October 2004
IMF Country Report No. 04/336

Republic of Kazakhstan—Financial Sector Assessment Program Update—Technical Note—Bank Profitability and Competition

This Technical Note on Bank Profitability and Competition for the **Republic of Kazakhstan** was prepared by a joint staff team of the International Monetary Fund and the World Bank as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed in **August 2004.** The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of the **Republic of Kazakhstan** or the Executive Board of the IMF.

The policy of publication of staff reports and other documents by the IMF allows for the deletion of market-sensitive information.

To assist the IMF in evaluating the publication policy, reader comments are invited and may be sent by e-mail to publicationpolicy@imf.org.

Copies of this report are available to the public from

International Monetary Fund ● Publication Services
700 19th Street, N.W. ● Washington, D.C. 20431
Telephone: (202) 623 7430 ● Telefax: (202) 623 7201
E-mail: publications@imf.org ● Internet: http://www.imf.org

Price: $15.00 a copy

International Monetary Fund
Washington, D.C.

FINANCIAL SECTOR ASSESSMENT PROGRAM UPDATE

REPUBLIC OF KAZAKHSTAN

TECHNICAL NOTE

BANK PROFITABILITY AND COMPETITION

AUGUST 2004

INTERNATIONAL MONETARY FUND
MONETARY AND FINANCIAL SYSTEMS DEPARTMENT

THE WORLD BANK
FINANCIAL SECTOR VICE PRESIDENCY
EUROPE & CENTRAL ASIA VICE PRESIDENCY

Contents Page

Tables

Figures

Appendices

BANK PROFITABILITY AND COMPETITION[1]

1. **Since 2000, the banking sector in Kazakhstan has grown rapidly, led by strong economic growth.** The steady evolution of the banking sector has been accompanied by some gains in efficiency and lower overhead costs that contributed to an overall decline in the interest rate spread. The level of interest rates and the level of financial intermediation compares well with respect to the region. The performance of the banking sector varies with the size of banks, and there is growing concern about competitive conditions given the fairly high concentration, bearing in mind the size and segmentation of the market.

2. **The purpose of this note is to explore the reasons for a comparatively high interest rate spread in Kazakhstan in the context of competition in the banking sector.** In spite of significant gains in efficiency made in recent years, operational costs and provisioning for loan losses remain high compared to some other economies. Profitability of the aggregate banking system has increased in the face of lower interest spreads. A highly concentrated banking system could be an indicator of lack of competition, but it needs to be assessed with contestability conditions (openness to entry of banks). The lack of license applications since 2001 raises questions about the attractiveness of entry by new banks. Competitive and market contestability conditions will be further enhanced with the authorities' continuation of strong macroeconomic and financial policies, improvements in financial sector regulation and enforcement thus continuing the achievements during the last five years. Administrative measures to control interest rates (for instance, the ceiling on deposit rates introduced by the Deposit Insurance Fund and tax incentives) only distort financial intermediation, and are likely to be counterproductive.

I. BACKGROUND

3. **Financial depth and intermediation in Kazakhstan have been growing steadily since the Russian economic crisis in 1998.** Macroeconomic stability, greater soundness of the banking system, faster and more transparent judicial procedures, and a steady decline in the spread between lending and borrowing interest rates are some of the factors responsible for financial deepening. Growing confidence in the banking system has been facilitated by a deposit insurance scheme introduced in 1999 (compulsory in 2004) and the Bank Secrecy Law of 2000. The size of the banking sector has grown, although the number of licensed banks has decreased from 71 in 1998 to 36 in 2003, due to tighter prudential regulations and licensing requirements. The number of bank branches declined to 359 in January 2004, from 367 in January 2003, and 458 in 1998.

4. **Bank lending to the private sector has increased sharply in recent years.** This development is due to a sound fiscal stance and better credit assessments underpinned by strong real growth. Almost 60 percent of the loans have gone to industry and trade sectors since 2000, while the share of loans to agriculture has ranged between 10 to 12 percent. The

---

[1] Prepared by Srobona Mitra (IMF, MFD), who participated in the joint IMF-World Bank Financial Sector Assessment Program (FSAP) Update mission that visited Kazakhstan during the period February 11–25, 2004.

share of lending to households is small but rising rapidly, with mortgage credit increasing four times in 2003. The share of loans to small and medium-sized enterprises (SMEs) has started to pick up; with the larger banks targeting SMEs after their larger corporate customers have gained international access. Deposits constitute almost 70 percent of banks' total liabilities, and the increasing share of households in total deposits indicates enhanced confidence in the banking system. Around 55½ percent of credit and 47 percent of deposits are denominated in foreign currency (mainly U.S. dollars).

5. **The level of financial intermediation in Kazakhstan, while above many countries in the region, is still low in broader comparisons.** Figure 1 compares financial intermediation in Kazakhstan to that of other countries that have Purchasing Power Parity (PPP) adjusted per capita Gross National Income (GNI) between US$3,000 to US$10,000. Kazakhstan's position moved from being below average in 2001 to slightly above average (as given by the trend line) in 2002.[2] Figure 2 compares Kazakhstan's financial depth and intermediation to other neighboring, oil-exporting, and EU-Accession countries.[3] Broad money to GDP and private sector credit to GDP are used as indicators of financial depth and intermediation. Compared to other neighboring countries, Kazakhstan is above Russia and the Kyrgyz Republic (panel A) in terms of private sector credit, and between the two countries in terms of broad money. With respect to other oil-exporting and EU-Accession countries, the Kazakhstani indicators are more modest, but have been growing since 2000. In 2003, broad money compared to non-oil GDP, which may be a better proxy since the oil sector is to a large extent foreign financed, was 29½ percent.

6. **The interest rate spread, as shown in Figure 3, has declined substantially since 1996, but banks remain profitable in varying degrees.** At the same time, the spread in Kazakhstan was higher than most other comparable countries in 2002. A high spread might reflect high overhead costs, high cost of gathering information on borrowers, high loan-loss provisions, high unremunerated reserve requirements, few sources of alternative incomes, and scale diseconomies in small markets. The Kazakhstani banking system was relatively resilient to the Russian crisis in 1998 and the consequent floatation of the tenge in 1999, due to its long position in dollars. The subsequent increase in profitability in the face of lowering interest margins suggests that other factors have helped banks to remain profitable.

II. PROFITABILITY AND INTEREST SPREADS

There is a wide variation in profitability among banking groups in Kazakhstan. The three largest banks are prominent players in the market, with wide networks, and are diversifying into lending to SMEs. Owing to higher credit risks involved in SME lending, the

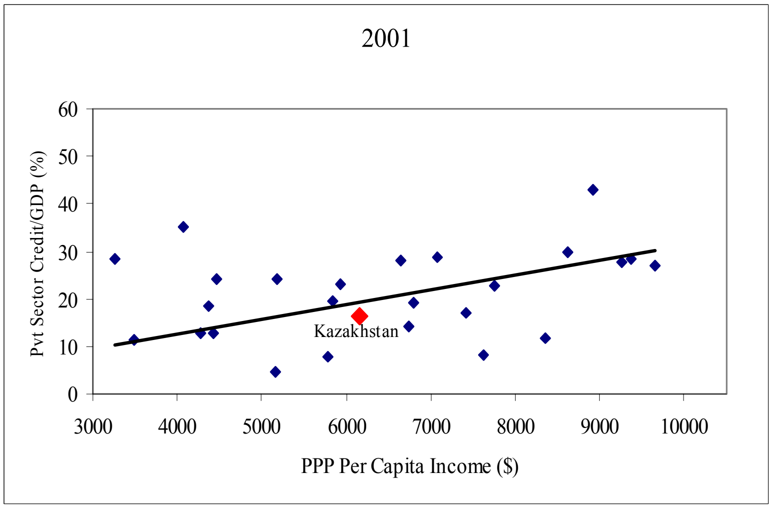
---

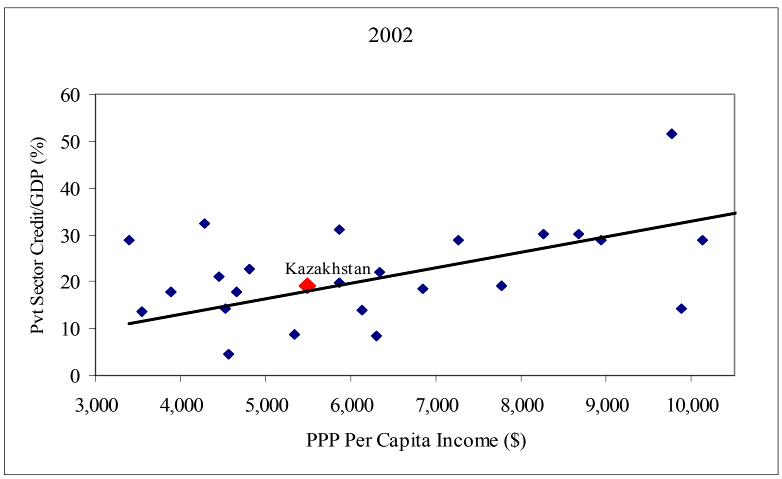
[2] PPP per capita income decreased in 2002 according to estimates prepared by the World Bank.

[3] Neighboring countries include the Kyrgyz Republic, Russia, and Uzbekistan; other oil-exporting countries encompass Bahrain, Kuwait, Nigeria, Norway, Oman, Qatar, Saudi Arabia, UAE, and Venezuela; EU-acceding countries include Bulgaria, Estonia, Hungary, Latvia, Lithuania, and Poland. For financial depth, Uzbekistan has been excluded due to unavailability of data.

three largest banks have higher provisions (as a ratio to loans as well as deposits) than the rest of the banking system. The largest banks have a tendency to increase interest rate

Figure 1. Financial Intermediation and PPP-adjusted Per Capita Income 1/





Source: World Development Indicators, World Bank, and International Financial Statistics, IMF.

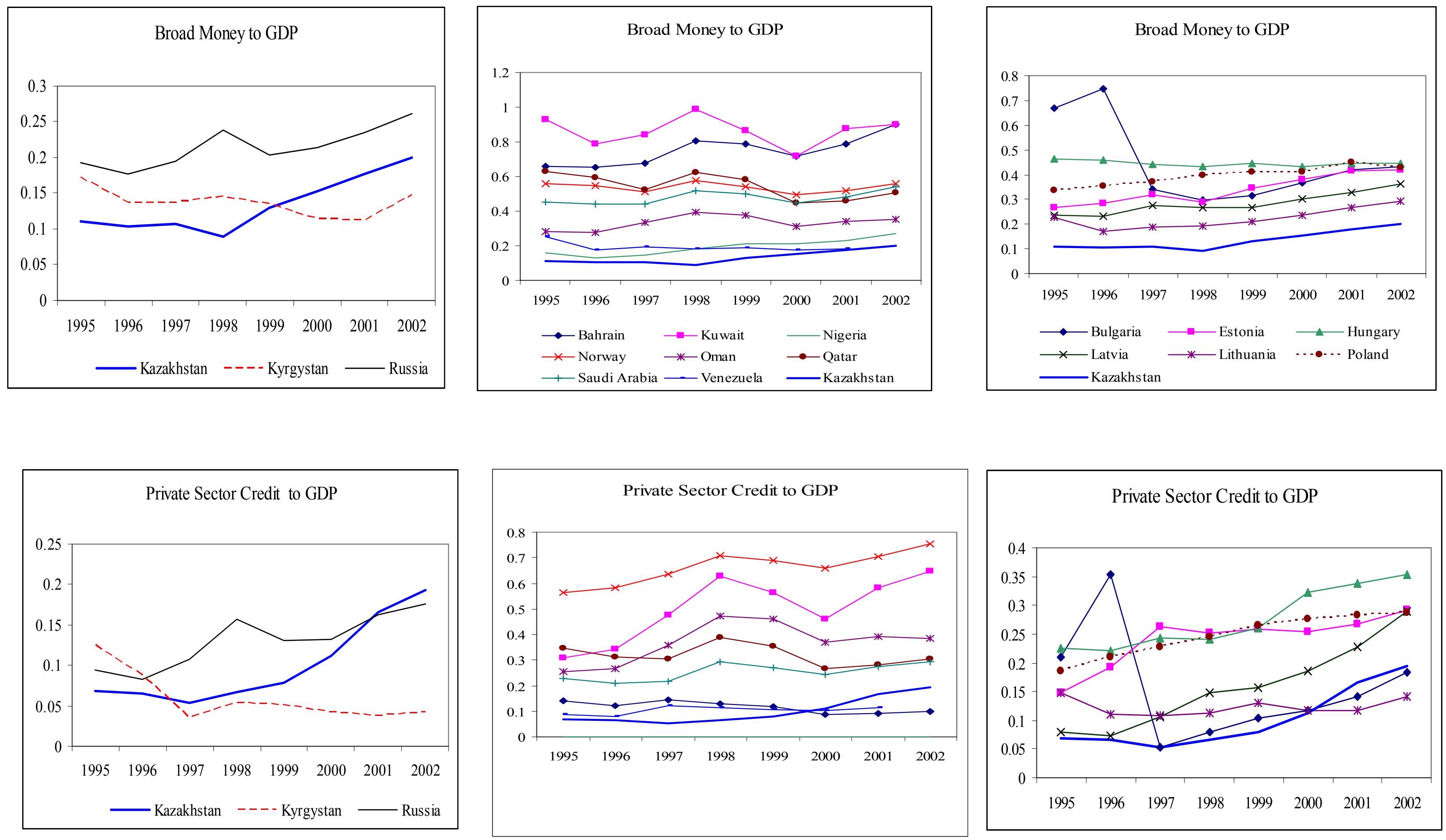
1/ Countries with PPP per capita income between US$3,000 and US$10,000 in 2001.

margins to improve their profitability. Halyk Savings Bank, was privatized in 2001, but continues to operate as a savings bank with many branches. Since it has a different operational structure, it is analyzed separately from the aggregate banking system.[4]

[4] The 'aggregate' represents a group of 34 banks, excluding the state-owned banks. Disaggregated data for the three largest banks for 1999–2001 have been obtained from Bankscope, a database with publicly available audited accounts, and for 2002–2003 from the NBK. Accordingly, the data may not be fully comparable.

Figure 2. Kazakhstan: Financial Depth Compared to Other Countries

A. Neighboring Countries | B. Other Oil Producing Countries | C. EU-Accession Countries



Source: International Financial Statistics, IMF.

7. **Nominal interest spreads, after declining by around 3½ percentage points since 2000, increased slightly during 2002 and decreased again in 2003.** Deposit rates are subject to a ceiling for banks participating in the deposit insurance scheme. Other administrative measures, like the limit on tax deductibility of interest paid by banks on deposits above certain thresholds have led some banks to charge higher lending rates to recoup payment of higher taxes. Better availability of creditor information, as well as competitive pressures from nonbank financial institutions may have helped in the further lowering of spreads.

8. **In order to analyze movements in spread and profitability, the interest spread is decomposed into its underlying components using annual consolidated data of banks in Kazakhstan, following the methodology in Randall (1998)**.[5] The ex post spread is calculated by taking the difference between interest earnings, as a percentage of loans, and interest expenses, as percentage of deposits. This calculation takes into account actual net interest income, reflecting actual transactions, and corrects for the differences in rates charged to different borrowers. The interest rate decomposition in Table 1 reveals that quite a few factors may have contributed to the dynamics of the spread, although the extent of the influence of each of these factors varied with the type of bank. Three categories of banks are examined: (a) aggregate banking system; (b) three largest banks (in terms of asset size), and (c) Halyk Savings Bank, which is also one of the three largest banks. From Table 1 and Figure 5, several observations can be made:

- **The decline in the spread has not been uniform across categories:** Halyk Savings Bank had the largest decline, starting with a higher spread in 1999 and ending with a spread in 2002 below the average banking system. The spread has increased in 2003, with an increase in its lending rate along with a decrease in the deposit rate. For all categories, the deposit rate has not varied substantially over the years, and the ceiling on deposit rates imposed on banks participating in the Deposit Insurance Fund could explain low variations in this rate.

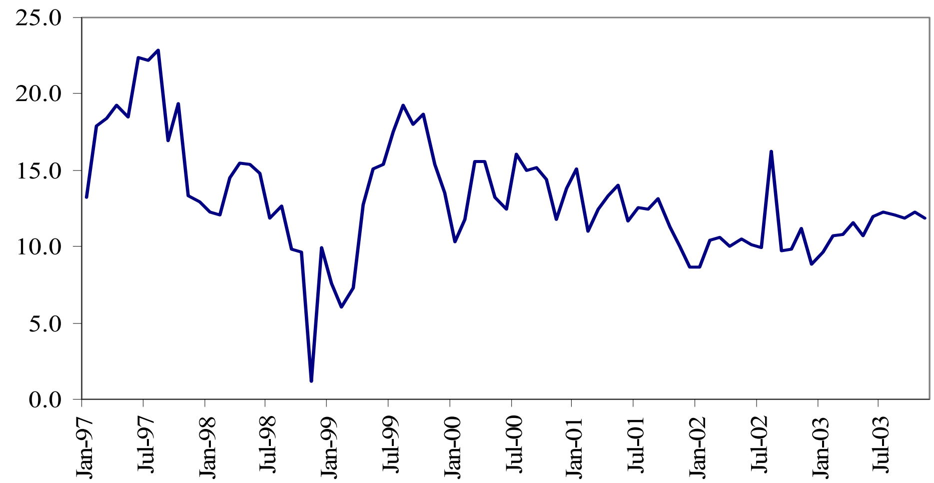
- **In 2002 and 2003, profitability, as measured by ROA (profits in percent of assets), has been a little higher for the aggregate banking system than for the three largest banks.** In 2002, the ROA was especially low for Halyk Savings Bank, with its extensive branch networks, but this changed in 2003, when the benefits of its privatization began to materialize.

- **Non-interest expenses can be divided into personnel expenses and other non-interest and overhead costs.** Personnel expenses/deposits (Table 1 and Figure 5) have come down over the years for all categories—although the decline is more drastic for Halyk Savings Bank, with its higher initial ratio. Since 2000, the three

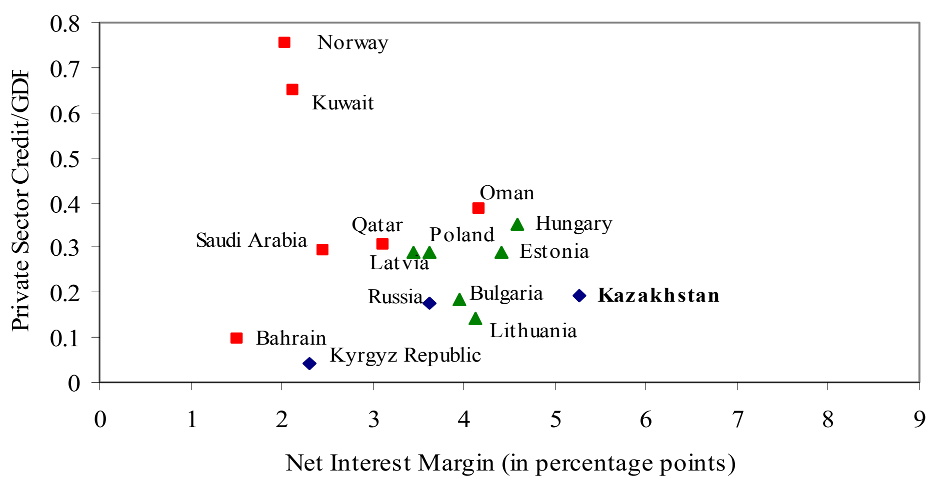
[5] Using the margin-decomposition analysis followed in Randall, R (1998): "Interest Rate Spreads in the Eastern Caribbean," IMF WP 98/59. This is also explained in Appendix I.

Figure 3. Ex ante and Ex post Interest Rate Spreads: Comparison with other Countries

Kazakhstan: Interest Rate Spread 1/
(in percentage points)



Net Interest Margin and Financial Intermediation 2/



1/ Short-term lending rate and tenge time deposit rates of legal entities from 1999 to September 2001 from IMF database. Data from October 2001 to August 2003 are from the National Bank of Kazakhstan's Statistical Bulletin. There is a break in the series from October 2001 owing to different sources.

2/ Source: Aggregate Balance Sheet data for 2002 provided by the NBK. Net Interest Margin = Net Interest Revenues in percent of total assets.

largest banks had lower personnel expenses in terms of deposits than the aggregate banking system.

- **Lower operating expenses in 2002, however, did not contribute to a decline in the interest spread, especially for large banks.** Adoption of new loan-loss provisioning rules and the diversification of the larger banks into SME lending, which typically comes with higher credit risk, led to higher provisioning. As a result, the larger banks (except for Halyk Savings Bank), and the banking system as a whole, tried to partially recoup the higher costs by raising the lending rate, leading to higher spreads. Despite improvements in prudential regulations, loan-loss provisions relative to assets remain high compared to other countries in the peer group (Figure 6).

- **The banking system, especially the larger banks, is increasingly entering into other nonbanking activities, like insurance, securities and real estate businesses.** These activities are sources of income from fees and commissions, as opposed to the more traditional interest-rate-based income. Except for Halyk Savings Bank, **fees and commissions received have been declining relative to deposits**. In 2002, fees and commissions for the aggregate banking system were almost 12 percent of operating income, and fees and commission expense were around 4 percent of total operating expenses.

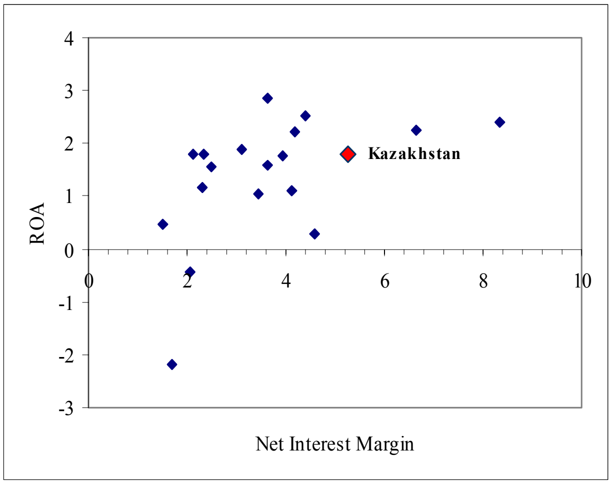
- **Foreign exchange revaluation gains from the depreciation of the tenge against the US dollar were instrumental in buffering the banking system from the Russian crisis of 1998, as the banking system had a long foreign exchange position.** This category of income was 3.1 percent of total assets (and 6.1 percent of deposits) in 1999. In 2003, with the appreciation of the tenge against the dollar, income from foreign exchange revaluation gains had fallen to 0.15 percent of deposits for the aggregate banking system, from 0.91 percent in 2002. This source of income is higher for the three largest banks (1.3 percent in 2002).

- **The overall macro environment, especially the inflation rate, has positively influenced the interest rate spread.** Countries with higher and more variable inflation, with presumably higher macroeconomic uncertainty, have a higher spread, as banks try to recoup the erosion of their real capital by increasing their margin. Figure 4(B) illustrates a (weak) positive relationship between margin and inflation rate in the cross-section of comparable countries for 2002. With the decline in the inflation rate, lending rates have decreased overall.

- **Non-quantifiable factors like dissemination of creditor information and creditor rights enforcement have helped in understanding and identifying credit risks better.** To disseminate creditor information to banks, a Regulation on Credit Register was adopted by NBK in 1998. Under this scheme, commercial banks are required to report to the regulatory authority if a single legal entity (or an individual) borrows in excess of tenge 3 million (or tenge 1 million). A new automated subsystem is being developed whereby the banks can access current and periodic creditor data. A law on

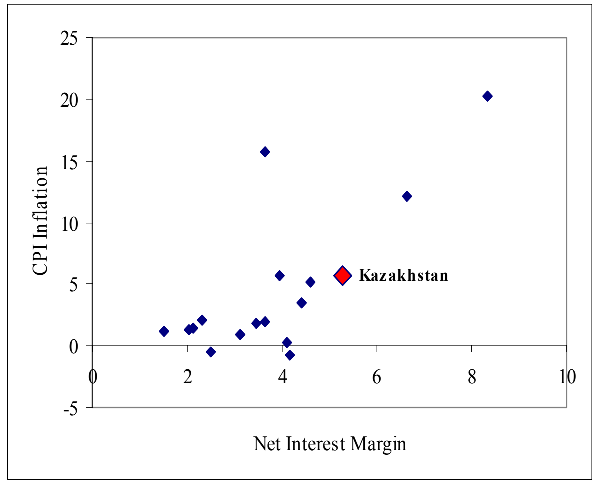
Figure 4. Cross-Country Relationships between Interest Spread, Profitability, CPI Inflation, and Economic Freedom, 2002 1/

A. Interest Rate Spread and Profitability in 2002 (in percent) 2/



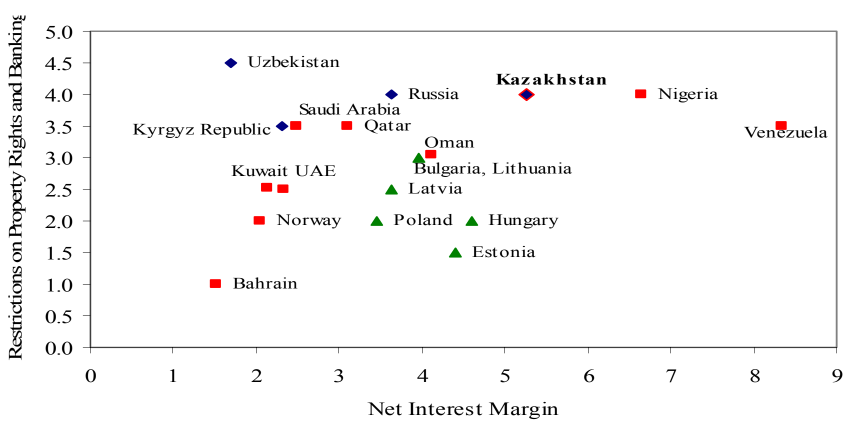
Source: Bankscope and National Bank of Kazakhstan.

B. Interest Rate Spread and CPI Inflation in 2002 (in percent) 2/



Source: International Financial Statistics and National Bank of Kazakhstan.

C. Net Interest Margin and Economic Freedom 3/



1/ Country samples in the scatter diagrams include Kazakhstan, neighboring countries, other oil-producing countries, and EU-accession countries.

2/ The Net Interest Margin is calculated as Net Interest Revenues/Assets. Profitability calculated as Return on Assets (ROA), according to the Annual Reports of the National Bank of Kazakhstan.

3/ Indices of banking freedom and property rights enforcement averaged from the Heritage Foundation, with 1 as most free and 5 as least free. More information available at http://www.heritage.org/.

Table 1. Interest Spread Decomposition, by Different Bank Groups 1/

	3 Largest					Aggregate					Halyk Savings				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Interest Rate on Loans = Interest Received/Loans 2/	19.18	15.91	12.63	14.93	12.47	19.94	17.06	14.98	14.55	13.05	23.10	14.81	12.87	12.55	13.03
Interest Paid on Deposits = Interest Paid/Deposits	8.36	6.79	6.26	6.27	5.61	6.16	5.93	5.69	6.17	5.73	4.07	4.38	4.69	5.60	5.32
Spread	10.82	9.12	6.36	8.65	6.86	13.77	11.13	9.29	8.38	7.32	19.03	10.42	8.17	6.95	7.71
RR * (Interest Rate on loans)	1.53	1.27	1.01	0.90	0.75	1.59	1.36	1.20	0.87	0.78	1.85	1.18	1.03	0.75	0.78
ROA* (Assets/Deposits)	5.31	2.42	2.31	2.60	2.85	6.43	2.39	1.53	3.20	3.42	1.06	-0.24	0.07	1.90	3.79
Personnel Expenses/Deposits	7.77	3.46	2.36	1.80	1.49	6.97	4.90	3.20	2.42	2.00	9.23	2.98	2.36	1.93	1.97
Loan-loss Provisions/Deposits	7.91	3.04	4.87	6.70	5.37	9.31	4.56	5.39	5.72	4.88	3.51	1.72	4.33	5.23	6.46
Fees and Commissions Received/Deposits	5.43	4.39	3.71	3.13	3.20	4.87	4.60	3.48	3.43	3.35	5.87	4.21	4.27	3.79	4.19
Net Foreign Exchange Revaluation Gains/Deposits 3/	--	--	--	1.27	0.19	6.07	-0.10	0.28	0.91	0.15	--	--	--	0.36	0.31
Memorandum Items:															
ROA 4/	2.95	1.50	1.51	1.71	1.84	3.73	1.45	1.00	1.95	1.98	0.91	-0.20	0.06	1.30	2.35
Reserve Requirements (RR) 5/	0.08	0.08	0.08	0.06	0.06	0.08	0.08	0.08	0.06	0.06	0.08	0.08	0.08	0.06	0.06

1/ Data provided by the authorities, except for 1999–2002 data for the three largest banks, which are taken from Bankscope. The interest rate spread on unrestricted lending (that is, not taking into account reserve requirements) is a policy variable of the bank, which can be affected by several factors. Appendix I describes the decomposition of the spread into several factors that might influence it. Data on deposits include non-resident accounts. Data on provisions is taken from the earnings statements, and therefore, represent flow data.

2/ Interest Rate on unrestricted lending.

3/ Data on net foreign exchange revaluation gains for 1999–2001 for the three largest banks were not available.

4/ ROA is Gross (before-tax) Profits in percent of end-of-period Assets. Figure for 2003 provided by the authorities.

5/ Required reserves changed from 8 percent in 1999–2001 to 6 percent during the period 2002–2003. Required reserves are unremunerated.

credit bureaus has been submitted for the government's approval, which will also help reduce credit risk.

- **Property rights enforcement and effectiveness of the judicial system, an unobservable factor, has helped in the growth of financial intermediation in general.** Kunt, Laeven, and Levine (2003) found that margins were positively related to weaker institutions and property rights enforcement.[6] Figure 4(C) provides a scatter plot of an average of banking freedom and enforcement of property rights indices (from the Heritage Foundation) and the interest margin in some selected countries.[7] Although, there is a very weak positive relationship between weaker economic freedom and the net interest margin in the sample, Kazakhstan stands out as being economically "less free" than the EU-accession countries. Kazakhstan is almost in line with some of its neighboring countries regarding economic freedom, but has the highest spread among these countries.

9. **Profitability of all three categories of banks has been increasing since 2001 despite the decline in spreads.** Kazakhstan's case is different from the experiences of other countries that have generally had stable spreads over the period. In Figure 5, the averages for different country groups are drawn along with the subgroups for Kazakhstani banks. During 1999–2002, the average spread and profitability for other oil-producing and EU-accession countries have not varied significantly, but both spread and profitability were lower than those for the three largest banks in Kazakhstan.[8] However, the neighboring countries, with lower spreads, varied in profitability over the years, were harder hit by the Russian crisis in 1998.[9]

III. Efficiency of Banking Operations

10. **Banks in Kazakhstan are small by international standards. Maintaining large networks tend to increase overhead expenses, making the banks less profitable.** In order to examine the efficiency of the banks in their main business of intermediation, various indicators are analyzed in Table 2. Assuming that the banks engage in the "production" of loans, using deposits as their main source of funding, and labor as one of the inputs of production, the various efficiency indicators characterize the cost of lending operations and productivity of the banking sector.

---

[6] Kunt, A., L. Laeven, and R. Levine (2003): "The impact of Bank Regulations, Concentration, and Institutions on Bank Margins," World Bank Policy Research WP 3030, April.

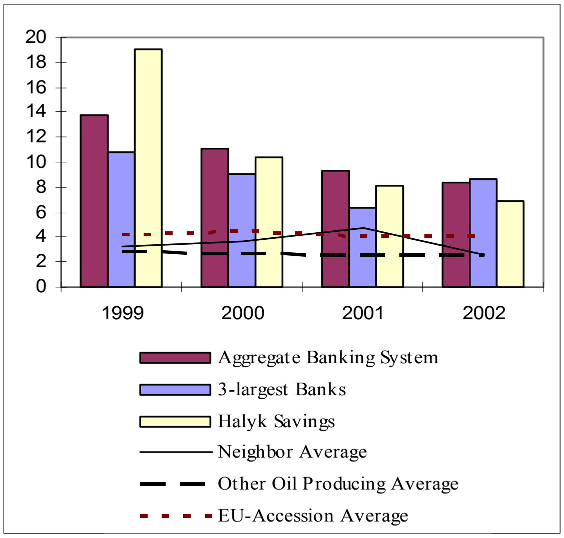
[7] The indices take the value of 1 (high degree of economic freedom) through 5 (low freedom).

[8] Only oil-producing Gulf countries are included.

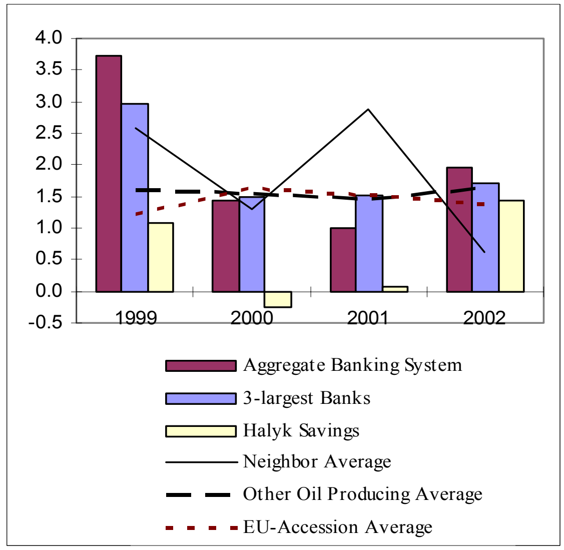
[9] Average for Russia, the Kyrgyz Republic, and Uzbekistan. The Kyrgyz Republic excluded in 1999.

Figure 5. Profitability, Cost Structure, and Interest Spread in different Categories of Banks 1/

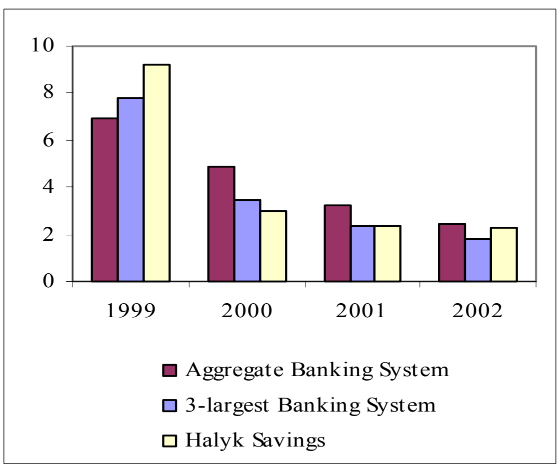
A. Interest Spread on unrestricted lending (in percent)



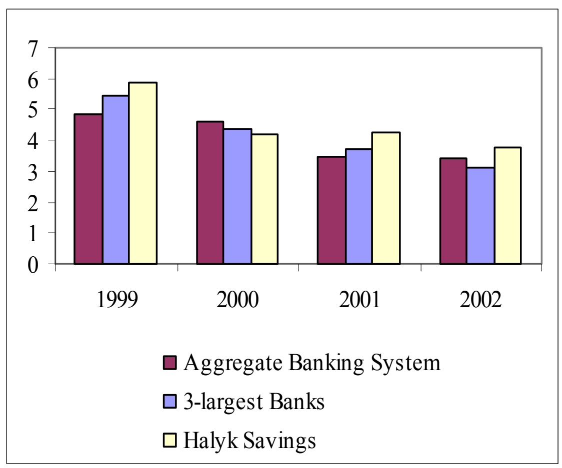
B. Return on Assets (in percent)



C. Personnel Expenses (in percent of deposits)



D. Fees and Commissions Received (in percent of deposits)



Source: Bankscope and the NBK.

1/ Regarding interest rate spread and ROA, country comparisons have been done by taking the simple average their aggregate balance sheet data for the respective groups. In "Neighbor Average," the Kyrgyz Republic is not included in 1999 due to lack of data.

11. **Table 2 provides more detailed information on the profitability of the various groups of banks.** The three largest banks were more profitable than the other medium sized banks included in the 10 largest banks, but less profitable than the aggregate banking system.

- The contribution of **net interest income** as a percent of assets (or the net interest margin) has a similar profile for all the bank groups, except for Halyk Savings Bank. There does not seem to be a clear relationship between profitability and net interest margins across banking groups. However, net interest income as percent of operating income has increased from around 30 percent to 50 percent between 2002 and 2003. The increase is higher at the aggregate level, implying that the share of interest margin in operating income has gone up faster for the smaller banks. This suggests that intermediation has been growing more rapidly than other fee-based business.

- **Non-interest expense (including loan-loss provisions)** as a share of assets has declined substantially in 2003. Non-interest expense includes overhead and personnel costs, and represents cost of production of banking services. As a percent of operating income, however, non-interest expenses remain high—more than 80 percent for all the categories in both 2003, down from around 88 percent in 2002.

- **Extraordinary income** is income from past period related to banking and nonbanking activities revealed in the reporting period. This has the effect of cushioning current period profits. This source of income is relatively higher for the medium-sized banks, rather than that for the largest banks.

- **Foreign exchange revaluation gains**, as discussed earlier, has helped cushion profitability, but is uncertain and volatile, especially in a flexible exchange rate regime with long foreign exchange positions of the banking system. This is especially high for the three largest banks in 2002, but has declined with the appreciation of the tenge against the US dollar in 2003.

- **Non-interest expense as a share of deposits** is an indicator of maintenance costs of branches. These costs have come down, but remain relatively high for Halyk Savings Bank.

- **Loans per employee** is an indicator of average productivity of labor. This has also increased for all categories, but is highest for the three largest banks. These banks are also instrumental in introducing new banking products in the market, like labor saving ATMs, credit and debit cards.

12. **Cost of operations in the banking sector remains high, although significant progress has been made in bringing them down during the period 2002–03.** The three largest banks are the most productive, in terms of labor productivity, and are more profitable than the medium-sized banks. Figure 6 shows that Kazakhstan had relatively higher cost of

Table 2. Operating Costs, Efficiency and Profitability of different Groups of Banks

Indicators	Aggregate		3-largest		10-largest		Halyk	
	2002	2003	2002	2003	2002	2003	2002	2003
	(end of period; in percent unless otherwise stated)							
Pre-tax Return on Assets (ROA)	1.95	1.98	1.71	1.84	1.52	1.46	1.30	2.35
Net interest Income/Assets	5.27	4.43	5.47	4.43	5.38	4.36	4.35	5.02
Operating Income/Assets 1/	17.83	9.02	15.76	8.98	14.99	8.80	12.81	10.22
Non-Interest Expenses/Assets	15.99	7.26	17.83	7.17	13.3	7.12	10.73	8.22
Net Interest Income/Operating Income	29.57	49.05	34.71	49.33	35.91	49.54	33.93	49.08
Extraordinary Income/Operating Income	0.87	2.32	0.30	0.01	0.79	1.96	0.01	0.01
Non-interest Expenses/Operating Income	89.69	80.51	89.41	79.88	88.72	80.90	88.83	80.43
Net Foreign Exchange Revaluation Gains/Operating Income	3.12	0.99	5.14	1.31	4.28	1.19	2.32	1.86
Non-interest Expenses/Deposits 2/	26.22	11.93	22.16	11.33	20.44	11.15	16.61	13.41
Loans/Employee (thous. KZT)	28.4	40.4	31.1	52.3	23.4	34.5	15.3	26.2
Net Profits/Employee (thous. KZT)	70.0	84.9	82.2	139.3	71.2	99.2	30.5	74.1

1/ Operating Income = Net Interest Income + Non-interest Income
2/ Includes Loan-loss Provisions

operations than many comparable countries in 2002. This could help explain a relatively higher spread in Kazakhstan.

IV. Competition and Contestability in the Banking Sector

13. **Competitive conditions in the banking market help lower interest spreads.** In Kazakhstan, the banks appear to be fairly competitive within their own group, but not necessarily between groups. For instance, the three largest banks compete with each other, but view only some of the medium-sized and smaller banks as competitors. In addition, banks are competitive in and around the big cities, but the smaller towns are catered only by a few banks. Recent economic growth has enabled large Kazakhstani business groups to access international markets with lower borrowing rates. This has led some of the larger banks to change their strategy to focus more on SMEs, and diversify into retail business.

14. **Banks are fairly concentrated in assets, loans, and deposits, although concentration is an approximate indicator of competition.** More than 80 percent of the assets, loans, and deposits were held by the top 10 banks, and 61 percent of the assets and 66 percent of loans were held by the three largest banks, in 2003 (Appendix II). The

concentration is even greater for personal deposits with more than 82 percent held by the 10 largest banks, and 69 percent by the 3 largest banks. The Law on Competition and Restriction of Monopolistic Practices call for a ruling of a dominant (monopolistic) position if the aggregate share of a given goods market of no more than three market participants constitutes 70 percent or more.[10] The Agency of the Republic of Kazakhstan on Regulation and Supervision of Financial Markets and Financial Institutions (FSA) works in close collaboration with the Anti-Monopoly Authority, especially in meeting its mandate of consumer protection.

15. **In order to examine the degree of concentration in Kazakhstani banks, the Herfindahl-Hirschman index (denoted H) for assets, loans, deposits, and personal deposits are presented in Table 3.** The effect of using the H is to give a greater weight to larger banks, as they are more likely to exercise market power.[11] The higher the H, the greater is the concentration of assets (or any of the balance sheet items) in a few banks. As a point of reference, an H of 1,800 in the United States may prevent mergers. The Herfindahl-Hirschman Indices, shown in Table 3, reveal a fairly highly concentrated banking system. For 34 banks (excluding the three state-owned banks) in 2003, an even distribution of assets, loans or deposits would have yielded an index of 294. Instead the indices are 1,402, 1,509, 1,426, and 1,645 for assets, loans, deposits, and personal deposits respectively. These represent a deviation (= H*N/100) of 350, 383, 356 and 459 percentage points from an even distribution for these categories respectively. However, all of these indices represent an improvement since 1998.[12]

16. **Although a relatively high H index could help explain the reason for a high interest spread in Kazakhstan, the index might not fully reflect the degree of competition.** Empirical evidence on banking systems of 50 countries, by Claessens and Laeven (2003), suggest that competitiveness indicators are positively related to systems with greater foreign entry, and fewer entry and activity restrictions.[13] Furthermore, they do not find evidence that higher competitiveness necessarily relates to concentration negatively.

---

[10] Article 16 of Republic of Kazakhstan Law on Competition and the Restriction of Monopolistic Practices, No. 144-II, January 19, 2001.

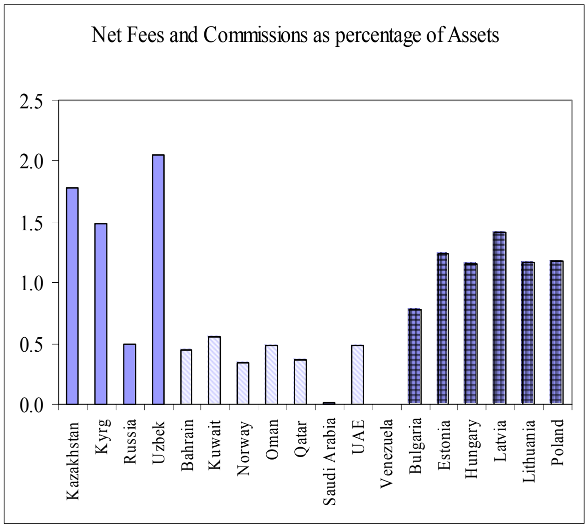
[11] $H = 10000 * \sum \left(\frac{A_i}{\sum_{i=1}^{N} A_i} \right)^2$, where A is assets/liabilities/deposits/personal deposits as the case may be, and N is the number of banks.

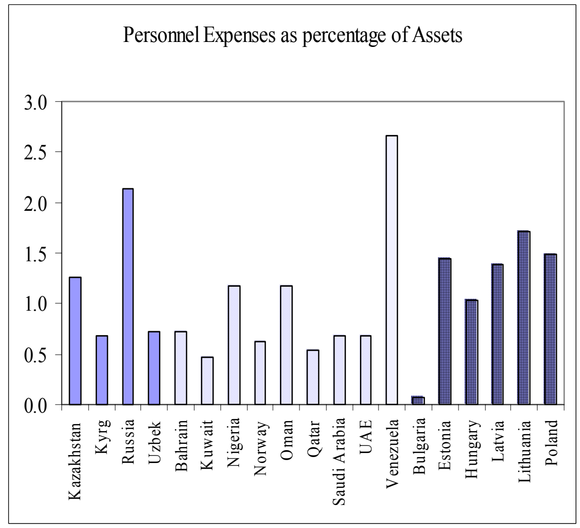
[12] Data for Personal Deposits was not available for 1998.

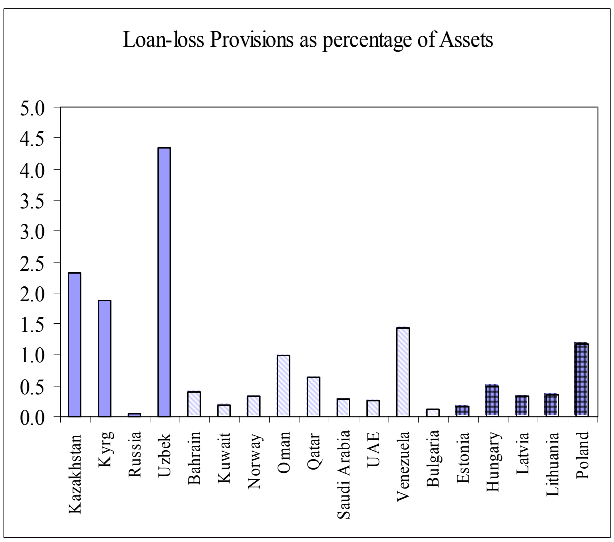
[13] Claessens, S., and L. Laeven (2003): “What Drives Bank Competition? Some International Evidence,” World Bank Policy Research Working Paper 3113, August. The paper by Yildirim, H. Semih, and George Philippatos

(continued)

Figure 6. Cross-country Comparisons of Cost and Revenue of Banking Operations, 2002







Source: Data from Bankscope and the National Bank of Kazakhstan.

(2002): "Competition and Contestability in Central and Eastern European Banking Markets," uses the same methodology.

Contestability—how open the market is to new entrants—is also important for competitiveness. Lack of contestability can lead to higher-than-normal spreads if the threat of entry by new banking business is substantially reduced by regulatory restrictions.

Table 3. Concentration Analysis

Bank	Cumulative Percentage of Assets		Loans		Deposits		Personal Deposits 1/	
	1998	2003	1998	2003	1998	2003	1998	2003
H	**1307**	**1402**	**1670**	**1509**	**927**	**1426**		**1645**
H low	**185**	**294**	**185**	**294**	**185**	**294**		**294**
H*N/100	**706**	**449**	**902**	**483**	**501**	**456**		**559**

1/ Data on personal deposits for 22 banks taken from National Bank of Kazakhstan's Statistical Bulletin, November 2003. A detailed table is included in Appendix II. Data for 1998 were not available.

17. **Indices of entry and activity restrictions for different geographic regions and for Kazakhstan are presented in Table 4.**[14] The regions used for comparison are Europe and Central Asia (37 countries, ECA), Middle East and North Africa (11 countries, MENA), European Union (15 countries, EU), and Kazakhstan. The EU is included as an example of a region of "best practices" of banking operations. The indices, broadly divided into entry restrictions, activity restrictions, and other characteristics, are based on answers to a set of questions requiring either a 'Yes/No' or an 'unrestricted/permitted/restricted/prohibited' response. The following observations can be made from the table, bearing in mind that these indices are only rough proxies for contestability:

- Fraction of **entry applications denied and restrictions on foreign bank entry** (index ranging from 0 to 1) are highest for MENA, and lowest for the EU. In Kazakhstan, there were no new applications for entry since 2001, with the exception of the state-owned Zhilstroi Bank licensed in 2003.

- For **entry-into-banking requirements**, eight types of legal submissions were considered. A larger number (ranging from 0 to 8) represents higher requirements—not necessarily a more restrictive environment—but could ensure that the quality of entrants is higher. EU has the least number of requirements, and Kazakhstan requires all eight submissions.

[14] Appendix III provides an explanation of the indices used in this approach.

- Three **regulatory variables that affect important and alternative activities** in which banks may engage are also considered. They involve securities, insurance, and real estate activities that are sources of fee-based, as opposed to interest-spread-based, income. The questions covered the banks' ability to engage in securities underwriting, engage in mutual fund industry; ability to engage in insurance underwriting and selling; ability to engage in real estate investment, development and management. Depending upon the degree of ability—namely, unrestricted, permitted, restricted, prohibited—the index ranges from 1 to 4 for each activity. Kazakhstan has no restrictions according to this information, which is consistent with the fact that Kazakhstan has one of the highest net fees and commissions incomes to total assets.

- **Concentration of deposits** in the five largest banks in Kazakhstan is comparable to the ECA average, but is a little higher than that of the EU.

- The **index on initial capital stringency** decreases with higher stringency. Questions relate to whether the sources of funds counted as regulatory capital can include assets other than cash or government securities and borrowed funds, and whether the sources are verified by the supervisory and regulatory authorities. According to this index, Kazakhstan is closer to the EU than to ECA.

18. **The banking market in Kazakhstan is segmented, both geographically and in terms of clientele.** This enables banks to practice product differentiation, either through specialization in a particular product-group, or through their presence in specific regions of the country. For instance, the market for housing mortgages can be broadly divided into the group of medium-sized banks participating in the new lending program of the Kazakhstan Mortgage Company (KMC) that securitizes mortgage loans of these banks, and the largest banks having their own mortgage lending programs. The KMC mainly operates around the big cities. With a wider network and higher operational costs, the largest banks engage in mortgage lending in less urban regions, but are free to choose their interest margins. The newly licensed state-owned Zhilstroi Bank is a third player, but solely caters to low-income groups.

19. **Although the banking market is fairly highly concentrated, the previously discussed rough indicators suggest that there is some contestability (Table 4).** However, the lack of license applications since 2001 raises questions. Some reports mention cumbersome bureaucracy, incomplete implementation of laws, and questionable settlement of investment disputes may explain lack of interest in investing in new banking business in Kazakhstan.[15] However, proposed capital account liberalization and increasing access to international capital markets will promote competition.

---

[15] European Commission, http://europa.eu.int/comm/trade/issues/bilateral/countries/kazakhstan/index_en.htm

Table 4. Entry and Activity Restrictions in Banking Business: Averages of Indices by Region, 2001

	Entry restrictions			Activity restrictions			Other characteristics	
				Restrictions on entry into other activities				
Country	Fraction of entry denied	Restrictions on foreign bank entry	New entry requirements	Securities	Insurance	Real estate	5-bank concentration of deposits	Initial capital stringency
Europe & Central Asia	8.19	0.06	7.39	1.51	2.27	2.27	65.42	1.86
Middle East and North Africa	19.05	0.10	7.36	1.45	3.45	3.73	72.04	1.45
European Union	3.67	0.00	7.07	1.13	2.20	1.87	59.19	1.93
Kazakhstan 1/	**--**	**1.00**	**8.00**	**1.00**	**1.00**	**1.00**	**64.00**	**2.00**

Source: Barth, J.R., G. Caprio and R. Levine, 2001, "The Regulation and Supervision of Banks Around the World —A New Database," World Bank.

1/ Latest available data, as of end-2003. There were no new applications for entry into banking business since 2001.

V. CONCLUSIONS

20. **Rapid progress is being made in developing an efficient banking sector, and further improvements will depend on good supervisory and regulatory enforcement, also working toward improving competitive conditions.** The following observations can be made:

- The level of financial intermediation, although high among neighboring countries and growing, is still low in broader comparisons. The interest rate spread is higher than for other countries in the peer group.

- Interest margins have declined across the three different categories of banks, and profitability has been increasing since 2001. Although banks are moving into businesses involving fee-based incomes, net interest income has been growing as a proportion of operating income.

- Operational costs remain high compared to other countries, but are likely to improve, both within and between different groups of banks, and in non-urban regions.

- Certain administrative measures like imposing a ceiling on deposit rates and limits on tax deductibility of interest paid by banks over a certain threshold are likely to be counterproductive in reducing spreads.

- Although the banking market is fairly concentrated, the lack of license applications, in spite of profitable banks, raises the question of desirability of doing banking business in Kazakhstan. This could be indicative of deeper problems involving institutional setups that were beyond the scope of this analysis.

- Capital account liberalization will lead to improvements in contestability conditions as may Kazakhstan's eventual accession to the WTO.

Interest Spread Decomposition and Analysis

The income statement and balance sheet of commercial banks can be used to derive an accounting framework for the decomposition of the interest rate spread. One advantage of using balance sheet and profit and loss statements in deriving the spread is smoothing out of differences in interest rates charged (and offered) to different borrowers (depositors).

The consolidated income statement of commercial banks defines gross profits (profit before taxes), P, as Interest Income (II) *plus* non-interest income that includes fees and commissions received (FC) and Net Foreign Exchange Revaluation Gains (FX) *minus* interest expense (IP), operating cost that can be broken down into Personnel expenses (PE) and overheads (not shown here), and Loan-loss Provisions (PROV). Besides these factors, there are other (U) factors like other non-interest income and expenses, not taken into account, which could also affect profitability. This identity can be rearranged and expressed as the interest margin—the difference between interest income and interest expense:

$$II - IP \equiv PE + PROV + P - FC - FX + U$$

Dividing this expression by Deposits (D) as a scaling factor, and using loans (L) and assets (A), the following expression results:

$$\frac{II}{L} * \frac{L}{D} - \frac{IP}{D} \equiv \frac{PE}{D} + \frac{PROV}{D} + \frac{P}{A} * \frac{A}{D} - \frac{FC}{D} - \frac{FX}{D} + \frac{U}{D}$$

Using the fact that $\frac{L}{D} \equiv 1 - \textit{required reserves ratio}(RR)$, and that interest incomes and expenses are average lending rate (i_L) and deposit rate (i_D) times the volumes of loans and deposits, respectively, the resulting expression for the interest rate spread is:

$$i_L - i_D \equiv RR * i_L + ROA * \frac{A}{D} + \frac{PE}{D} + \frac{PROV}{D} - \frac{FC}{D} - \frac{FX}{D} + e$$

where:

ROA = Return on Assets
i_L = average interest charged on loans
i_D = average interest charged on deposits
e = residual items not taken into account (not shown in the table), also reflects errors that might result from combining flow data and stock data, as well as the simplifying assumption that loanable funds consist of deposits net of required reserves.

CONCENTRATION ANALYSIS

	Cumulative Percentage of							
Bank	Assets		Loans		Deposits		Personal Deposits 1/	
	1998	2003	1998	2003	1998	2003	1998	2003
1	25.6	23.0	34.2	23.8	4.1	31.8		23.2
2	35.5	45.1	45.0	47.3	14.6	36.6		43.1
3	56.1	61.2	62.2	63.8	25.7	48.2		68.7
4	58.5	67.5	63.7	69.8	29.5	55.2		71.5
5	63.9	72.6	69.6	75.0	31.1	64.0		72.2
6	65.0	76.1	70.6	78.5	33.9	69.4		75.0
7	65.0	79.4	70.6	81.5	33.9	71.4		77.7
8	66.5	82.7	71.6	85.1	34.6	72.9		79.5
9	69.4	85.2	73.4	86.4	38.0	75.8		81.7
10	70.5	87.4	73.4	88.5	44.0	80.7		82.2
11	77.6	89.5	75.6	89.9	66.1	87.1		83.5
12	80.5	91.3	77.9	91.6	74.6	89.2		84.9
13	81.3	93.0	79.0	93.4	74.7	91.9		88.6
14	81.3	94.3	79.0	94.7	74.7	93.1		89.1
15	81.9	95.5	79.0	95.9	78.7	95.3		89.7
16	82.7	96.4	79.4	96.8	80.4	96.2		90.8
17	83.4	97.1	80.2	97.5	81.2	96.5		91.9
18	84.3	97.7	80.8	98.3	82.1	96.8		92.5
19	85.0	98.1	81.7	98.5	82.6	97.9		93.1
20	85.8	98.3	82.7	98.7	83.2	98.3		93.4
21	86.3	98.5	83.0	98.7	85.0	98.7		94.0
22	86.7	98.7	83.2	98.8	85.5	98.9		94.1
23	87.0	98.8	83.4	99.0	86.1	99.0		94.7
24	87.1	99.0	83.6	99.2	86.3	99.1		95.4
25	87.5	99.1	83.9	99.4	87.0	99.3		96.0
26	87.9	99.3	84.0	99.4	89.4	99.4		96.7
27	88.5	99.4	84.6	99.6	91.0	99.4		97.3
28	88.5	99.5	84.6	99.6	91.0	99.6		97.4
29	88.5	99.6	84.6	99.6	91.0	99.6		98.0
30	88.9	99.7	85.2	99.7	91.3	99.7		98.7
31	89.1	99.8	85.4	99.8	91.6	99.8		98.7
32	89.3	99.9	85.5	99.9	91.9	99.8		99.3
33	89.3	99.9	85.5	99.9	91.9	100.0		100.0
34	89.4	100.0	85.7	100.0	91.9	100.0		100.0
35	89.4		85.7		92.0			
36	89.5		85.7		92.0			
37	89.5		85.7		92.0			
38	89.5		85.8		92.0			
39	89.6		85.9		92.0			
40	89.7		86.0		92.0			
41	89.8		86.2		92.1			
42	89.9		86.4		92.2			
43	90.0		86.5		92.2			
44	90.3		87.0		92.9			
45	90.6		87.1		93.5			
46	91.1		87.7		93.9			
47	91.3		88.0		94.0			
48	92.5		89.7		95.4			
49	93.2		90.8		95.9			
50	93.4		91.1		95.9			
51	95.9		94.4		96.7			
52	96.4		95.0		97.1			
53	96.8		96.0		97.2			
54	97.0		96.0		98.4			
55	97.2		96.2		98.5			
56	100.0		100.0		100.0			
H	**1307**	**1402**	**1670**	**1509**	**927**	**1426**		**1645**
H low	**185**	**294**	**185**	**294**	**185**	**294**		**294**
H*N/100	**706**	**449**	**902**	**483**	**501**	**456**		**559**

1/ As of November 2003, Statistical Bulletin, National Bank of Kazakhstan. The difference between individual bank data for 22 banks and aggregate data distributed evenly between the rest of the banks.

Entry and Activity Restrictions in Banking Business: Explanation of Indices

Fraction of entry denied—in percentage of total entry applications.

Restrictions on foreign bank entry—whether there are any limitations on the ability of foreign banks to enter the domestic banking industry. Index is 1 for any restrictions, and 0 for no restrictions.

New entry requirements—whether there are specific legal submissions that could potentially be considered by the banking authorities when deciding upon whether or not to grant a license. Each of the submissions was assigned a value of 1 if required, or 0 if not required. These documents are (1) Draft By-laws, (2) Intended Organizational Chart, (3) First 3-year financial projections, (4) Financial information on main potential shareholders, (5) Background/experience of future directors, (6) Background/experience of future managers, (7) Sources of funds to be used to capitalize the new bank, and (8) Intended differentiation of new bank from other banks. Most countries say yes to all eight document requirements. This index therefore ranges from 0 to 8.

Restrictions on entry into other activities—the degree to which banks is allowed to engage in the three fee-based, rather than interest-spread-based, activities. Responses are 1 for 'unrestricted,' 2 for 'permitted,' 3 for 'restricted,' and 4 for 'prohibited.' Index ranges from 1 to 4.

Initial capital stringency—whether the sources of funds counted as regulatory capital can include assets other than cash or government securities and borrowed funds, and whether the sources of funds are verified by the supervisory authorities. More specifically, the questions were: (1) Can initial and subsequent infusions of regulatory capital include assets other than cash or government securities; (2) Can the initial infusion of capital be based on borrowed funds; (3) Are the sources of funds that count as regulatory capital verified by the regulatory or supervisory authorities. The answers are assigned a value of 1 for 'yes,' and 0 for 'no.' The index ranges from 0 to 3. Higher value signifies less stringency.