

WORLDWIDE CONCENTRATION IN THE BANKING SECTOR CAUSES AND POTENTIAL EFFECTS*

Eduardo Strachman

Instituto de Geociências da Universidade Estadual de Campinas

Cidade Universitária, CEP 13083-970, Campinas, SP, Brasil

e-mail: edstrach@yahoo.com

José Ricardo Fucidji

Departamento de Economia da Universidade Estadual de Maringá

Campus Universitário, Av. Colombo, 5.790, Bloco D34, CEP 87020-900, Maringá, PR, Brasil

e-mail: jrfucidji@uem.br

Marcos R. Vasconcelos

Departamento de Economia da Universidade Estadual de Maringá

Campus Universitário, Av. Colombo, 5790, Bloco D34, CEP 87020-900, Maringá, PR, Brasil

e-mail: mrvasconcelos@uem.br

RESUMO Nos anos 90, vários fatores afetaram a estrutura e o padrão de concorrência do mercado bancário, diluindo barreiras representadas pelas nações. Em primeiro plano, encontram-se medidas de liberalização e desregulamentação. Em segundo, tem-se o progresso tanto na tecnologia de processamento de dados quanto nas técnicas de administração de riscos. Desencadeou-se um processo de consolidação do setor, com a constituição de grandes grupos provedores de amplo leque de produtos, o que, em muitos países, convergiu para a desnacionalização bancária. É possível uma série de efeitos positivos e negativos, seja para os demandantes de serviços financeiros, seja para as economias como um todo, impondo às autoridades responsáveis novos desafios para combinar pressão concorrencial com estabilidade sistêmica.

* This paper is part of a research supported by IPEA (Instituto de Pesquisa Econômica Aplicada), and was presented at the 13th Annual Australasian Finance and Banking Conference, held in Sydney, Australia, on December 2000. We would like to thank the unvaluable comments of James F. Steel, Sergio M. Schwab and Roberto H. Gremler.

Palavras-chave: mercado financeiro internacional, política e regulação governamental, fusões, aquisições, reestruturação, controle corporativo

**WORLDWIDE CONCENTRATION IN THE BANKING SECTOR:
CAUSES AND POTENTIAL EFFECTS**

ABSTRACT During the 90s, several factors affected the market structure and the standard of competition in the banking system, diluting barriers represented by country frontiers. First there were measures directed toward liberalization and deregulation. Secondly, there were technological innovations in data processing and risk management. A process of industry consolidation got under way with the formation of large banking groups that provided a wide range of products and financial services, which converged in many countries towards banking denationalization. It is possible to identify a number of positive and negative effects thereof, whether for those requiring financial services or for economies as a whole, implying new challenges for authorities in their pursuit of an atmosphere of competition combined with one of systemic stability.

Key words: international financial markets, government policy and regulations, mergers, acquisitions, restructuring, corporate governance

INTRODUCTION

Since the early 80s, an intense acceleration in the international trade of products and services has taken place and deepened the economic integration amongst countries. If in 1987 the international trade of goods represented 21% of the world product, in 1997 it reached 30% (World Bank, 1999). In the period 1990-1998 alone, world product grew at an average rate of 3.2% p.a., while international trade during the same period, in terms of volume, expanded at a rate of 6.4% p.a. (International Monetary Fund — IMF 1999). One of the consequences of this expansion was a growing demand for financial services in the international sphere. In order to meet this demand, the suppliers of those services, especially banks, also increased their degree of “internationalization”, which included the opening of new branches abroad. This is the traditional explanation for the internationalization of banks: an offshoot of the transnationalization of companies in the productive sector and of the increase in international trade (Aliber, 1984; Claessens *et alii*, 1998).

However, in disagreement with this view, we start out from the principle that internationalization cannot be understood without due attention to the dynamics of competition between financial service corporations and to the process of increasing the value of capital in the financial sphere. After all, the recent stronger growth in the flows of international financial capital indicates that the deepening of economic integration amongst countries has been more intense in the financial sphere than in the commercial one. There is a growing interlacing of the various national capital markets (shares, derivatives and other securities), with a consequent formation of truly global markets (Vasconcelos, 1998; Ayuso & Blanco, 2000).

This context has provided new business opportunities for both potential users of financial services and their suppliers, who compete for a world market with annual incomes above US\$ 2 trillion (The Economist, 1999). The competition for these incomes requires and favors the formation of large institutions of suppliers of financial services, modifying market structure not only in the international sphere but also in the national ones. As a result, spurred by the entrance of foreign institutions, several national banking-financial systems are undergoing modifications in their market

structures and their patterns of competition. A marked banking concentration can also be perceived, though the potential outcomes of this are as yet little understood.

With this scenario in mind, the present paper aims to present the world process of banking concentration, discussing its causes and potential effects through an examination of international experiences observed in various countries. The paper is organized as follows: in the first section we discuss the recent banking concentration in various regional markets as well as in the international market as a whole, and some of its main causes. Next we analyze possible consequences of this banking concentration, including the presentation of some problems referring to systemic risk. In section three we seek to examine the process of banking internationalization and denationalization along with its possible effects. Lastly, in the fourth section, we offer some brief final considerations.

1. BANKING CONCENTRATION

During the 90s, a broad movement of mergers and acquisitions was noted in the sector of financial services. That process of concentration was taking place both within the frontiers of many countries and in the international sphere, i.e., through national *and* crossborder mergers and acquisitions. In recent years, this process was intensified through the emergence of megamergers, including those involving firms from different countries (see tables 1 and 2 in the Annex).¹ Consequently, a consolidation and concentration of the sector has been going on through the formation of large financial conglomerates, many of which operate on a global level. Such phenomenon has taken place in several countries with different degrees of economic development and financial structure, thus showing its worldwide character. Some data illustrating this process of concentration are displayed in tables 4 and 5 in the Annex. As we try to show, this movement reflects a search by financial institutions of competitive advantages, especially those coming from economies of scale and scope, as well as a search for “market power”.

In the United States, the number of banking institutions was reduced by 30% between 1988 and 1997, mainly as a consequence of a process of merg-

ers and acquisitions that reached an average of 510 per year (Brewer III *et al.*, 2000). During that period, the 8 major institutions increased their share in total banking assets from 22.3% to 35.5% (Berger *et alii*, 1999).² In Europe, prodded by the *Single European Act* of 1986 and chiefly by the *Second Banking Co-ordination Directive* of 1989, several financial institutions became involved in some sort of merger or acquisition operations with other institutions in the continent (Shearlock, 1999), causing the number of banks and other credit institutions to drop in nearly all countries in the region (table 4).

Nevertheless, the process of mergers and acquisitions in the financial sector has not been restricted to the banking universe. Banks have also been aggressive towards non-banking financial institutions. During recent years, insurance and pension companies have been the preferential targets of banking groups. This occurs because, with the aging of the population, the accentuation of uncertainties regarding the economic future of families, due to the possibility of unemployment or a worsening of working conditions and to the dismantling of public social security systems in several countries, insurance companies have shown a better performance in terms of profitability and income expansion than the average observed in the banking sector, making them interesting targets for large banking groups aiming to widen the supply of products and services to their customers. Examples of this type of action are Credit Suisse and Winterthut (Switzerland); SE-Banken and Trygg Hansa (Sweden); Halifax and Clerical & Medical (UK); Citibank and Travelers Insurance (USA).³

Many are the causes or motivations for the process of consolidation in the financial sector. There are both those related to changes in the supply conditions and those related to demand. On the supply side, technological improvements (in data processing and transfer) and financial innovations (derivatives and risk management systems) seem to have increased the potential for exploitation of economies of scale and scope in the financial “industry” (Tiner, 1999). Thus, if studies made with data of the 80s did not point to the existence of significant scale economies in the financial sector⁴, more recent works, incorporating data of the 90s and therefore, the effects of technological progress in the period, offer positive evidence of the pres-

ence of such economies.⁵ At this point, construction and management costs related to complex products (e.g., derivative pricing systems or electronic networks for real time payments and transfers) can be diluted amongst various customers.⁶ In the same sense, the development of forms of electronic payment systems (debit cards or other forms of electronic currency) also demands high capital investments (for the setup of electronic payment and settlement networks) and presents significant gains of scale. This represents an additional competitive advantage for large banking institutions with respect to their smaller competitors, and a force that presses toward the process of bank mergers.

Being very intensive in information, the financial services sector has received a direct and strong impact from innovations taking place in the areas of information technologies and communications (Levine, 1997; Tiner, 1999). Firms with worldwide competitive strategies were greatly benefited, since they obtained a reduction costs and lead times in both their data transaction and the processing/transmission of information. At the same time, the growing sophistication of the market, with the development of new instruments and financial products (mechanisms of securitization and derivatives, instantaneous clearing networks, etc.) and the need for complex systems of risk evaluation led to a need for firms that might be capable of supplying a wide range of services simultaneously in different markets, in order to dilute the high investment costs required to maintain competitiveness. Consequently, financial corporations restricted to national or regional areas and with their business concentrated in the supply of a set of traditional financial services should find it increasingly difficult to remain in the market. This also results from a growing predominance of financial businesses in major international financial centers, in which many types of assets find more liquidity and better and safer systems of commercialization.

Hence, with the development of technologies for collecting and processing technical financial information, banks and other financial institutions have become more efficient in their evaluation of potential risks involved in their operations through standardized techniques (*credit-scoring techniques*), thereby achieving more favorable conditions to expand their operations even to regions or sectors in which they had not yet gained *expertise*

from practical experience (through processes such as *learning by doing* or any other learning method) (Stiglitz, 1987; 1989; May 1989; Celarier, 1998). For instance, with the development of credit classification systems, the capacity of large banks to handle credit operations of small values was expanded, minimizing problems arising from information asymmetry and leveling the informational advantage held until then by banks acting in more specialized and local fields. Changes in the technologies directly related to the supply of financial services seem also to have provided substantial scale gains benefiting large institutions. Service systems provided by telephone and/or through the world wide web are clear examples of that evolution (Radecki, Wenninger & Orlow, 1997; Tiner, 1999).⁷

The fact that financial institutions need to rearrange their organizations in order to meet new demands from customers is another motivation for the process of consolidation of the financial sector.⁸ Corporate customers (multinational companies, pension funds etc.) seem to prefer to concentrate their business with a small number of financial institutions, be that for reasons of transaction costs reduction, or to prevent private information from being handed over to a large number of external agents. In addition, as these agents, most especially large corporations, have diversified their financial portfolios with assets issued in different currencies, it has proved fundamental for banks to be able to offer evaluations and services to clients in several national markets, thus forcing them to expand their operations globally.

The Bank's desire to diversify their risks by sector should not be underrated either. Diversification of products, services, and consequently clients allows financial institutions to reach a better combination of risk and return expectations, even if this may mean higher risk levels, including those difficult to evaluate *ex-ante*.⁹ Corroborating this statement, empiric evidence shows that financial institutions consolidated in processes of mergers/acquisitions tend to expand the range of their assets and form a more diversified portfolio, which also means a diversification of their risks.¹⁰ The mere territorial and/or geographical expansion of a banking institution allows it to build more trustworthy models for the management of credit and market risks, due to the possibility of expansion and diversification of its data base, which gives it a wider vision of general business conditions. Furthermore,

even managers of financial institutions, in order to protect their jobs (and emulate expansive strategies of other institutions),¹¹ seem to tend to look for a wider risk diversification (May, 1995) or to defensive mergers and acquisitions (Hadlock *et alii*, 1999), even if this may not represent the most lucrative strategy for the institution and its shareholders.

Another point highlighted in the literature is the search by banks for better conditions to make use of the security networks supplied by governments (Saunders & Wilson, 1999). In general, large financial institutions are favored by their condition of being too big to fail, having for this reason privileged access to government help (discount windows, deposit insurance, support in merger processes, special credit lines etc.) in comparison with smaller institutions (Aglietta, 1998; Van't Dack, 1998; Eichengren, 1999). There is also evidence that the desire of these institutions to reach a higher market capitalization stimulates in many cases the merger with or acquisition of other corporations (The Economist, 1999; Steward, 1998). Consequently, shareholders and financial institutions put pressure for these deals to happen because of their understanding that this will increase the value of their shares. In addition, higher market capitalization allows financial institutions to acquire "strategic flexibility", giving them better conditions for external financing through the capital market and, as a result, to continue advancing positions in a market that presents an ever growing competition, even in the international sphere (Sherlock, 1998).

The increase in capitalization of banking institutions through the processes of association (graphic 1) takes place due to investors' expectations regarding gains of efficiency and/or market power, which will permit larger profits in the future. This occurs because through such processes banks are able to get greater market shares and considerable cost reductions, significantly improving their cost/income ratio (efficiency ratio). As an example, the association between Chase Manhattan, Chemical Bank and Manufacturers Hanover provided the resulting group with cost reductions in the range of US\$ 2.5 billion per year (The Economist, 1999). The announcement of the merger of the Swiss Bank Corporation with the Union Bank of Switzerland, in December 1997, was spurred by the expectation of a reduction of close to 13 thousand jobs and 20% in costs in the first three years

(Euromoney, 1998). Likewise, the merger in September 1997 of the German banks Bayerische Hypobank and Bayerische Vereinsbank was expected to attain a yearly economy of US\$ 562 million, thanks to the resulting cost reduction (Euromoney, 1998).

Finally, one cannot reject the possibility that the wave of mergers and acquisitions between financial institutions may also be fed by the desire of their managers to increase their own salaries. As shown by Bliss and Rosen (1999), the earnings of the directors of these institutions generally rise in the period after the association, in accordance with the principle that bigger financial corporations offer their managers higher compensation (Demsetz & Saidenberg, 1999).

A close analysis shows that such causes act not alone but jointly, mutually reinforcing each other in the majority of the cases, providing forces in favor of associations that surpass existing barriers, including those found in mergers and acquisitions between institutions of equal size. As described theoretically and empirically in many texts on the theory of organizations, due to the similar size of institutions that associate and to the rivalry that can emerge from that, the obstacles to a process of aggregation of institutions of similar size are higher, because of the presence of strong management and organizational culture conflicts.¹²

However, it is necessary to underline that such opportunities and incentives towards consolidation would not have been exploited if the regulation standards of the financial sector enforced in different countries up until the 70s had prevailed. It was the deregulation observed in the sector that set off the process of consolidation back in the 70s and 80s (*First Banking Coordination Directive* of 1977 and *Second Banking Coordination Directive* of 1989, in European Union countries; *Garn-St. Germain Act* of 1982 and several changes in state laws during this period in the USA) and that gave it a new impulse and dimension in the 90s (effective implementation of *Second Directive*, 1993/94, in the European Union; *Riegle-Neal Act*, 1994, and *Gramm-Leach-Bliley Act*, 1999, in the USA, as well as the “*Big Bang*” initiated in Japan in 1997). Therefore, under a general policy of financial liberalization, the changes in North American, Japanese and European legislation allowed their financial institutions to carry out a process of consolidation

via intra and inter-sectorial mergers and acquisitions with local and foreign corporations (see tables 1 and 3; Shearlock, 1999).

In other words, the suppliers of financial services try to benefit from the deregulation of the sector and from the opportunities which emerge therefrom, given the possibilities of financial gains, in many cases immediate,¹³ that can in general be anticipated for the shares of the firms involved in the processes of mergers or acquisitions. This also accounts for a large number of financial corporation associations from different countries and for an increase in the contestability of several national financial markets, even explaining part of those mergers and acquisitions inside domestic markets as a way for domestic financial institutions to become larger and discourage the entry and further growth of potential foreign competitors (tables 2 and 3).

Nonetheless, it should be noted that many countries have witnessed several rounds of financial deregulation and government incentives to consolidate the financial sector, including spurs toward, the entrance of foreign institutions either after or during periods of financial crisis (Caprio & Klingebiel, 1996). Thus, besides exposing their own deficiencies or the sector's fragilities as a whole, as well as the reductions in the price of firms which occur in those periods of difficulties, financial crises are a favorable time for reforming the financial system, as during those periods there is a weakening of the mechanisms of political resistance of both domestic financial institutions and the society at large (Kane, 1996; Kroszner, 1999). Hence, an important factor giving impulse to changes in financial and banking regulations is the desire of governments to incite the strengthening of the domestic financial institutions (Kono & Schuknecht, 1998; Taylor, 1998; Tamirisa *et alii*, 2000).

Therefore, in spite of the "national pride" in having large financial institutions (Boot, 1999), the technical basis behind such measures is the perception that these institutions have a better chance to survive in periods of financial instability, when compared to smaller ones. There is evidence that in the face of a financial crisis, a reduction in the supply of credit, which can deepen the crisis, is greater in the case of smaller banking institutions, whereas larger ones may act as cushions and avoid the collapse of this supply (Hancock & Wilcox, 1998). This point is very important especially for financial markets in developing countries, as many of them have in recent

years suffered the effects of a series of financial crises (Aglietta, 1998; Celarier, 1998; Stiglitz, 2000; Eichengreen, 1999). In such cases, not only do governments tend to press for an association of domestic financial institutions, but also, and sometimes predominantly, tend to create incentives to the entry of foreign institutions, seeking to strengthen domestic financial markets and to create wider and more stable channels for the flow of international credit (Goldberg *et alii*, 2000).

It can be emphasized that the technological innovations which occurred in the banking sector, whether on the asset or the liability side of their operations have given impulse to deregulation by governments, as they introduced new difficulties and challenges into the task of controlling financial operations (Kroszner & Strahan, 1997). They also strengthened the positions of those who defended financial deregulation and of potential local users of the international financial services market (Kroszner, 1999).

2. POSSIBLE CONSEQUENCES OF BANKING CONCENTRATION

The current world process of mergers and acquisitions discerned in the financial services industry can increase the market power of financial institutions, giving them, in some national and/or regional spheres, greater capacity to determine the value of their services, especially when considering those agents whose needs cannot be satisfied by institutions which are not located close by. In general, this is the case of retail customers with small deposits or loans (Kwast, Starr-McCluer & Wolken, 1997; Kwast, 1999). As some studies show (Berger & Hannan, 1989; Hannan, 1991, 1994; Jackson, 1997), more concentrated financial and banking markets are not beneficial to small customers, given that the rates of interest paid on investments are lower and the costs of loans are higher in comparison to those of markets with a lesser degree of concentration. Nevertheless, accepting the existence of potential economies of scale and scope in basic banking operations, the increase in the size of banks implies gains in efficiency that will reduce operating costs. Consequently, one cannot discard the possibility that this reduction will imply a decrease in banking spreads, thus providing better credit conditions and/or a higher remuneration on deposits for banking services customers.

Another positive effect of banking concentration, also with a cost decreasing potential, may come from a reduction of the expected risks of banking operations. This reduction would be obtained with the increase of sectorial, geographical and product diversification achieved by consolidated financial suppliers. Certainly, in order to know if such *ex-ante* cost reductions will or will not be passed on to customers of financial services, whether in the form of lower costs or quality improvement, will depend on the market structure emerging from this process of consolidation and especially on the level of competition the sector, imposed not only by market forces but also by the actions of regulatory agents, i.e., as a result both of “pure” market *and* institutional factors.

Hence, two aspects should be examined in estimating the impact of banking-financial concentration on the prices paid by customers: first of all, we must determine if this concentration will increase the efficiency of newly consolidated institutions, which leads to discussing whether or not there will be economies of scale and scope to be reaped even by large financial conglomerates; secondly, we must determine if those gains of efficiency will tend to be passed on to potential clients, whether through price reductions (lower cost of loans, higher earnings on deposits, reduction of *tariffs and taxes* for various services) or through a growth in the supply of new services.¹⁴ This relates to whether or not there are elements in the market generating competitive pressures, even when the financial services sector, after passing through a process consolidation, amplifies its degree of concentration.

With regard to the first aspect, evidence in several countries favors the hypothesis that a consolidation between financial institutions will promote cost reductions in the supply of traditional products and services (Resti, 1998; Rhoades, 1998; Fried *et alii*, 1999; Haynes & Thompson, 1999). This can be perceived, for example, as a greater efficiency of consolidated institutions capable of supplying multiple products and services through common channels and systems of distribution, management, marketing, and accounting. In this respect, several papers (Jayaratne & Strahan, 1998; Strahan & Weston, 1998; Berger *et alii*, 1998) indicate that from the process of concentration onwards there is (given an appropriate time span) a tendency toward a reduction in the prices of loans simultaneously to an expansion of the supply of credit, especially for small credit-takers.

However, it is important to stress the possibility that at first the opposite will take place if large banks acquire smaller ones in a hostile manner (which most often implies changes in the former corporation management). In this case, a curtail in the supply of credit to small borrowers can occur until the new controllers are able to properly evaluate the risks involved in those operations, as many of them depend on information obtained through a direct relationship between the parties (Berger *et al.*, 1995). Likewise, we cannot discard the possibility that when banks increase their capacity in order to leverage resources and work with more complex products and services they will move toward giving priority to the wholesale operations required by their large customers, as these offer better possibilities to “add value” as well as smaller risks. Smaller customers are thus relegated to a secondary role also for reasons of organizational “diseconomies” (Williamson, 1988). After all, the organizational profile necessary to meet the needs of large customers is different from that required for small and medium size customers. In general, being unable to compete in more sophisticated markets that cater to the needs of large customers, small financial institutions end up specializing in the supply of simpler products and services mostly required by smaller customers. In most cases, such operations call for a close relationship between suppliers and users of the service, not least because this enables the former to obtain information allowing for an evaluation of the risks involved for example in loans requested by the latter (Mester Nakamura & Renault, 1998; Cole, 1998).

Validating these statements, some studies carried out on data from the North American banking market (Keeton, 1995; Levonian & Soller, 1996) reinforce the conclusion that large banks relegate catering to small clients to a secondary plane. In the case of Italy, upon examining the process of mergers and acquisitions in the banking sector, Sapienza (1998) has also concluded that consolidated corporations, especially when large institutions were involved, reduced their credit portfolio to small debtors. Notwithstanding that, one cannot eliminate the possibility that as a reaction other banking institutions may come to supply this market niche and to specialize in providing credit to small economic agents. Although one cannot generalize this assertion with respect to many countries, Goldberg and White (1998) and De Young, Goldberg and White (1999) show that this is happening in the USA.

On the other hand, if there is empiric evidence that consolidated corporations become more efficient in terms of costs,¹⁵ there is also evidence that they start supplying more complex and sophisticated products and services, hence increasing their total costs (Berger & Mester, 1999). Such products and services are demanded mainly by large customers, who form the wholesale market of financial institutions and generally have plenty of access to international financial markets. Nonetheless, it is precisely in the wholesale market that the negative impacts of concentration are fewer and the positive effects of deregulation in terms of competitive pressure are more numerous, due to the fact that location advantages are almost nonexistent (Gande *et alii*, 1999). This being the case, financial institutions can adopt a differentiated margin profit policy in order to pass on some of the costs incurred in their wholesale operations to the prices of their retail products and services. They would therefore be in a better position to either protect or amplify their operations in the one market that offers a greater degree of contestability, that is to say, the wholesale market. On the other hand, with the continuation of the crossborder consolidation of financial institutions and its consequent reduction in the number of institutions operating in the global market, one cannot eliminate the possibility of an increase in the power of suppliers in relation to users of financial services even in this wholesale market.

This leads us to a second aspect. It is certainly true that for consumers of financial services (especially small ones) to benefit from these possible cost reductions in conventional products and services, banking concentration would have to take place simultaneously with an increase in the sector's level of competition, both in the retail market (small and medium customers) and in the wholesale one (corporate clients or holders of large fortunes). Although at first sight this may seem paradoxical, the process could be explained by either using the view that competition between capitals under general conditions is never ending, even amongst large capitals,¹⁶ or by those cases in which governments try to promote policies that increase market contestability (François & Schuknecht, 1999) by curtailing sectorial barriers to entry and/or exit. Hence, there is arguably a possibility that a reduction of competition within the sector could be taking place, with larger institutions increasing their capacity to fix prices, and that significant gains

in efficiency are being achieved through economies of scale. But the opposite view can also be upheld, namely, specifically with regard to financial sector conditions, that the sector is benefiting from economies of scale and scope (Hufbauer & Warren, 1999) and therefore having an opportunity both to reduce the costs of financial services and to increase the “fire power” of large international financial institutions (mega-corporations) in a market under rapid concentration and transformation, partly owing to technological development. Consequently, in a market with such characteristics, an increase rather than a reduction seems to be taking place in the competition between different capitals, since if the latter were true the market would be relatively stagnated and mature.

This argument seems to be supported by the state of affairs in USA, where the antitrust policy applied to the banking sector is similar to that applied to any other industrial sector, although a review of the antitrust policy in the banking sector literature is beyond the scope of this paper. So, general guidelines follow the Sherman Act (1890), the Clayton Act (1914), the U. S. Supreme Court decision involving Philadelphia National Bank in 1963, and the Community Reinvestment Act (1977). Proposals for banking mergers are surveyed by the FDIC (for non chartered interstate banks) or the FED (chartered interstate banks) and decided upon by the Department of Justice.

These institutions assume that “a primary goal of banking antitrust policy is to prevent the creation of, or an increase in, market power such that a firm could impose above-competitive prices and earn excess profits at the expense of consumers” (Cynark, 1998, p. 705).¹⁷ Nevertheless, it implies a definition of geographical and product market boundaries which in the last decade is being blurred by innovations in financial and information technologies. Thus, market evolution is one more factor challenging such a static approach to antitrust policy. But there still is no consensus in the specialized literature on this subject, for it is too early to foresee a clear trend in the complex interrelationship between the developments of all these contradictory forces.¹⁸

A decisive factor in the competitive and systemic effects of banking concentration is the action of regulatory agents. For a probable *leitmotif* for banks to incorporate other corporations and increase their size, as formerly indicated, is their search for the “too big to fail” condition (Saunders & Wil-

son, 1999), which will theoretically give them easier access to the security networks provided by governments. Another reason for this union between financial institutions is their desire to diversify risks. Both *leitmotivs* are related to the question of systemic risk or, in other words, to the possibility that liquidity or solvency problems within an institution will cause the same problems in other institutions, thus contaminating and exposing the whole financial and banking system to risk.

While accepting the hypothesis that consolidation of the financial services industry implies the formation of large institutions that are therefore more robust, the fact that these, as explained before, are subject to a higher degree of risk and individually represent a significant market share increases the possibility of systemic risk in case any of them should get into trouble, even more so if we consider the possibility of a market generalization of the “too big to fail” logic. Furthermore, as a large part of the merger and acquisition process takes place under the “umbrella” of a bank (i.e., with a bank as the head of the new bigger firm), when forming large financial services conglomerates there is a greater possibility that financial sub-sectors traditionally not protected by government security networks (as insurance, health and pension plans, finance companies etc.) will contaminate the banking activities of those conglomerates. As a result, more resources and/or better safety structures are required in order to prevent localized problems from contaminating other financial institutions in a scenario of systemic risk. In other words, consolidation of the financial sector under the auspices of banking groups increases the need for and the responsibilities of the lender of last resort.

Hence, all these factors lead us to the well-known question of a moral hazard: should such financial groups believe that they will be protected by the government in case of financial difficulties, which means at least a partial “socialization” of their losses, they may feel stimulated to increase their risk preference in order to obtain higher yields. This implies the generation of moral hazard problems, for there are incentives for such institutions to take greater risks than they would if the “safety network” provided by governments were not available. As a consequence, there will tend to be an elevation of the systemic risk of the financial sector as a whole (Aglietta, 1998).

One way to mitigate the moral hazard problem is to ask the agents responsible for the prudential regulation and supervision to settle clear and rigid rules that explicitly limit the risks for several banking activities, conditioning access to the government's safety network to compliance to those rules. Such action may thus discourage any particular trend towards risk. However, *ex-ante* imposition of those aid rules to financial markets has proven very difficult, whether because it is hard to settle them beforehand and/or on account of market pressures for help times of hardship (we should also include in this last reason the risk that crises may spread beyond the financial market, i.e., to the entire economy). Some authors¹⁹ go as far as to indicate that a certain degree of moral hazard is inherent to financial contracts and to the activities of the lender of last resort.

If so, starting from an examination of the existing international literature it is impossible to affirm *ex-ante* what will be the effects of banking concentration and to offer a general conclusion. Examples showing the beneficial results of concentration are as numerous as those reaching contrary conclusions. Each case of a merger or acquisition has its own peculiarities and, keeping those in mind, one must endeavor to extract relevant information in order to estimate its effects on the market. This imposes serious challenges to government regulatory institutions, since it does not allow for the definition of a standardized line of action.

3. BANKING INTERNATIONALIZATION AND DENATIONALIZATION

In countries having a banking system composed of institutions directed toward a domestic market of small size by international standards, and/or of lower efficiency when compared to their foreign counterparts, it is probable that banking deregulation accompanied by liberalization of the entry of foreign institutions will provoke not only concentration but also banking denationalization. That process occurred, for instance, in several Latin-American countries during the 1990s, Argentina and Mexico being the most outstanding cases (Goldberg *et alii*, 2000).

As analyzed before, changes in information and payments technologies have broadened the economies of scale and scope available to banking ac-

tivities. Simultaneously, several national markets became too small to allow banks to make use of such economies in an efficient and wiser manner. This forced them to seek external markets, whether in developed or developing countries, where they could vie for potentially important customers with domestic banks.

In the case of developed countries, this motivation came from objectives of pure and simple geographical expansion as well as from the opening of profitable opportunities in those countries, in addition to the search for the bigger customers to be found therein. Consequently, even banks acting in large national markets were forced to react as their national territories were more subjected to foreign competition. From this point of view, the very survival of banking institutions in national markets became fundamentally dependent on their global competitive capacity. Moreover, as stated before, there is the fact that financial institutions with geographical diversification seem to show a better performance in the expected risk-return mix (Demsetz & Strahan, 1997; Hughes & Mester, 1998; Hughes *et alii*, 1999).

Apparently, those aspects and reasons permitted financial institutions to overcome eventual difficulties to manage and supervise their activities in other countries, given that those activities involve dealing with different cultures, currencies, regulation systems, etc. However, it should be clear that this effort is probably being motivated by greater return prospects as well as by the need to ensure the survival of the institution in every local sphere through this international expansion, or, when this movement is motivated by local governments, even by the very need to preserve the stability of domestic financial systems under the rule of those governments. Therefore, governmental authorities responsible for regulating the sector must be aware of the prevalence of each of those circumstances and ponder over the potential implications of each choice for the future course of the economy. We now present three important issues for this evaluation.

Some papers (Berger *et alii*, 1998, 1999; Clarke *et alii*, 1999) have shown that financial institutions acting simultaneously in different countries try to concentrate their business and obtain their income by catering to the needs of large customers, who represent the most profitable share of

the market, and by assigning a secondary role to smaller ones, who generally demand only traditional products and services. Thus, to the negative effects on smaller investors and/or loan takers which arise from banking concentration we should add those of banking denationalization. Such effects obviously cause more concern when the country in question does not have a large and sound capital market granting easy access to the smaller economic agents, or when the country has no alternative channels of credit supply, such as cooperative systems, state or public financing agencies etc. Among other effects, the reduction of credit channels to small firms might mean that fewer business opportunities will be exploited by these corporations and that there will be greater economic concentration. Keeping those issues in mind, it is thus necessary to determine whether the decrease in the cost of capital for large institutions will offset the loss incurred by smaller enterprises and create a positive general impact on the rates of economic growth. Denationalization and banking concentration will otherwise hinder the course of the country's economic growth.

Another aspect that deserves attention in discussing the process of internationalization and consolidation of the banking sector is its impact on the channels of transmission of monetary policy. In a banking system composed mainly of small-sized national banks, as judged by international standards, the monetary authority has greater capacity to influence the economy through changes in the basic interest rates and/or in the supply of banking reserves (Kashyap & Stein, 1997a, 1997b). This occurs because of its control over the sources of banking reserves to which banks have access, hence making them more sensitive to monetary policy indications in order to define their strategies of supplying credit to their customers. But, with the consolidation and internationalization of the banking system, it gets to be formed by institutions with plenty of access to the international credit market, even through the issuance of securities. In other words, the banking system turns up to be made of institutions which are less dependent on banking "funds" controlled by the domestic monetary authority, and it therefore has more freedom to define its credit policies. This argument could be reinforced by the fact that foreign banks have the possibility to be more receptive to market indicators, supplying credit when market opportunities seem to be profitable *ex ante*, even within a context of restric-

tive monetary policies or during unfavorable domestic business cycles. Analysis of data on the Mexican and Argentinian banking systems confirms such a possibility (Goldberg *et alii*, 2000).

There is also the possibility that the entry of foreign banking and financial institutions, with the resulting banking denationalization, will render developing countries more fragile in the face of external impacts, due to the greater availability of channels for capital outflows from the countries in question. Some papers evidence that financial crises are preceded by measures of financial liberalization (Caprio & Hanson, 1999; Kaminsky & Reinhart, 1999). Nevertheless, Demirgüç-Kunt *et alii* (1998) show that, between 1988 and 1995, the incidence of banking crises was less conspicuous precisely in countries where the entry of foreign banks was greater. Even so, the possibility that foreign banks can provide wider channels for inflows and, more important, outflows of capitals when faced with economic crises cannot be dismissed, though it is also admissible, at least in theory, that they accelerate the return of countries to the international capital markets in the post crisis period.

In short, banking denationalization does not imply only one range of possible consequences, regardless of the country under consideration. On the contrary: we should make a case by case study of the potential consequences of each individual example, starting from the analysis of as many intervening factors as possible and, most specifically, of the credit market structure of the country in question.

4. CLOSING CONSIDERATIONS

In view of what has been discussed throughout this paper, the complexity of financial consolidation in different countries becomes evident. If measures of liberalization and financial deregulation have redefined the competition *locus*, technological innovations and new demands for financial services have made these *loci* even more attractive to banking institutions. They have also increased the competitive advantage of large banking institutions, unleashing a chain of mergers and acquisitions which created mega-banks operating in different markets and financial businesses.

The impacts of this phenomenon come in several dimensions. While reducing the costs of development and distribution of financial services as well as the risks in bank portfolios, banking concentration does not result *a priori* in better conditions for the users of these services, especially those pertaining to the retail market, given that such economies of scale may be accompanied by greater market power. Furthermore, large banks seem to give priority to wholesale market customers who usually demand more sophisticated products with greater “value added”. Thus, the risk exists that smaller economic agents will have their channels of access to credit reduced and probably incur a loss of investment opportunities.

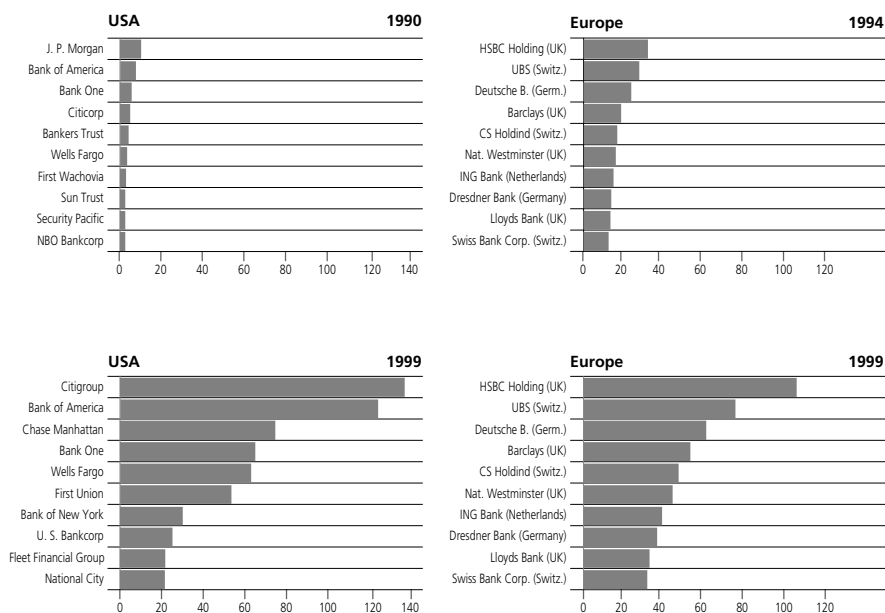
The challenge to the authorities responsible for this sector is to devise regulations which can exercise pressure so that banks will comply with their function as efficient providers of financial services even to small customers in an environment of competitive pressure, and which at the same time will give banking institutions installed in national markets enough freedom to implement strategies that may guarantee their competitiveness also in the international sphere. Accordingly, authorities responsible for this industry must also consider the question of the risks incurred by consolidated banks, for as seen above, being goaded among other things by their status as institutions that are “too big to fail”, these banks can increase systemic risk. The scenario becomes even more complex when the process of banking consolidation converges toward a process of banking denationalization. As discussed previously, this kind of developments bear upon the mechanisms of transmission of monetary policy and upon control of the flows of international capital.

Finally, since we are dealing with a segment that is strategic in the definition of the future economic growth of nations, the policies directed toward the financial services sector must be implemented with caution and within a pre-established sequence, even in regard to the timing of their adoption, always evaluating the effects of each measure taken. If there is a consensus, it is that the need exists for greater coordination among countries in the setup and management of prudential regulation/supervision systems, along with an efficient establishment of safety networks for financial activities.

ANNEX

Graph 1: Ten Largest Banks by Market Capitalization

USA (1990 and 1999) and Europe (1994 and 1999)



Source: Financial Times and Securities Data Company.

Table 1: Crossborder Acquisitions and Mergers of Banks and Private Insurance Companies (1989-1996)

	Value of transactions (in US\$ billions)		
	Major*	Total	1989 = 100
1989	7.216	7.216	100
1990	5.524	9.114	126
1991	2.965	6.073	84
1992	11.435	13.432	186
1993	5.651	10.134	140
1994	5.032	6.961	96
1995	14.478	16.805	233
1996	14.296	21.303	295

Source: World Investment Report (1997).

*Transactions involving major acquisition.

Table 2: Large Mergers in the Banking Sector

Institutions	Value of the transaction		Date	Total assets*
	(US\$ bilhões)			
Nations Bank / BankAmerica	42,8		Sep. 1998	570
Citicorp / Travelers	37,4		Sep. 1998	751
BNP / SG Paribas	37,2		pending	1170
Royal Bank of Scotland / National Westminster	33,9		Feb. 2000	..
Mitsubishi / Bank of Tokyo	33,8		Mar. 1996	980
Wells Fargo / Norwest	32,3		Oct. 1998	191
Union Bank of Switzerland / Swiss Bank Corp.	29,3		Jun. 1998	600
TSB / Lloyds Bank	20,1		Dec. 1995	410
Bank One / First Chicago NBD	18,9		Jan. 1998	240
Deutsche Bank / Bankers Trust	10,1		Mai. 1999	567
HSBC / Republic New York	10,3		pending	536

Source: The Banker, 7/1999, Business Times on line, and Bankers Almanac.

*Value resulting from the sum of assets at the time of the merger (in US\$ millions).

Table 3: Mergers and Acquisitions in the Banking Sector (1991-1998)

	Number of transactions (1)				Value of transactions (2)				Percentage of all sectors (3)			
					(US\$ billions)							
	1991 -1992	1993 -1994	1995 -1996	1997 -1998	1991 -1992	1993 -1994	1995 -1996	1997 -1998	1991 -1992	1993 -1994	1995 -1996	1997 -1998
United States	1.354	1.477	1.803	1.052	56,8	55,3	114,9	362,4	10,7	9,0	10,6	18,2
Japan	22	8	14	28	0,0	2,2	34,0	1,1	0,3	18,8	21,6	4,1
Euro Area (4)	495	350	241	203	17,5	14,6	19,1	100,4	8,3	9,3	11,2	27,1
Belgium	22	18	20	21	1,0	0,8	0,5	32,5	14,1	7,0	4,9	34,8
Finland	51	16	7	7	0,9	1,0	1,2	4,3	22,3	21,7	7,4	77,5
France	133	71	50	36	2,4	0,5	6,5	4,0	4,3	1,0	9,8	4,1
Germany	71	83	36	45	3,5	1,9	1,0	23,2	6,5	7,6	3,7	45,5
Italy	122	105	93	55	5,3	6,1	5,3	30,1	15,6	17,7	24,9	63,3
Holland	20	13	8	9	0,1	0,1	2,2	0,4	0,2	0,5	17,5	0,8
Spain	76	44	27	30	4,3	4,5	2,3	5,9	13,5	21,5	14,1	26,6
Norway	23	24	9	5	0,1	0,2	1,0	1,5	1,2	5,7	8,0	20,0
Sweden	38	23	8	8	1,1	0,4	0,1	2,1	3,8	2,0	0,3	7,1
Switzerland	47	59	28	22	0,4	3,9	1,0	24,3	9,5	43,4	2,4	78,3
United Kingdom	71	40	25	17	7,5	3,3	22,6	11,0	6,5	3,4	10,4	4,0
Australia	19	20	18	14	0,9	1,5	7,3	2,3	3,6	5,7	14,3	4,9
Canada	29	31	16	11	0,5	1,8	0,1	29,1	1,9	4,1	1,6	34,4
Total of banks	2.098	2.032	2.162	1.360	84,7	83,2	200,8	534,2	11,7	8,5	11,0	18,9
Total of non bank finan. Inst.	2.723	3.267	3.973	5.156	63,7	1.22,2	89,9	..	8,8	12,5	10,4	19,4

Source: Securities Data Company.

(1) Per target sector. (2) Transactions realized and pending, by announced value. (3) Share of banking sector in the total M & A value of all sectors. (4) Excluding Austria, Ireland, Luxembourg and Portugal.

Table 4: Banking Concentration in Selected Countries

	Number of Institutions ¹ (%)			Rate of variation 1980-1997	Share of 5 (10) largest institutions in total assets (%)		
	1980	1990	1997		1980	1990	1997
USA	36103	27897	22140	-20,6	9 (14)	9 (15)	17 (26)
Japan	547	605	575	-5,0	25 (40)	30 (49)	31 (51)
Euro Area	9445	8979	7040	-21,6			
Austria	1595	1210	995	-17,8	40 (63)	35 (54)	44 (57)
Belgium	176	157	136	-13,4	53 (69)	48 (65)	57 (74)
Finland	631	498	341	-31,5	63 (68)	65 (69)	77 (80)
France	1033	786	567	-27,9	56 (69)	52 (66)	57 (73)
Germany	5355	4721	3577	-24,2			17 (28)
Italy	1071	1067	909	-14,8	26 (42)	24 (39)	25 (38)
Holland	200	180	169	-6,1	69 (81)	73 (84)	79 (88)
Portugal	17	33	39	18,2			
Spain	357	327	307	-6,1	38 (58)	38 (58)	47 (62)
Norway	346	165	154	-6,7	63 (74)	68 (79)	59 (71)
Sweden	598	498	124	-75,1	64 (71)	70 (82)	90 (93)
Switzerland	478	499	394	-21,0	45 (56)	45 (57)	49 (62)
United Kingdom	796	665	537	-19,2		49 (66)	47 (68)
Australia	812	481	344	-28,5	62 (80)	65 (79)	69 (81)
Canada	1671	1307	942	-27,9		55 (78)	78 (93)

Source: BIS (1999).

¹Deposit-taking institutions, generally including commercial banks, savings banks, and various types of mutual and cooperative banks.

Table 5: Credit Institutions in G – 10 Countries – 1997

	Total number of institutions		Rate of variation (%) 1990-97	Total number of branches		Rate of variation (%) 1990-97	Market share of 5 largest total assets (%)		Market share of branches and subsidiaries total assets no. (%)		
	1990	1997		1990	1997		1990	1997	1995	1997	
Germany	4.594	3.409	-25,79	77.326	59.695	-22,8	13,9	16,1	153	4,2	4,3
Belgium	122	136	11,48	13.452	9.041	-32,79	48	57	71	28,4	36,3
Canada	2.920	2.413	-17,36	13.269	13.642	2,81	55	78	-	-	-
USA ¹	31.842	22.331	-29,87	107.703	73.538	-31,72	9	17	460	21,7	20,7
France	779	519	-33,38	42.536	46.639	9,65	52	57	305	12,2	12,2
Holland	153	127	-16,99	8.161	7.071	-13,36	73	79	49	9,7	7,7
Italy	1.065	937	-12,02	32.162	39.936	24,17	24	25	61	5,4	6,8
Japan ²	6.279	4.266	-32,06	68.142	69.022	1,29	30	31	142	2,1	4,9
Unit. Kingdom	637	553	-13,19	41.431	35.234	-14,96	22	28	387	51,6	52,1
Sweden	138	125	-9,42	5.136	3.624	-29,44	70	90	18	9,8	1,6
Switzerland	458	362	-20,96	8.021	6.995	-12,79	45	49	18	11,8	-

Source: Berger *et al.* (2000), rearranged by the authors.

¹ Does not include branches or representation offices of foreign banks.

² Excluding credit cooperatives and other finance intermediates.

NOTES

1. See also Shearlock (1999); Caplen (1998) and Stewart (1998).
2. Between the early 80s and 1998, the share in total deposits of the ten largest commercial banks in the USA grew from 19% to 37% (Brewer III *et al.*, 2000, 5).
3. In the words of an Executive of the Credit Suisse Group, European and North American banks are in the “Age of Bankassurance” (Euromoney, 1998).
4. See, for instance, Hunter & Timme (1986); Ferrier & Lovell (1990); Hunter *et al.* (1990); Noulas *et alii* (1990); Goldberg *et al.* (1991); Mester (1992); Gardner & Grace (1993); Yuengert (1993).
5. Bauer & Ferrier (1996); Radecki *et al.* (1997); Berger & Mester (1997); Hancock *et al.* (1999). Evidence is less conclusive regarding the presence of economies of scope in the financial industry (Allen & Rai, 1996; Clark & Siems, 1997; Vander Vennet, 1999). However, with the dissemination of market-based financial systems (Levine, 2000), in which the concentration, processing and analysis of information, data and markets are fundamental for operations such as the launching of securities, multiple banks that supply diverse financial products and act in several markets can benefit from a reduction of maintenance costs of their information and data banks. This advantage would be added to those arising from the sharing of physical installations and communication networks, probably surpassing eventual diseconomies of management and/or lack of specialization.
6. See statements made in this respect by the Chairman of Westdeutsche Landesbank (Euromoney, 1998).
7. The possibility that such innovations can also benefit smaller financial institutions cannot be discarded, if they are able to associate with electronic payment and financial transaction settlement networks maintenance consortia.
8. In this respect, the Dresdner Bank is planning to concentrate its banking activities outside Europe in the area of consulting for large companies (multinationals) and in asset management, while keeping its traditional banking activities essentially within the European Continent (*O Estado de S. Paulo*, 2000).
9. Edwards & Mishkin (1995); Kwan (1998); Tiner (1999).
10. Akhavein *et alii* (1997); Berger & Mester (1999); Hughes *et alii* (1999).
11. Stewart (1998); Shearlock (1999); Guillén & Tschöegl (1999).
12. Such a conflict seems to have been responsible for the discontinuation of the merger of the German Deutsche Bank and Dresdner Bank, which had even been announced in the press in March of that year (*Folha de S. Paulo*, 2000).
13. As explained before, this accrual in value occurs because an increased market share improves future prospects of profits by financial institutions, given the possibilities of gains of scale and scope, greater power to establish profit margins, cutting redundant costs, a wider access to the government security network, expansion of geographical areas efficiently covered etc. (Caplen, 1998; Hufbauer & Warren, 1999).

14. Claessens *et alii* (1998); Claessens & Glaessner (1999); Cetorelli & Gambera (1999); Scholtens (2000).
15. Resti (1998); Rhoades (1998); Fried *et al.* (1999); Haynes & Thompson (1999).
16. As in Schumpeter (1942). This author lays emphasis on the importance of a series of product and market organizational strategies (generically named “new combinations”) leading to the concentration of markets (but always with the presence of counterforces and unexpected innovations by new competitors that pressure in the opposite direction, i.e., toward a deconcentration of markets) as the relevant competitive criterion. *Effective* competitive and *potential* perennial pressures would thus guarantee a *sufficing* efficiency of the enterprises’ structures (of any size), whether this *sufficing* efficiency refers to an augmenting competition or a decreasing one. Thus, the Schumpeterian view opposes the passive, atomistic and maximizing conventional vision of enterprises and competition. See also Nelson & Winter (1974, 1977, 1982); Hodgson (1991, 1994) and Possas *et alii* (1995).
17. This increase in market power is measured by the Herfindahl-Hirschman Index (HHI).
18. Claessens *et alii* (1998); Claessens & Glaessner (1999); Cetorelli & Gambera (1999); Scholtens (2000); Edwards & Mishkin (1995).
19. Aglietta (1998); Minsky (1993); Minsky & Whalen (1996-1997); Tobin & Ranis (1998). For Aglietta (1998, p. 19), “(c)ontrary to what people use to say, as a moral hazard is included in most financial contracts, to prohibit the lender of last resort is surely not the right way to deal with this inefficiency. The proper course is to strengthen prudential policies that can ensure a complete autonomy of action to the lender of last resort. This implies no more than a return to the true essence of the lender of last resort: to guarantee confidence in the functioning of monetary markets.” Nevertheless, one may point to the additional difficulties of granting complete autonomy to the lender of last resort in face of the pressures toward its action. From this result once again the high levels of moral hazard in this particular case.

REFERENCES

- AGLIETTA, M. (1998) “Lidando com o risco sistêmico”. *Economia e Sociedade*, 11, p. 1-32.
- ALIBER, R. Z. (1984) “International banking: a survey”. *Journal of Money, Credit, and Banking*, 16 (4), p. 661-678.
- AKHAVEIN, J. D., BERGER, A. N., HUMPHREY, D. B. (1997) “The effects of bank mega-mergers on efficiency and prices: evidence from the profit function”. *Review of Industrial Organization*, 12 (1), p. 95-139.
- ALLEN, L., RAI, A. (1996) “Operational efficiency in banking: an international comparison”. *Journal of Banking and Finance*, 20 (4), p. 655-672.
- AYUSO, J., BLANCO, R. (2000) *Has Financial Market Integration Increased During the 1990s?* Conference, Papers n. 8. Bank for International Settlements, Basel.
- BANK FOR INTERNATIONAL SETTLEMENTS (BIS) (1999) “International banking and financial market developments”. *BIS Quarterly Review*, Aug.

- THE BANKER (1999) "Reversal of fortune". *The Banker*, 881, p. 85-96.
- BANKER ALMANAC (<http://www.bankersalmanac.com>).
- BAUER, P. W., FERRIER, G. D. (1996) "Efficiency measurement issues for payments processing". *Journal of Money, Credit and Banking*, 28 (4), p. 1.004-1.039.
- BERGER, A. N., BONIME, S. D., GOLDBERG, L. G., WHITE, L. J. (1999) *The Dynamics of Market Entry: the effects of mergers and acquisitions on de novo entry and small business lending in the banking industry*. Finance and Economics Discussion Series, 1999-41. Washington, DC: Board of Governors of the Federal Reserve System.
- _____, DE YOUNG, R., GENAY, H., UDELL, G. F. (2000) *Globalization of Financial Institutions: evidence from cross-border banking performance*. Finance and Economics Discussion Series, 2000-04. Washington, DC: Board of Governors of the Federal Reserve System.
- _____, HANNAN, T. H. (1989) "The price-concentration relationship in banking". *Review of Economics and Statistics*, 71: 291-299.
- _____, KASHYAP, A., SCALISE, J. (1995) "The transformation of the U.S. banking industry: what a long, strange trip it's been". *Brookings Papers on Economic Activity*, 2, p. 55-218.
- _____, MESTER, L. J. (1997) "Inside the black box: what explains differences in the efficiencies of financial institutions?". *Journal of Banking and Finance*, 21 (4), p. 895-947.
- _____, _____ (1999) *What Explains the Dramatic Changes in Cost and Profit Performance of the U.S. Banking Industry?* Finance and Economics Discussion Series, 1999-13, Washington, DC: Board of Governors of the Federal Reserve System.
- _____, SAUNDERS, A., SCALISE, J., UDELL, G. (1998) "The effects of bank mergers and acquisitions on small business lending". *Journal of Financial Economics*, 50 (2), p. 187-229.
- BLISS, R. T., ROSEN, R. J. (1999) *The CEO Compensation and Bank Merger*. Indiana: Mimeo. (www.bus.indiana.edu/fin446/MYSTUFF/ceo.comp.pdf).
- BOOT, A. W. A. (1999) "European lessons on consolidation in banking". *Journal of Banking and Finance*, 23 (2-4), p. 609-613.
- BREWER III, E., JACKSON III, W. E., JAGTIANI, J. A., NGUYEN, T. (2000) "The price of bank mergers in the 1990s". *Economic Perspectives*, Federal Reserve Bank of Chicago, Chicago, 24 (1), p. 2-23.
- BUSINESS TIMES ON LINE (<http://business-times.asia1.com.sg/special/bankfin9911.html>).
- CAPLEN, B. (1998) "Uriarte's latin springboard". *Euromoney*, 353, p. 130-132.
- CAPRIO Jr., G., HANSON, J. A. (1999) *The Case for Liberalization and some Drawbacks*. Policy Research Working Papers. Washington, DC: The World Bank (<http://www.worldbank.org/research/interest/confs/past/papers18/Caprio-HansonNew.pdf>)
- _____, KLINGEBIEL, D. (1996) "Bank insolvency: bad luck, bad policy, or bad banking". In M. Bruno, B. Pleskovic (eds.), *Annual World Bank Conference on Development Economics 1996*. Washington, DC: The World Bank (<http://www.worldbank.org/research/pdffiles/abcde96.pdf>).

- CELARIER, M. (1998) "Too many risks, too few rewards". *Euromoney*, 353, p. 71-80.
- CLAESSENS, S., DEMIRGÜÇ-KUNT, A., HUIZINGA, H. (1998) *How Does Foreign Entry Affect the Domestic Banking Market?* Washington, DC: The World Bank.
- _____, GLAESSNER, T. (1999) *Internationalization of Financial Services in Asia*. Washington, DC: The World Bank.
- CLARK, J., SIEMS, T. F. (1997) *Competitive Viability in Banking*. Financial Industry Studies Working Paper, 97-5. Dallas: Federal Reserve Bank of Dallas.
- CLARKE, G., CULL, R., D'AMATO, L., MOLINARI, A. (1999) *The Effect of Foreign Entry on Argentina's Domestic Banking Sector*. Policy Research Working Papers, 2.158. Washington, DC: The World Bank.
- COLE, R. A. (1998) "The importance of relationships to the availability of credit". *Journal of Banking and Finance*, 22 (6-8), p. 959-977.
- CYNARK, A. W. (1998). "Bank Merger Policy and the New CRA Data". *Federal Reserve Bulletin*. September: 703-715. Washington DC: Federal Reserve Board.
- DEMIRGÜÇ-KUNT, A., DETRAGIACHE, E. (1998) *Financial Liberalization and Financial Fragility*. Policy Research Working Papers, 1917. Washington, DC: The World Bank.
- DEMSETZ, R. S., SAIDENBERG, M. R. (1999) *Looking Beyond the CEO: executive compensation at banks*. Staff Report, 68. New York: Federal Reserve Bank of New York.
- _____, STRAHAN, P. E. (1997) "Diversification, size, and risk at bank holding companies". *Journal of Money, Credit, and Banking*, 29 (3), p. 300-313.
- DE YOUNG, R., GOLDBERG, L. G., WHITE, L. J. (1999) "Youth, adolescence, and maturity at banks: credit availability to small business in an era of banking consolidation". *Journal of Banking and Finance*, 23 (2-4), p. 463-492.
- EDWARDS, F. R., MISHKIN, F. S. (1995) "The decline of traditional banking: implications for financial stability and regulatory policy". *Economic Policy Review*, 27-45, July. New York: Federal Reserve Bank of New York.
- EICHENGREEN, B. (1999) *Strengthening the International Financial Architecture: where do we stand*. Prepared for the East-West Center Workshop on International Monetary and Financial Reform. Honolulu: Mimeo.
- EUROMONEY (1998) "The virtual roundtable". *Euromoney*, 356 (<http://www.euromoney.com/index.html>).
- FERRIER, G. D., LOVELL, C. A. K. (1990) "Measuring cost efficiency in banking: econometric and linear programming evidence". *Journal of Econometrics*, 46 (1-2), p. 229-245.
- FINANCIAL TIMES (1999) "Route of consolidation is unclear". *Financial Times*. Survey on Banking (www.ft.com/ftsurveys/q75e2.htm).
- FOLHA DE S. PAULO (2000) "Deutsche Bank deve se unir a concorrente". *Folha de S. Paulo*, 8 Mar.: 5-2.
- FRANÇOIS, J. F., SCHUKNECHT, L. (1999) *Trade in Financial Services: procompetitive effects and growth performance*. (s.l.): Mimeo.

- FRIED, H. O., LOVELL, C. A. K., YAISAWARNG, S. (1999) "The impact of mergers on credit union service provision". *Journal of Banking and Finance*, 23 (2-4), p. 367-386.
- GANDE, A., PURI, M., SAUNDERS, A. (1999) "Bank entry, competition and the market for corporate securities underwriting". *Journal of Financial Economics*, 54 (2), p. 165-195.
- GARDNER, L., GRACE, M. F. (1993) "X-efficiency in the U.S. life insurance industry". *Journal of Banking and Finance*, 17 (2-3), p. 497-510.
- GOLDBERG, L. G., WHITE, L. J. (1998) "De novo banks and lending to small businesses". *Journal of Banking and Finance*, 22 (6-8), p. 851-867.
- _____, HANWECK, G. A., KEENAN, M., YOUNG, A. (1991) "Economies of scale and scope in the securities industry". *Journal of Banking and Finance*, 15 (1), p. 91-107.
- _____, DAGES, B. G., KINNEY, D. (2000) *Foreign and Domestic Bank Participation in Emerging Markets: lessons from Mexico and Argentina*. NBER Working Papers, W7714. Cambridge, Mass: National Bureau of Economic Research.
- GUILLEN, M. F., TSCHOEGL, A. E. (1999) *At Last the Internationalization of Retail Banking? The Case of the Spanish Banks in Latin America*. Working Paper, 99-41. Philadelphia, Penn: The Wharton Financial Institutions Center.
- HADLOCK, C., HOUSTON, J.F., RYNGAERT, M. (1999) "The role of managerial incentives in bank acquisitions". *Journal of Banking and Finance*, 23 (2-4), p. 221-249.
- HANCOCK, D., HUMPHREY, D. B., WILCOX, J. A. (1999) "Cost reductions in electronic payments: the roles of consolidation, economies of scale, and technical change". *Journal of Banking and Finance*, 23 (2-4), p. 391-421.
- _____, WILCOX, J. A. (1998) "The 'credit crunch' and the availability of credit to small business". *Journal of Banking and Finance*, 22 (6-8), p. 983-1.014.
- HANNAN, T. H. (1991) "Bank commercial loan markets and the role of market structure: evidence from surveys of commercial lending". *Journal of Banking and Finance*, 15 (1), p. 133-149.
- HAYNES, M., THOMPSON, S. (1999) "The productivity effects of banks mergers: evidence from the UK building societies". *Journal of Banking and Finance*, 23 (4), p. 825-846.
- HODGSON, G. M. (1991) "Economic evolution: intervention contra Pangloss". *Journal of Economic Issues*, 25 (2), p. 519-533.
- _____, (1994) "Optimisation and evolution: Winter's critique of Friedman revisited". *Cambridge Journal of Economics*, 18 (4), p. 413-430.
- HUFBAUER, G., WARREN, T. (1999) *The Globalization of Services: what has happened? What are the implications?* Washington, D.C.: Mimeo.
- HUGHES, J. P., LANG, W., MESTER, L. J., MOON, C. G. (1999) "The dollars and sense of bank consolidation". *Journal of Banking and Finance*, 23 (2-4), p. 291-324.
- _____, MESTER, L. J. (1998) "Bank capitalization and cost: evidence of scale economies in risk management and signaling". *Review of Economics and Statistics*, 80 (2), p. 314-325.
- HUNTER, W. C., TIMME, S. G. (1986) "Technical change, organizational form, and the structure of bank production". *Journal of Money, Credit and Banking*, 18 (2), p. 152-166.

- _____, _____, YANG, W. K. (1990) "An examination of cost subadditivity and multi-product in large U. S. banks". *Journal of Money, Credit and Banking*, 22 (4), p. 504-525.
- INTERNATIONAL MONETARY FUND (IMF) (1999) *International Capital Markets: developments, prospects and key policy issues*. Washington, DC: IMF.
- _____ (2000) *World Economic Outlook*. Washington, DC: IMF.
- JACKSON III, W. E. (1997) "Market structure and the speed of price adjustments: evidence of non-monotonicity". *Review of Industrial Organization*, 12 (1), p. 37-57.
- JAYARATNE, J. STRAHAN, P. E. (1998) "Entry restrictions, industry evolution and dynamic efficiency: evidence from commercial banking". *Journal of Law and Economics*, 41 (1), p. 239-274.
- KAMINSKY, G., REINHART, C. M. (1999) "The twin crises: the causes of banking and balance-of-payments problems". *American Economic Review*, 89 (3), p. 473-500.
- KANE, E. J. (1996) "De jure interstate banking: why only now?". *Journal of Money, Credit, and Banking*, 28 (2), p. 141-161.
- KEETON, W. R. (1995) "Multi-office bank lending to small businesses and farmers? New evidence from tenth district states". *Economic Review*, Federal Reserve Bank of Kansas City, Kansas City, 80 (2), p. 63-75.
- KONO, M., SCHUKNECHT, L. (1998) *Financial Services Trade, Capital Flows, and Financial Stability*. World Trade Organization, Economic Research and Analysis Division. Geneva: WTO.
- KROSZNER, R. S. (1999) *Is the Financial System Politically Independent? Perspectives on the Political Economy of Banking and Financial Regulation*. Chicago: University of Chicago.
- _____, STRAHAN, P. E. (1997) "The political economy of deregulation: evidence from the relaxation of banking restrictions in the United States". Research Paper, 9.720. New York: Federal Reserve Bank of New York.
- KWAN, S. (1998) *Securities Activities by Commercial Banking Firms' Section 20 Subsidiaries: risk, return, and diversification benefits*. Working Paper, 98-10. San Francisco: Federal Reserve Bank of San Francisco.
- KWAST, M. (1999) "Bank mergers: what should policymakers do?". *Journal of Banking and Finance*, 23 (2-4), p. 629-636.
- _____, STARR-MCCLUER, M., WOLKEN, J. D. (1997) "Market definition and the analysis of antitrust in banking". *Antitrust Bulletin*, 42, p. 973-995.
- LEVINE, R. (1997) "Financial development and economic growth: views and agenda". *Journal of Economic Literature*, 35, p. 688-726.
- _____ (2000) *Bank-Based or Market-Based Financial Systems: which is better?* Conference Paper on Financial Structure and Economic Development. Washington, DC: The World Bank.
- LEVONIAN, M., SOLLER, J. (1996) *Small Banks, Small Loans, Small Business*. Weekly Letter, 96-02. San Francisco: Federal Reserve Bank of San Francisco.

- MAY, D. O. (1995) "Do managerial motives influence firm risk reduction strategies?". *Journal of Finance*, 50, p. 1.291-1.308.
- MESTER, L. J. (1992) "Traditional and nontraditional banking: an information-theoretic approach". *Journal of Banking and Finance*, 16 (3), p. 545-566.
- _____, NAKAMURA, L. I., RENAULT, M. (1998) *Checking Accounts and Bank Monitoring*. Working Paper, 98-25. Philadelphia, Penn: Federal Reserve Bank of Philadelphia.
- MINSKY, H. P. (1993) *Finance and Stability: the limits of capitalism*. Presented at a Conference on "The Structure of Capitalism and the Firm in Contemporary Society." Milan: Mimeo.
- _____, WHALEN, C. J. (1996-1997) "Economic insecurity and the institutional prerequisites for successful capitalism". *Journal of Post Keynesian Economics*, 19 (2), p. 155-170.
- NELSON, R. R., WINTER, S. G. (1974) "Neoclassical vs. evolutionary theories of economic growth: critique and prospectus". *Economic Journal*, 84, p. 886-905.
- _____, _____ (1977) "In search of a useful theory of innovation". *Research Policy*, 6 (1), p. 36-76.
- _____, _____ (1982) *An Evolutionary Theory of Economic Change*. Cambridge, Mass.: Harvard University Press.
- NOULAS, A. G., RAY, S. C., MILLER, S. M. (1990) "Returns to scale and input substitution for large U.S. banks". *Journal of Money, Credit, and Banking*, 22 (1), p. 94-108.
- O ESTADO DE S. PAULO (2000) "Dresdner demitirá 10% dos funcionários". *O Estado de S. Paulo*, 20 maio (<http://www.estado.estadao.com.br/jornal/00/05/20/news219.html>).
- POSSAS, M. L., FAGUNDES, J., PONDÉ, J. L. (1995) *Política Anti-truste: um enfoque schumpeteriano*. Texto para discussão, 347. Rio de Janeiro: Instituto de Economia Industrial, Universidade Federal do Rio de Janeiro.
- RADECKI, L. J., WENNINGER, J., ORLOW, D. K. (1997) "Industry structure: electronic delivery's potential effects on retail banking". *Journal of Retail Banking Services*, 19 (4), p. 57-63.
- RESTI, A. (1998) "Regulation can foster mergers, can mergers foster efficiency? The Italian case". *Journal of Economics and Business*, 50 (2), p. 157-169.
- RHOADES, S. A. (1998) "The efficiency effects of bank mergers: an overview of case studies of nine mergers". *Journal of Banking and Finance*, 22 (3), p. 273-291.
- SAPIENZA, P. (1998) *The Effects of Banking Mergers on Loans Contracts*. Working Papers. Northwestern University.
- SAUNDERS, A., WILSON, B. K. (1999) "The impact of consolidation and safety-net support on Canadian, U.S. and U.K. banks: 1983-1992". *Journal of Banking and Finance*, 23 (2-4), p. 537-571.
- SCHOLTENS, B. (2000) *Competition, Growth, and Performance in the Banking Industry*. Working Paper, 00-18. Philadelphia, Penn: The Wharton Financial Institutions Center.
- SCHUMPETER, J. A. (1942) *Capitalism, Socialism and Democracy*. 5th ed. London: G. Allen and Unwin, 1979.

- SECURITIES DATA COMPANY (<http://www.tfsd.com>).
- SHEARLOCK, P. (1999) "Bank mergers to multiply". *The Banker*, 149 (876), p. 16-18.
- STEWART, J. (1998) "Everyone's a winner". *Euromoney*, 351, p. 53-54.
- STIGLITZ, J. E. (1987) "Learning to learn, localized learning and technological progress". In: Dasgupta, P. and P. Stoneman (eds.), *Economic Policy and Technological Performance*. Cambridge: Cambridge University Press.
- _____ (1989a) "Markets, market failure and development". *American Economic Review*, 79 (2), p. 197-203.
- _____ (1989b) "Financial markets and development". *Oxford Review of Economic Policy*, 5 (4), p. 55-68.
- _____ (2000) "The insider: what i learned at the world economic crisis". *New Republic*, 17 April. (<http://www.thenewrepublic.com/041700/stiglitz041700.html>).
- STRAHAN, P. H., WESTON, J. (1998) "Small business lending and the changing structure of the banking industry". *Journal of Banking and Finance*, 22 (6-8), p. 821-845.
- TAMIRISA, N., SORSA, P., BANNISTER, G., MCDONALD, B., WIECZOREK, J. (2000) *Trade Policy in Financial Services*. Working Paper, WP/00/31. Washington, DC: International Monetary Fund.
- TAYLOR, R. (1998) "Private sector revolution". *The Banker*, 148 (870), p. 54-55.
- THE ECONOMIST (1999) "Survey: international banking". *The Economist*, 15 April.
- TINER, J. (1999) "Bad old days for bankers". *The Banker*, 149 (883), p. 24-26.
- TOBIN, J., RANIS, G. (1998) "The IMF's misplaced priorities: flawed fund". *New Republic*, 3 Sept. (http://www.tnr.com/archive/0398/030998/tobin_030998.html).
- VANDER VENNET, R. (1999) *Cost and Profit Dynamics in Financial Conglomerates and Universal Banks in Europe*. University of Ghent: Mimeo.
- VAN'T DACK, J. (1998) "Administrando um sistema financeiro crescentemente global. um panorama de temas selecionados". *Economia e Sociedade*, 11, p. 33-71.
- VASCONCELOS, M. R. (1998) *Instabilidade e Especulação em Mercados Cambiais*. Tese de doutorado, Instituto de Economia, Universidade Estadual de Campinas.
- WHEELER, M., POZO, S. (1997) "Is the world economy more integrated than a century ago?". *American Economic Journal*, 25, p. 139-154.
- WILLIAMSON, O. E. (1988) "Corporate finance and corporate governance". *Journal of Finance*, 43 (3), p. 567-591.
- WORLD BANK (1999) "Integration with the global economy". *World Development Indicators*. Washington, D.C.: The World Bank.
- WORLD INVESTMENT REPORT (1997) *Transnational Corporations, Market Structure and Competition Policy*. New York and Geneva: United Nations Conference on Trade and Development (UNCTAD).
- YUENGERT, A. (1993) "The measurement of efficiency in life insurance: estimates of a mixed normal-gamma error model". *Journal of Banking and Finance*, 17 (2-3), p. 483-496.