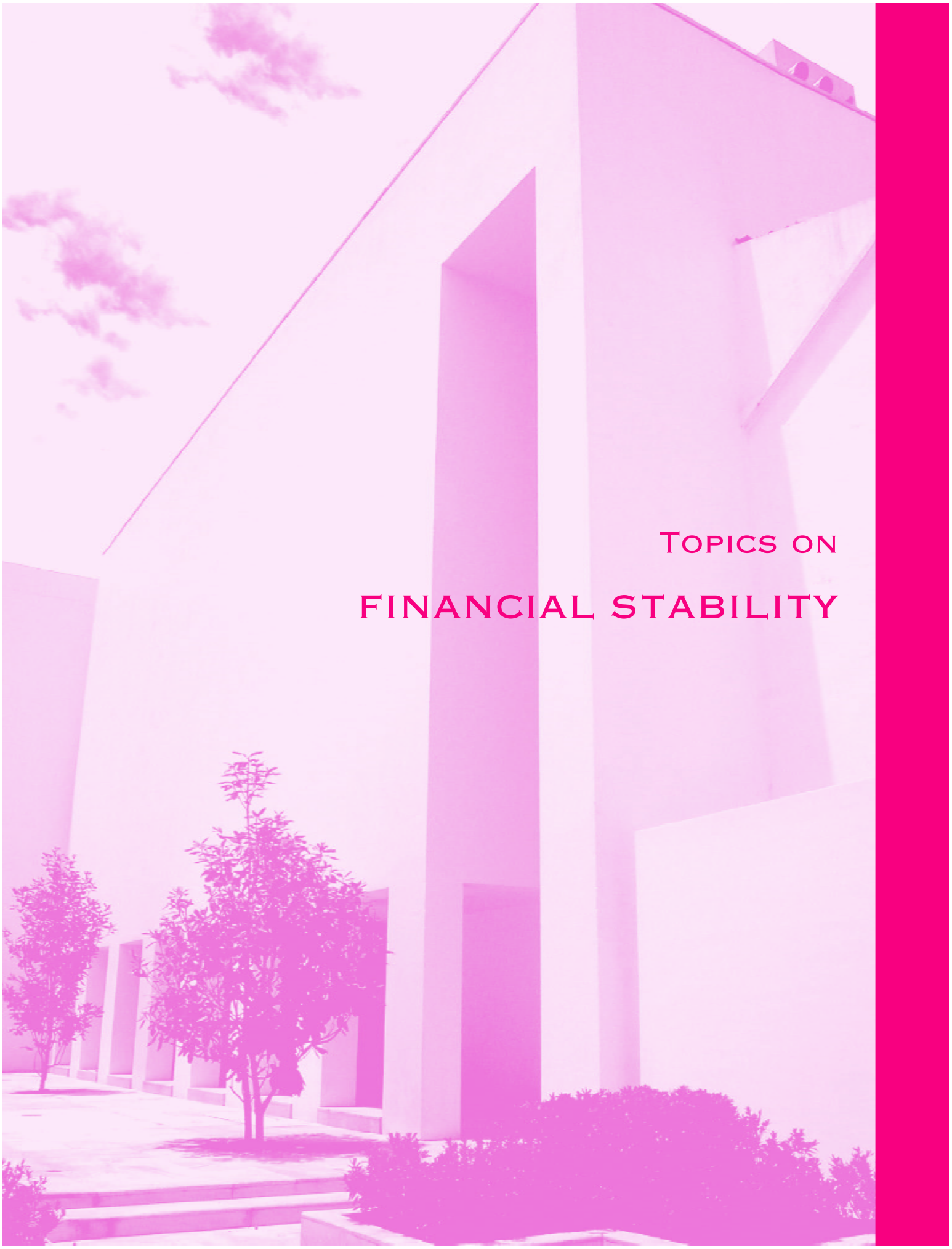


Topics on
FINANCIAL STABILITY

An analysis of banking mergers in Colombia

Dairo Estrada*

I. Introduction

In recent years, different mergers have taken place both in the financial and manufacturing sectors. These processes have raised questions as to the policies implemented with regard to trade offs between profits via efficiency and those related to social costs, given the presence of greater market power. If profits due to efficiency surpass the resulting social losses as a result of increased market power, mergers then may be of interest from the economic and antitrust perspective.

This analysis will look at mergers from different angles: first, mergers can improve cost efficiencies; second, they can improve the efficiency of benefits that involve combining raw materials and superior products[1] , and third, they can provide greater price setting benefits by exercising market power. A greater concentration or participation of business enterprises within the market can provide the basis for intermediaries to establish higher rates for their goods or services, or to lower deposit rates without having efficiency improvements.

Unfortunately, not many studies have analyzed the gains associated with bank mergers. Furthermore, not many have dwelt on the price changes when mergers take place. Price changes reveal the effects of mergers on market power, plus the effects on prices due to higher bank operational efficiency. In this study, the role of mergers is analyzed with regard to their efficiency in benefits and market power. This analysis is based on data taken from the Colombian financial system over the 1996-2004[2] period.

---

* The author is a researcher from the Research Department of the *Banco de la República's* Monetary and Reserves Senior Vice Presidency. This is a summary of the work done in *Borradores de Economía, Banco de la República, No. 329*: *Efectos de las fusiones sobre el mercado financiero colombiano* (Merger effects on the Colombian financial market). The opinions contained in this paper are the sole responsibility of the author and do not necessarily reflect those of the Bank or its Board of Directors.

1 Akhavein *et al.* (1997), and Berger Mester (1997) explain how the concept of benefit efficiency is a more global concept than that of cost efficiency, as it takes into account cost and income effects on selecting the products vector which remain fixed when considering cost efficiency.

Section II shows some international evidence. Section III expands on the efficiency measure in benefits. Section IV discusses the results of the efficiency measurements and the effects of mergers. Section V analyzes the competition effects associated with mergers. Section VI concludes with some final remarks.

II. International evidence

Mergers and takeovers have changed significantly in recent years. In the United States, the number of banks fell from 16,000 to around 8,000 during the 1980-2003 period. The fall sparked a consolidation process, including bringing about merger processes that have rationalized some participating market institutions[3].

This consolidation process in the US has been primarily due to the impact of technology and geographic integration. There were 3,517 mergers over 1994-2003; 1998 was the peak year for mergers—a historical year for the US in this respect. There were 493 mergers, involving nearly 14% of assets, (Table 1). In the European Union, the number of credit institutions fell from 12,256 to 9,285[4] over the 1985-1997 period.

---

2 At the international level, cost efficiency gains as a result of mergers are relatively scarce. Some empirical studies suggest average bank deviations against the frontier on the cost function at a level of 20%-25%. See Savage (1991), Shaffer (1993), and Berger and Humphrey (1992).

3 See Rhoades (2000).

4 European Central Bank (ECB), (1999).

Table 1

Mergers, assets, deposits, and branches acquired (*)

Year	Mergers	Assets	Percentage	Deposits	Percentage	Branches	Percentage
1994	475	187,012	3.8	143,651	4.4	3,932	5.1
1995	475	254,851	4.9	186,968	5.5	4,981	6.5
1996	446	406,695	7.5	292,740	8.4	6,549	8.5
1997	422	311,871	5.3	230,148	6.1	5,687	7.3
1998	493	836,970	13.3	580,972	14.7	11,351	14.3
1999	333	276,643	4.2	186,440	4.6	3,477	4.3
2000	255	200,963	2.8	98,190	2.2	2,693	3.3
2001	231	359,495	4.6	236,067	5.0	4,958	6.0
2002	203	150,186	1.8	92,102	1.8	1,914	2.3
2003	184	88,330	1.0	66,950	1.2	1,741	2.1
Total	**3,517**	**3,073,016**		**2,114,228**		**47,283**	

(*) Data in millions of USD, except for percentages.
Source: Pilloff (2004).

A recent study by IDB adequately describes some general features related to merger processes. It analyzes the differences that have arisen among the various mergers, comparing Latin America with the developed countries: in developed countries mergers took place among the local banks and as a result of reactions to different market situations, while in developing countries, mergers took place as a result of the entry process of foreign banks or as a response by regulatory agencies to crisis periods and financial instability[5].

A. Market power and policies on competition

Traditionally, financial sectors have not paid much attention to competitive aspects. In some developed countries, including the US, the banking sector is not strictly controled by antitrust policy. In some cases, mergers only require the approval of the regulatory agency, but not from the antitrust authority. The main objective of the authorities has been to maintain the stability of the financial system. In the past, market power was the means through which financial firms could increase their value, which could be seen as a way of preventing financial intermediaries from taking riskier positions. Recently, regulatory agencies have given greater importance to the aspect of competition through antitrust policies that have application on merger processes. Some countries like Australia, Canada, Italy and Switzerland have approved merger processes without hampering competitiveness.

From the above, antitrust policies have suffered significant changes. In emerging markets, these policies have started to play a greater role in merger processes, but there are still some points that remain unsolved: first, the geographical sphere of products and services has to be defined, incorporating the consolidation processes of the financial system; second, there should be a closer look at how mergers affect or create barriers to entry in financial markets; and, third, the globalization process, which allows for trading to and from abroad, creates difficulties in applying the antitrust policies internationally. Differences in rules among countries can also create inconveniences on the follow up and surveillance of the financial market with reference to its policies on competition. Last, there are still difficulties when regulators work to promote competitive activities without endangering the stability of the financial system. Based on information from several developed countries, Table 2 illustrates the main characteristics of banking systems in relation to their policies on competition.

---

[5] See IDB (2004), for more detailed reading on bank consolidation processes in Latin America.

TABLE 2

ANTITRUST POLICIES OF VARIOUS BANKING SYSTEMS

Country	Implementation	Laws
Australia	Two aspects are considered by the ACCC at the time of a merger: 1. The market share of the firm after the merger. (15%) 2. The share of the four biggest firms in the country, which cannot be above 75%. If these percentages are surpassed, the ACCC takes into account other factors if it is to authorize or not the merger. Mergers are not allowed among the four biggest firms.	Governed by the Trade Practices Act (1974). Can prohibit merger Governed by the Trade Practices Act (1974). Can prohibit merger processes that endanger market competition. The Australian Competition and Consumer Commission (ACCC) is in charge of supervision.
Belgium	The CBF has a three month period to analyze merger processes. In recent years, no merger requests have been rejected, and both the Commission and Council on Competition have accepted the opinions of the CBF.	Based on Law 5 dated August 1991 concerning competition (Revised in 1999), under the Commission on Competition, the Service on Competition and the Council on Competition. Each sector also has its own regulatory body. The Commission for Banking and Finance (CBF), and the Banking Superintendency cover the financial sector.
Canada	The Competition Act establishes criteria on approval of mergers based on efficiency (cost reduction) so as to produce fund savings. The Competition Bureau analysis is based on the "Merger Enforcement Guidelines as Applied to a Bank Merger" (1998). In general terms, a firm cannot have more than a 35% share in the market after the merger. The four biggest firms cannot have more than a 65% share and those that merge cannot possess more than 10%.	It is under the Competition Bureau, a federal agency that defines the geographic and product markets. It reviews mergers under the rules and regulations established under the Competition Act, Sect. 93.
European Union	Most of the merger processes between 1991 and 2000 have taken place at the local level and the Commission's intervention has been minimal.	Merger Law (1990), revised in 1997. Small mergers belong to the territorial prescriptive jurisdiction of each country. The European Commission is in charge of making sure that the law on mergers is enforced and intervenes on issues affecting the EU as a whole.
France	The CECEI has not stopped any merger process. In 1998, when the CIC was privatized, the acquisition effect was studied by four institutions mainly from the viewpoint of market share. In 1999, the BNP-SocGen-Páribas Affair was analyzed regarding market share.	Under the EU Merger Commission. The *Comité des Etablissements de Crédit et des Entreprises d'Invertissement* (CECEI) takes part at the local level.
Germany	The Bundeskartellamt has four months to analyze a merger. The concentration after the merger is analyzed bearing in mind the competition with the other local and foreign firms.	The Act in place prohibits barriers on competition (*Gesetz gegen Wettbewerbsbeschrankkungen*). The Bundeskartellamt is in charge of merger surveillance in agreement with the European Commission's standards. These are also subject to domestic supervision.
Italy	The Bank of Italy established five guiding factors on banking performance and, at times, it has fixed rates on territorial products and markets in agreement with the Association of Italian Banks.	The Central Bank of Italy established antitrust guidelines based on 33 files: 16 on consolidation, 5 on abusing a predominant market position, and 12 on agreements against competition. Predominant geographical markets and product positions are analyzed.
Spain	Should a resulting merger have a market share above 25% or a sales volume above 40 billion pesetas, a report, usually taking no more than a month, is prepared to approve the merger. If the Government is hesitant about a merger, it may seek the opinion of the Court and then will decide.	The Law on Competition # 16/1989, Art. 14 through 18. It is applicable to the local markets outside the consideration of the European Commission.
United States	Mergers are analyzed from the HHI index level and variations function. Increases above 200 points or above 1800 points lead to reviews carried out by the DOJ. Mergers among banks are also subject to reviews by the federal bank enforcement body, as well as by the government of each State. It uses the same DOJ standards. In some merger cases, banks have accepted the closing of some of their local branches to avoid having a predominant position in some particular region.	Governed by the Department of Justice (DOJ) and the Federal Trade Commission. The DOJ is in charge of analyzing mergers involving financial intermediaries.

Source: G-10 (2001),

In the case of Colombia, we should note that the financial system has no clear policies in defense of competition, except for one mandate established under the Financial System's Organic Statute, Art. 58, D, with reference to bad practices:

> When the new or absorbing institution, as a result of a merger, maintains or sets unjust prices, limits services, or hinders, restricts or falsely represents free competition in the markets in which it participates, whether acting through its head office or affiliates, and, in its opinion, does not take the necessary and sufficient measures to prevent any of the aforementioned. It is understood that none of these hypothetical situations apply when the absorbing or new business enterprise meets less that twenty-five per cent (25%) of its related markets.

Chapter XIV, part 3, 1, Rules on Competition, when referring to the regulations on competition and consumer protection, reads that:

> Prohibited are all contracts or agreements, or decisions to associate, or practices agreed among entrepreneurs, which directly or indirectly have the purpose or effect of hindering, restricting or misrepresenting the free play of competition within the financial and insurance system.

Our Banking Superintendency, based on the Statutes, Art. 58 above, has made careful studies of each merger case already approved or that is undergoing approval.

The Superintendency has also requested and received the cooperation from the *Banco de la República* via the research work I have carried out in determining the market definition and the resulting competitive conditions when surpassing the 25% mark.

III. Measurement of efficiency gains

To determine how mergers affect the efficiency in terms of benefits, an estimate based on the Colombian financial system was done for the 1994-2004 period. In the analysis, I am including the four main types of financial intermediaries: commercial banks (CB), specialized mortgage banks (BSMP), financial corporations (FC) [investment banks], and commercial financing corporations (CFC) [specialized commercial banks]. Following Akhavein *et al.* (1997) methodology, I have computed the efficiency measurement variation associated with the merger, as a variation in the efficiency measurement of the corporation that has merged against the weighted average efficiency measurements of the participating corporations before the merger.

Both, the especificationa and estimation of the efficiency measure are based on the stochastic frontier analysis by adopting a translog

TABLE 3

EFFICIENCY MEASURES BY TYPE OF INTERMEDIARY (*)

	Total	Banks	BECH	CF	CFC
Alternative benefit function					
Number	102	33	13	27	29
Max.	0.96	0.96	0.95	0.84	0.95
Min.	0.27	0.27	0.42	0.48	0.49
Mean	0.73	0.71	0.82	0.65	0.78
Median	0.73	0.71	0.89	0.64	0.81
Variance	0.01	0.01	0.01	0.01	0.01
Measurement equality test					
t-stat		13.73	2.84	1.67	0.19
p-value		0.00	0.00	0.10	0.85

(*) The interval for the efficiency measures within the alternative benefit function comes to (0.1).

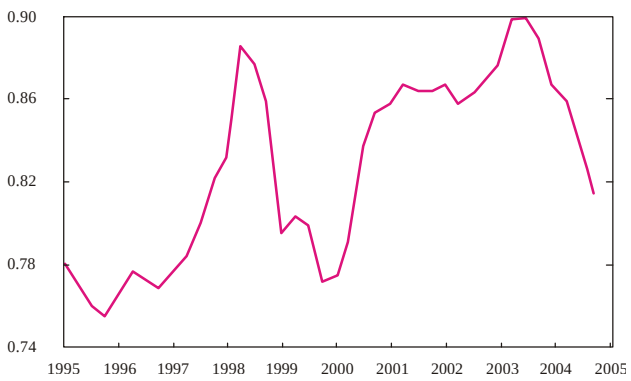
function[6]. The efficiency evaluation takes values on the (0,1) interval, where 1 represents the level of a fully efficient individual bank.

Data from the main mergers among financial intermediaries was taken from the 1994-2004 period. Within the sample, I compared individual banks before the merger and the resulting bank after the merger.

This is consistent with the idea that mergers may show improvements in efficiency, which are related to the new merger coordination policies and to the possibility of there being economies of scale in the banking industry. The resulting better efficiency from the mergers is not immediately seen; in fact, they may take several periods, because of adjustment costs (legal, consulting, labor, claims paid and other costs) at the moment of the merger[7].

GRAPH 1

TEMPORARY EFFICIENCY



Source: Banking Superintendency. Calculations from the author.

IV. MERGER EFFECTS ON EFFICIENCY

From Table 3, the mean of the efficiency evaluation comes to 0.73, for the whole system.

The BECH show on average the highest levels of efficiency (0.82), while the the FCs have the lowest level (0.63); the mean equality tests for the different

6 See Humphrey and Pulley (1997); Berger and Mester (1997), and Estrada and Osorio (2004).

7 Berger and Humphrey (1992) found that for the first three years after the merger, costs are not significantly important in such a way that these costs do not create a strong bias when analyzing the effects of a merger.

types of banks convey a certain level of heterogeneity, especially when we compare the CBs with the FCs and the CFCs. (Table 3)

Graph 1 depicts the efficiency evaluation performance during the period. Note the negative impact of the financial crisis on efficiency from 1998 to l999.

Early on in this period, the efficiency levels came to 0.767 if we take the average of the first five quarters (Dec.1994-Dec.1995), while efficiency reached 0.845 if we take the last four quarters (Sep. 2003-Sep. 2004), which accounts for a growth of 10.1% during the last 10 years.

During this period, the Colombian financial system has gone through several mergers, the most outstanding being the *Banco de Colombia* and *Cafetero* mergers. Graphs 2 and 3 illustrate how the merger processes increased the level of efficiency of the resulting banks. In the case of the *Banco de Colombia*, it revealed a better benefit efficiency of 10%, while *Bancafé* gained 5%[8]. These findings do not contradict other studies showing that efficiency gains may be given when mergers take place, and that these gains are not as much when these mergers are relatively small in size.

GRAPH 2

LEVELS OF EFFICIENCY BY THE BANCO DE COLOMBIA

Source: Banking Superintendency. Calculations from the author.

GRAPH 3

LEVELS OF EFFICIENCY BY BANCAFÉ

Source: Banking Superintendency. Calculations from the author.

V. MERGERS AND COMPETITION

Recently, Panetta and Focarelli (2004), and Sapienza (2002) found that there can be mixed effects when mergers take place. The short and long-term effects can differ from each other when there is a different temporary response from the efficiency and market power factors. These authors found that Italian bank mergers brought about negative effects on the short-term consumer prices, while the long-term effects were favorable. Thus, the market power effect prevailed in the short term, while the efficiency effect on prices prevailed over the long term.

Other studies on the US and Europe conclude that mergers seem to have had a favorable effect on the growth of banking competition[9].

---

8 To carry out this analysis, the data on the efficiency in benefits was included for the merged bank and the creditor bank after the period of financial crisis was over.

9 See Krozner and Stadhan (1999) in the case of America.

From a theoretical perspective, the explanation that concentration does not positively relate with a reduction in competition coincides with the version of the competitive debatable markets. This suggests that if there are no entry barriers, the presence of future competitors imposes discipline on established banks and creates a situation of future competition, even though mergers cause a fall in the number of banks currently in the market.

In analyzing the degree of competition, I used the Colombian deposit market, based on what has been known as the new empirical analysis of industrial organization (NEIO)[10] .

To estimate the structural form, requires the deposit supply function, the marginal cost function, and the relevant selection of explainable variables. I have considered the following linear specifications:

$$D_i = a_0 + a_1 r_i^D + a2r_{-i} + a_3 E_i$$

$$MCD_i = \partial C_i / \partial D_i = ACD_i = b_0 + b_1 D_i + b_2 w_i^E + b_3 w_i^K + b_4 \text{Effi} - b_5 (D_i / r_{-i})$$

Where D_i are the deposits of each financial intermediary; r_i^D is the interest rate offered by each bank for deposits; $r\text{-}_i^D$ pertains to the rate offered by the

[10] See Bresnahan (1987) for a revision of the focus: New Empirical Industrial Organization (NEIO). This analysis is based on an unfinished research project related to the level of competition in the Colombian deposits' market carried out by the author.

TABLE 4

DEPOSITS MARKET IN COLOMBIA (*)

	SF		Banks		CF		CFC	
	Coef.	*Std error*	*Coef.*	*Std error*	*Coef.*	*Std error*	*Coef.*	*Std error*
Supply for deposits								
Dependent variable D_i								
a_0	15.52	0.01	15.79	0.02	12.83	0.03	14.10	0.02
r_i^D	0.15	0.02	0.80	0.03	2.15	0.06	0.49	0.05
E_i	0.53	0.00	0.47	0.00	1.07	0.00	0.91	0.00
r_{-i}^D	-0.32	0.02	-1.18	0.03	-2.58	0.06	-0.24	0.04
Demand for deposits								
Dependent variable MC_i								
b_0	7.77	0.05	7.23	0.09	2.78	0.16	8.09	0.08
D_i	0.57	0.00	0.51	0.00	0.76	0.01	0.71	0.00
w_i^K	-0.02	0.00	-0.07	0.00	-0.02	0.01	0.03	0.00
w_i^L	-0.17	0.00	-0.05	0.01	-0.10	0.01	-0.33	0.00
Effi	0.53	0.01	0.35	0.01	0.01	0.07	0.36	0.01
D_i / r_{-i}	-0.90	0.00	-0.86	0.00	-0.87	0.01	-0.97	0.00

(*) The (G.L.S). Random Individual Effects Estimation method was used. See Biorn (1999).

remaining intermediary present in the sector; E_i are the employees of each bank, which measures the size of the bank. On the other hand, MCD_i is the marginal cost, ACD_i is the mean cost; w_i^E is the labor cost; w_i^K is the price of physical capital; and Effi is the estimated efficiency evaluation referred to from the previous section.

Having included its own interest rates as variables and those of other intermediaries all fits well with the conjectural analysis proper of this focus (NEIO). *Ceteris paribus*, deposits should respond positively to their own price and negatively to the price of the remaining intermediaries.

Table 4 shows the results from estimating the system's simultaneous equations over the 1995-2004 period, including quarterly data. A preliminary look tells us that there are no big differences in the results obtained from the financial system as a whole and those derived when dividing by type of intermediary. As far as the supply of deposits is concerned, all parameters are statistically significant and in conformity with theoretical intuition.

The hypothetical conjured variable ended up with the expected sign and significance, not only with reference to the financial system's estimates as a whole, but also when we considered various subsectors. This parameter is negative and close to zero in the majority of cases and shows that we cannot say that there is a high collusive power in the deposits market of participating banks.

This result opposes the idea that mergers generate greater market power, which would provoke banks to pay lower interest rates on deposits.

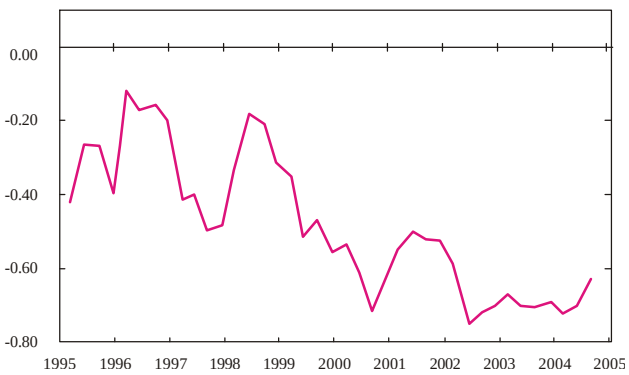
Graph 4 shows the relation between the HHI index and the rates paid on deposits for the same period. As seen, there is an inverse ratio between the deposits market concentration index and deposit interest rates.

VI. Conclusions and recommendations

If we focus on the banking sector's competitive situation, as opposed to what has been found in other studies carried out on Europe, the US and Canada, we cannot say that there is evidence of monopoly or oligopoly activities carried out by the Colombian financial intermediaries after the mergers. On the other hand, when considering the effects of mergers on efficiency, this study reveals that, for the alternative benefit function, efficiency data improves in regard to the most important mergers undertaken in recent years.

Graph 4

The deposit rate and HHI correlation



Source: Banking Superintendency. The author's calculations.

In this context, an in-depth analysis on competition and the effect of mergers on the following points are deemed necessary:

1. Identifying relevant markets.

2. Based on the fact that competition makes reference to the price behavior of firms in a particular market, Cetorelli (1999) points out that upon analyzing the impact of concentration on prices, two factors should be borne in mind: the existence of alternative funding sources and the degree of market response or the easiness with which potential competitors can enter the market—factors which contribute to lessening the potential impact of concentration resulting from mergers.

3. The financial integration-competition ratio. Mergers and acquisitions provoke financial integration not only at the national but at the international level through free trade agreements and the incorporation of electronic banking and, hence, no longer requiring the geographical closeness between clients and banks.

4. Market power determinants. Although this study approaches the structure of the Colombian banking market, it needs, for the sake of further completion, factors more directly related to market power, as well as with variables that represent specialization, institutional form, the regulatory environment on competition, and the entry barriers both at the local and national level in order to explain the market power we are referring to.

Bibliography

Akhavein, J.; Berger, A.; Humphrey, D. The Effects of Megamergers on Efficiency and Prices: Evidence from a Bank Profit Function. In: *Review of Industrial Organization*, 12, 95–139, 1997.

Berger, A.; Humphrey, D. Megamergers in Banking and the Use of Cost Efficiency as an Antitrust Defense. In: *Antitrust Bulletin*, 37, 541–600, 1992.

Berger, A. N.; Hunter, W. C.; Timme, S. The Efficiency of Financial Institutions: a Review and Preview of Research Past, Present, and Future. In: *Journal of Banking and Finance*, 17, 221–249, 1993.

Berger, A. y Mester, L. Inside the Black Box: What Explains Differences in the Efficiencies of Financial Institutions. In: *Journal of Banking and Finance* 21, 895–947, 1997.

Interamerican Development Bank (IDB). Technical and Social Progress in Latin America. *Informe 2005: Desencadenar el crédito, cómo ampliar y estabilizar la banca*. Part III, Chap. 9, 135–145.

Biørn, E. Estimating Regression System From Unbalanced Panel Data: A Stepwise Maximum Likelihood Procedure. Memorandum n.º 20/99 Department of Economics University of Oslo, 1999a.

Bresnahan. Competition and Collusion in the American automobile oligopoly: the 1955 price war. In: *Journal of Industrial Economics* 35, pag. 457–482, 1987.

Cetorelli, N. Competitive Analysis in Banking: Appraisal of Methodologies. *Federal Reserve Bank of Chicago*, Economic Perspectives. First Quarter, 1999.

Dermine, J. The Economics of Bank Mergers in the European Union, a Review of the Public Policy Issues, *Insead*, Mimeo, 1999.

Estrada, D.; Osorio, P. Effects of Financial Capital on Colombian Banking Efficiency. In: *Borradores de Economía*, 292, *Banco de la República*, June 2004.

Group of Ten. Report on Consolidation in the Financial Sector. (Basel: Group of Ten), 2001.

Hughes, J., y Mester, L. Accounting for the Demand for Financial Capital and Risk-Taking in Bank-Cost Functions. *Federal Reserve Bank of Philadelphia, Economic Research Division*. Working Paper, 93–17, 1993.

Humphrey, D. y Pulley, L. Banks' Response to Deregulation: Profits, Technology and Efficiency. In: *Journal of Money, Credit and Banking* 29(1). pag. 73–93, 1997.

Kroszner, R. y Strahan, P. What Drives Deregulation? Economies and Politics of the Relaxation of Bank Branching Restrictions. *Quarterly Journal of Economics* 114(4). pag. 1437–1467, 1999.

Linder, J. y Crane, D. Bank Mergers: Integration and Profitability, Working paper, *Harvard Business School*, Cambridge MA, 1992.

Panetta, F. y Focarelli, D. Are Mergers Beneficial to Consumers? Evidence from the Italian Markets for Bank Deposits. In: *American Economic Review*, forthcoming, 2004.

Pilloff, S. Performance Changes and Shareholder Wealth Creation Associated with Mergers of Publicly Traded Banking Institutions. In: *Journal of Money, Credit, and Banking*, 28, 1996.

Pilloff, S. Bank Merger Activity in the United States, (1994-2003). *Board of Governors of the Federal Reserve System*, Staff Study n.º 176, 2004.

Rhoades, S. The Operating Performance of Acquired Firms in Banking Before and After Acquisition, Staff Economic Studies 149, *Board of Governors of the Federal Reserve System*, Washington, D. C., 1986.

Rhoades, S. Bank Mergers and Banking Structure in the United States, (1980–1998). *Board of Governors of the Federal Reserve System*, Staff Study n.º 174, 2000.

Sapienza, P. The Effects of Banking Mergers on Loan Contracts. In: *Journal of Finance*, 57, 329–367, 2002.

Savage, D. Mergers, Branch Closings, and Cost Savings. Working Paper. *Board of Governors of the Federal Reserve System*, Washington, D. C., 1991.

Shaffer, S. Can Megamergers Improve Bank Efficiency? In: *Journal of Banking and Finance*, 17, 423–36, 1993.

Srinivasan, Aruna. Are there Cost Savings from Bank Mergers? In: *Federal Reserve Bank of Atlanta*, Economic Review, 17–28, 1992.