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Bernhard Fischer*

Financial Liberalisation and Sustained Interest Differentials

In the last decade, many of the more advanced developing countries in Latin America and Asia have deregulated and opened up their financial markets. What impact has this had on the efficiency of the financial sector? How can the existence of sustained interest differentials be explained?

The aim of domestic financial liberalisation and deregulation is to improve economic performance through increased competitive efficiency within financial markets, thereby indirectly benefiting non-financial sectors of the economy through three major channels: firstly, the removal of regulations and price distortions should permit savings to be directed into highest-yielding (risk-adjusted) forms of investment (improved allocative efficiency); secondly, increased competition should reduce the costs of financial intermediation (higher operational efficiency); and thirdly, the reform measures should generate an improved range of financial products and services adaptable to changing consumer needs (dynamic efficiency). The removal of price and quantity restrictions from portfolio structures is also expected to make for a safer financial system by improving the ability of financial institutions to manage risk and hence make managers more accountable for their portfolio decisions.

The main objectives of external financial liberalisation have been the improved functioning of the financial sector, thereby achieving a more efficient distribution of real and financial resources amongst alternative economic uses. The gains in efficiency accompanying this process appear to arise from the promotion of competition among financial intermediaries, enabling them to incorporate financial innovations initially developed in other countries.¹ Innovation and competition are bound to stimulate and improve the functioning of domestic markets, giving rise to positive effects on the price, diversification and quality of financial assets:

□ Intermediation margins are squeezed, costs of funds to borrowers are lower and returns for lenders are higher. In

addition, lower transaction costs for non-financial market participants can be expected.

□ A higher quality of financial assets results from greater liquidity for asset holders due to deeper markets with well capitalised market participants, homogeneous pricing as well as better tailoring of financial needs in terms of liquidity and instruments through a wider range for separating, hedging and spreading of risks.

□ The modernisation of financial structures is strengthened as the liberalisation of capital movements provides greater incentives to improve the regulatory framework of domestic financial systems. In addition, the modernisation of the financial markets opens up new channels for mobilising and improving the efficiency of investment, which, in turn, is essential for enhancing economic growth and the development of modern economies.

In the last decade, many of the more advanced developing countries in Latin America (in particular Argentina, Chile and Uruguay) and in Asia (for example, Indonesia, Malaysia, Korea and Taiwan) have, in the framework of more comprehensive liberalisation strategies, also deregulated and opened up their financial markets. Their experiences can be summarised as follows:²

□ The deregulation of interest rates has mobilised substantial savings in financial assets. Increases in the supply of long-term credits, especially in countries with

* Hamburg Institute for Economic Research (HWWA), Hamburg, Germany.

¹ Bank for International Settlements (BIS), Annual Report 1987, Basle 1987; OECD: Liberalization of Capital Movements and Financial Services in the OECD Area, Paris 1990.

² Bernhard Fischer: Success and Pitfalls with Financial Reforms in Developing Countries, in: Savings and Development, 1993 (forthcoming).

high and volatile inflation rates, remained, however, rather modest. The experiences of Korea and Taiwan suggest that for the provision of risk capital new instruments and markets have to be developed in addition to maintaining stable interest rates and low inflation rates.

□ In most of the reforming countries, private net real savings did not increase significantly in spite of high real rates of interest (with the notable exception of Korea and Taiwan). Financial opening also did not contribute substantially to increasing real investment in the capital stock, for capital flows from abroad went into more liquid forms of investment. Hence, at least in the short-run financial reforms did not stimulate growth, an experience that could also be observed in reforming OECD countries.

□ Contrary to theoretical expectations domestic interest rates did not converge to the international rates, especially in the Latin American countries.

□ Almost all reforming countries experienced – although to differing degrees – banking crises. They were most pronounced in the Southern Cone countries.

The following article assesses the impact of financial liberalisation on financial sector efficiency and concentrates on microeconomic analyses that have been advanced to explain sustained interest differentials after financial opening, stressing structural impediments in the domestic financial sector – segmented credit markets, the oligopolistic structure of the finance industry and the overhang of bad loans.

Financial Sector Efficiency

Developing financial indicators of allocative efficiency is a complex task requiring analytical calculations of relative rates of return to which financial flows respond, including the interaction between inflation and the taxation system. Such an effort would also require indicators of productivity gains associated with corporate (and other forms) of expenditure. Another way to look at allocative efficiency gains due to financial liberalisation is to ask whether the pricing of financial instruments is appropriate, particularly with respect to risks. The underpricing of risk would be allocationally inefficient, leading the financial system towards excessive exposure to high-risk activities. These areas are complex and require specialised data and analysis which are not easily available in the reforming countries.

Little empirical work has been done to evaluate the

beneficial effect of financial liberalisation on the efficiency of credit allocation. An exception is Cho's study³ of Korea's recent experience with financial liberalisation, analyzing changes in the variation of average borrowing costs across different sectors and industries using consolidated balance sheets and income statements of firms. Comparing marginal returns on capital investment across sectors and industries (thereby abstracting from risk, uncertainty and transaction cost) the study concludes that the allocative efficiency of credit has been substantially improved since the Korean government adopted its financial liberalisation policy. This result was mainly achieved by three effects: firstly, a reduction of the difference in the average costs of credit for different (i.e. favoured and non-favoured) sectors; secondly, a reduction of the gap between bank or foreign loans and other credit sources' lending rates; and thirdly, a narrowing of the range of bank loan rates for various types of bank credit.

A serious shortcoming of Cho's approach is, however, that even in a liberal financial system financial intermediaries ration credit in terms of non-price factors. A reduction in the differences in borrowing costs is therefore not an adequate measure of the allocative efficiency gains attributed to financial liberalisation. But estimates of the rates of return on investment in different sectors and industries, especially in the long run, are not easy due to the lack of adequate data.

Operational Efficiency

Similarly difficult to the assessment of the impact of financial reform on the allocative efficiency of investment is the measurement of how financial liberalisation policies have affected the operational efficiency of the banking sector in the reforming countries. Gains in operational efficiency can be expected to derive from factors which increase competition or, alternatively, from factors which break down barriers that inhibit organisational changes consistent with cost reductions through economies of scale.⁴ In principle, increased competition should reduce banks' interest margins to the extent that they are forced to offer lower rates for lending and pay higher rates to attract deposits.

The measurement of improvements in bank efficiency would require detailed data on bank spreads before and after the financial reform. A systematic quantitative assessment of operational efficiency gains achieved through financial reform faces serious constraints, however.⁵ The usefulness of operating ratios is

³ Yoon-Je Cho: The Effect of Financial Liberalization on the Efficiency of Credit Allocation. Some Evidence from Korea, in: *Journal of Development Economics*, Vol. 29, 1988, No. 1, pp. 101-110.

⁴ OECD: *The Role of Indicators in Structural Surveillance*, Paris, 1990.

⁵ Dimitri Vittas: *Measuring Bank Efficiency*, The World Bank, Washington D.C. 1991 (mimeo).

undermined by differences in capital structure, business or product mix, and accounting practices across countries, among institutions, and over time. Differences in capital structure refer to differences in the equity capitalisation ratio of different banks, differences in business mix derive from different combinations of high and low margin business, while accounting practices cover such issues as the valuation of assets, the treatment of reserves for depreciation, pensions and loan losses, and the use of hidden reserves.

Another difficulty arises if one banking system is offering a narrow range of services at low unit costs and another a wide range of services at higher unit costs. While the more sophisticated banking system after financial reform may be less efficient in terms of unit costs, its total economic contribution could be higher than that of the former system if the provision of a wider range of services reduces the transaction and information costs of other economic agents and leads to a more efficient mobilisation and allocation of resources by the economy as a whole.

Table 1
Foreign Banking Presence¹
In Reforming Countries, 1975-1987/88

Host country	1975	1980	1983	1987/88
Argentina	18		32	
Chile	1	13	19	
Uruguay		40		
Indonesia	11	11	11	16
Malaysia	12	12	16	16
Korea		28	41	55
Taiwan		13	28	35
Thailand			14	20 ^a
Memo:				
Australia	3 ^b	3	2	18
New Zealand	3 ^b	3	3 ^c	3
Spain	4 ^b	25	45 ^c	49
Turkey		4	10	

¹ Number of branches and subsidiaries if not otherwise indicated; subsidiaries and branches of overseas subsidiaries are generally excluded.

^a 1985. ^b 1970. ^c 1984.

Sources: OECD: Competition in Banking, Paris 1989; Tomas J. T. Balino, V. Sundararajan: Financial Reform in Indonesia. Causes, Consequences and Prospects, in: Hang-Shang Cheng (ed.): Financial Policy and Reform in Pacific Basin Countries, Boston 1986, pp. 191-219; Anne Hendrie: Banking in the Far East, 1990. Structures and Sources of Finance, A Financial Times Management Report, London 1990; Jean-Claude Nascimento: The Crisis in the Financial Sector and the Authorities' Reaction: The Case of the Philippines, IMF, Working Paper No. 90/26, Washington D.C. March 1990; Stefano Cavaglia: Financial Liberalization Reforms: A Review of Turkey, CPD Discussion Paper No. 1986-13, April 1986; Yoon-Dae Euh, James C. Baker: The Korean Banking System and Foreign Influence, London 1990; Jia-Dong Shea, Ya-Hwei Yang: Financial System and the Allocation of Investment Funds, Chung-Hua Institution for Economic Research, Occasional Paper No. 9001, Taipei 1990; Charles A. Pigott: Financial Reforms and the Role of Foreign Banks in Pacific Basin Nations, in: Hang-Shang Cheng, op. cit., pp. 265-295.

In reviewing the experiences of Korea, Malaysia and Indonesia, Cho and Khatkhate⁶ conclude that the result was diverse to such a degree that nothing definitive can be said about how intermediation costs were influenced by financial liberalisation. In Malaysia, there was evidence that the intermediation margin widened slightly after the reform because of the perpetuation of the oligopolistic banking structure. The rise in the overhead costs of banks caused by rapid branch expansion and the continuation of selective credit programmes may have contributed to the widened margin. The efficiency of intermediation appears to have increased in Indonesia, given the reduction in the interest rate margin. In Korea, two opposing factors have influenced the cost of intermediation: the scaling-down of reserve requirements and increasing losses of non-performing loans. It could be argued that if the non-performing loans problem had not arisen, intermediation costs would have declined as a consequence of growing competition after liberalisation.

Market Concentration

On the other hand, free access for domestic banks and the relaxation of entry restrictions for foreign banks should have influenced market concentration, which seems to be closely related to the issue of economic efficiency in the banking market. Table 1 reveals that foreign banking presence has indeed increased in the course of financial reform in the 1980s. But the role of foreign direct investment in shaping competitive patterns in host banking markets has rarely been investigated. However, some empirical evidence is available for Indonesia and Spain.

The evidence for Indonesia shows that foreign banking presence has contributed to increased market competition in the banking industry.⁷ The study also finds that the size of markets and fewer restrictions on expanding markets have negative correlations with banking market concentration, and that market growth and a number of banks have a favourable influence. Obviously, economies of scale do not play their usual role as a barrier to market entry in Indonesian banking. The case of Indonesia demonstrates that foreign entry may, in fact, enhance economic efficiency through increased market competition.

In Spain, a major consequence of the deregulation process was the repositioning of financial institutions. In

⁶ Yoon-Je Cho, Deena Khatkhate: Lessons of Financial Liberalization in Asia: A Comparative Study, World Bank, Discussion Paper No. 50, Washington D.C. 1989.

⁷ Kang Rae Cho: Foreign Banking Presence and Banking Market Concentration: The Case of Indonesia, in: The Journal of Development Studies, Vol. 26, 1989, No. 1, pp. 98-110.

the emerging financial system foreign banks have a competitive edge in the wholesale business, international operations in particular, and also seem to do well in the higher income segment by offering, for example, high interest checking accounts. It was argued that foreign banks would be innovative in the Spanish context although they try to accommodate to the established business practices of national banks.⁸ Spanish banking seems to be evolving into a segmented market with very different degrees of competitiveness in individual segments. As long as barriers to entry persist in the sector of retail and small firm services the competition in wholesale banking will tend to be mainly between the big banks and the foreign banks, with some specialised smaller banks and some of the large savings banks acting as side-players.

Interest Rates

One of the most puzzling features of the financial reform in the Southern Cone countries was the behaviour of interest rates (see Table 2). As stylized facts emerging from interest rate behaviour during the reform periods one can highlight: high nominal interest rates in local currency, not easily explainable by international interest parity considerations; extraordinarily high real interest rates on loans in domestic currency; and a high and relatively stable margin between loan and deposit rates denominated in local currency.

As a result of financial liberalisation, real interest rates rose in all Southern Cone countries, from being systematically negative during the years of financial repression to generally positive (see Table 2). But domestic interest rates failed to converge to international ones.⁹ Especially short-term real interest rates remained extremely high in Argentina, Chile and Uruguay, even in periods of massive capital inflow. Borrowing rates averaged, in real terms, 41 per cent per annum in Chile (1975-1981), 17 per cent per annum in Argentina (1977-1980), and 15 per cent per annum in Uruguay (1977-1982) for the periods beginning with the financial liberalisation and ending with the maxi-devaluations. The spread between domestic borrowing and deposit rates averaged at least 13 per cent per annum in the three countries but was systematically reduced in the course of time.

In the Asian reforming countries, the consequences of financial opening for the integration of domestic interest

rates with foreign interest rates were not uniform (see Table 3). Because of the controls maintained on capital movements, Korean interest rates could not be expected to be very sensitive to international interest rates. However, following financial reforms and a substantial devaluation of the currency in the early 1980s, the gap between domestic and foreign interest rates in Korea declined and reversed, i.e. foreign interest rates exceeded domestic ones in the 1980s.

In Malaysia, domestic interest rates were quite sensitive to interest rate differentials between that country and abroad. However, the degree of sensitivity was not as high as expected, presumably because the non-bank

Table 2
Interest Rates and Spreads in the
Southern Cone Countries, 1975-1983
(per cent)

	Interest rate differentials		
	1	2	3
Argentina			
1975	17.1	-90.8	-89.2
1976	9.0	-67.2	-64.3
1977 ^a	11.6	-70.9	-67.5
1977 ^b	23.7	9.5	35.5
1978	18.2	26.2	49.2
1979	8.0	20.2	29.9
1980	10.5	27.4	40.8
1981	9.1	-40.3	-34.9
1982	26.0	-67.3	-58.8
1983	-	-85.2	-
Chile			
1975 ^a	7.0	117.0	132.2
1975 ^b	79.9	83.9	228.9
1976	17.8	37.7	62.1
1977	32.3	13.9	50.6
1978	13.8	23.3	40.4
1979	11.7	12.7	25.9
1980	6.9	20.1	28.5
1981	7.9	20.8	30.4
1982	10.7	-30.8	-23.7
1983 ^c	11.6	-18.0	9.0
Uruguay			
1977	19.8	-3.6	15.5
1978	18.1	3.8	22.7
1979	15.4	6.7	23.2
1980	11.0	10.9	23.0
1981	9.8	8.4	19.0
1982	5.1	-56.3	-54.0
1983 ^c	14.3	-5.6	38.2

Column 1: Spread 1 = Difference between loan rate and deposit rate.

Column 2: Spread 2 = $\frac{(1 + \text{Deposit rate})}{(1 + \text{Libor})} - 1$.

Column 3: $\frac{(1 + \text{Lending rate})}{(1 + \text{Libor}) (1 + \text{Variation in R})} - 1$.

⁸ Xavier Vives: Deregulation and Competition in Spanish Banking, in: *European Economic Review*, Vol. 34, 1990, No. 2/3, pp. 403-411.

⁹ Joseph Ramos: The Rise and Fall of Capital Markets in the Southern Cone, in: Miguel Urrutia (ed.): *Financial Liberalisation and the Internal Structure of Capital Markets*, United Nations University, Tokyo 1988, pp. 43-81.

^a January - June. ^b July - December. ^c Preliminary figures.

Source: Joseph Ramos: The Rise and Fall of Capital Markets in the Southern Cone, in: Miguel Urrutia (ed.): *Financial Liberalisation and the Internal Structure of Capital Markets*, United Nations University, Tokyo 1988, Tables 6 and 7.

public had little access to foreign markets. In Indonesia, foreign interest rates, when adjusted for depreciation, were lower than those in the domestic markets before the financial reform. This gap, however, was narrow and the situation turned around after financial reforms. As a result of a series of devaluations the cost of borrowing abroad exceeded that in the domestic market. In general, one may conclude that after financial liberalisation the influence of foreign factors on domestic interest rates increased. It is noteworthy, however, that full integration of interest rates did not take place even when capital movement was almost free, as in Indonesia and Malaysia.

Segmented Credit Markets

The principal failing of financial opening in the reforming countries, in particular the Southern Cone countries, was the persistently high real rate of interest throughout the reform period. A first microeconomic explanation of deviation from interest parity and the persistence of interest rate differentials refers to market segmentation before and after the opening of the capital account. Credit markets have been segmented in the reforming countries both between national and international financial markets as well as within the domestic credit markets. Since international capital markets are largely "wholesale" markets, access was in practice restricted to firms linked to principal banks or to the export sector. Firms which were privileged by their contacts and collateral could borrow cheaply abroad while the remaining borrowers had to resort to expensive domestic credit. As a consequence most small and medium-sized firms, as well as those in the production of non-tradables or whose production was mainly for the domestic market, were largely restricted to the domestic credit market to satisfy their needs. In so far as the

privileged firms borrowed long-term credits in foreign currency at favourable interest rates (i.e. at negative real rates of interest in terms of domestic currency) they could re-lend it, in domestic currency, for short periods of time and at high real rates of interest, or use it to buy assets at good prices, obtaining in this way substantial profits.

Segmentation within the domestic credit market can be characterised along three lines: firstly, by the borrower and the economic activity to be financed; secondly, by the currency denomination of the credit (local vs. foreign); and thirdly, by the type of lending institution. As a consequence, differences in the average terms of credit can be greater than the premium the financial market would reasonably be expected to charge for borrower and for currency risk. These differentials result both from competitive imperfections in the financial system and lender perception of comparative sectoral risk. For the long-term development potential this situation poses two concerns: firstly, large rate differentials result in resource misallocation to the extent that they stimulate overinvestment by preferred borrowers at the expense of non-prime borrowers; secondly, during periods of tightened domestic liquidity, the automatic adjustment processes triggered by the general rise in real domestic interest rates are focused unduly upon small and medium-sized industrial borrowers, livestock producers and the housing sector. Hence, the adjustment burden tends to fall upon those sectors which are financially the weakest, but not necessarily the least efficient. To the extent that asset concentration is thereby promoted, there may be negative consequences not only for long-term efficiency, but also for income distribution.

A clear example of this segmentation of credit markets is provided by Uruguay. The access of borrowers to credit

Table 3
Differentials of Domestic and Foreign Interest Rates in Reforming Asian Countries, 1975-1986
(per cent)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Indonesia:												
Spread 1	-	-	-	-6.5	-4.7	-4.2	-1.4	-4.8	-8.9	-9.4	-9.2	-8.7
Spread 2	-	-	-	0.6	41.3	-3.5	-0.5	0.5	32.3	4.9	-0.2	7.9
Malaysia:												
Spread 1	1.8	0.1	1.1	3.5	6.4	5.5	6.2	4.4	1.4	0.8	1.1	0.1
Spread 2	1.2	6.7	-2.2	-3.0	0.2	4.9	13.0	5.9	0.8	1.9	7.6	4.3
Korea:												
Spread 1	-7.8	-10.0	-9.9	-7.7	-6.4	-8.9	-2.6	1.3	-0.1	1.0	-2.2	-4.0
Spread 2	13.4	-10.0	-9.9	-7.7	-6.4	20.2	11.6	9.7	6.7	5.3	6.5	-2.6

Spread 1 = Euro Dollar Rate (6 Months) - Domestic Lending Rate.

Spread 2 = Effective Cost - Domestic Lending Rate.

Source: Yoon-Je Cho, Deena Khakhatre: Lessons of Financial Liberalization in Asia: A Comparative Study, World Bank, Discussion Paper No. 50, Washington D.C. 1989.

at varying terms depended on their creditworthiness, and the nature of the investment being financed. Perceptions of creditworthiness, particularly among the private commercial banks, drew heavily upon consideration of the size of the borrower's operation and the share of the borrower's income originating in riskier primary agricultural activities as opposed to manufacturing and certain service sectors. Relatively little emphasis was placed on assessing the merits of the project being financed or the soundness of the borrower's guarantees. As a consequence, substantial variations were observed in the average interest rates charged by the same class of banks to borrowers in different lines of activity. For example, lending rates for small farmers were 20-30 percentage points higher than rates charged to prime industrial borrowers. The highest rates were charged to consumers.

Access to credit denominated in foreign currency has been a significant factor in determining the cost of borrowing in Uruguay. Borrowers without substantial foreign currency earnings, such as agricultural producers, continued to show a strong preference for borrowing in pesos at fixed, albeit high, rates of interest rather than borrowing more cheaply in foreign currency and assuming the risk of variable interest rates and peso devaluation. Concerns about clients' solvency in the event of a major devaluation also curbed lender willingness to extend foreign currency credit to smaller, less diversified borrowers, so that, in many cases, these borrowers had little option but to borrow in pesos or not at all.

Institutional Specialisation

Another type of financial market segmentation in Uruguay also did not disappear after financial opening: institutional specialisation. Although financial liberalisation removed most legal and institutional barriers to multi-sectoral banking and reduced somewhat the traditional specialisation in markets, specialisation largely remained the rule. The Banco de la Republica, for example, had been and remained the dominant source of foreign trade financing, reflecting its longstanding role as the government's chief agency for trade administration. It has also been a key lender to the agricultural and meat packing sectors, reflecting a long history of direct state involvement in managing those activities. The State Mortgage Bank had been and remained the sole source of medium and long-term mortgage financing for many decades. Foreign-owned banks, for their part, have concentrated mainly on serving the needs of their multinational clients and those of a few prime borrowers in local industry and trade. Only the national, private commercial banks have been involved in financing a wide variety of activities.

Similar to Uruguay the Chilean liberalisation process did not eliminate the credit market segmentation characteristics of financially repressed economies. When the differential between internal and foreign real interest rates surpassed an annual 30 per cent, foreign currency credit brought into the country under article 14 of the Foreign Exchange Law became concentrated in a few economic sectors. These included the industrial sector up

Andreas Loewenstein

European Air Law

Towards a new system of International Air Transport Regulation

THE INTERNATIONAL SYSTEM OF AIR TRANSPORT REGULATION, consisting of ICAO's technical regulation, IATA's tariff services coordination and the dense network of Bilateral Agreements might be challenged and profoundly modified by recent developments in the LAW OF THE EUROPEAN COMMUNITIES. In the framework of the creation of the European INTERNAL MARKET the European civil aviation industry is submitted to an accelerated integration and liberalization process. It comprises the opening of national markets to all Community Carriers, the application of a common competition regime to all EEC-related flights and a beginning transfer of regulatory functions to the EEC institutions. The present study analyzes in a concise way the state of the international law governing civil aviation world-wide. It explores the recent legal developments in the EEC and the EEC Commission's projects in order to show their potential legal and economic impact on the global aviation network. A book of great interest for practicing legal advisers and airline managers as well as researchers and civil servants in the transport or aviation industry.

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to 1977, and thereafter the financial sector. At that time the Chilean capital market could be described by the existence of economic conglomerates ("grupos"), i.e. a group of firms organized around one or more domestic banks. Under these conditions financial intermediaries pursued the objectives of the economic group to whom they belonged rather than the objectives of their depositors and creditors. As a consequence large enterprises with connections to the economic groups had privileged access to cheaper foreign credit.¹⁰

The completely deregulated domestic peso-loan market in Chile played a role similar to the one performed by the informal credit markets in financially repressed economies. Firms willing to pay the high interest rates, mostly small enterprises without connections to the economic groups, could contract loans. Both the elimination of regulations ruling credit allocation and the strong competition over market shares in the banking industry during the reform period implied a relaxation of the criteria used to select debtors, and a lowering of the standard and quality of collateral required. The increased competition in the banking sector did not achieve a decrease in lending rates or an increase in deposit rates but rather a rise in the risk of the banks's portfolios.

The high positive real cost of pesos borrowing reduced industrial profits considerably.¹¹ A handful of powerful

conglomerates generated large (but presumably unrealized) capital gains by investing in the securities of related enterprises. Such activities allowed them to offset relatively poor returns on real operations. Their ownership of the country's major banks allowed them to consolidate control of a large volume of assets with debt finance.

High Operating Costs

Another microeconomic explanation for very high real lending rates after financial liberalisation and the persistence of interest rate differentials after financial opening in the reforming countries is related to presumed high operating costs and large spreads between deposit and lending rates of financial institutions in developing countries. At first glance this perception contradicts the view that operating costs and spreads should be smaller for financial institutions in developing countries than those of banks in developed countries, since the business or product mix of banks in developing countries generally offers a narrower range of services at a lower level of quality and labour costs are generally lower than in developed countries, which offer a wider range of services of high quality. Unfortunately, a detailed comparative study of operation costs and spreads is faced with similar problems of measurement to those faced by comparisons over time.

Hanson and Rocha¹² provide the only study on this issue available up to now. In comparing gross margins and operating costs between OECD countries and sixteen developing countries, their study could not support the common perception that financial intermediation in developing countries is much more costly than in industrial

¹⁰ Mauricio Larrain: How the 1981-83 Chilean Banking Crisis was Handled, World Bank, Policy, Planning, and Research, Working Paper No. 300, Washington D.C. 1989.

¹¹ Julia Galvez, James Tybout: Microeconomic Adjustments in Chile during 1977-81: The Importance of Being a Group, in: World Development, Vol. 13, No. 8, pp. 969-994.

Table 4
Indicators for Bank Performance in Selected Reforming Countries, 1980-1983

		As percentage of total assets				Deviations from OECD average values as % of GDP	
		Gross earnings margins	Operation costs	Net earnings margins	Profits before tax	Gross margins	Operating costs
Chile	1983	4.1	2.8	1.3	n.a.	n.a.	n.a.
Korea	1981	4.3	2.1	2.1	0.9	0.2	0.0
Malaysia	1982	3.4	1.2	2.3	1.6	0.0	0.0
Thailand	1980	4.3	2.4	1.8	1.5	0.3	0.0
Memo:							
France	1981	3.1	2.0	1.0	0.4	—	—
Germany	1981	4.3	2.2	0.7	0.5	—	—
Spain	1981	5.0	3.1	1.9	0.8	—	—
USA	1981	4.1	2.8	1.3	0.8	(1979)	—

Note: Aggregation of income items as follows:
Interest received – interest paid = interest margin
+ other income (net) = gross earnings margin
– operating costs = net earnings margin
+ other credit (net) = profits before tax

Source: James Hanson, Robert Rocha: High Interest Rates, Spreads, and the Costs of Intermediation, World Bank, Industry and Finance Series, Vol. 18, Washington D.C. 1986.

countries. (See Table 4, including some of the reforming countries considered in this study.) Malaysia is one example of a developing country where cost/asset ratios (1.2 per cent) were lower than those in developed countries in the early 1980s. The average of other developing countries ranged between 2 and 3.5 per cent while in high inflationary countries the ratios were in excess of 4 per cent, thereby surpassing OECD countries' ratios by two to four percentage points.

Banks operating in countries that suffer from high inflation exhibit very high margins and cost ratios mainly due to three reasons. Firstly, banks employ more staff because of the increased volume of paperwork. Secondly, chronic inflation may lead banks to compete for low cost deposits by expanding their branch network. Thirdly, inflation may cause bank disintermediation which lowers the real value of assets while operating costs may rise. Of course the impact of inflation on margins and cost ratios depends on the capital structure, business mix and accounting conventions of banks in different countries.

Oligopolistic Structures

Oligopolistic pricing in a highly concentrated banking sector was a further microeconomic explanation put forward to explain the persistence of interest rate differentials in the reforming countries. Spreads may merely embody monopolistic profits. As discussed above, the opening-up of the economy to external capital flows does not necessarily imply that all economic agents will have the same access to international borrowing. Those agents with no access must therefore obtain credit from domestic financial intermediaries that can borrow abroad and lend to domestic agents. If the number of agents with access to foreign markets is limited, the domestic structure may lead to monopolistic profits which will be reflected in the spread. Using a partial equilibrium model, Blejer and Sagari¹³ have shown that after financial opening the average domestic interest rate may be well above the international interest rate, in particular if barriers to entry for foreign banks continue to exist.

The oligopolistic structure of the banking industry in developing countries has often been the result of restricted entry plus restrictions on foreign ownership of domestic financial institutions. Entry rights are typically granted to certain groups rather than auctioned to the highest bidder. An elimination of restrictions on foreign bank entry or their discriminatory treatment would weaken the monopolistic

structure of the banking sector. However, depending on demand preferences and domestic bank cost structure, the domestic interest rate may still be higher than the international rate. The reason for this lack of convergence to interest parity is that foreign and domestic assets are imperfect substitutes because many domestic financial assets have characteristics that make them nontradable. This implies that comparison of interest rates is not very meaningful unless they reflect differences in rates of return on "equivalent" financial assets.

All reforming countries have undertaken – although to different degrees – steps to stimulate competition in the banking system. Measures to enforce competition included the abolition of interest rate controls, the permission of unregulated financial institutions such as finance companies (as in Malaysia, Taiwan and Thailand), privatisation of government-owned financial institutions (as in Korea), encouragement of universal banks by despecialising development banks and commercial banks, and the lowering of entry barriers for both domestic and foreign financial institutions. While some of these measures resulted in financial crisis, the effects of others on the efficiency of financial intermediation and the behaviour of banks have not yet been evaluated systematically.

Empirical Evidence

The empirical measurement of bank concentration and the threat of entry into the banking sector is a difficult task. Some frequently used measures of participation and concentration are the expansion of banking networks and their density in terms of inhabitants, the number of foreign banks operating within the host countries or the share of the four or five largest banks in the total or domestic assets of all banks. Available empirical evidence for the last indicator suggest that bank concentration in the reforming developing countries is significantly higher than in industrial countries (see Table 5).

Another possible way of looking at cartel behaviour in the banking system is to consider the public sector as the agent introducing non-competitive practices and as an enforcer of a cartel. One could assume that greater entry, reduced rates of concentration, a higher density of offices per head and a privatised banking sector would reflect greater competitive pressures and hence improved performance. However, while foreign banks can impose an important competitive threat, cost structures can be such

¹² James Hanson, Robert Rocha: High Interest Rates, Spreads, and the Costs of Intermediation, World Bank, Industry and Finance Series, Vol. 18, Washington D.C. 1986.

¹³ Mario Blejer, Silvia Sagari: The Structure of the Banking Sector and the Sequence of Financial Liberalisation, in: Michael Connolly, Claudio Gonzalez-Vega (eds.): Economic Reform and Stabilization in Latin America, New York 1987, pp. 93-107.

that real dangers of "overbanking" may arise.¹⁴ There are important economies of scale in the banking system related to overheads, changing technology and the structure of customer demands. For example, electronic payments and clearing systems may greatly reduce the need for expensive branch networks. Costs can be reduced through rationalisation and concentration where fragmented banking systems are highly inefficient. The structure of demand may also be such that it is difficult for new entrants to penetrate the retail banking market.

Market Power

The market power exercised by large banks can be examined vis-à-vis small banks, possible collusive behavior on the part of the largest banks as a group and the market power of the banks vis-à-vis the non-bank financial intermediaries. The problem in finding empirical evidence is that if monopoly is present in banking, it cannot be generally observed across the whole range of banking services, but lies mainly in some market segments. Segments such as wholesale deposit gathering and lending to medium-scale corporate clients tend to have the characteristics of a contestable market: even though only a few players are active, the potential entry of others deters the incumbents from monopolistic behaviour. In other segments, monopoly profits can be sustained because the potential entrant would have to incur high sunk costs.

There is evidence that in a number of reforming developing countries financial liberalisation has obviously not led to substantial changes in the behaviour of financial

institutions. It seems that in some countries bank associations took over the interest rate setting function when the monetary authorities abolished it. For Indonesia it is reported that after interest rate ceilings on state banks were abolished in 1983 these banks continued to behave as before.¹⁵ Sticky responses by bank lending rates to changes in market interest rates were also observed in Thailand.

A different trend in the development of banking could be observed in Malaysia, where the degree of bank concentration significantly lessened in the last two decades although the financial system remains dominated by the large banks. In 1959, the five largest banks accounted for 72 per cent of total bank resources, nearly three-quarters of total bank deposits and two-thirds of total bank loans.¹⁶ In contrast, by 1988 the five largest banks accounted for only 53 per cent of total bank resources, 55 per cent of total bank deposits and 50 per cent of total bank loans. The decline in market share of the five largest banks was mainly due to the rapid expansion in the branch network of the medium and small banks as well as the rise in the number of non-bank financial institutions. The number of finance companies, which did not even exist at independence, reached 47 by September 1988.¹⁷

Nonperforming Loans

Nonperforming loans in the portfolios of the banking sector were also blamed for having contributed to the interest rate spread observed above all in the reforming Southern Cone countries.¹⁸ As the banks capitalised debt service, their portfolios of bad loans grew at roughly the same rate as interest earnings were written into deposits. Thus the entire system could appear to be growing stable in real terms, with the Central Bank providing the necessary growth in real terms. But the growth was on a base of bad debt. A major explicit failure of an industrial firm could expose its major creditor bank and begin a run of depositors out of that bank into others. This provided one incentive for banks to keep the bubble growing by not declaring bankruptcy against any major borrower. As bad debt rose, banks increased their interest charges to successful borrowers to compensate for losses on bad

Table 5
Bank Concentration Ratios
for Selected Reforming Countries

Bank concentration ratio ¹		
Argentina	1987	82 ^a
Indonesia	1987	66 ^a
Malaysia	1987	64 ^a
Thailand	1987	65 ^a
Taiwan	1982-87	58-63 ^a
Memo:		
France	1987	52 ^b
Germany	1984	26 ^b
Spain	1987	43 ^b
USA ^c	1984	13 ^b

¹ Expressed as percentage of total assets.

^a Four largest banks. ^b Five largest banks. ^c Domestic assets only.

Sources: Tein-Chen Chou: Government, Financial Systems and Economic Development in Taiwan. A paper presented at the Workshop on "Government, Financial Systems and Economic Development: A Comparative Study of Selected Asian and Latin American Countries" at the East-West Center on November 30 – December 1, 1990; James Hanson, Robert Rocha, op.cit., (see Table 4); OECD: Economic Surveys: New Zealand, Paris 1991; World Bank estimates.

¹⁴ Cf. OECD: The Role of Indicators ..., op. cit.

¹⁵ David Cole, Betty F. Slade: Indonesian Financial Development: A Different Sequencing?, paper presented at the Seminar on Financial Sector Liberalisation and Regulation "Changing the Rules of the Game", Cambridge, Mass., June 10-15, 1990, p. 21.

¹⁶ Bank Negara Malaysia: Money and Banking in Malaysia, Kuala Lumpur 1989, pp. 164 ff.

¹⁷ Ibid., p. 220.

¹⁸ Cf. Joseph Ramos, op.cit.; and A. Velasco: Liberalisation, Crisis, Intervention: the Chilean Financial System, 1975-1985, IMF, Working Paper No. 66, Washington D.C. 1988.

loans. The spread tended to rise, further depressing investment and aggravating the problem of financial instability.

Arrears in the service of nonperforming loans in the banking system in the Southern Cone countries was and still is a significant problem. In Table 6 the total of bad and doubtful debt is shown as a percentage of total loans. Loans quality deteriorated during the 1980s as (i) macroeconomic difficulties made it more difficult for borrowers to prosper and thus repay their loans, (ii) loans made with inadequate credit analysis (particularly before 1982) began to deteriorate, and (iii) some improvement in institutional capabilities made estimates of nonperforming loans increase.¹⁹ It is very likely that these figures are severely underestimated because the implications from the disclosure of large volumes of nonperforming assets can be disastrous to individual banks and to entire banking systems.

In contrast to the Southern Cone countries the quality of bank portfolios was much better in the Asian reforming

countries, although situations differed. Nonperforming loans never assumed large dimensions in Malaysia and nominal interest rates were never excessively high. However, the burden of arrears has grown since 1985, as real interest rates increased and the economy slowed. The Indonesian financial system also faced the serious problems of a growing volume of bad and doubtful assets in banks' portfolios. The main reason for this was the high level of interest rates in relation to the productivity of capital.

In Korea, the share of nonperforming loans in the total credit of seven nationwide commercial banks showed a steep rise from 2.4 per cent during 1976-80 to 10.5 per cent during 1984-86.²⁰ The accumulation of nonperforming loans was mainly the result of an aggravated industrial situation given the worldwide recession following the second oil shock. The problem of nonperforming loans was gradually resolved without major impact on the solvency of banks. In 1989 the share of nonperforming loans to total assets was reduced to 5.9 per cent. Nonperforming loans also peaked in Taiwan in the period 1984-86 for similar reasons to Korea although their share in total assets was only between 4.6 and 6.5 per cent for domestic banks with a falling trend towards the end of the 1980s (see Table 7). However, nonperforming loans seem to be a major problem for local branches of foreign banks.

A final hypothesis about the high level of real interest rates is related to "distress borrowing". The hypothesis implies that a borrowing firm under financial stress and with serious cash-flow problems prefers to borrow at any interest rate rather than to sell assets to cover losses. Without prudential regulation and supervision, banks may extend credit to insolvent but related firms in order to protect their own capital. Increased interest rates, which often accompany financial opening, do not reduce demand for credit as expected, but stimulate "distress borrowing", particularly when interlocking ownership relations are prevalent. Evidence for such "distress borrowing" was reported mainly for Argentina.²¹

Table 6
Nonperforming Loans in the
Southern Cone Countries, 1980-1987

Nonperforming loans (as percentage of total loans)								
	1980	1981	1982	1983	1984	1985	1986	1987
Argentina	—	—	—	16.9	29.1	30.3	24.6	25.1
Chile	1.2	3.3	4.1	8.5	9.0	3.5	3.6	2.7
Uruguay	8.9	14.6	30.6	24.7	22.3	36.2	45.9	25.2

— Not available.

Source: Felipe Morris: (with Mark Dorfman, Jose Pedro Ortiz and Maria Llandia Franco): *Latin America's Banking Systems in the 1980s*, World Bank Discussion Paper No. 81, Washington D.C. 1990.

Table 7
Nonperforming Loans Ratio¹ in
Taiwan, 1980-1988
(per cent)

	Government-owned commercial banks	Government-owned specialized banks	Private-owned banks	Local branches of foreign banks
1980	4.4	6.0	3.5	3.9
1981	3.9	5.1	3.8	2.5
1982	4.4	4.0	4.1	4.7
1983	4.6	3.9	5.0	7.3
1984	4.4	3.5	6.5	14.5
1985	5.0	3.9	6.9	12.3
1986	4.5	4.3	5.6	14.1
1987	4.0	3.7	5.3	11.3
1988	3.0	2.9	3.2	7.1

¹ Ratio of nonperforming loans (overdue loans, called accounts and bad loans) to total loans.

Source: Tien-Chen Chou, *op. cit.*, see Table 5.

¹⁹ Felipe Morris (with Mark Dorfman, Jose Pedro Ortiz and Maria Llandia Franco): *Latin America's Banking Systems in the 1980s*, in: World Bank Discussion Paper No. 81, Washington D.C. 1990.

²⁰ Sang-Woo Nam: *Korea's Financial Policy and Its Consequences*. A paper presented at the Workshop on "Government, Financial Systems and Economic Development: A Comparative Study of Selected Asian and Latin American Countries" held at the East-West Center on November 20 - December 1, 1990.

²¹ A. Humberto Petrei, James R. Tybout: *Microeconomic Adjustments in Argentina During 1976-81: The Importance of Changing Levels of Financial Subsidies*, in: *World Development*, Special Issue on Liberalisation with Stabilization in the Southern Cone of Latin America, Vol. 13, 1985, No. 8, pp. 949-967.