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Banking Sector Integration and Competition in CEMAC

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Abstract

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those of the IMF or IMF policy. Working Papers describe research in progress by the author(s) and are
published to elicit comments and to further debate.

This paper considers the extent of retail banking integration in the *Communauté Economique et
Monétaire d'Afrique Centrale* (CEMAC) and the level of bank competition at the regional level.
Using a mix of quantitative and qualitative indicators, the paper finds some evidence of price
convergence in average interest rate spreads. However, this observed fact is not supported by an
increase in cross-border flows in retail loans and deposits, and price convergence may merely
reflect excess liquidity in the region. Other data also indicate that bank competition within the
CEMAC as a region is limited, complementing the findings on integration. Addressing shortfalls
in legal and regulatory frameworks, infrastructure, and markets would facilitate integration.

Content   Page

I. INTRODUCTION

This paper[2] examines the issue of banking sector integration and competition in the *Communauté Economique et Monétaire d'Afrique Centrale* (CEMAC), with a focus on the integration of products and services in retail banking, as financial markets are limited in size (Box 1). A common currency and monetary policy and the adoption of a common set of convergence criteria for the monetary union, may be expected to lead to a process of financial integration. Banking sector integration can be viewed as a *process* of convergence into a single market for banking products and services, where all buyers and sellers within CEMAC have opportunities to transact on the most favorable terms. However, integration may not materialize for a number of reasons: (i) incentives of the economic agents to operate in other countries within the union (home bias); (ii) institutional conditions of the countries of origin and reception (for instance in terms of property rights protection); and (iii) impact of regulation. This paper assesses the degree of integration achieved by the banking systems in CEMAC, explores the major obstacles to further integration, and seeks to quantify the effects of integration on the efficiency and profitability of banks.

While no quantitative study has so far examined banking sector integration and competition in the CEMAC zone, several key indicators can be used to gauge the degree of financial integration. An extensive literature on the subject exists for European Union (EU) countries, with several papers analyzing the extent to which the "single market" has led to more integrated banking markets, and offering insights on the mechanisms at play.[3] Various methods allow a quantitative assessment of the degree of financial integration and are based on: (i) interest rate data; (ii) bank structure data (branches versus subsidiaries); (iii) mergers and acquisitions data; and (iv) bank concentration data. For instance, comparable interest rate data across the EU fail to show a significant reduction in spread differentials. This would be consistent with the relatively limited increase in the presence of foreign credit institutions in individual EU retail banking markets. A clear trend towards dominance of branches over subsidiaries also emerges from EU data (Adams et al., 2002), although, as pointed out by Dermine (2002) and Rosengreen (2002), domestic subsidiaries remain important, potentially indicating insufficient integration. A geographical breakdown of mergers and acquisitions shows very clearly that the consolidation that took place during the second half of the 1990s took place within nations much more than across nations (as in earlier periods—see Gual (1993). Finally, a comparison of the evolution of concentration figures at the national level, the EU level, and in the United States was conducted by DeYoung (1999). If mergers are

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[2] This working paper draws on research conducted within MCM on banking integration in the CFA Franc Zone, and benefited from discussions with the authorities in the context of the 2006 joint IMF/WB regional FSAP missions to CEMAC. Data used is available from public or commercial sources.

[3] Adam et al. (2002), Dermine (2003a), Manna (2004), Gual (2004), European Commission (2005), to name a few.

primarily taking place within national borders, concentration at the country level increases, while EU-wide concentration need not increase.

Box 1. CEMAC Institutional and Economic Background

Previously known as the *Union Douanière et Economique de l'Afrique Centrale* (UDEAC), the *Communauté Economique et Monétaire d'Afrique Centrale* (CEMAC) was created in March 1994 as a customs and monetary union among six former French Central African countries. CEMAC includes: Cameroon, the Central African Republic, Chad, the Congo (Brazzaville), Equatorial Guinea, and Gabon. Along with WAEMU, it is one of the most important and structured regional groupings in Africa.

The Conference of the Heads of State meets at least once a year to define overall guidelines for the grouping's policies. CEMAC's Executive Secretariat is in charge of monitoring the implementation of agreed measures. The main policy objectives consist in creating a fully functional and effective customs union, ensuring a system of macroeconomic surveillance and promoting sectoral policies that help create a common market for goods, capital, and services.

The regional banking supervision commission the *Commission Bancaire de l'Afrique Centrale* (COBAC) was established on October 16, 1990. On January 17, 1992, a convention was signed, establishing the harmonization of banking regulations across CEMAC. Although legally independent, COBAC is closely related to the *Banque des Etats d'Afrique Centrale* (BEAC), whose governor is also the chair of COBAC, and depends on BEAC for its financial and human resources. COBAC's main role is ensuring banks' compliance with prudential norms, as well as issuing and withdrawing (in coordination with the country's MOF) banking licenses.

The recent policy environment for the CEMAC (see 2006 IMF Article IV Staff Report for CEMAC) has been shaped by increasing oil prices, higher oil output and revenues, and the sharp appreciation of the franc (along with the euro) against the U.S. dollar. The zone as a whole has benefited from a substantial increase in growth (reaching nearly 7 percent in 2004 and 4 percent in 2005), inflation below euro area levels, and substantial increases in foreign exchange reserves. These overall positive economic developments, however, also pose challenges to the conduct of monetary and fiscal policies. Main policy challenges relate to the use of oil-related inflows and to setting common policies in the context of significant cross-country differences in economic performance.

Since the ratification of the CEMAC treaty in 1999, the region has been moving, albeit slowly, towards fuller economic and monetary integration. Macroeconomic convergence has improved with greater country adherence to both fiscal and nonfiscal criteria of convergence modeled on the EU experience. However, limited progress has been achieved in enhancing the functioning of the customs union. Administrative hurdles and an absence of economic complementarities continue to hinder the flow of goods, services, and people in the subregion. Intraregional trade still remains low—even in comparison to its West African counterpart.

The paper considers first the extent to which financial sector integration has developed in CEMAC, before carrying out an assessment of impediments to greater financial integration and of the degree of competition. An overview of the CEMAC's banking sectors shows the very limited degree of financial intermediation reached so far in CEMAC (Section II). Although important progress has been made to regulate the financial sector at the regional level, little has been achieved in facilitating integration of banking markets, as

regional infrastructure and markets are not sufficiently well developed (Section III). Moreover, within CEMAC and beyond the national boundaries of the six countries, bank competition seems to stay at a relatively low level. To assess the degree of bank competition at the regional level, we used an estimated H statistic (using a standard Panzar Rosse model to assess bank competition) that places CEMAC—as a region—among the least competitive environments (Section IV). Finally, we identify a number of policies that could be implemented to facilitate regional integration. Policy recommendations include, on the legal and regulatory framework side, lifting obstacles to the implementation of the *agrément unique,* and, on the infrastructure side, developing a coherent strategy to develop regional interbank and debt markets consistent with efforts aimed at improving the framework for systemic liquidity at the regional level.

II. OVERVIEW OF CEMAC'S BANKING SECTORS

The financial system in CEMAC is bank-dominated and mostly foreign-owned (Table 1). Cameroon and Gabon, the two largest economic powers in the subregion, account for about three-fourths of total assets and loans. There are 33 deposit-taking banks in operation in CEMAC as of end-2005, 31 of which are privately owned, and 23 of which are foreign-owned by entities outside CEMAC. Eight banks do not comply with the minimum capital adequacy ratio (8 percent), including five with negative equity.

Government ownership of banks in CEMAC is limited and has been declining since the restructuring of the sector in the mid-1990s. At the regional level, as of end-2005, the average government share of bank capital is about 20 percent, while central government share of deposits is around 9 percent. In contrast to the situation prevailing in other countries in sub-Saharan Africa (SSA), banks have considerably limited their direct lending to governments.

Financial depth in CEMAC is low (Table 2). The ratio of credit to the private sector to GDP (around 7 percent), and the ratio of bank deposits to GDP (around 17 percent) are much lower than in the West African Economic and Monetary Union (WAEMU), but comparable to the median deposits to GDP ratio for SSA. As of end-2004 (Table 3), commercial banks employed relatively few employees (5,700), in a limited number of branches (190, against 120 in 2000). Branch density is limited—just reaching the density of Ghana or Nigeria would require a tripling of the number of branches (Figure 1).[4] There is significant scope for further intermediation in several countries, while other countries seem over-extended: Chad and the Central African Republic have loan-to-deposit ratios above 100 percent, reflecting a narrower deposit base and a tighter liquidity situation relative to Cameroon and the Congo, for example. In Cameroon, as a result of past bank restructuring episodes, banks hold a large share of government securities, which tends to limit their capacity and willingness to extend loans.

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[4] Branch density in the CEMAC is about one hundred times lower than in a number of densely banked countries, for example Germany, France, Austria, Belgium, or Canada.

Table 1. CEMAC: Major Banking Groups, December 2004

Country	Bank Name	Assets (mil CFA)	Capital (mil CFA)	Ownership (% of Capital)				Associated Banks in CEMAC		
				State	Foreign	Local	Ult. Owner 1/	Name (Country)	Ult. Owner 1	Share 2/
Cameroon	BICEC	333,994	25,367	52.5	47.5	0	Natexis/BP	...	...	...
(10 Banks)	Crédit Lyonnais Cameroun S. A.	258,315	14,439	35	65	0	CALYON	UGB (Gabon)	CALYON	56.25
								CL (Congo)	CALYON	80.99
	Société Générale de Banques au Cameroun	314,302	34,049	25.6	58.08	16.32	SG	SGBT (Tchad)	SG France	30
								SGBGE (GE)	SG France	57.24
	Standard Chartered Bank Cameroon	144,260	20,678	0	100	0	SC	...	...	...
	AFRILAND FIRST BANK	181,028	6,680	0	0	100		CCEI (GE)	Afriland	51
	AMITY BANK Cameroon	36,838	6,026	0	?	?				
	CITIBANK N. A. Cameroon	55,682	6,369	0	100	0	CitiCorp	Citibank (Gabon)	CitiCorp	100
	Commercial Bank of Cameroon	153,263	13,059	0	15	85	DEG	CBCA (RCA)	FOTSO	59.5
								CBT (Tchad)	FOTSO	50.68
	Union Bank of Cameroon PLC	28,118	5,405	92.87	7.13	0	Cr. Unions	...	...	...
	Ecobank Cameroun S. A	59,670	3,325	0	97	3	Ecobank	...	...	...
C.A.R.	Banque Populaire Maroco-Centrafricaine	17417	6024	37.5	62.5	0	Morocco	...	...	...
(3 Banks)	Banque Internationale pour le Centrafrique	20,877	1,928	11.7	50	38.3	Belg.-COFIPA	BIAT (Tchad)	COFIPA	80.6
								COFIPA (Congo)	COFIPA	69.43
	Commercial Bank Centrafrique	23,563	3,423	10	59.5	30.5	FOTSO	CBC (Cameroon)	DEG	15
								CBT (Tchad)	FOTSO	50.68
Congo	Cofipa Investment Bank Congo	50,699	3,000	10	77.43	12.57	COFIPA	...	...	...
(4 Banks)	Crédit Lyonnais Congo S.A.	72,476	4,211	9	81	10	CALYON	CL (Cameroon)	CALYON	65
								UGB (Gabon)	CALYON	56.25
	BGFIBANK CONGO	72,421	7,504	0	85	15	BGFI Gabon	BGFI (GABON)	private inv.	29.81
								BGFI (GE)	BGFI Gabon	55
	La Congolaise de Banque	50,177	4,457	10	25	65	?	...	...	...
Gabon	BICIG	271,844	33,799	26.3	46.67	27.03	BNP	...	...	...
(6 Banks)	Banque Gabonaise de Développement	52,613	33,212	69.01	30.99	0	State	...	...	...
	BGFIBANK GABON	281,217	56,997	23	14	63		BGFI (Congo)	BGFI Gabon	60
								BGFI (GE)	BGFI Gabon	55
	CITIBANK N. A. GABON	72,368	14,371	0	100	0	CitiCorp	CitiBank (Cameroo	CitiCorp	100
	Union Gabonaise de Banque	170,778	14,021	25	74.2	0.8	CALYON	CL (Cameroon)	CALYON	65
								CL (Congo)	CALYON	80.99
	Financial Bank Gabon	7,758	2,019	1.58	70	28.42	FB Togo	FB (Tchad)	FB Togo	67.83
Equatorial Guinea	BGFIBANK-GUINEE EQUATORIALE	25,914	1,559	15	55	30	BGFI Gabon	BGFI (Gabon)	private inv.	29.81
(3 Banks)								BGFI (Congo)	BGFI Gabon	60
	SGBGE	111,474	6,619	31.8	57.25	10.95	SG	SGBC (Cameroon)	SG France	58.08
								SGBT (Tchad)	SG France	30
	CCEI BANK GUINEE-EQUATORIALE	91,306	7,085	10	77	13	Afriland	Afriland (Cam.)	Cam.private	100
Chad	Banque Agricole du Soudan au Tchad	3,165	968	0	100	0	Sudan	...	...	...
(7 Banks)	Banque Commerciale du Chari	29,027	4,099	50	50	0	Libya	...	...	...
	Commercial Bank Tchad	40,037	6,999	17.48	82.52	0	FOTSO	...	...	...
	Banque Internationale pour l'Afrique au Tchad	29,911	3,014	0	80.6	19.4	COFIPA	COFIPA (Congo)	COFIPA	69.43
	Société Générale Tchadienne de Banque	43,840	4,524	20	76	4	SG	SGBC (Cameroon)	SG France	58.08
								SGBGE (GE)	SG France	57.24
	Financial Bank Tchad	22,658	1,879	0	100	0	FB Togo	FB (Gabon)	FB Togo	70
	BSIC	5,280	2,000	0	100	0	Libya	...	...	...

Sources: COBAC.

NoteL C.A.R.= Central African Republic.
1/ Ultimate Owner is owner of biggest share of total capital.
2/ Represents percentage share of capital owned by ultimate owner out of total capital of associated bank.

Table 2. CEMAC: Financial Intermediation, December 2005
(In percent)

	Private Credit/GDP	Bank Deposits/GDP	Loan-Deposit Ratio	Overhead Costs 1/
Cameroon	9.4	25.2	40.9	2.89
CAR	6.6	5.3	152.0	3.13
Congo	2.5	10.5	25.9	3.32
Gabon	8.1	15.0	68.2	2.58
Eq. Guinea	2.5	10.5	40.7	4.57
Chad	5.2	6.2	111.2	5.15
CEMAC	6.8	16.8	48.0	3.03
WAEMU	15.4	22.5	79.4	…
SSA	…	13.4	…	…

Sources: COBAC, IFS, and IMF staff calculations.

1/ in percent of total earning assets (TEA).

Figure 1. Bank Branch Density in CEMAC and Selected African Countries
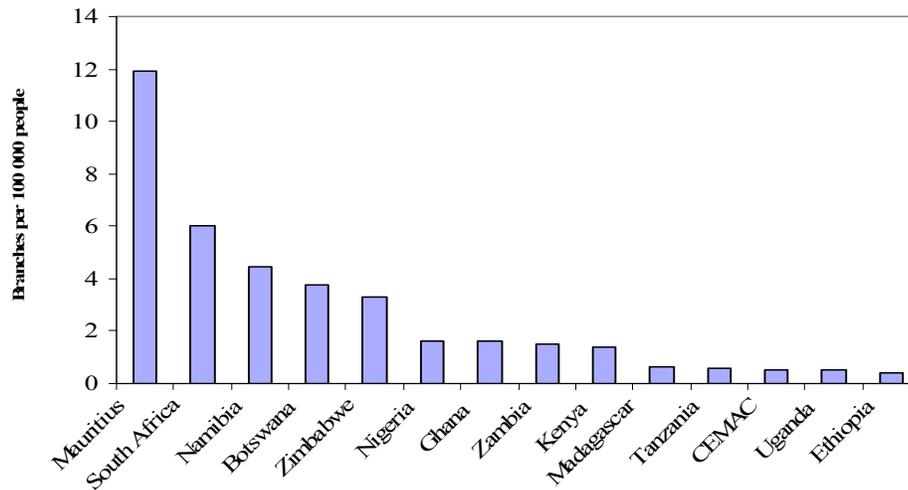
Sources: Beck et al. (2005), and IMF staff calculations.

Table 3. Commercial Bank Branches and Employees in CEMAC, December 2004

Banks	Employees	Branches
Afriland First Bank Cameroun	311	12
Amity Bank Cameroon PLC.	168	9
Banque Agricole du Soudan au Tchad	22	1
Banque Commerciale du Chari	105	3
Banque Gabonaise de Développement	214	7
Banque Internationale du Cameroun pour l'Épargne et le Crédit	548	27
Banque Internationale pour l'Afrique au Tchad	113	4
Banque Internationale pour le Centrafrique	91	3
Banque Internationale pour Commerce et Industrie du Gabon	473	15
Banque Populaire Maroco-Centrafricaine	54	1
Banque Sahélo-saharienne pour Investissement et Commerce Tchad	45	1
BGFIBANK	380	4
BGFIBANK Congo	89	3
BGFIBANK Guinée Equatoriale	22	1
CCEI Bank Guinée Équatoriale	86	4
Citibank N,A Cameroon	51	2
Citibank N.A Gabon	42	2
Commercial Bank Centrafrique	84	2
Commercial Bank of Cameroon	292	6
Commercial Bank Tchad	80	2
Cofipa Investment Bank	147	13
Crédit Lyonnais Cameroun S.A	506	13
Crédit Lyonnais Congo	108	5
EcoBank Cameroun	72	2
Financial Bank Gabon	18	1
Financial Bank Tchad	40	1
La Congolaise de Banque	183	7
Société Générale de Banque au Cameroun	563	18
Société Générale de Banques en Guinée Équatoriale	176	5
Société Générale Tchadienne de Banque	160	5
Standard Chartered Bank Cameroon S.A	130	2
Union Bank of Cameroon PLC.	93	6
Union Gabonaise de Banque	241	4

Source: COBAC.

Banking sectors are highly concentrated in four out of six CEMAC countries (Table 4).
However, concentration levels have somewhat decreased since 2002 and are considered
moderate for Cameroon and Chad, both with Herfindahl-Hirchman Index (HHI) values

below 2,000.[5] The number of banks increased from 29 in 2002 to 33 in 2005, and no major consolidation occurred during that period.

Table 4. CEMAC: Banking Concentration, 2002–05

	HH Index 2002	HH Index 2005
Cameroon	1,621	1,416
Central African Republic	3,673	3,421
Congo	3,098	2,689
Gabon	2,716	2,734
Equatorial Guinea	4,346	3,832
Chad	2,154	1,933

Source: IMF staff calculations.

Foreign banks dominate the banking sector (Table 1). With foreign banks controlling 63 percent of total assets in the banking system or 10.9 percent of GDP, several large foreign banking groups are particularly dominant. Two French groups each operate in three out of the six CEMAC countries, while other foreign groups include COFIPA, Financial Bank, and Citibank. On the other hand, local groups, in particular Afriland and BGFIBANK, have commanding market shares (both in assets and in capital) in the Congo, Gabon, and Equatorial Guinea. In Chad, the only country with no local privately-owned banks, two banks are majority owned by the Libyan government, and one by the Sudanese government.

The soundness of banks in CEMAC differs greatly across countries or groups of banks (Table 5). We have grouped the banks into four categories: Group I: foreign-owned banking groups (outside CEMAC); Group II: locally-owned banks or groups (inside CEMAC);[6] Group III: local groups; and Group IV: state-owned banks, including banks owned by foreign states.

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[5] HHI values between 1,000 and 2,000 indicate a moderate level of concentration; values above 2,000 indicate high levels of concentration. The index is calculated by summing up the squared relative market shares (in percentage points) of all the banks: $INDEX = \sum_n^1 X_n^2$, where X is the market share in percentage points.

[6] Group II includes banks in Group III.

Table 5. CEMAC: Selected Financial Soundness Indicators by Bank Groups
(In percent, unless otherwise noted)

(December 2005)	Group I	Group II	Group III	Group IV	CEMAC
Percentage of total banking assets	55.3	43.2	26.3	4.4	129.3
Capital adequacy					
Regulatory capital/risk-weighted assets	11.0	6.9	8.3	…	10.8
Equity over total assets	9.4	11.0	12.1	…	10.8
Asset quality					
NPLs net of provisions/gross loans	2.0	3.4	2.2	5.6	2.9
Provisions over NPLs	84.4	73.0	78.6	78.7	79.1
Profitability					
Average return on assets (ROA)	1.8	2.2	2.3	-0.2	1.8
Average return on equity (ROE)	19.4	19.8	19.0	-0.6	16.9

Sources: COBAC, and IMF staff calculations.

1/ Total percentages do not add up to 100 (see footnote 5).

We observed the following regarding banking soundness:

- Group I banks appear at end-2005 to be better capitalized than the regional average (owing to financial connections to parent companies). They have a lower level of nonperforming loans (NPLs), and a better-than-average rate of NPL provisioning.

- Higher provisioning has, among other factors, reduced the profitability for banks in Group I relative to other banks.

- Group IV banks operate for the most part at a loss and have high levels of NPLs, consistent with the performance of most state-owned banks in SSA.

Excess liquidity in the banking system, due to a large extent to growing oil-related surpluses has been growing significantly since 2001 and has now reached high levels. Banks tend to hold reserves in excess of those mandated by BEAC and have increased susbtantially their liquidity ratios (Figure 2). This phenomenon is further exacerbated by the lack of well functioning money, interbank, and capital markets, and substantial lags in monetary policy to address this situation (IMF 2006). Excess liquidity is unequally distributed among countries, with most countries showing excess liquidity and two countries experiencing a tighter liquidity situation (Central African Republic and Chad).

Figure 2. CEMAC: Liquid Assets Over Short-Term Liabilities, 2001–04 1/
(In percent)
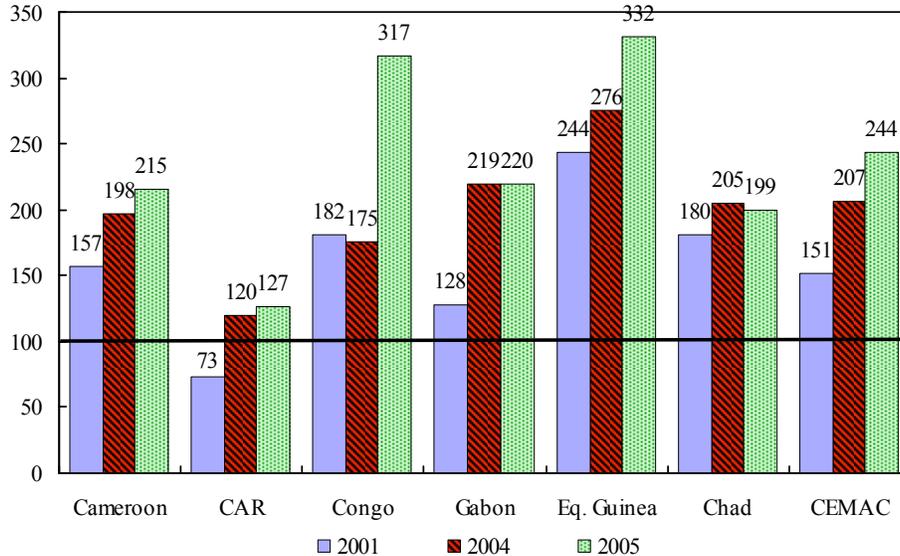
Source: COBAC, IFS.

1/ Maturities of one month or less.

III.   THE STATE OF CEMAC'S BANKING INTEGRATION

The ultimate goal of CEMAC's banking integration policies is to create a more efficient market for financial services, which ultimately will contribute to higher growth. A larger market should, in theory, lead to a more competitive environment, with the development of stronger credit institutions, able to offer a wider and more complex array of financial products and services. Several reports (commissioned by the EU, for example) have stressed the relationship between market size and efficiency and have attempted to estimate the magnitude of these effects. It is therefore necessary to assess first the degree of integration of CEMAC markets and then the extent to which such integration is having its expected positive effects on the structure and performance of CEMAC banking. Later in Section IV, we examine the degree of efficiency and competition.

A.   Degree of Integration

Banking integration can be viewed as a *process* of convergence into a single market for banking products and services, where all buyers and sellers within the union have opportunities to transact on the most favorable terms. The law of one price remains the benchmark for studies on banking integration, focusing on interest rate convergence: a single market must be characterized by only one *price* for the product that defines the market. Another strand of the literature on banking integration focuses on *quantities*. When the

enlargement of a market coincides with a change in the competitive advantages of the firms in initial markets, changes in equilibrium market shares are expected and more efficient banks will ultimately gain a larger equilibrium market share (Manna 2004). In effect, if initially segregated national banking markets evolve into a single market, domestic banks will start to compete and those that are more efficient will gain market share at the expense of the less efficient ones. Cross-border flows of deposits may be observed in response to the new competitive conditions, which reflect the transition from the old to the new equilibrium. Such a process will eventually lead to greater efficiency of the banking markets.

Differing levels of competition among market segments and of market integration are to be expected. For each market segment (households, SMEs, large corporates), the extent of integration can be assessed as is usually done in trade economics, by focusing on the evolution of price convergence, or through a quantity indicator, such as cross-border flows or the market share of foreign entities.

- *Price* convergence implies that price differentials for the same financial service should be reduced, down to a level explained mostly by the existence of arbitrage or transportation costs.

- Integration measured by *quantities* usually comes as a complement. The absence of cross-border flows (or the small market share of foreign competitors) need not be incompatible with a substantial degree of integration, provided that the threat of foreign entry/competition keeps the markets integrated—notably with price differences not exceeding the costs of arbitrage (Gual 2004).

Price-based indicators

Given data limitations, we only look at CEMAC's retail bank credit markets between 1999 and 2004. The interbank money market is shallow and the capital market is not yet operational. Furthermore, wholesale banking (or banking services between merchant or investment banks and other financial institutions) is virtually nonexistent in CEMAC.

Bank profitability is relatively high and reflects large differences in operating environments. In 2005, the average return on assets (ROA) and the return on equity (ROE) were 2 percent and 18 percent, respectively, with significant differences between countries. The share of fee income is significantly higher than the gross margin on loans for all countries except the Congo reflecting reliance on fee income to compensate for the low level of income derived from lending activities and for the effects of interest rate regulations (Table 6). Margins in CEMAC can appear substantial, but they also reflect the risks associated with banking activity in the region, and notably a high degree of credit and operational risk. Foreign banks, which tend to be better capitalized, also show a slightly smaller ROE than that for local banks, notably due to a higher provisioning rate (about 84 percent of NPLs). Three factors explain country differences in profitability (Table 6): (i) the weight of NPLs and provisions;

(ii) differences in operational efficiency; and (iii) the different weights of taxation on profits[7]. The latter is a distortion to competition within the CEMAC region given the wide differences in taxation regimes for banks (in Gabon, the absence of tax deductibility of provisions has been a long-standing issue).

Table 6. Intermediation Margins, December 2004

(In percent of total earning assets TEA, unless otherwise noted)

	Cameroon	CAR	Congo	Gabon	Eq. Guinea	Chad	CEMAC
Earning assets (TEA) 1/	1,201	65	153	743	118	132	2,411
Gross margin on TEA 2/	**8.0**	**8.3**	**9.3**	**8.6**	**10.0**	**9.6**	**8.5**
NPLs provisioning	0.8	2.4	0.1	0.8	0.8	1.1	0.8
Net margin on TEA	**7.1**	**5.9**	**9.2**	**7.8**	**9.2**	**8.5**	**7.7**
Other income net 3/	9.5	9.2	9.1	9.3	14.6	13.0	9.9
Total margin on TEA	**16.7**	**15.1**	**18.3**	**17.2**	**23.8**	**21.5**	**17.6**
Overhead expenses	2.9	3.1	3.3	2.6	4.6	5.1	3.0
Personnel expenses	2.3	2.0	2.7	3.2	2.0	3.5	2.6
Margin before taxes	**11.5**	**9.9**	**12.2**	**11.4**	**17.2**	**12.8**	**11.9**
Taxes	1.2	0.4	0.7	1.5	0.7	1.1	1.2
Margin after taxes	**10.3**	**9.5**	**11.6**	**9.9**	**16.5**	**11.7**	**10.7**

Sources: COBAC, and IMF staff estimates.

1/ Total earning assets (in CFAF billions) include BEAC and national bills and bonds, net interbank loans, and gross loans.
2/ Gross margin on assets is difference between average return on loans and average cost of funding as calculated by COBAC.
3/ Includes net income on *operations de tresorerie*, *operations divers,* and *operations sur credit-bail.*

However, notwithstanding these factors affecting profitability, interest rate margins have converged across countries. The average ROA and ROE are on the decline, as are intermediation margins, which declined by two percentage points to 8.5 percent from 2000 to 2004 (Figure 3). This decline, most notable in the Congo, Equatorial Guinea, and the Central African Republic, reflects primarily lower returns on loans (11 percent as of

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[7] The cost of intermediation may also be affected by differences in reserve requirements. Although differences in reserve requirements are motivated by the dispersion of liquidity situations within the region, they also create possibilities for regulatory arbitrage and distortions to competition at the regional level.

end 2004), whereas the average cost of funds (at 2.5 percent) has been stable, but with differences between countries.[8]

Figure 3. CEMAC: Evolution of Average Interest Rate Spreads, 2000–04
(In percent)
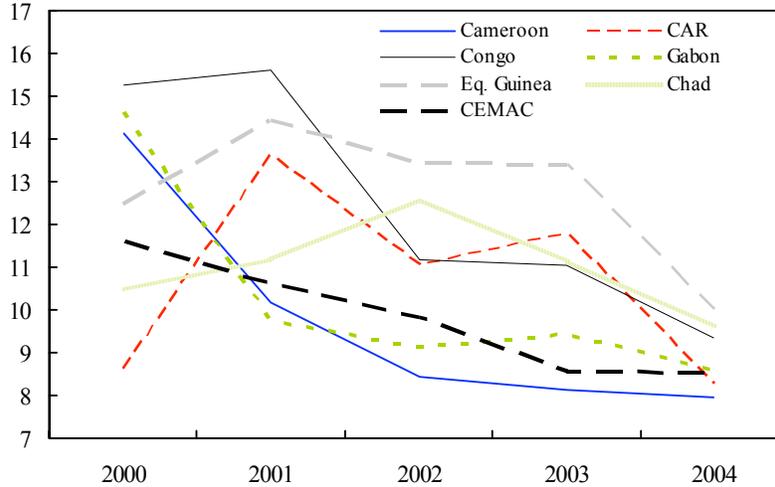
Source: COBAC.

The evolution of average interest rate spreads in the CEMAC between 2000 and 2004 points to a significant price convergence.[9] Borrowing from a methodology used by Adam et al. (2002) and Sy (2006), we estimate one measure of financial integration: sigma-convergence (Figure 4).[10] The large decrease of sigma-convergence from 1999 to 2004 in CEMAC points toward a significant degree of price convergence in retail banking interest rates during that period. We also note a significant decrease in the *volatility* of spreads, recorded at end-2004 as being 0.8 standard deviation units, down from almost 4 standard deviation units in 1999. In other words, average bank spreads in CEMAC have now converged toward a common level (currently around 8.5 percent), with increasingly diminishing variations between countries since 1999

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[8] The decrease in margins could act as an incentive for banks to broaden their clientele. However, this would require that efforts be made to improve the operating environment of banks and debt recovery in the region.

[9] Average spread is calculated *ex-post* as average return on credit minus average cost of credit.

[10] Sigma-convergence captures the standard deviation of interest rates across countries at each point in time. This measure is often used to assess the degree of integration in monetary unions. Using COBAC's cross-sectional time-series of average interest rate spreads, we estimate and plot the evolution of sigma-convergence over time.

Figure 4. CEMAC: Sigma-Convergence of Spreads, 1999–2004
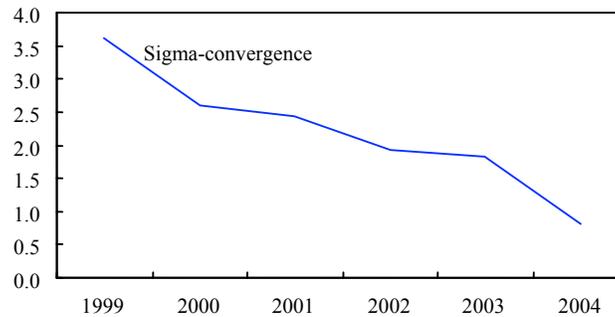
Sources: COBAC and IMF staff calculations.

The convergence in spreads could be due to a number of factors. Notably, the current situation of excess liquidity in the region (Figure 5) is likely to contribute to a decrease in margins, and more importantly to a decrease in lending rates, especially in regard to the best corporate risks. Government deposits in banks and the settlement of government arrears have produced a strong increase in bank deposits (up nearly 25 percent in 2005). The accelerated growth in bank deposits, combined with a scarcity of investment opportunities, has led to an escalation of surplus bank liquidity.[11] In times of high liquidity and limited lending opportunities, the dispersion of spreads is likely to decline. This evolution can not be explained by cross-border flows of liquidity but by the mere fact that a situation of excess liquidity has occurred simultaneously in several countries of the region. In essence, although spread convergence is often regarded as real evidence of financial integration, we find that, for CEMAC, this interpretation is not corroborated by further evidence (see below) and is the likely manifestation of masking factors, such as excess liquidity and limited lending opportunities.

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[11] Limited investment opportunities in the CEMAC can be linked to a number of factors: (i)a restricted economic diversification with a few high profile customers, with risk concentration rules rapidly binding in this context; (ii) interest rate regulations (notably a ceiling on bank lending rates currently set at 15 percent), which are likely to limit the feasibility of bank lending to credit constrained SMEs and households; and (iii) the absence of a modern financial market where banks can diversify their assets. The lack of opportunities to shape an adequate risk/return profile also means that banks have to increase the return on their operations, either through interest or fees, with customers who actually present a tolerable level of risk.

Figure 5. CEMAC: Evolution of deposits, credit, and interest rates (2000-05)
(In billions CFAF and percentage, unless otherwise noted)
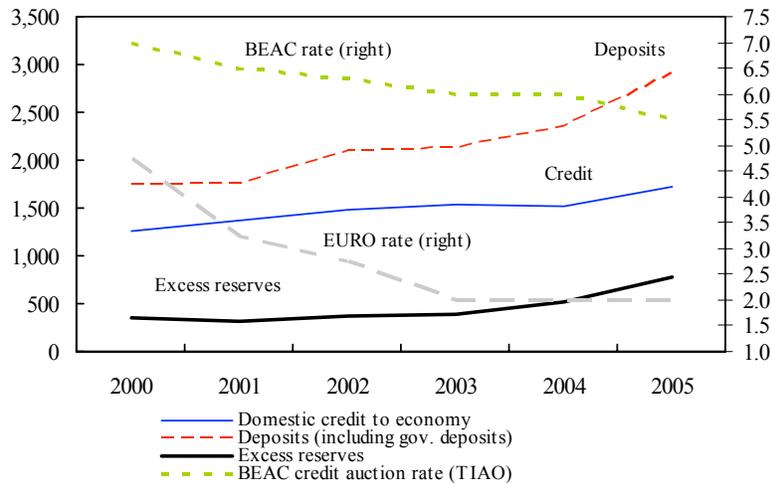
Source: IFS.

Quantity-based indicators

Anecdotal evidence suggests that cross-border flows are still negligible in retail loans and deposits, suggesting that integration is not taking place. Based on data collected from COBAC, banks in the CEMAC still work primarily with their domestic customers, which explains the lack of cross-border flows.[12]

Using a different quantitative indicator (cross-border entry and ownership), we show well-established links between foreign and CEMAC retail markets. Foreign bank branches often concentrate on corporate finance services, trading activities, and private banking, rather than retail activities. Retail businesses are more difficult to enter as domestic banks usually enjoy substantial competitive advantages. Thus, the most effective way of gaining entry to the CEMAC retail sector has been to merge with or acquire an existing local bank. A number of such operations have indeed taken place over the past ten years or so, mostly by French banking groups as the current market structure in CEMAC shows (Table 3). After a series of bank failures in the late 1980s and early 1990s, several banks were restructured and government ownership was reduced, while foreign ownership increased. Although this might indicate that integration is present and progressing, a mere change in the ownership structure

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[12] Even in the euro area, banks still work exclusively with their national customers on average in the case of 89 percent of their loans and 84 percent of their deposit base (Cabral et al. 2002).

may not necessarily affect the pricing behavior of financial institutions. The significant amount of foreign ownership reflects, at least, tangible links between local banking and global groups.

B. Obstacles to Integration

So far, the common currency and a comprehensive regional institutional setup have not led to financial integration in the region. The regional institutional setup notably includes a common central bank and bank supervisor, a common legal framework and regional decision-making bodies at the political level. Some important progress has been made to regulate the financial sector at the regional level, but limited progress has been made in facilitating integration of banking markets. Obstacles include: (i) limited effectiveness of the instruments that have been set up (notably *agrément unique*); (ii) lags in infrastructure and markets; and (iii) reputation effects and consumer preferences.

The *agrément unique* or single banking license procedure—a major step for integration—is not functioning as expected. In 2001, following the example of the EU and the WAEMU, an *agrément unique* procedure was approved in CEMAC (Box 2). In practice, no application for a single banking license has been submitted to COBAC for a number of potential reasons, including the fact that banks interested in the procedure are already present in several countries. The chosen method for developing bank networks in CEMAC has been so far the purchase of existing institutions, often during restructuring episodes. In slight contrast with the situation prevailing in the EU, the issue of different national supervisors and supervisory practices does not pose a problem in CEMAC given the existence of the COBAC, but barriers of a rather political and administrative nature (e.g., the role of the ministries of finance of CEMAC countries in pre-approving licensing applications) do contribute to the inefficient functioning of the *agrément unique*.

Even with the eventual lifting of regulatory restrictions and barriers of a political nature, market forces may not be effective in pushing banks to develop their networks in the region. Banks may be enticed to develop their networks if there is evidence of overbanking at the country level (with inefficiently overlapping branch networks, which does not appear to be the case in the region), and/or if banks are failing to operate at an appropriate level of efficiency for other reasons. Financial depth is very low in the case of CEMAC and thus points towards significant potential growth of the banking sector through monetization, but probably only to the extent that member countries manage to achieve a greater diversification of their economies and a more conducive business environment.

Regional infrastructure and markets are not sufficiently developed to facilitate banking integration (Box 3). There is virtually no regional interbank market (total interbank market volume for the whole CEMAC was a mere 110 CFA billions in 2003 and 90 CFA billions in 2004) and debt market. To the extent that interbank flows have not developed, the apparent progress in integration that could be inferred from the narrowing of retail spreads could be further questioned. In particular, there is a limited flow of liquidity between countries with excess liquidity and those (like the Central African Republic and Chad) with a tighter liquidity situation. Efforts to mobilize various sources of funding are constrained by the

overall situation of excess liquidity or limited to banks within the same group. The fact that foreign banks may have available financing and undertake liquidity management through their parent companies may partly explain the absence of an active interbank market, at least in foreign currency, and the lack of cross-border transactions. Moreover, the shortcomings in transparency and disclosure make it difficult for banks in one country to assess the creditworthiness of banks in neighboring countries, and the absence of a reliable payment system or government securities market renders collateralized lending difficult. In addition, excess liquidity and regulation of interest rates (Figure 5) limit bank competition to mobilize savings: banks have no incentive to increase the number of depositors when their remunerated resources are costly in the context of regulated interest rates, and when liquidity is high in the economy. Hence, at best, banks guide depositors toward sight deposits which are more volatile. Furthermore, while the BEAC has designed a framework for government securities issuance at the regional level, no country has yet made use of the framework.

Box 2. *Agrément Unique* in the European Union, WAEMU, and CEMAC

European Union
In 1989, the "Second Banking Directive" instituted the *Agrément Unique*, as a means to achieve the objectives of the Single Market. The *Agrément Unique* was broadened in 1993 to cover investment services and came into force the same year. It now covers 25 states, plus Iceland and Norway and all the related texts were consolidated in 2000 into Directive 2000/12/EC. A credit institution is allowed to open branches in other EU member states, so long as it is authorized to do so by its home country supervisor. The home country supervisor has the power to scrutinize the adequacy of the institution's administrative structure and financial situation and, if appropriate, to prohibit the bank from opening a branch in another member state. However, the justification for any negative decision must be disclosed, allowing the bank to contest the supervisor's decision in court. In the EU, the expansion of cross-border banking services has occurred equally through branches and subsidiaries (Walkner and Raes, 2005). Despite a lower initial cost in terms of capital of establishing branches, banks seem to hesitate to enter other European markets through greenfield operations and as a result seem to opt for mergers and acquisitions as a preferred expansion strategy.

WAEMU
The Council of Ministers opted for an *Agrément Unique* procedure in 1998 which took effect on January 1, 1999. For an already established bank, the application for *agrément unique* is presented at the BCEAO national office and a decision is taken within three months by the Regional Banking Commission, after consultation with the ministry of finance of the country of origin and of the country of destination. In December 2004 (Avis 01/RB/2004, Dec. 6, 2004) , following a meeting of the council of ministers in July 2004 to revive the procedure, which had not borne fruit as expected, it was decided to end the minimum capital requirement for branches in other countries of the union.

CEMAC
In 2001, an *agrément unique* was instituted with CEMAC Regulation R-01/100, based on what has been the practice within the EU. The *agrément unique* allows a bank to supply financial services in another country of the region directly or indirectly when it is already established in one country, and provided the bank has been in operation for a minimum of two years and it is rated as "strong" in COBAC's SYSCO system (rating 1 or 2). COBAC has to decide on a request for an *agrément unique* within three months following the transmittal of the application by the national monetary authority (i.e., the ministry of finance).

The payment system in CEMAC countries is rudimentary, while capital markets are in their infancy. The current payment system is slow, unreliable, burdensome, and costly for the

participants. Thus, it represents a constraint on regional integration, on the implementation of monetary policy, and the management of commercial bank liquidity. A significant risk of duplication has arisen between the recently established regional stock exchange (BVMAC) and the already existing (yet inactive) stock exchange in Cameroon (DSX), as well as a potential conflicting regulatory and supervisory overlap between the (regional) *Commission de Surveillance du Marché Financier de l'Afrique Centrale* and the (Cameroonian) *Commission des Marchés Financiers*. These parallel structures risk hampering further the chances of successfully developing CEMAC's securities markets.

Box 3. CEMAC: Financial Infrastructure Elements

A rudimentary payment system in the CEMAC zone remains a serious obstacle to the development and integration of the financial sector. The regional payment system reform project comprises several components, including a Real Time Gross Settlement System (RTGS): an Electronic Bulk Payment Clearing System (EBPCS) or Regional Inter-Bank Compensation (CIR); an interbank bank card system (*Système Monétique Interbancaire* or SMI); and a "*Centrale des Incidents de Paiement,*" which is a limited credit information system. There has been slow progress on this project since its inception five years ago, but regional authorities expect a completion date sometime in 2008.

The legal framework for creditor rights in CEMAC member states has been developed at two levels: regionally and domestically. All CEMAC countries are members of the OHADA (*Organisation pour l'Harmonisation en Afrique du Droit des Affaires*), and many of the legal issues relating to the credit environment are governed by regional uniform legislation. However, although substantial matters are, to a large extent, governed by uniform the OHADA legislation, judicial (e.g., enforcement, court system, judicial training, and specialization), regulatory (e.g., registries, insolvency trustees,) and institutional (e.g., level of implementation of uniform legislation) issues are dealt with at the national level. While the legal framework is broadly appropriate, knowledge and understanding of the OHADA Acts appear to be very limited, and dissemination and training have been woefully inadequate. These issues are compounded by dysfunctional judicial systems, which seriously undermine creditor rights and represent an obstacle to the sound development of the financial sector throughout the region.

The statutory framework for private sector accounting and auditing in CEMAC is strongly influenced by regional agreements. Basic legal accounting, reporting, and external audit requirements are established by the OHADA Acts, which require all joint stock companies (*sociétés anonymes*) to appoint a statutory auditor (*commissaire aux comptes*) to audit their annual financial statements and perform other independent functions. The OHADA Accounting System (*Système Comptable de l'OHADA* or "SYSCOHADA") adopted in 2002 is based on the French Plan Comptable with some amendments mirroring certain principles set out in the International Financial Reporting Standards (IFRS).

Reputation effects and consumer preferences add to the lack of banking integration. These so-called "natural" barriers emerge in the form of national-based market differences, which relate to language, cultural preferences, considerations of geographical proximity, and information availability. Banks suffer from a lack of information on borrowers or other

banks. Local and regional credit registries and rating agencies are absent, exacerbating an already weak credit culture. The limited availability of information on banks prevents interbank market development. For instance, banks have so far failed to agree on the dissemination of SYSCO ratings which would help improve transparency.[13] Apart from a few exceptions (i.e., border of Chad and Cameroon) bank flows are negligible and point to low-trade integration.

IV. BANK COMPETITION AT THE REGIONAL LEVEL

This section seeks to assess the degree of bank competition in CEMAC. A widely-used technique to measure the degree of bank competition is the Panzar-Rosse (PR) model. This model examines the relationship between a change in factor input prices and the revenue earned by a bank, assuming that banks employ different pricing strategies in response to changes in input costs depending on the banking system's market structure. For instance, in a collusive environment, assuming profit maximization, an increase in input prices will increase marginal cost and reduce equilibrium output and revenues. Under perfect competition, an increase in input prices will increase marginal cost and marginal revenue by the same amount.[14]

Based on the PR model, we examine how banks' revenue correlates with factor prices (Table 7). Given the small size of the sample for some CEMAC countries, the analysis is conducted for the region as a whole. Because competition seems to take place primarily on a national level, this analysis has obvious limitations. However, it can help in understanding the present degree of integration and the extent to which there is competition on a regional level. The following equation is estimated by using individual bank data from 1993 to 2004 on 32 banks, drawing on data provided by the COBAC:

(1) *ln INCOME= a+ b ln(PF)+c ln(PL)+ d ln(PK)+e ln(SIZE)+f ln(CAPITAL)+g ln(LOANASSET)*

where: *INCOME* represents the ratio of gross revenue to total assets;[15] *PF* the unit price of funds, proxied by the ratio of interest expenses to total deposits; *PL* the unit price of labor or

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[13] SYSCO ratings are prepared by the regional banking commission COBAC, and are based on the CAMEL bank rating system. So far, individual banks appear reluctant to share this information with their counterparts and the public.

[14] This model was used in recent country studies on Hong Kong (HKMA, 2004), India (Prasad, Ghosh, 2005), Canada (IMF, 2005), Malaysia (IMF, 2006), and a large set of countries (Claessens, Laeven, 2003).

[15] Which includes interest and noninterest revenue. Both measures with or without noninterest revenue are commonly used but given the role of fees and other income in an interest rate regulated environment such as CEMAC, a more comprehensive measure was preferred.

personnel expense to total number of employees (or assets); and *PK* the unit price of capital or other operating costs to fixed assets. The last three variables control for the characteristics of banks: *LNSIZE* (size captured by total assets), *LNCAPITAL* (capital by equity to assets); and *LNLOANASSET* (degree of intermediation by the ratio of loans to total assets).[16] The sum of estimated coefficients of factor prices (i.e., b+c+d) is the H statistic and indicates the degree of competition. A value of H between 0 and 1 indicates monopolistic competition (input prices increase is associated with a less than proportional increase in revenue, as the demand curve for banks is inelastic). An H equal to 1 indicates perfect competition. An H lower than 0 indicates a monopoly or a perfectly collusive oligopoly.

Table 7. Statistical Results

Dependent Variable: LNINCOME
Method: Panel Least Squares
Sample: 1999 2004
Cross-sections included: 30
Total panel (unbalanced) observations: 140

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	1.183190	0.636091	1.860095	0.0651
LNPF	0.115866	0.046311	2.501915	0.0136
LNPL	0.121488	0.053786	2.258725	0.0255
LNPK	0.031349	0.041804	0.749895	0.4546
LNSIZE	-0.010121	0.036650	-0.276147	0.7829
LNCAPITAL	0.033769	0.031302	1.078813	0.2826
LNLOANASSET	0.245437	0.072571	3.382027	0.0009
R-squared	0.257038	Mean dependent var		2.359776
Adjusted R-squared	0.223520	S.D. dependent var		0.333156
S.E. of regression	0.293571	Akaike info criterion		0.435313
Sum squared resid	11.46247	Schwarz criterion		0.582395
Log likelihood	-23.47189	F-statistic		7.668846
Durbin-Watson stat	1.164012	Prob(F-statistic)		0.000000

Source: IMF staff calculations.

The estimated H statistic places CEMAC, as a region, among the least competitive environments (Table 8). The results: (i) confirm monopolistic competition—as is the case for most banking systems—and show an H value of 0.3; (ii) do not show an increase in competition in later years with tests performed for shorter periods; and (iii) suggest a lower

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[16] Estimates performed with fixed and random effects (not reported) provide similar results. Fixed effects are the most appropriate to capture idiosyncrasies in individual data, with data on institutions operating in the same field of business and in the same country.

degree of competition than for most African countries although comparisons are difficult. These results should not come as a surprise, given that the tests were performed at the regional level and there is limited regional integration. Tests performed on individual countries—which are made difficult by the small size of the samples—would probably show a higher degree of competition, for example in Cameroon in the later years. Moreover, the results should be compared with similar results—which are unfortunately lacking—for monetary unions with a common banking supervision and regulatory framework (not the case of the EU for instance). Finally, the results are subject to a number of statistical caveats: (i) the R squared is rather low; and (ii) some variables are not significant (the unit price of capital, control variables, size and capital).

Table 8. H Statistic Country Comparisons

Country	Sample Period	H Statistic	Number of Banks	Number of Observations
Ghana	1998–2003	0.56	13	65
Kenya	1994–2001	0.58	34	106
Nigeria	1994–2001	0.67	42	186
South Africa	1994–2001	0.85	45	186
Uganda	1999:Q1–2002:Q3	0.30	15	196
Uganda	2002:Q4–2004:Q2	0.49	15	97
CEMAC	1993–2004	0.27	32	140

   Source: IMF staff calculations, Claessens and Laeven (2004), Buchs and Mathiesen (2005), Hauner and Peiris (2005).

V. ISSUES GOING FORWARD

Over half a century into the creation of a single currency, the picture that emerges is one of fragmented retail banking markets. This market segmentation the fragmentation of goods and labor markets (World Bank, 2003). While most of the regional institutional frameworks are in place, regional markets have still to emerge, and implementation of existing regulations is weak.

Some measures could and should be taken to address the various obstacles to regional integration:

- Legal and regulatory framework: (i) remove the various administrative and political obstacles to the implementation of the *agrément unique* (which would mean a change in the current general procedure for the *agrément*) and in particular diminish the role of the ministries of finance and allow banks already established to open branches following an easier procedure; (ii) liberalize lending and deposit rates so that they are no longer a constraint on the incentives for financial intermediation; (iii) have more

uniform reserve requirements across the region; and (iv) work on greater harmonization of tax regimes (notably on provisions) for banks.

- Infrastructure, markets, reputation, and consumer preferences: (i) develop and implement a coherent strategy to develop regional interbank and debt markets consistent with efforts aimed at improving systemic liquidity management;[17] (ii) strengthen transparency by ensuring greater dissemination of bank data (SYSCO ratings); and (iii) establish an efficient procedure for the sharing of credit bureau information.

Looking forward, more research could be undertaken on the roots of the identified shortcomings in integration and competition in CEMAC. On bank competition, a lack of data and small samples has prevented us from doing a thorough analysis at the national level, which, given the lack of integration within CEMAC, is likely to be the most relevant level of analysis. Although data limitations are likely to persist, more needs to be done to fine-tune the assessment of the degree of bank competition in individual countries, and to quantify the main factors behind noncompetitive features at the national or regional level, e.g., interest rate regulations. Nominal convergence dynamics also need to be better understood, in particular the effects of high liquidity on interest rate spreads and on the dispersion of lending rates. Finally, we need to better grasp the effects of both limited economic integration and diversification on the development and integration of banking systems, with a view to adjusting the appropriate sequencing in the design of policy measures.

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[17] See IMF (2006).

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