

What size should banks want to be?

Klaus SPREMANN

In: H. Geiger / C. Hirsowicz / R. Volkart / P. F. Weibel: **Schweizerisches Bankwesen im Umbruch, Bank- und Finanzwirtschaftliche Forschungen**, Haupt Verlag Bern, 1996, pp. 331-344.

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The question "what size should banks want to be" can be understood in three different ways.

The first and traditional point of view is to ask: which is the optimal size of a single bank? Technology largely determines the answer, that is, returns to scale and returns to scope, transaction costs, and the costs of internal monitoring and control. Because the technology of banking processes changed and changes dramatically - mainly because of the advent of modern information and communication technology - the optimal size and shape of every single bank are transforming correspondingly. Chapter 1 is devoted to this first interpretation of the title.

The second meaning of the question "what size should banks want to be" refers to the extent to which a number of banks should form a group, engage in an alliance, forming something as a larger institution that practices in its inside only limited competition. Such alliances may refer to particular activities such as computer operations, portfolio management, and economic research, which can be easily be organized on a common platform by several banks. Most important for the banking industry is regulation. Also regulation reduces competition between single institutions and imbeds them into a more "cooperative," larger arrangement: the whole banking industry. So the second interpretation of the title refers to the

question: to which degree should a bank wish to have both the advantages and the disadvantages of regulation? The paper proceeds to this question in Chapter 2.

Third: Still another interpretation of the title distinguishes, within the financial sector of an economy, banks from financial markets. Nowadays, banks not only use financial markets in their role as intermediaries. Today, there is even competition between the group of banks and financial markets: Some services are provided by banks and can, alternatively, be directly bought in the market. The question is then: Which size and importance should the banking sector, taken as a whole group of intermediaries, have in relation to "anonymous" financial markets. In more practical terms one can ask whether an economy should enhance financial institutions or encourage direct access to financial markets. We look at this issue in Chapter 3.

In all three meanings of the question risen in the title similar fundamentals apply to find answers. These are drawn from technology (such as returns to scale and to scope), asymmetric information (such as delegated monitoring), and the economics of institutions. The key words are costs of production, transaction costs, costs of monitoring, and agency costs.

1. The optimal size of a single bank depends on the technology

Before attempting to answer the three questions, it must be said what a bank is and what it does. Since there is no universally adopted, clear-cut definition that separates banks from near-banks and from non-banks, proceed by considering a list of three basic functions:

- Banks produce financial services and products
- banks contribute to maintain a stable monetary infrastructure
- banks produce safety.

Start by focusing on the production and provision of financial products, of services, and of safety. The size of a bank permanently changes. Investments, growth activities, and diversification into new markets increase the size and alter the shape of a bank. Regarding diversification, there are two main "systems". These have legal as well as traditional roots. So-called Universal Banks are dominant in Central Europe, while America and the Anglo-Saxon world preferred a banking industry specializing according to the lines of merchant banking, commercial banking, and investment banking.

On the other hand, spin-offs, re-engineering and restructuring tend to decrease the size of the bank. The institution gets leaner, more focused, less diversified and, perhaps, more specialized and concentrated on "core competence." In a few countries large banks have been split into smaller parts. The resulting smaller banks were less-stringent related, and each of the parts has been redesigned to concentrate a properly selected business. Disintegration was then undertaken to meet specific needs of heterogeneous customers. Some 15 years ago the common way to deal with different market segments was to differentiate clients by marketing - within the same institution. The idea today is to offer differentiated organizations to cope with heterogeneous customers - think of a private bank and a discount bank.

All these changes presuppose to know which factors determine the "optimal" size.

Size has obviously several dimensions. One is the size of assets, another the range of geographical representation, and the degree of international business, still another is the broadness of market segments covered. But the main criterion to choose among different sizes and shapes are (1) the cost of the bank, its internal efficiency, (2) its ability to generate revenues, its market powers, and (3) its flexibility and ability to take risks.

All this is determined by "technology," the relevant behavior of costs with size. Technology may not as narrowly be understood as the aspects of manufacturing and processing materials. Everything a firm does, including

processing information, raising capital from shareholders, refinancing activities, research activities, and innovative activities, obeys certain basic patterns. The patterns of all the banks' processes are subsumed under the term "technology." In other words, technology is the relation between various outputs and their associated inputs. Technology gives an answer to how production costs and costs to market products depend on the size of a firm.

Many technologies display increasing returns to scale, some show increasing returns to scope. Under increasing returns to scale or to scope, it is desirable to make the firm larger, simply because unit costs decrease as the scale of the business increases or the scope broadens. First, cost reduction is important for the single firm. Beyond this, the cost structure of its industry is of substance for the whole economy. Last not least the wealth of private consumers depends, among other things, on whether the sizes and shapes of firms are appropriate or not.

Empirical studies show, for example, that there are increasing returns to scale in shipbuilding. For the economy as a whole it is therefore more desirable to have, if not just a single, only very few but large shipbuilders rather than many smaller ones. This theoretical insight is of utmost importance. In Eastern Europe, shipbuilders are of medium size only. If they bid to win a new contract, it turns out that the larger shipbuilder in Japan can easily produce and offer at lower costs and prices.

To refer to another example: Underwriting is a financial service that is produced under increasing returns to scale. Larger banks can take the associated risk more easily, and they can signal the promise they give in the underwriting business in a more credible way. So, a larger bank can make more attractive offers in the underwriting business than, let us say, a mid-sized bank. The same is true for innovative projects.

On the other hand, quite a few other technologies show decreasing returns to scale. For example, returns to scale with bakeries are very limited. For these technological reasons, it is never desirable for the economy as a whole to have just very few but large bakeries in the world. Rather than

that, many small bakeries have lower unit costs of production, processing, and distribution.

These statements are not based on feelings such as whether one likes or dislikes the site of a shipbuilder, or whether or not you like or dislike the smell of fresh bread. They are completely based on measurable returns to scale in the prevailing technology. There is no mystery with it, it is just the technology that determines that size of a firm that results in minimal unit costs.

The technology of producing financial products and services: Banks provide their customers with financial services and products. These services and products include saving accounts, loans, and currency change for the customers in the broad market segment. The services include, for another market segment, private banking and portfolio management. Firms and institutions, of course, demand a bank to produce still other products and services.

To inquire the individual needs of retail customers, to suggest the proper services, and to perform these services, are activities the costs of which are proportional to the number of customers. There is no proving for increasing returns to scale. Consequently, small banks can conveniently offer this second function. The retail customer will observe the quality of the service offered, and small banks might thereby have an advantage over large banks.

Note that there is in retail banking a tendency to increased returns to scope, however. Who has already established relationships to many small customers, and who has access to information on their individual purchasing power, could easily market through these channels many other items and services as well. The idea of a really wide assortment, of extensively cross-selling, of offering investment funds, insurance contracts, holiday packages and the like seemed very unusual to bankers still some years ago. Today, retail banks should move to realize the economies of scope. The small banks must speed up a bit, after all, since near-banks are rushing in with fairly broad assortments. This is the way the POST takes in Switzerland with its "service centers".

The technology of producing safety: The third function that characterizes the bank is to produce safety. To generate safety is a very old function, a function that was already exercised ancient goldsmiths, the predecessors of bankers. Besides the safety standard as it is perceived by the retail customer, banks generate safety for large clients, even for whole countries. Hence, safety means different kinds of certitude for different customers. A certain bank might be safe for the deposits of retail customers but shaky in the underwriting business. There is safety in the small and in the large. The size of a bank is of importance depending on whether it produces safety in the small or in the large. Safety in the small can be produced even by very small banks through appropriate management. Most important is the diversification of the loan portfolio. It is easy if all the single borrowers are small and if they are coming from different environments. Diversification of loan portfolios, however, is difficult in small and homogeneous places as in a single canton like the Valise or as in a single state-state like Hong Kong. Think of the strong dependency on the property market.

Producing safety in the large requires wise and skillful management. These banks must employ and cultivate a highly sophisticated staff. Good Management is not sufficient, however. These banks should have accumulated huge resources as reserves that even bigger losses cannot put their existence into question. Concentration on larger assets, on financial engineering and on individually tailored solutions is then the theme. Placing power is also affiliated to experience. These aspects make clear that only larger banks can produce and offer safety in the large. Because of their sizes, not too many banks will remain in the business of producing safety in the large. Consequently, competition among the remaining big banks might turn out to be low. In fact, some of them will seek cooperation in consortia, virtually excluding competition.

To market the safety they produce, banks should show it. To show safety, positive signals are appropriate. Architecture is only one example, personal style in the contact with clients another. Also, negative signals must be avoided. Bankers feel that signaling their safety requires them to specialize services on the very core of finance. Offering shopping bags or water cookers, for discount retailers always a big success, could destroy the credibility of bankers, who attempt to produce safety in the large.

A large bank might therefore wish to split up into different and smaller organizations. One of the sub-organizations, conservative in style and rich in expression, produces and signals safety in the large: Financial engineering and underwriting. Another sub-organization, liberated of the traditional requirements of a too earnest appearance, could serve the typical discount customers who are shopping for low prices.

What are therefore the types of banks that can survive fiercer competition? The Types of banks that can survive shapes of three completely different types of banks can be drawn.

- (1) Banks of the first type are serving retail customers belonging to a variety of segments. These banks can be small, but their assortment should be wide. Their focus is the service and not so much the product. When products are sold, they will be well explained. The key word is friendliness, and it is the friendliness of service that determines the corporate culture of the service centers.
- (2) Banks of the second type resemble discount retailers. They are also focusing on private clients, but only on those who are looking for the lowest price in town. The assortment is narrow and comprehends a few products. Service in the sense of individual advice is not offered at all. The products, however, are well designed such that they deserve the term "self-explanatory." These discount banks are, if not friendly in a very human meaning, clean, proper, and befitting. The culture that distinguishes different discount banks is strongly related to the mode in which products are constructed and designed. We might observe brands of financial products and heavy use of telebanking.
- (3) The third type of bank is producing and signaling safety for the big business. Each of these few banks must be large with assets, and employ a highly sophisticated staff. The scope of the business will remain focused on financial engineering and specialized. The key word is competence, and competence determines the corporate culture of these larger institutions.

Can one institution unite all three types of banks (or two of them) under one roof and one name? Could a holding play this role? Are there any chances for one legal bank that appears, at the surface of the client, in three different forms? Perhaps, but do not forget that it requires three corporate cultures under one roof and one name. Can such an institution still be managed? It depends. If the institutional setting and arrangement at the top do allow for a multi-cultural setting in the levels below, the answer will likely be yes. If, on the other hand, the name of a corporation stands for its culture and its management style, then a split into two or three different banks might turn out to be a desirable reorganization.

2. To which degree should a bank wish to be regulated?

As their premier function, banks assist the central bank to create and sustain a reliable, stable, liquid, and transparent monetary system. The monetary system is an important part of the infrastructure of a country. Take the elements of the infrastructure as commodities. These are public goods - in contrast to private goods. A public good is a commodity that, once it is put into existence, generates positive externalities to many people. Many of them can enjoy the public good; there are no practicable ways to exclude them from consumption, and very often it is unfeasible to charge them properly for their consumption of the public good.

Microeconomics state that in a pure private and wholly market-driven economy the resulting supply of public goods will be too low. The resulting allocation is inefficient because of the free rider problem. More of the public good should be provided to enhance welfare. Yet nobody wants to be the first in the queue to pay for additional quantities of the public good. So, in our context, the basic question is how banks can be induced to place more teller machines, to open up more 24-hour service counters, and to take fewer risks than they would according to their original own interest? In fact, it makes a big difference whether a firm that goes bankrupt is a bank or a nonbank. An insolvent bank does not only harm depositors. An insolvent bank generates, in addition, huge negative externalities that are harmful to the

monetary stability of the country as well as to the reputation of other banks in that country. So, also the stability of a single bank is a public good.

Many devices have been suggested and realized to overcome the dilemma of too low supply of public goods in a purely private economy. An old-fashioned idea is to ask for more "government and taxes." This idea leads to a completely state-owned banking system, which is the reality in many countries. A more suitable idea is to allow for private banks, but to set appropriate rules and conditions under which they have to operate, and to set also incentives that guide private institutions to produce more of the public good "sound financial infrastructure." This is the idea of regulating the banking industry. Regulation endows the banking industry with particular privileges - such as protection against undesired competition, in particular from foreign banks - but requires the fulfillment of special conditions that are intended to enhance the production of the public good "stable financial infrastructure." In several countries, bank cartels are allowed, and in even more countries there is a very conservative tradition to handle cases of takeover and bank failure. In almost all countries, cooperation between banks is welcomed - even if all this reduces competition and decreases the power of market forces.

Thus, regulation, cartels, and similar arrangements increase the virtual size of a single bank - the size of the region where market forces are excluded. Every single bank will and has to coordinate many plans and intended activities with other members of the respective group. The single bank is much more imbedded in the banking industry than, for example, a single machine manufacturer is imbedded into the machine industry. The increased virtual size of a single bank has advantages (some resources can be shared between what otherwise would be fiercely competing institutions) and disadvantages (individual steps could be perceived to be unfriendly by other banks).

The discussed phenomenon of public goods thus lead to a situation, where a few banks wish to have reduced regulation and fewer cartels (reduced protection and reduced privileges, fiercer competition, but also more individual freedom to take promising opportunities) while other banks wish

more regulation, more cartels (more protection, lessened competition, though reduced freedom of individual decision making).

Social costs are associated to all designs: Ways to enhance the provision of the public good "monetary infrastructure and stability" are important because without similar designs, the provision of the public good would be inefficient. All the proposed designs, on the other hand, interrupt the market mechanism, and they are, therefore, only second best. Regulation, for example, not only helps to enhance the stability of the banking system. It also gives every single bank the opportunity to reduce effort and to become, a little bit, feeble. This is a cost to society.

It is difficult to measure these social costs, and in each instance the bill has to be paid by a different party. So the choice among the various schemes - regulations, cartel, traditions - is not as much an issue of economic reasoning as it is a battlefield for the exchange of political arguments. Typically the costs of regulation and of cartels have to be beard by local retail customers. Larger banks, banks that serve international clients, are confronted with the fact that the international client is mobile and chooses to get the desired financial services in whichever place. Certainly he will not shop in a country where tough regulation protects feeble and inefficient local banks, even if the whole system is very stable.

So one can conclude that the preference regarding regulation (the degree of cooperation versus competition within the national banking industry) is related to size: the more international - which is also a characteristic of size - the more likely the bank wishes to become free from the embodiment into the national regulated "community" of local banks. In Switzerland regulators must be very careful not to crowd out banking activities.

3. Banks versus capital markets

Today, much more financial contracting can occur without intermediation directly across capital markets. Consequently, there is competition between

banks, taken as a group of [financial intermediaries, and capital markets. A most practical question for policy makers is: Should a country try to develop a better banking industry or should the policy be to enhance capital markets and to wait and see what capital markets will do with the banking system? Agency theory helps to [md an answer.

Central versus decentral decision making: When speaking of size, one always assumes that the bank has a dear-cut shape and borderline. Inside, the institution is controlled according to the idea of ownership. Outside one observes markets and competition.

Inside, the dominant control instruments are direct supervision, exercised by owners, or by managers the owners have selected and employed. Direct supervision is supported by incentives, by established rules, by planning, and by the communication of strategies and business values. Yet, also rules, strategies and business values must be selected, and communicated by somebody. Here again ownership comes in. Inside the firm, to describe it all in one word, we have centralized decision making. In contrast, what happens outside is the result of many, independently-made decisions.

Both types of decision making, the centralized and the decentralized type, have advantages and disadvantages. Y ou simply cannot say that we must have markets and decentralized decision making for all types of contracts. It would likewise be wrong to say that most contracting should occur within an institution under centralized decision making.

Institutions are better for some contracts, while markets are superior for other contracts.

As private customer of a bank, for example, you might be satisfied with a long-lasting relationship to a particular banker. Such a relationship can continue so unconditionally for both sides that it is, obviously, a non-market contract. On the other hand, though loyal to your superior in the present job, you might be quite glad that there exists a well-developed labor market. So, from time to time, you could change employment, and you will also become aware that the well-developed labor market has an impact on your superior's behavior.

The borderline between the range of contracts where we desire institutions with their centralized decision making and where we prefer markets is of considerable importance to the proper size and shape of the institutions.

Which organization for which contract? Where is this borderline between the appropriateness of centralized and decentralized decision making precisely located? What is known about the borderline between those contracts that are handled better within institutions and those which are better realized in markets? Again, one can introduce transaction costs and agency costs. The answer also depends on the cultural and on traditions, however. The answer depends on the people involved, on their way of feeling and thinking, on their social attitudes and values. So the borderline might be somewhat different in the USA as compared to China, and it might be different in England as compared to Continental Europe. The borderline, that is, the relative importance of institutions and markets respectively, might also change over time.

This change is driven by what now is called institutional competition. Ask for any new contract, whether it is better to set up a market or whether it is better for both sides to contract within a corporation. The answer will not only depend on cultural aspects. The answer will also depend on the respective alternative.

If markets are fairly undeveloped and unstable, institutions will prosper and grow since nobody wants to contract across an undeveloped market. If we have an existing system of efficiently managed institutions, it is not so attractive to set up new markets.

If, on the other hand, existing institutions are bureaucratic, inefficient, and poorly performing, everybody is looking for market contracting as a supposedly better choice. If we have already a well-established system of markets, it might be very hard for companies to grow, since new contracting opportunities will be attracted by the efficiency of markets.

These remarks point out the fact that we cannot say how beneficial it is for the society to have small or large firms without knowing how developed

markets are, and how reliably contracting in the existing markets is. Typically, if the performance of markets is poor, much contracting must occur within institutions. These institutions will grow. If a country has developed forms of reliable contracting across markets, fewer institutions are required. Existing firms will shrink.

Efficiency versus stability: Here, one should admit that all countries have own experiences. Americans believe more than many Europeans in the power of markets. Very often they cannot understand why there are so few takeovers in Europe. Some European countries, for example, make hostile takeovers virtually impossible. On the other hand, a member of the EIDGENÖSSISCHE BANKENKOMMISSION once said: "There will never be a hostile take over in the Swiss banking system." Americans claim those cross holdings annihilate a market of corporate control in Europe. Obviously, the more rigid corporate governance in Europe enhances the stability of the system, but it also creates some rigidity. Markets give flexibility, but markets also exhibit volatility, in particular if they are small and therefore thin.

A particular country like Thailand or Indonesia may wish to mature its banking industry first. The development of large capital markets is then, though not postponed, the goal of a long-term step-by-step policy. The intended stability comes at a cost. The cost is that institutions are never as efficient as markets are. Stability is not for free.

Another country like Australia or New Zealand might put first priority to the development of capital markets and makes the adjustment of the size and shape of her banking industry a subject of market forces. This country will move toward a more efficient and more flexible system. This time, the trade off is a higher volatility in the finance sector.

Hence, one of the fundamental issues in the competition between institutions and markets leads to the question: Does the society wish, for the moment of her historic development, more flexibility and efficiency? Does the society prefer more stability, even at the expense of some inefficiencies? Evidently, the answer is a way between the two extremes. Each country

must make an individual decision. Countries like Switzerland, alas, rank among the stablest in our world. They can afford to move towards more efficiency.

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