Table 1.1: Sample of H-statistics for banking systems

Low competition		Medium competition		High competition	
Country	H-statistic	Country	H-statistic	Country	H-statistic
Finland	-0.27	Pakistan	0.47	China	1.57
Malta	-0.22	Ukraine	0.47	Ireland	1.11
Portugal	-0.15	Norway	0.47	Costa Rica	1.08
Iceland	-0.14	India	0.48	Macedonia	1.08
Cyprus	-0.11	United States	0.49	Senegal	1.06
Hong Kong	0.00	Belgium	0.49	Bangladesh	0.98
Indonesia	0.07	Japan	0.50	Chile	0.95
Austria	0.07	Zambia	0.50	Taiwan	0.93
Poland	0.08	Greece	0.51	Andorra	0.89
Botswana	0.08	Armenia	0.51	South Africa	0.88
Italy	0.09	Mozambique	0.52	Spain	0.87
Azerbaijan	0.11	Uruguay	0.52	Switzerland	0.86
Israel	0.12	Bahrain	0.52	Venezuela	0.79
Hungary	0.17	Bahamas	0.53	Kenya	0.79
Morocco	0.20	Australia	0.56	Netherlands	0.78
Algeria	0.25	Latvia	0.57	Czech Republic	0.77
Kazakhstan	0.25	Panama	0.58	United Kingdom	0.77

Source: Bikker and Spierdijk, 2009, Appendix pp. 31-35

There is of course a very wide divergence between the statistics arrived at by Claessens and Laeven (2004) and by Bikker et al (2006). But the more disturbing aspect of these studies is the palpably misleading set of numbers. What conclusion is one supposed to draw from studies that suggest that China, Costa Rica, Macedonia, Senegal, Hong Kong Bolivia and Bangladesh have the most contestable and competitive banking systems, while Finland, Malta, Portugal, Iceland, Cypress, Hong Kong, Indonesia, Austria, Poland, Botswana, Italy, Azarbaijan and Israel appear to be characterized almost as banking monopolies ?

The authors do not question these odd results. Not only do they accept them as valid, but they also go on to construct an elaborate econometric model based on these statistics to inform us on the determinants of competition across countries. Bikker and Spierdijk (2009) go further to perform recursive least squares estimates of the H-statistic of 11 major industrialized countries to show that, in these economies, large-scale banking consolidation is significantly correlated with a decrease in competition and that larger banks have greater market power than the smaller ones. It would appear from this observation that market structure does, after all, have some effect on competition --- a proposition that had earlier been negated by the same authors.

For whatever it is worth, the H-statistic for Pakistan is 0.47 – 0.48, while for India it is 0.48 – 0.53, depending on which of two studies is relied upon. This lies close to the world-wide average of 0.5. Bikker and Spierdijk (2009) have also calculated the average H value for each continent.

South America has the highest average of 0.61, followed by North America (0.55), Africa (0.54) and Asia (0.49). Europe has a lower value of 0.48 while the lowest (0.34) average is that of the Middle East. These findings also appear to be counter-intuitive, as are the low competitive ratings for the banking sectors of many advanced countries. For instance, the U.S., which ranks first in the world in the Financial Development Index (2008), does not have a more competitive H-score than Pakistan.

For a comparison between the H-statistic and the entirely different rankings of the financial development index of the World Economic Forum, see Table 1.2.

Table 1.2: The Financial Development Index 2008 Rankings
Country/Economy Rank Score (1–7)

Country/Economy	Ranking	Score (1-7)	Country/Economy	Ranking	Score (1-7)
United States	1	5.85	Saudi Arabia	27	3.90
United Kingdom	2	5.83	Bahrain	28	3.89
Germany	3	5.28	Thailand	29	3.82
Japan	4	5.28	Chile	30	3.79
Canada	5	5.26	India	31	3.63
France	6	5.25	Panama	32	3.61
Switzerland	7	5.23	Hungary	33	3.53
Hong Kong SAR	8	5.23	Pakistan	34	3.46
Netherlands	9	5.22	Czech Republic	35	3.43
Singapore	10	5.15	Russian Federation	36	3.40
Australia	11	4.98	Egypt	37	3.32
Spain	12	4.90	Indonesia	38	3.31
Sweden	13	4.75	Turkey	39	3.30
Ireland	14	4.72	Brazil	40	3.28
Norway	15	4.66	Poland	41	3.27
United Arab Emirates	16	4.61	Slovak Republic	42	3.25
Belgium	17	4.56	Mexico	43	3.21
Austria	18	4.55	Colombia	44	3.21
Korea, Rep.	19	4.55	Kazakhstan	45	3.13
Malaysia	20	4.48	Peru	46	3.06
Finland	21	4.45	Argentina	47	3.04
Italy	22	4.38	Philippines	48	3.03
Israel	23	4.14	Vietnam	49	3.03
China	24	4.09	Nigeria	50	2.76
South Africa	25	4.00	Ukraine	51	2.73
Kuwait	26	3.93	Venezuela	52	2.71

Reproduced from The Financial Development Report 2008 World Economic Forum

The conclusions emerging from the global studies using the PR methodology are thus not very exciting. The researchers set out three null hypotheses: 'perfect competition not rejected', 'monopoly not rejected' and 'both monopoly and perfect competition not rejected'. When the first hypothesis (perfect competition) is not rejected (as in one-third of the countries) Bikker and Spierdijk (2009) classify them as 'high competition' countries. When the second hypothesis is not rejected, as in 30% of the countries, they are classified as 'low competition' countries. In the

third case, the null hypothesis is not rejected, except in only one unspecified country. Consequently, the banking systems of all countries are stated to have 'monopolistic competition', which is hardly an original or inspiring finding from which one could draw any meaningful inference or base any policy recommendation upon.

Judging from these cross-country studies, the H-statistic appears to be a flawed indicator of measuring competition. On the face of it, it appears much less helpful than formal indicators, such as the interest- rate spread, used in the Global Competitiveness Index. Theoretically, it could be a precise indicator of the pass-through effect of incremental changes in input prices upon output. In practice, however, judging by the results cited above, it does not appear to be a convincing measure.

Application of the PR methodology has the additional deficiency of taking into account only the total (aggregate) output of banks, not product-specific output. Competition within different product-markets cannot therefore be analyzed, unless all data are disaggregated to the product level.

CHAPTER 2

REVIEW OF COMPETITION STUDIES: INDIA, BRAZIL, PAKISTAN

The discussion in the previous chapter revolved around the methodologies that have used panel data to analyze competition in a cross-section of countries. The results of those studies were discussed, especially insofar as competition was related (or not related) to market structure, was the outcome of other explanatory variables, or depended upon institutional factors. Different techniques and criteria that have been employed to measure competition across countries were also discussed. In particular, the measurement of contestability vs. market power was analyzed critically.

This chapter discusses the application of these techniques and methodologies to specific countries, not to panel data pertaining to a wide cross-section of countries. The findings of three such country-studies are discussed below. The three countries are India, Brazil and Pakistan.

I. INDIA

Until 1992, the Indian banking industry was largely in the public sector, and it was administered by the State without much regard to competition. 90% of the assets of the banking sector were owned by the government, with the top 5 banks (all State-owned) accounting for 68% of lending and 54% of assets. As in any centrally-planned economy, the Reserve Bank of India (RBI) held a large part of bank deposits as reserves. RBI administered a complex regime of multiple interest rates, involving cross-subsidization, and concessionary lending to chosen sectors. Rigid management structures, combined with lack of disclosure requirements and accountability, contributed to thwarting of competition.

Following the Report (1991) of the Committee on the Financial System, headed by Shri M. Narasimham, the banking sector was opened up to foreign firms, public ownership of banks was considerably diluted, competition was introduced through new products, in rural and urban areas alike, by private banks. As a result of this liberalization, between 1992 and 1998, the banking industry underwent a radical transformation. A second Committee on Banking Sector Reforms, also headed by Narasimham, reviewed these developments to find that they had "enhanced the competitive framework for banking – the more so as the new private and foreign banks have higher productivity levels based on newer technology and lower levels of manning." (Government of India Report, 1998, para1:21)

Over the next decade, prudential regulations were introduced by the Reserve Bank for capital adequacy, loan provisioning, and accounting standards. State ownership was further divested, more liberal entry allowed to new private banks. Interest rates on deposits and loans were

allowed to be set by the banks themselves, statutory reserve requirements were lowered. As a result, concentration ratios fell. The top 5 banks that had controlled 68% of the loan market (1991 – 92), controlled only 48% in 1995-96 and only 41% in 2003-2004. The asset concentration ratio (54% in 1990-91) fell to 43% (2003 – 2004) and the share of government banks (90% in 1991) fell to 75% (2004).

Although the structure of the industry changed after 1991, no attempt was made until 2005 to study either the extent of competition prevailing in the Indian banking sector or of the effects of these structural changes. Nevertheless, there was a general perception that competition had intensified since 1992.

The first empirical evaluation of the degree of competition, and of the proposition whether competition had provided cost benefits, was made by A. Prasad (Advisor to IMF Executive Director) and S. Ghosh (Assistant Advisor in the Reserve Bank of India). Using annual data on scheduled banks[6], Prasad (2005) and Prasad and Ghosh (2007) applied the Panzar-Rosse (PR) methodology to 64 banks, constituting 90% of the total assets of the sector.[7] They examined both phases of banking reforms (1992-1999 liberalization, followed by 1999-2004 second generation reforms) in order to determine the effect of a host of factor costs (interest expenses, personnel expenses, other operating costs, capital-asset ratio, loan-asset ratio and number of operating branches) upon interest revenues. Through this input-output elasticity analysis, they estimated the H-statistic of contestability. The H-statistic they arrived at was 0.51 which is very close to the global average of 0.50. They compared it with estimates of other countries obtained from other studies, to draw the following inference (see Table 2.1):

Table 2.1: H-Statistic of different countries obtained from various studies

Country	H-statistic	Competition Type
United States	0.283	Monopolistic Competition
United Kingdom	0.581	"
Canada	0.698	"
Germany	0.482	"
Italy	0.471	"
Spain	0.283	"
Brazil	0.889	"
Argentina	0.460	"
Chile	0.821	"
India	0.510	"

Source: Prasad and Ghosh, 2007, p.282

The conclusion of the Indian study was:

[6] Commercial banks listed according to the Second Schedule of the Reserve Bank of India Act of 1934.

[7] Out of these 64 banks, 27 were State-owned, 23 were private domestic banks (8 of them being new entrants) and 14 major foreign banks.

> "Summing up, the results reject the monopoly and perfect competition hypotheses and lend credence to the fact that Indian banks earn their revenues as if under monopolistic competition. These results seem to be compatible with the contestable market theory, if it is assumed that the incumbent firms set their prices close to the competitive level because of potential competition". (Prasad and Ghosh, 2007, p.281)

The second study, on measuring competition and the determinants of competition in private Indian banking, was done at Delhi University. Murthy and Deb (2008) tracked the changes in the rankings of 27 domestic private banks to show that, even though this sub-sector was not the largest (government-owned banks, controlling 75% of the market, constituted the largest sector), it was the most dynamic, witnessing changes in relative market shares and rankings. They suggested that, in line with the policy objective of the Narasimham Committee, private bank entry had promoted competition and mobility in the industry:

> "One can observe a rise in strength of competitive forced following entry of new firms. Forces of competition reached their peak in 1999-2000. It was followed by a period of stability in ranks of leading firms. The period from 2000-01 to 2001-02 was characterized by complete absence of mobility and turnover. It is apparent that a period of instability created by emergence of competitive forces has given way to stability. Thus one may distinguish between two phases of competition following entry in private banking industry. In the first phase, the strength of the forces of competition increased to reach their peak. This was followed by a phase, in which competition became less intense and ultimately died down. The course of events related to generation of forces following entry resembles the aftermath of throwing of a stone in a water body, as a result of which ripples are created, gather strength, and disappear." (Murthy and Deb, 2008, p.22)

Murthy and Deb (2008) used a very complex methodology, incorporating Structure-Conduct-Performance (SCP) analysis, chi-squared hypothesis testing and ranking coefficients. They set up three equations in order to determine market dynamics and the state of competition. The first equation related the Herfindahl-Hirschman (HHI) value (as the dependent variable) to the number of banks, the average size of bank's assets and the skew in the distribution of those assets. The second equation explained profitability in terms of liquidity ratio, interest margin, advertising and size of other incomes. Competition was explained as being a function of HHI (value predicted from first equation), and other fixed assets, size of wage bill (as proportion of operating expenses) and profit ratio (as derived from the second equation). Included in this model were two so-called "strategic conduct" variables. The first strategy variable was the wage bill as a proportion of total expenses. This variable was included on the basis of an observation that the new entrants' wage bill (as a percentage of expenses) was lower than that of incumbents.[8] The second conduct variable was in fact a dummy variable for a merger having taken place: it assumed a value of one during a merger year; zero otherwise.[9]

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[8] From this observation it was inferred that the incumbents (old banks) had tried to thwart new entry, presumably through higher salaries. The logic of how this observation constituted strategic conduct or could be construed as a strategy variable was not made clear.

[9] How this dummy variable represented strategic conduct, or could be a strategy variable, was again not made clear

Applying this elaborate statistical model, Murthy and Deb (2008) concluded (as had scores of other studies) that concentration and competition could not simply be related to one another. Nor was entry found to be the only factor determining competition, although it could have an indirect effect. Strategic conduct was argued to have played an important role, even though the two variables supposedly meant to denote strategic conduct were not related to "conduct" as commonly understood in SCP parlance or in the strategic management literature. On the basis of this exercise, the authors concluded further that competition could indeed be measured through an extension of the SCP model and was indeed an "all-pervasive phenomenon, which embraces all the aspects of the SCP paradigm", and that "finally, the adjunct empirical analysis of the dynamics of market shares, ranks, conduct variables and return reveals that the market form is close to monopolistic competition rather than oligopoly." (Murthy and Deb, 2008, p.41). With this terse sentence this study of private banking in India also arrived at the same hackneyed conclusion as other quantitative studies of competition in other jurisdictions[10].

II. BRAZIL

Brazil has the largest banking system in Latin America. Its competition indices have been more or less in line with those prevailing in the region. Its interest rate spread is one of the highest in the world, and the World Bank has been trying over the years to get this reduced and to make Brazilian banking more competitive. Towards this end, the World Bank's study on interest rate spreads (de la Torre and S. Claessens, 2006) recommended that competition in specific markets be studied. Two earlier studies, by Nakane (2001) and Belaisch (2003) had analyzed aggregate banking data and had come up with contradictory findings. Nakane (2001) found that, although the Brazilian banking system could not be labeled as 'perfect competition', it was highly competitive, with complete absence of collusion. Belaisch (2003) had come to the opposite conclusion, finding that, although foreign banks behaved competitively, the domestic banks, both the State-owned ones and the small/medium private banks, behaved as oligopolies. Both studies used formal indicators: the former applied Bresnahan (1982) and Lau (1982), the latter Panzar and Rosse (1987) methodology, discussed earlier.

Since no policy recommendation could be based on either study, the World Bank's Country Assistance Strategy, following de la Torre and Claessens (2006), disaggregated all the banking statistics according to different market segments, and then assessed the degree of competition through an econometric model based on Panzar and Rosse (1987). Performance of two distinct markets – the retail market and the corporate market – was also analyzed within the SCP framework of Industrial Organization. The consistency of research findings was checked with

[10] See Table 2 on p.273 of Prasad and Ghosh, 2007, for a listing of 6 studies pertaining to developed economies(Germany, France, Italy, Spain, UK, USA) and 4 separate studies on Latin American, Central and East European and other emerging economies. All 10 studies applied the PR methodology with the same outcome.

top managers of 8 banks. As a result, this World Bank country study (2007) found that, although larger than all other Latin American countries, Brazil was similar to them in most respects. Its banking sector's concentration ratio and Herfindahl index (900), its cost/income ratio (62%), and its capital adequacy ratio (15%) were all similar. However, it had scarce capital (34% of assets), higher operating expenses and non-performing loans, although these were declining. The sensitivity of bank revenues to changes in factor costs, the PR test, was different for market segments: retail products were less sensitive to changes in input costs than corporate products. In other words, the retail business was more profitable than the corporate business. The retail line of business, constituting the largest market (40% of Brazilian banking assets), covered the provision of services pertaining to deposits, personal loans and payment networks for all individuals and SMEs. The corporate line of business that came next in importance covered lending and cash management services provided to medium-sized and large companies. The third line of business comprised the 'government' and the fourth was the 'treasury' that included central trading and investment functions. The last two lines of business were small and therefore excluded from the analysis.

The World Bank study (2007) came to the conclusion that the structure of the retail banking business in Brazil was quite different from that of the corporate line of business. Retail accounts represented 40% of the banking businesses, corporate accounts were only 26%. Yet, retail lending was a much smaller proportion of the retail-side business than it was of the corporate side of business. Corporate lending was the predominant asset of the corporate side of bank operations. Even though operating costs of the retail business were higher, it generated much higher profitability: 70% of interest-rate income came from retailing. Loan rates and spreads were found to be much higher for Retail than for the corporate business, which accounted for only 20% of interest margins.

The Report suggested the existence of cross-subsidies between different lines of business. Retail customers appeared to come up against barriers, information deficiencies, lack of standardization, bundling of products (e.g. deposit accounts being tied to cheaper payment services) and technical inefficiencies.

All these factors, impeding competition, are found in many countries. In Brazil, they were found to be the cause of rents accruing in the retail business in which low-interest deposits more than compensated for the high fixed costs of bank operations. By contrast, the corporate side was characterized by greater price competition, lower loan spreads and greater contestability. This variability that was observed between the two categories of accounts (retail and corporate) and which had been subsumed in the earlier studies, allowed the World Bank to make a number of policy recommendations to promote competition – e.g. facilitating switching of accounts, sharing credit histories, improving the retail payment system.

III. PAKISTAN

Many of the competition strains found in India and in Brazil are found also in Pakistan. The Indian history of State-owned banking until 1992 is stronger than in Pakistan, where the high stage of nationalization lasted 20 years (1973 - 1992). The post-1992 scenario, in both countries, however does have broad similarities. As will be observed later in this study, foreign bank entry in Pakistan spurred domestic banks into greater competition, but this tide also ebbed, as had been noted by Murthy and Deb (2008) in India. The measurement of competition in Pakistan has also yielded results very similar to those mentioned by Prasad and Ghosh (2007) for India.

The similarity with Brazil is also noteworthy. Although cross-subsidization has not been proven, there is a strong suggestion of it--- between the two kinds of accounts: retail and corporate. In the present study, data obtained from the State Bank of Pakistan have been disaggregated according to several categories of accounts (e.g.: government, non-financial public sector enterprises, non-banking financial institutions, private sector businesses, trust funds and NGOs, foreign constituents, personal) and even though bank expenses and incomes have not been separately allocated in terms of these categories, it is apparent that there are wide differences between interest margins obtained from different markets. This shows varying degrees of competition across product-markets in both countries. The overall H-statistic also shows the same genre of monopolistic competition.

Industrial competition has not really received attention either in government or the academic community in Pakistan. It is therefore hardly surprising that banking sector studies make only a passing reference to it. Two exceptions are noted below.

Qayyum and Khan (2007) examined four aspects of the banking sector in Pakistan: x-efficiency, economies of scale, technological progress and competition. The four are interlinked, and the authors argue that output restrictions (through collusion) lead naturally to manifest inefficiency, while freedom of entry and exit (a contestable market) result in efficiency and greater competition. The argument however goes further. Firstly, scale economies are necessary to ensure efficiency and competition. Secondly, there is a trade-off between competition and stability – a well rehearsed argument, the pros and cons of which, as found in the academic literature, have been discussed already.

This study was based on panel data of 29 Pakistani banks from 1998 to 2005 (8 years). 11 of these were foreign banks. 18 domestic banks included the big five. Three basic cost inputs (labour, capital and borrowed funds) were examined with relation to each bank's output of loans (advances) and investments. The study found the existence of economies of scale for all banks, but these were lowest for the big five banks and highest for the foreign banks. The efficiency score of foreign banks was also higher than that of domestic banks, the smaller ones of which were the least efficient. Yet, the big five were seen to be losing market share over the 8 year period.

Despite these statistical findings on technological progress, scale economies and x-efficiency, the inescapable conclusion was that the banking sector lacked competition. This could easily be gauged from the high interest rate spreads. Significantly, the spread of foreign banks was highest, followed by that of the big 5. Table 2.2 provides a comparison of these spreads from 1998 to 2005 during which period concentration declined. The results reported here are not entirely convincing. For instance, the interest rate spread of domestic banks is suspiciously low.

Table 2.2: Concentration Ratios and average interest rate spread

		Interest Rate Spread			
Years	Concentration Ratio	All Banks	Domestic Banks	Foreign Banks	Big Banks
1998	0.72	2.60	0.13	8.39	4.59
1999	0.73	9.71	0.49	10.31	5.58
2000	0.72	11.75	0.59	12.93	5.76
2001	0.69	12.91	0.65	13.52	6.86
2002	0.61	9.38	0.47	8.93	5.92
2003	0.58	7.30	0.36	6.03	4.50
2004	0.56	6.94	0.35	5.87	4.09
2005	0.58	9.15	0.46	7.81	6.25

Reproduced from Qayyum and Khan (2007, p.14)

The explanation furnished by the authors for the differences (in the spread) between the big five and smaller domestic banks is that the big five have access to cheaper deposits through a large number of branches. They are also perceived as being less risky and command customer loyalty. This enables them to extract premium prices. This does not, however, explain why the interest spread of foreign banks, shown to be the most efficient of all, should be the highest. Clearly there are unexplained anti-competitive forces at work, which the study does not go into.

From these results the authors also draw the conclusion that mergers can be expected to take place to even out the differences. These mergers would reduce cost without conferring monopoly power, it is argued. The basis for this optimism is, however, not indicated. It is also argued that these mergers would provide greater stability and should therefore be encouraged by the State Bank.

Mergers did indeed take place. They were indeed encouraged by the State Bank in the interest of consolidation and stability. If they reduced costs, however, these cost reductions were not passed on to the consumer, as the authors had hoped they would be. Nor was the interest rate spread lowered proportionately. Instead, the profitability of the banks increased. All the evidence pointed to lack of competition.

The second study on concentration and competition in the banking system has been done by Mahmood ul Hasan Khan of the Financial Stability Department of the State Bank.[11] The study follows the well-trodden approach of the Structure-Conduct-Performance model of Industrial

[11] It formed Chapter 4 of the *Financial Stability Review, 2007-2008* of the State Bank of Pakistan.

Organization, tracing the evolution of the banking sector in terms of changing concentration ratios and HHI.

The top five banks, all State-owned until 1990, had a market share of 84% (compared to 68% in India). With the entry of private banking after 1990, and an increase in the number of banks from 31 (1990) to 45 (1995), the share of the top 5 fell to 68.9% in 1995. However, Hasan Khan (2008) notes that the new entrants could not compete effectively against the big five and remained very weak. Hence, the issuance of licenses to new banks was stopped in 1995. This was followed by further restrictions in terms of risk-based regulations and minimum capital requirements as well as the avowed policy of the State Bank to promote consolidation. This consolidation resulted in a spate of mergers and acquisitions (still continuing), as a result of which a significant second tier of banking emerged. The top five banks lost market share to the next five large banks. This finding is consistent with that of Qayyum and Khan (2007).

Hasan Khan (2008) goes on to show that the banking industry underwent a structural change between 1990 and 2007 and argues, on the basis of structural indicators, that competition is improving. He cites five statistics in support of this claim. The first statistic is the M-concentration ratio[12] that has been steadily declining in terms of deposits and assets, although not necessarily in terms of advances.

The second statistic cited by Hasan Khan (2008) is the coefficient of variation. This coefficient has been declining, for deposits, advances and assets alike, implying a narrowing of the dispersion around the mean. See Table 2.3.

Table 2.3: Coefficient of Variation (Pakistan)

Calendar Year	Deposits	Advances	Assets
1996	2.21	1.92	2.03
1997	2.09	1.80	1.97
1998	2.11	1.82	1.96
1999	2.15	1.83	1.95
2000	2.10	1.77	1.87
2001	2.05	1.80	1.83
2002	1.90	1.57	1.72
2003	1.79	1.47	1.65
2004	1.63	1.40	1.51
2005	1.52	1.44	1.42
2006	1.49	1.40	1.40
2007	1.45	1.38	1.39

Source: Concentration and Competition in the Banking System, in *Financial Stability Review 2007-2008,* State Bank of Pakistan, p.79.

[12] M=1 for the share of the leading bank, M=3 for the top 3, M=5 for the top 5, and M=10 for the top 10 banks

The decrease in the coefficient of variation shows that the wide differences between the sizes of banks have shrunk (relatively speaking), and the industry now comprises more uniform- sized banks. More equal-sized banks are assumed to have a greater propensity to complete among themselves and are less likely to collude. This is the all-important assumption that is made here. Whether or not this assumption is tenable is an empirical question. The State Bank study does not test it. Hence, any conclusion on increased competition drawn on the basis of this decreased coefficient of variation is not necessarily correct.

Alongside the coefficient of variation the State Bank Review (Hasan Khan, 2008) cites the HHI, which too has been declining (see Table 2.4). The HHI is a somewhat more reliable statistic of a monopoly situation than the first two statistics but a fall in its numeric value is not enough to prove heightened competition either. HHI reckons with both the number and size distribution of banks. It is, however, an arbitrary measure: US Department of Justice considers an HHI below 1000 to connote a competitive market, a value of 1000-1800 to connote moderate concentration and HHI in excess of 1800 to connote a concentrated and uncompetitive market.

As shown in Table 2.4, the HHI indices for deposits, advances and assets have all come down in Pakistan. Hasan Khan (2008, p.79) argues further that, since "the number of banks (in Pakistan) has either declined or stayed unchanged over the period of analysis," the decrease in the HHI is "entirely on account of changes in the relative size of banks." Consequently, he concludes that the market structure has become more favourable to competition.

Table 2.4: Herfindahl-Hirschman Index (Pakistan)

Calendar Year	Deposits	Advances	Assets
1996	1255	1004	1098
1997	1149	906	1045
1998	1190	941	1055
1999	1259	967	1069
2000	1238	942	1023
2001	1185	965	993
2002	1130	852	973
2003	1032	777	912
2004	946	764	850
2005	833	772	762
2006	810	746	745
2007	785	732	741

Source: Concentration and Competition in the Banking System, in *Financial Stability Review 2007-2008,* State Bank of Pakistan, p.79.

There are several flaws in this line of argument. First of all, the observation that the number of banks has declined or stayed unchanged, is not corroborated by the data presented by the author (p. 80): total number of banks *increased* from 31 to 40. See Table 2.5. Domestic private banks

(zero in 1990) also *increased* –from 15 in 1995 to 26 in 2007. Foreign banks decreased from 21 to 6, but they never had large enough market shares to significantly impact the parameters.

Table 2.5: Number of Banks (Pakistan)

Calendar Year	PSCBs	DPBs	FBs	SBs	Total
1990	6	0	21	4	31
1995	6	15	20	4	45
2000	6	14	20	4	44
2001	6	14	19	4	43
2002	5	16	16	3	40
2003	5	18	14	3	40
2004	4	20	11	3	38
2005	4	20	11	4	39
2006	4	24	7	4	39
2007	4	26	6	4	40

Source: Concentration and Competition in the Banking System, in *Financial Stability Review 2007-2008,* State Bank of Pakistan, p.80.

Secondly, an improvement in competition cannot, in any case, be inferred *ipso facto* from a decrease in the number of banks or from the decrease in the coefficient of variation. Thirdly, a change in the size distribution of banks cannot form the basis of any argument on competition. Equal-sized banks might be as well inclined to collude as to compete. The theoretical assumption, that a large number of enterprises of more or less the same size are more likely to result in greater competition, is not convincing. In fact, the opposite might be the case. Cartelization might become easier with less dispersion in sizes or variations in assets. Fourthly, the Herfindahl-Hirschman index, which is a composite of number and size of banks, can also be a misleading measure of concentration and competition, especially when there is on-going merger activity. Cetorelli (1999) gives numerical examples and empirical evidence to show that applying the Herfindahl index (or other market structure indicators) to gauge market power or the effect of mergers on competition can be erroneous and misleading.

Hasan Khan's study also applies the PR methodology to work out the H-statistic from panel data on 26 banks for the past 10 years (1997 – 2007), in order to show the contestability of the banking sector in Pakistan. Using two different specifications (interest income and total income) of bank revenues, H-statistics of 0.868 and 0.899 are reported. However, to make them comparable with international studies (Claessens and Laeven, 2004 and Bikker et al 2007), a different pooled estimation procedure is used to arrive at H-statistics of 0.407 and 0.418. These are akin to the Indian H-Statistic of 0.51. Just as Prasad and Ghosh (2007) had presented comparative cross-country statistics (see Table 2.1. earlier), Hasan Khan (2008, p.81) presents a slightly different set of numbers (see Table 2.6) by way of an international comparison. In all cases, however, the conclusion is identical: monopolistic competition prevails.

Table 2.6: Comparison of H-statistic for Pakistan

Countries	Claessens & Laeven (2004)	Bikker etal (2007)
Regional Countries		
Bangladesh	0.69	0.966
India	0.53	0.736
Pakistan	0.48	0.724
Philippines	0.66	0.715
Turkey	0.46	0.651
Developed Countries		
UK	0.74	0.776
USA	0.41	0.583
Canada	0.67	0.792
Switzerland	0.67	0.555

Source: Concentration and Competition in the Banking System, in *Financial Stability Review 2007-2008,* State Bank of Pakistan, p.81.

Despite the State Bank's attempt to show that competition in Pakistan's banking system is improving and is reasonably contestable, Hasan Khan (2008, p. 83) too comes to the compelling conclusion of weak competition:

> "Despite these positive developments, the low rates of return to depositors (negative in real terms), high banking spreads, and the weak pass-through of monetary policy measures to the deposit rate, all point to the presence of relatively weak competitive forces at play in the industry in case of deposit mobilization. Given the market structure of the banking sector with the historical dominance of the big 5 banks, the related economies of scale and extended distribution enjoyed by them, an intuitive assessment regarding the status of competition would be that while there is a fair degree of banking competition in urban areas, there is a strong monopoly of the big 5 banks in small cities due to their large branch networks."

IV. SUMMARY

This chapter has analyzed various studies on the banking system in three countries: Brazil, India and Pakistan. The methodologies used in these studies to examine competition have been the same. All three have looked at the structures prevailing in the three countries. They have also looked at the contestability of the markets, and have applied the Panzar-Rosse methodology to calculate the H-statistics, coming in each case to the same, rather trite conclusion that "monopolistic competition" prevails.

The Brazilian data had lent itself to contradictory findings in previous studies. However, the World Bank's 2007 study reconciled some of these differences by looking deeper into the market. It disaggregated the banking statistics into two distinct product markets – retail services and corporate services. It found evidence of cross- subsidization and of rent-seeking in retail services. The corporate client service, by way of loan advances, was rather more competitive than retail services. The latter, however, provided greater revenues because of the availability of

low-cost deposits and high- priced personal lending. Naturally, this led to very high levels of interest rate spreads. This by itself was strong evidence of non-competitive markets.

There are distinct similarities between the Brazilian experience and that of India and Pakistan. These similarities show up partly because the same methodology has been used. In terms of evolving structure of the industry, concentration levels have gone down considerably in both countries. The order of magnitude of the loss of market shares of the top five banks (and of State-owned banks) is also broadly similar. In both countries there was a divestiture of State controls in the 1990s, considerable expansion and consolidation after 2000, foreign entry and a resurgence of second line domestic private commercial banks. There were conflicting findings on the implications of mergers and of foreign entry on the domestic market. The contestability of the industry was analyzed but the conclusion of the prevalence of "monopolistic competition" is trite and unhelpful in providing any insight into the mores of competition. The surge of foreign entry, and its subsequent loss of market share to domestic private banks, appears to have been met with retaliation from domestic banks. This is quite instructive.

None of these studies has, however, scratched beneath the statistical surface. Actual competition in product markets has not been looked into at all. That is the unsatisfying property of all these country studies. The dissatisfaction and the lack of depth stems from the limitations of the methodology: the econometric approach couched within the Industrial Organization paradigm. In other industries this approach and this paradigm has been discarded, or modified greatly, because of the selfsame disaffection. In the banking sector, however, academics and policy analysts have stuck to this well-trodden path and not been able to find very meaningful insights.

None the less, in some other countries, a different approach has been adopted. That approach is driven far less by theory, far more by practical realism and policy requirements. As a result, those studies may have greater relevance to the terms of reference of the present study. The next chapter (Chapter 3) takes up these studies – on competition in the U.K., Ireland, South Africa, Germany and the European Union.

CHAPTER 3

INTERNATIONAL EXPERIENCE

I. COMPETITION IN THE UNITED KINGDOM

One of the most influential reports on competition has been the Review of Banking Services in the UK (2000) -- influential not so much for its impact on UK policy as for the inspiration it provided to other countries (e.g. Ireland, South Africa) and for the choice of its methodology and practical approach that is very different from the academic literature and the country-reports discussed in the previous chapters.

This independent review of competition in the banking sector in the U.K. was commissioned in November 1998 – the same year that the Competition Act (1998) was legislated[13]. While the Competition Commission examines specific sectoral competition issues, referred to it usually by the Office of Fair Trading, or scrutinizes anti-competitive behavior in individual product-markets, the Review of Banking Services was meant to provide an over-arching view of innovation, competition and efficiency and report on how well the banking sector was serving the business community, ordinary customers and the economy as a whole.

Don Cruickshank, who led the review team, took a deliberately wider view of his mandate. He split the review into two stages. After an initial review, covering 7 months, he made an Interim Report (July 1999) that spelt out his methodology, his broad and general findings, and his recommendations for the institutional role to be accorded to the new Competition Commission in the UK.. Cruickshank then went into an analysis of four product markets through which banking services are provided. He looked at the state of competition in each market and furnished his conclusions and recommendations in the Final Report of 20 March 2000.

Since the Cruickshank Report has provided a template for analyzing banking competition in other countries as well, its methodology, findings and recommendations will be discussed presently. This will be followed by a discussion on its applicability in other jurisdictions, including that of Pakistan.

Methodology

The Cruickshank review did not use the H-statistic to measure contestability or competition, even though the study team had access to accounting data on the costs and prices of the 10 largest banks in the U.K. Instead, the study applied the simpler, and more widely-accepted,

[13] The Competition Commission of the UK succeeded the Monopolies and Mergers Commission in 1999 as a result of this Act.

indicators of market concentration and HHI. However, unlike other statistical analyses of the structure of an industry, these statistics were calculated separately for different product- markets.

No UK bank could provide data on allocation of its costs or profitability to its different products. Therefore, the review did not even attempt to estimate product-wise profitability through an econometric analysis such as that of the World Bank study on Brazil. It may be recalled that the Brazilian study had broken down banking services in terms of retailing and corporate services. This categorization of different kinds of customers does not really conform to product-markets, although it can categorize customer types. As against this categorization (according to customer type), Cruickshank defined product markets on the basis of substitutability of the product. Products that were not substitutes of one another belonged to different markets. Close substitutes (even imperfect substitutes) belonged to the same product market[14]. Thus, Cruickshank's analysis was possibly the first and most genuine product-market analysis of competition in any country.

Cruickshank's review team succeeded in obtaining data on country-wide banking operations in three product-markets: (i) current accounts, (ii) unsecured lending through personal loans and credit cards, and (iii) secured lending through mortgages. The fourth product-market, namely that of savings accounts, was excluded from the review since savings were substitutes of investment products --- and investment banking lay outside the scope of the review. Competition for deposits was therefore not analyzed. In the present report on Pakistan an analysis of bank deposits and savings accounts has been added because of its significance for bank revenues. Other additions have also been made to Cruickshank's classification scheme to make product-market distinctions more precise and empirically-based. These methodological improvements are discussed later.

The Cruickshank review did not look at efficiency measures but only those of profitability: rates of return on capital and to shareholders. Rates of return (of 10 banks) were adjusted for risk, using beta values of risk measurement provided by the London Business School. These risk-adjusted rates of return were found to be so high as to constitute supernormal profits. The review went through several alternative hypotheses that might suggest plausible explanations other than that of monopoly rents, but none was plausible enough. Hence, the supernormal profitability of banks could be construed only as a result of lack of competition. The logic of this argument and

[14] This criterion, based on Joan Robinson's definition of a product market as a group of commodities which are close substitutes for each other, has been the bedrock of competition analysis and constitutes the most valid definition of a product market. It followed from Robinson's definition of a "product" as a commodity that is surrounded by a marked gap in the chain of substitution (1933). In "Imperfect Competition Revisited" (1953) she argued that the output of *an industry* must be considered separately from the supply to *a market*. The two concepts (industry and market) were distinctly different. She reinforced this distinction in 'The industry and the Market' (1956):

> "Questions relating to competition, monopoly and oligopoly must be considered in terms of markets, whilst questions concerning labour, profits, technical progress, localization and so forth have to be considered in terms of industries". (Robinson, J., "The Industry and the Market", *Economic Journal*, 66, 1956, pp. 360-361

of the methodology to arrive at it is unassailable and has been accepted in other jurisdictions. The same conclusion can be drawn from similar data in the case of Pakistan.

It can be summed up that the methodology of the UK review rests on three premises. The first is the correct product-market specification and assessing competition within each product market rather than across the industry. It is common sense that firms compete differently in different markets. Hence, industry-wide concentration measures can give no indication of the state of competition in a specific market, and to expect these aggregate measures to provide meaningful results is to indulge in self-deception.

Second, the simplest arithmetical calculations that require no econometric estimation or economic assumptions have been used. The simplest of these is the five-firm concentration ratio. The difference between the UK review and the other studies discussed earlier is that the UK study provides concentration ratios and Herfindahl indices for each market. Moreover, return on assets/equity is the most direct measure of profitability (and a fairly straightforward one) and is therefore the measure used by choice. When adjusted for risk it becomes all the more convincing a statistic. Similarly, the lack of competition is inferred, quite simply, from the interest rate spread --- higher interest margins being suggestive of monopoly rents, almost by definition. It may be mentioned here that this inference can be drawn even more strongly from the Brazilian data. In Pakistan too, the very high interest- rate spreads provide *prima facie* evidence of lack of competition in the banking sector.

The third methodological premise is the inference of lack of competition from observable restrictions placed on entry through regulation. Trade associations can place these entry restrictions, as has been shown to be the case in the U.K. and in Pakistan, among other countries. Equally, these entry barriers can be facilitated by State regulators – to the extent that one might end up with a regulatory capture by the incumbent firms. The point, however, is that these entry barriers can be noted through an analysis and understanding of the behaviour of firms. Formal indicators (e.g. H-statistic) can only provide imperfect estimates on entry conditions. A descriptive method of pointing out entry barriers is thus more appropriate in understanding the level of competition.

Core problem

The core problem, as diagnosed by Cruickshank, is one of prudential regulation of banking activity and consumer regulations that have an anti-competitive effect. The most adverse effect is found in the payment system – the service network of money transmission in the economy through the usage of cheques, ATMs' credit/debit cards and other financial guarantee instruments. In comparison with the competitiveness of the payment systems in Australia, Canada, and the United States, the UK system was the least competitive in 2000.

In Australia, the Financial System Inquiry Report (Wallis Report, 1997) proposed a regulatory structure to ensure competition consistent with the need for stability and a Payment System Board was accordingly set up in 1998 with the Reserve Bank of Australia. In Canada, the Board

of Canadian Payments Association (CPA) regulated the system, while in the US the Federal Reserve did so. In the U.K., however, the APACS, set up in 1985, and comprising 28 members, was a bankers' association that itself controlled the payment system. This self control militated against competition. APACS did not allow access to outsiders. Consequently, Cruickshank recommended an independent agency, PAYCOM, to regulate the payment system and permit its usage by those outside the exclusive banking association.

The exclusive status conferred upon the banks (they were allowed to formulate their own rules of conduct) flowed from the excessive concern, on the part of successive British governments, to ensure stability at all cost. Cruickshank called it the 'informal contract' between governments and the banks to promote the incumbent banks and not allow them to be exposed to any risk – especially the risk of competition. Having diagnosed the problem thus, he recommended in the interim report, that the Financial Services and Markets Bill that was wending its way through parliament at the same time as the Cruickshank review (1998 – 2000) explicitly recognize the trade-off between stability and competition, and that competition be promoted by strengthening the mandate of the Office of Fair Trading. Cruickshank argued that the U.S. Federal Reserve Board was much more cognizant, than the U.K. authorities, of the need for competition, and the U.S. Department of Justice had greater oversight for anti-trust scrutiny than the UK Competition Commission and OFT. Australia, Canada and the EU had also given greater importance to it. Consequently, the Financial Services Authority (FSA), which came into being while the Cruickshank review was in progress, should not be excluded from the purview of competition.

The debate between stability and competition is not a new one, as already discussed in the literature review in Chapter 1. Notwithstanding the recent findings (e.g. Beck, 2008)--- that competition is not incompatible with stability, except when there is a regulatory failure ---- financial regulators have concerned themselves almost exclusively with stability, and competition has not been accorded the primacy that Cruickshank advocated. So much so that, with the passage of the Banking Act (12 February 2009), the regulators of stability (Bank of England, Financial Services Authority, Treasury) have relegated competition to a secondary position. When the government started salvaging banks (e.g., September 2008 consolidation operation spearheaded by Lloyds) the jurisdiction of the Competition Commission was in fact specifically ousted by the Chancellor of the Exchequer.

Entry barriers

Instead of deducing entry conditions from contestability indicators, Cruickshank enumerated the entry constraints and regulatory restrictions actually in force. For instance, non-banking financial service providers could not enter the payment network, which was controlled by APAC's 28 members. Tesco and Sainsbury could not gain access to the network without tying up with Scottish banks as joint venture partners. This discriminatory access to the money business had several ramifications on the supply side as well as the demand side.

On the supply side, the British Bankers' Association dominated regulatory dealings. There were strict conditions regarding ownership of banks (who can and who cannot own them), minimum capital requirements posed a major entry barrier. As a result, the banking industry was found to be a highly concentrated oligopoly. The big 4 banks controlled 68% of current accounts, 61% of credit cards, 46% of personal loans outstanding--- although they did not have monopoly power in savings accounts and mortgages (holding only 17% of these markets). Banking services to personal retail customers being very profitable, had the highest entry barriers, and the review concluded that, even when there had been new entry and the introduction of new technology, its success had been muted. An even more pessimistic note was struck by the observation that even the introduction of internet banking was not likely to cure the UK of its non-competitive ills.

On the demand side, the problems of access were found to be the worst for the SME's. Being a highly profitable source of lending for the banks, the SME market was the most concentrated one, with the big four holding 83% market share, and an HHI of 1834. As a result, neither small businesses nor personal account holders were getting a fair deal. They were estimated to be paying £3 - £5 billion too much every year for banking services. This translated to £40 -£400 per annum per household as extra cost – that could be avoided through competition. To remedy the situation, to ease entry restrictions and to promote consumer access, the review recommended several measures. A monopoly reference to the Competition Commission on the market power being exercised in the SME market and the setting up of PAYCOM as the payments regulator for supervising cash and payment network, were the two most significant recommendations to ease entry barriers. Alongside these, there was greater need for ensuring access by low-income households. It was estimated that 2.5 million – 3.5 million persons had no access to banking services (no bank accounts) and that 25% of applications for current accounts had been refused.

A comparison with the situation prevailing in Pakistan would show that the denial of access is of a much greater magnitude. Entry barriers are even more pronounced. The Cruickshank review has pointed the way towards a line of inquiry that is incorporated in the present report.

Product markets

The banking sector has three basic services to perform: (i) transmission of money, (ii) holding deposits and (iii) issuing credit. These services are provided through the payments system, unsecured lending, secured lending and savings accounts. As a result of these banking activities, four product-markets are formed. Cruickshank considered the most important banking activity to be that which was related to current accounts, for which there were no substitutes and which therefore formed a distinct and stand-alone market. Unsecured credit, through credit cards and personal loans (they are a similar service, hence can substitute for one another) came next in importance. Secured credit, mainly through mortgages, formed the third market. The fourth market, of savings accounts, was excluded from the purview of the Review since savings accounts could be substituted for investment products--- that lay outside Cruickshank's Terms of Reference. To analyze competition for current accounts, credit cards and personal loans, for mortgages, and to analyze the state of competition within the network of money transmission and

payment system, a survey of 2000 people was launched. The results reported in the Review were based on this survey.

Current accounts were arguably the most important banking instrument. These accounts provided banks with a gateway to sell other services. The problem with these accounts, according to the Review, was the way in which they were priced: total cost of operating current accounts was recovered by the banks, but the underlying cost of maintaining different value accounts was not reflected in their price. The Review noted different costs of providing different services linked to current accounts. An automatic credit transfer cost 10p., an ATM transaction 30p, cash back cost 15p, while a cheque payment cost 45p. A transaction over a bank counter cost £1. Maintaining a current account cost £10 per year. An average current account balance was £1175, yielding a profit of £75, while a minimum profitable level was £1000. Since the values of accounts varied widely, there was a cross-subsidization of low value account holders. The obvious beneficiaries were those with low balances but the cost of transacting with them was high. Data on cross-subsidization could not be obtained. Yet, it could be inferred.

Despite the outflow of subsidy to low-value accounts, the current account holdings of the banks were found to be a highly profitable source. At the time of the Cruickshank Review, the current account product market was a highly concentrated one. The big four held 68% market share, while the HHI in this market was 1330.

These findings contributed to the view that ample cushion of profits was available to the banks from this market, and that this cushion could be applied towards providing a more "universal service" in which everyone should be entitled to a current account. Cruickshank recommended this bare minimum standard in the interest of public welfare, and suggested that the Financial Services Authority should raise the level of awareness among low income groups so that they might be able to get access to banking services ---- access to ATMs and retail cash back for all, cash deposit and chequeing facility for all and a universal facility for receiving credit electronically and making payments electronically. In particular, the government was advised to define, and lay down benchmarks for, the basic minimum free universal service. This was felt to be a more sensible option than subsidizing the Post Office's over-the-counter banking service.

Cruickshank's identification of current accounts as a significant relevant product market, separate from all others owing to the non-substitutability criterion, has cast an influence upon subsequent analyses. It is true that this distinction often gets blurred, as was the case in the Brazilian study that drew a dichotomy only between Retail Banking and Corporate Service/Banking as the basis of competition analysis (see Chapter 2). The EU also divides markets between retail and corporate. However, such a broad dichotomy still requires further breakdown into product groups, such as current accounts, savings, bonds, pension funds, short term loans, long term loans, mortgages all of which form part of the EU classification. Cruickshank's definition has a more consistent internal logic. Accordingly, it was adopted in South Africa and in Ireland. It has also been adopted in the present Report for disaggregating data provided by the State Bank of Pakistan. It may be worth noting here that the present Pakistan study goes beyond Cruickshank and scrutinizes sub-segments of product-markets also.

Credit cards and personal loans are both unsecured forms of banks advances or credit. The market for credit cards was found to be uncompetitive and dominated by the same big four companies. The concentration ratio (top 4 firms) for credit cards was 61%, and the HHI was 1090. Personal loans, however, attracted greater competition. The concentration ratio was 46% for the big four while the HHI was also low 710. This market characteristic also has some resonance in the Pakistani market under study, where consumer lending has provided an arena for competition over the past 5 years, whilst other product markets have remained uncompetitive.

The secured credit market (mortgages) in the UK had a very low concentration ratio (17%) for the top banks and a similarly low ratio (17%) for the top building societies, but with a high (1,100) HHI, suggesting an interesting line of inquiry for competition analysis. However, since there is no really corresponding market for mortgages in Pakistan (the closest parallel being housing loans) this line of inquiry has not been pursued.

Savings accounts were not analyzed by the UK Review, for the reason already mentioned, although it was noted that this was not a very concentrated market. The concentration ratio was 17%, HHI was 910. In this market, the UK banks encountered competition from building societies. In Pakistan, competition comes from the National Savings Schemes run by the government, and the savings bank accounts of commercial banks can be substituted by the National Savings accounts, but these accounts have not been analyzed because they are outside the Terms of Reference of the Pakistan study, just as the savings market was outside Cruickshank's terms of reference. None the less, even though the UK study did not analyze savings deposits, the Pakistan study does so, and brings out several competition issues.

Cruickshank's analysis reached several conclusions with regard to these product markets. Firstly, banking services to personal retail customers were very profitable. Secondly, current accounts held the key to competition because they unlocked the sale of other products. Yet, current accounts were most concentrated; competition in this market had been thwarted (explaining the high profitability) and there were entry barriers owing to the perception of difficulty in switching accounts. (The perception of this difficulty was more pronounced than the actual switching cost).

Moreover, there were severe informational problems. Redress for public grievances against banks was found to be inadequate. Worse still, from the public point of view, the code of conduct was drawn up by the banks themselves, not by consumer welfare agencies ---a situation that warranted much greater strengthening of the Ombudsman's institution.

New entry had not really promoted competition, Cruickshank observed. Nor was the induction of new technology, via the internet, likely to improve matters. The overall conclusion of the Review was an indictment ---- of competition having been muted in most markets and not having been effective in any market.

To sum up --- these unequivocal findings of the Cruickshank report were in sharp contrast to the weak statistical evidence furnished in the other country studies reviewed in the earlier chapter. It is therefore not surprising that the Cruickshank review had a salutary effect upon other country

studies – notably in Ireland and South Africa. Its methodology lends itself to replication in other environments and is similar to the methodology applied in the present study. Its essence is a closer product market scrutiny, without being burdened by econometric assumptions and statistical minutiae.

II. A EUROPEAN PERSPECTIVE

The European Union regulates competition among its member States through the European Competition Rules, aimed at limiting undue market power and restrictive trade practices. The European Central Bank, like all national central banks, is more concerned with maintenance of price stability than with competition, although in accordance with the Treaty of Rome, it cannot controvert free competition and an open economy. It cannot, for obvious reasons, ensure a uniform level of competition across different member countries. Yet, it monitors community-wide developments. The EU Banking Structures Report is an annual publication of the European Central Bank (ECB) devoted to an analysis of structural evolution – in particular, the concentration ratios and the Herfindahl indices. With the structural analysis being conducted at the aggregate level, with the data not being broken down according to product markets or even according to product lines, with the geographic markets being defined widely, the report is of limited value in providing any detailed insight into the actual impediments to competition in different countries.

Polish study on 'strategic groups'

To look deeper into the EU, one has to turn perforce to country studies. Several such studies have been conducted. They follow a range of methodologies and disparate approaches. This makes cross-country comparisons very difficult. A study on Poland (see Halaj and Zochowski, 2006), for instance, measures the profitability of different kinds of banks and seeks to explain their uneven performance by applying the concept of "strategic groups" borrowed from the literature on strategic management. The analysis does not, however, provide any insight into competition, even though the original concept of "strategic groups" was meant to identify intra-industry differences in competition and the presence of mobility barriers within industries. This warrants an explanation of terminology and of the methodology being mentioned.

The term "strategic groups" was coined by Hunt (1972) and extended by Newman (1978) to identify groups of firms following a similar conduct within an industry. It challenged the notion of the "industry" being a uniform, monolithic structure – which had been a significant, albeit erroneous, assumption that had been made in all economic analyses following the SCP approach. Caves and Porter (1977) extended the concept of entry barriers surrounding an industry to the existence of intra-industry "mobility barriers" that prevented firms within the same industry from emulating the strategy of a different set of firms belonging to a different "strategic group." While industry-wide "entry barriers" protected all firms in the industry alike, "mobility barriers" surrounded and protected only groups of firms that had a strategic similarity. There were costs

of emulating the strategies of firms belonging to a different group. The benchmark for defining a strategic group was the existence of maximum homogeneity (similarity of strategies) within the group and maximum distance or heterogeneity between different groups.

Empirical research, in the 1970s and 1980s, confirmed the existence of intra-industry strategic groups. Beginning with the beer industry (Hatten, 1974) in the United States, the concept was studied across continents in disparate industries as wide-ranging as reprographics (Ghazanfar, 1984) and banking (Amel and Rhoades, 1988).[15]

For the banking sector in Europe, Hackethal (2001) isolated the different strategic groups that reflected alternative strategies in the European commercial banks, while Koller (2001) did so for the large Austrian banks. This has been followed by Halaj and Zochowski (2006) for the Polish banking sector. In the Polish study Ward's algorithm was applied in a cluster analysis to show statistically significant differences between strategies of different banks. As a result, five strategic groups of banks were identified: universal banks, corporate banks, car finance and mortgage banks, retail banks and regional banks. Statistically significant differences were found in the performance of the five groups (1997-2004), from which the authors concluded that this methodology allowed an "ex ante assessment of the stability of the financial system" and earnings within the banking sector could be predicted more precisely.

Halaj and Zochowski did not, however, extend the argument to make any inferences regarding competition, even though an analysis of competition is implicit in the application of the "strategic groups" concept. If there are systematic differences in profitability between the five sets of groups and these differences can be sustained over time, it must follow that there are mobility barriers between the groups – or else the strategies of the more profitable group would be emulated without extra cost and excess profits would be whittled down. Mobility barriers must suggest some market power being possessed by some group of banks at the expense of others. In other words, the strategic group research methodology can yield the observation of systematic differences within the sector and point towards the absence of a level playing field. However, much more careful research needs to be done with much more detailed country data, before such a conclusion can safely be drawn. Suffice it to say that the three European studies, mentioned above, do not significantly advance our understanding of competition, though they do help in explaining the differences in the profitability of banks.

[15] Daems and Thomas (1994) provide a cross-section of studies on strategic groups, as found within several industries. For a review of the early literature on the original concept and its applications, see McGee and Thomas, 1985, 1986, and for its empirical basis see Ghazanfar, McGee and Thomas, 1985. Thomas and Venkatraman (1988) provide a prognosis of the future direction of research on strategic groups.

Lerner Index and Germany

An altogether different methodology has been used to study competition in Italy, Israel and Germany. Lerner Indices were applied by Angelini and Cetorelli (1999) to Italy, Ribon and Yosha (1999) to Israel and by Fischer and Pfeil(2003) to Germany.

The Lerner Index is an alternative to the Panzar / Rosse method (discussed earlier), which measures the profit margin as a function of the price elasticity of demand. The Italian and the Israeli market were found, on the basis of an observed improvement over time in the Lerner Indices, to have become more competitive. So was the German market. However, Fisher and Pfeil (2003) argued that this move towards greater competition in Germany was a recent phenomenon. They traced the history of German banking from the Weimar Republic onward to show that, in Germany, the concern for stability had driven out any concern for competition, until recently.

Historically, German banks have exercised control in two ways. First, banks have had extensive share holdings in German corporations. This is the most direct form of control. The second control is through monopoly power. Both the deposit and the loan markets have been highly concentrated. Cartelization was the norm in the Inter-War years. It started with the formation of the Central Credit Committee in 1936 (fully supported in 1937 by the Nazis), which still exists. In 1961 the Federal Banking Supervisory Office was established. It was separate from the Bundesbank (Central Bank of Germany) but supported by it to license new entry and regulate the incumbents. Since then, strong regulation, through licensing, supervision and ensuring of minimum capital requirements, remained noticeable features of German banking. Moreover, Fischer and Pfeil (2003) noted that, the absence of competition led to a regulatory capture. It was not until the 1980s that de-regulation started, as a result of which government ownership of banks fell from 52% (1970) to 36% in 1995 and 33% in 2000.

Thus even within the EU, notably in the largest and strongest economy, that of Germany, competition has not been the mainstay.

EU – retail payment systems

In an economic community as wide a Europe, where the 'geographic market' is dispersed and no standardized data are available insofar as product-markets are concerned, it is difficult to delineate or focus on competition issues *per se*. Yet, there is one market that has been looked at in an integrated and consistent framework. This is the retail payments system. The EU annual reports do discuss cross-border transactions and note that distribution strategies of banks do affect competition. For instance, the 2007 review of EU Banking Structures (October 2007) observes fierce competition for consumer credit, with European banks cooperating with third parties (e.g. retailers, finance companies, service groups) to prize out new distribution channels

(especially electronic channels) that augur well for competition. None the less, the primary concern of the EU reviews being one of stability, not competition, there is scant analysis of contestability.

Kemppainen (2003), however, did analyze both competition and regulation in the European retail payment system--- to find that payment service providers often competed, but also cooperated in shared network. He observed that there was downstream competition combined with upstream cooperation. The upstream infrastructure was characterized by economies of scale that required critical mass and justified collaboration among banking firms, despite competition for downstream product markets.

The European retail payment systems can best be understood as a network (requiring specialized techniques of network analysis) the complexity of which increases with every incremental addition of participants. Yet, no network analysis has been done, to the best of our knowledge. Kemppainen (2003) does argue (convincingly) that the system is indeed a network, the main properties of which are certain economies of scale and switching costs, which result in high entry barriers.[16] Customers are initially given discounts and incentives in order to lock them in. Once customers are locked in, prices can be raised. The network forecloses new entry, increases market power of the incumbents, provides an opportunity for cartelization and deters innovation. The role of the regulator must, therefore, be to provide a contestable market and a competitive environment for investment and innovation.

III. SOUTH AFRICA

In May 2003 a Task Group was set up in South Africa to study the competitiveness of its banking system. The Task Force was assisted by staff from the National Treasury and South African Reserve Bank as well as by external consultants, Nathan Associates, financed by USAID. The team was required to conduct its inquiry along the lines of the Cruickshank Report (2000) of the UK and the Wallis Report (1997) of Australia, and to submit its Report within a year (it did so in April 2004).

The Task Group analyzed economic concentration in the banking sector as a whole. Unlike the Cruickshank review it did not investigate competition and performance measures at the product-market level. It looked at the revenues and costs of all banks, at the payment system, and at the retail market segments.

South Africa is reported to have a somewhat perverse interest rate structure, as a result of which the money transmission system appears to be cross-subsidizing corporate lending. This is reminiscent of what was found in Brazil: a highly profitable retail sector and less revenue

[16] In Finland, for example, switching costs can be as high as 6% of the average account balance, according to Kemppainen (2003)