world capital adequacy regulation is extremely complex and increasingly difficult to handle and supervise. In addition, the more it applies position specific and risk-weighted capital ratios to individual and sometimes transformed credit risk and market risk positions, the more it interferes with allocative decision-making in banks. Everybody accepts that risk-weights, credit con-

17. This applies to off-balance sheet transactions which are transformed into virtual credit risk positions with the help of «credit conversion factors» specified by the regulatory agency.
version factors and the required overall capital ratio of 8% are not necessarily reflecting
the market realities. A bank in shortage of capital might even be tempted to concentrate
on those activities with lowest regulatory risk-weights irrespective of the effective
risk-adjusted profitability of those activities. This would imply shrinking returns and,
however, dwindling capital. This is not only an example of regulatory «excess burden», but
also of the counterproductive nature of existing regulation.

The more general capital adequacy regulation becomes the less «excessive burden»
we have to face. This is absolutely in line with what we know from the theory of public
finance. The Basel Committee recognized the potential value of generalized regulation
by accepting internal «value-at-risk» models as an alternative to the standard approach,
but only for the newly recommended capital underlying of the banks’ market risk on
trading book assets.

A further step in a similar direction was taken in the form of a proposal for
«precommitted capital». This proposal was made by the United States Federal Reserve
in July 1995. The proposal again applies to the capital underlying of the market risk of
a bank’s trading book assets. It can be summarized as follows: «Under the <precommit­
ment approach>, a bank would estimate the exposure of its trading account securities to
market rate changes over a stipulated period of time, and would set aside enough capital
to cover this exposure. If losses exceeded the precommitted capital, a supervisory penalty
would be imposed. The penalty could involve public disclosure of the violation, a
monetary fine, higher future capital requirements, restrictions on future trading, or some
combinations of these disciplines.»

The salient feature of this approach is a considerable reduction of the role of
the regulatory agencies. «Supervisors review banks» profit-and-loss reports to see if penal­
ties are to be imposed, and verify that adequate risk management structures are in
place.» Consequently, the «precommitment approach» would be less intrusive than the
alternative approaches, it would encourage the development and application of improved
risk-management technologies, and it would save capital.

The American Bankers Association (1996, p. 3) concludes that not only this initiative
of the Federal Reserve deserves to be fully supported, but it in addition suggests that «the
precommitment approach ... could potentially be applied to other types of risk aside from
market risk. Therefore, this approach could conceivably be used as a blanket capital
requirement covering a number of risk categories – taking into account the interrela­tion­ships.»

SHELDON (1995) argued for an extension of «value-at-risk» modelling to the totality
of risk in banking. According to his so-called «Limit-risk capital adequacy rule» the
regulatory agency would specify a uniform upper limit on the insolvency probability for
all banks. The banks would then be relatively free to choose their own activity portfolios.
Any portfolio would be acceptable as long as a bank, given its level of capital, could

make sure that its implied profitability and volatility profile would not violate the maximum insolvency probability accepted by the regulator. It goes without saying that the «Limit-risk rule» could be easily combined with the «precommitment approach» as proposed by the Federal Reserve.

These three proposals, i.e. the internal «value-at-risk» models, the «precommitment approach» and the «Limit-risk rule» all go in the direction of a reduction of regulatory «excess burden». Since they all lead to a potentially significant reduction of the imperfections of existing capital adequacy regulation they should all remain on the agenda for reform.

Although their adoption will most probably lead to a more cost-effective protection of depositors there remain some unresolved problems intrinsic to capital adequacy regulation. Some of them are related to the limited nature of the shareholders incentives to control bank managers' excessive risk-taking. Others have to do with the objective difficulties of the principals, i.e. the shareholders, to control the agents, i.e. the managers, even if the shareholders were ardently willing to live up to their responsibilities. Since capital adequacy regulation functions on the basis of the shareholders acting as the private representative agents of the depositors, these difficulties have to be taken care of, too.

Even in a well-functioning market for corporate control the shareholders' incentives to check effectively their managers' risk-taking are decreasing the more capital they have already lost in the process of adverse developments. This leads to the recommendation that in order to avoid «gambling for resurrection» the amount of shareholder capital at stake would have to be kept high under all circumstances. It is difficult to see how this requirement can be fulfilled. Once a bank has realized large losses, the recruiting of additional shareholder capital will prove difficult. Other representative agents might be needed to step in. GOODHART (1996) mentions the «consequential rationale for external regulators to enforce (graduated) additional controls over financial institutions with insufficient capital» (p. 13) In later stages further complementary regulation in the sense of the Swiss Committee on Banking Structure, whose duty is to arrange takeovers when a bank would otherwise have to be closed, have also proved effective.

With respect to the objective difficulties of controlling managers' excessive risk-taking GOODHART (1996) made a range of interesting proposals with the intention of improving the incentives for compliance with the rules either specified by law, external regulation or by shareholders. He sees a number of possibilities to ensure that the proper control procedures are in place. He attaches great weight to the internal auditing function. Furthermore GOODHART points to the importance of pay-off structures: « ... when the pay-off structure from their (the agents', NB) actions makes it in their own self-interest to assume risk, they will do so whatever the rule-book may lay down.» (p. 12) Shareholders need be satisfied with the internal pay-off structures, otherwise their other efforts to control risk-taking will be hardly effective. Stock-option schemes, not men-

20. This point is developed more fully by GOODHART (1996).
tioned by GOODHART, may prove particularly useful since they lead to a greater harmony between the managers’ and the shareholders’ interests.

In Switzerland banking regulation increasingly addresses its efforts to the issue of internal control procedures and to compliance. The most recent example can be found in the SBA «Risk management guidelines for trading and for the use of derivatives». These guidelines contain an extended list of directives and conclude by stating that banks not able to implement them in their totality have to «restrict or abandon altogether» those activities with respect to which the guidelines are not fulfilled.

Quite clearly even if reformed capital adequacy regulation eventually fulfils our highest expectations, there remains the necessity for complementary regulation both under the heading of protection and prevention. Looking back at the Table describing the Swiss system of banking regulation today, the question arises: is there a clear dividing line between what will be still required in the future and what could be disposed of already now?

I am not yet prepared to say «yes». Nevertheless, I am convinced that our system and that of many other countries is much too complex to be satisfactory. I also think that there are hardly any convincing alternatives to capital adequacy regulation. This type of banking regulation is probably the most convincing, not least on the grounds of theoretical considerations. Banks would probably be prepared to accept higher overall capital charges as long as there are significant compensating reductions in the regulatory «excess burden». A range of complementary regulatory instruments will certainly have to be maintained. I am not yet able to establish a list of what could be deleted, but I repeat my conviction that the totality of what exists today cannot possibly reflect an optimum.

What we urgently need are results from a systematic theoretical and empirical evaluation of banking regulation in Switzerland and internationally. This would put us in the position of responsibly deciding how to deal with the regulatory pile of the past and on how to proceed in the future. Let us allow a period of two years during which no new regulation would be introduced. The regulatory agencies would invest the time gained from not reacting to external «events» and to international recommendations in taking stock of what there is and of what there should be. They would do so together with the Basel Committee for Banking Supervision, a number of bankers and some economists (please!).

I am convinced that this innovatory standstill would provoke no increase at all in the probabilities of bank failure and of a systemic break down, but it would certainly lead to a more satisfactory structure of banking regulation in the future.
LITERATURE


SUMMARY

A critical summary of the theoretical and legal justifications of capital adequacy regulation (CAR) of banks is given. It is shown that CAR is particularly attractive since it uses an existing market mechanism (market for corporate control). The role of CAR in Switzerland is described. The survey shows that CAR is but one in a large group of regulatory instruments. All are justified by the same objectives. The analogy with the «Tinbergen Rule» suggests that a more parsimonious supervisory system is called for. This leads to a number of conclusions on how to improve regulation in Switzerland and elsewhere. The central position of CAR is not disputed.

ZUSAMMENFASSUNG

RESUME

L’article donne, pour commencer, un aperçu critique des justifications économiques et juridiques de la réglementation des fonds propres (RFP) des banques. La RFP est particulièrement attrayante, parce qu’elle se fonde sur des mécanismes existants de régulation du marché (marché assurant le contrôle des entreprises). Le rôle de la RFP, en Suisse, est ensuite décrit. Il en ressort que la RFP n’est qu’un mode de régulation parmi beaucoup d’autres. Tous poursuivent les mêmes objectifs. L’analogie avec la «règle de Tinbergen» laisse penser que le système de surveillance devrait être allégé. Un certain nombre de recommandations, qui ne s’appliquent pas seulement à la Suisse, sont ensuite formulées. Le rôle primordial joué par la RFP n’est pas remis en cause.