The Current Structure And Problems Of Azerbaijan Banking System

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Abstract

The main purpose of this paper is to analyze the efficiency performance of Azerbaijan banking system between 2002 and 2009, which this period characterized by high economic growth and tight control by National Bank. Overall, pure technical and scale efficiency of Azerbaijan commercial banks are measured with the use of Data Envelopment Analysis. In empirical results over the study period overall and pure technical efficiency scores show a great variation, which means banks have scale problems. Overall efficiency decreases over the study period. The main reasons are reforms of National Bank(now called Central Bank of Azerbaijan), regulations, new banking law of 2004 and high economic growth. It can be thought that in the short term these structural changes would have negative effects on efficiency, but in the long term efficiency would improve. Efficiency of state banks was slightly above private banks, except 2004 and 2006. It is also found that state banks are managed better than private banks in Azerbaijan. Results show that banks have problem of converting collected deposits into loans and collecting interest income from borrowers.

Key Words: Commercial Banks, Bank efficiency, Data Envelopment Analysis, Azerbaijan Banking System

INTRODUCTION

During the last three decades the nature of financial institutions, especially of banks have changed significantly. Taking deposits and making loans is not only or even the main activity of the modern bank. Globalization, deregulation of financial institutions and financial innovation strengthened competition faced by banks. These changes have created new opportunities and risks for banks and new challenges for supervisors and regulators. Now modern banks offer a variety of services such as payment, investment, pension, insurance e-banking and other services. Trading in financial markets and income generating through services fees are major source of a bank's profitability. Financial innovation led to creation of variety of "off-balance sheet" financial instruments, which in turn increased volatility within a whole banking system. Internationalization and deregulation have increased the possibilities for contagion, as evidenced by the spread of financial crises from Thailand to the rest of Southeast Asia, to East Asia, Eastern Europe, and South America in the late 1990s, and by their effect on banking systems in the rest of the world. The evolution of banking systems and markets has also raised important macro prudential concerns and monetary policy issues (Greuning and

Bratanovic, 2003:3) As the part of global community these changes inevitably effects to financial system of Azerbaijan. A series of financial reforms carried out to establish modern financial system in the country. The first stage of reforms began in early 1990s with formation of legislative base of financial system. Because of low capital requirements, liberal terms of licensing and weak regulation, number of banks increased rapidly in this period. After 2000 the second stage of reforms started. Since 2000, key performance indicators of banking system have improved significantly due to financial sector reform in coordination with the World Bank and the IMF and strong growth in the economy. Four state banks consolidated into two, licenses of weak banks drew back. Thus number of banks reduced to forties. With reforms legal framework of banking system improved, the regulatory, supervisory functions of National Bank enhanced. Despite recent progress, financial system is low capitalized and highly concentrated. State banks remain the main players in banking system and together they control half of the assets of the sector. But their share have declined in recent years and expected to be privatized in the near future. In the light of recent developments, it is important to analysis country's banking system. These analyses are very important from managerial and regulatory perspective.

The purpose of this paper is to investigate efficiency of banking in Azerbaijan, to see the effects of recent developments, financial reforms on whole banking system. Study analysis efficiency of commercial banks between 2002 and 2007, a period characterized by high economic growth in the country. In this period, National Bank tightened its control over the commercial banks and put into practice Basel principles for effective banking supervision. Under the Banking System Development Strategy for 2002-2005, Centralized Credit Registry System and online interbank payment system created in the country. Efficiency of commercial banks was measured by using two models – CCR and BCC models of Data Envelopment Analysis. The suggested model in this analysis offers an empirical reference set for comparing the inefficient banks with the efficient ones. DEA estimates the relative efficiency for each year and determines the feasible targets for improvements for each bank. Average efficiency scores are being used in this study in order to analyze the whole banking system.

1. THE ECONOMIC INDICATORS IN AZERBAIJAN

After the collapse of the former Soviet Union, Azerbaijan became an independent country and the country faced a term of long political and economic social turmoil. After that, Azerbaijan lived bad political and economic years between 1991 – 1995. Government engaged in very loose monetary and financial policies which resulted a budget deficit, hyperinflation of foreign reserves (BBC, 2002). Till 1995, the country went through a deep socio – economic crisis (IMF, 1995).

After 1996, the government has taken effective measures to ensure price stability and currency convertibility. The country has made a regular progress in the political and economical arena. Azerbaijan has maintained good relations with Russia, Turkey, Iran, the United States and European countries (Ministry of Economic Development, 2006). The economy reached amazing growth figures by the help of explotaition of several large oil and gas fields (Rabobank, 2007).

Azerbaijan's general country profile is shown in Table 1. Population of republic was 8.8 million and population growth was 1.1 % annually (WB, 2009).

Table 1: Azerbaijan Country Profile

	2005	2007	2008	2009
Population, total (millions)	8.3	8.5	8.6	8.8
Population growth (annual %)	1.0	1.1	1.1	1.1
Surface area (sq. km) (thousands)	86.6	86.6	86.6	86.6

Source: WB. (2008). Country Profile.

Real GDP was diminished from 1989 to 1996 without break due to ruling economic and financial crises in the country.Value of real GDP increased by 23.4 percent in 2007.This account was 30.5 % percent in 2006 (World Bank,2008).

As shown in Figure 1, gross domestic product of the country increased by 10.8% in 2008. Benefits from oil and gas industry helped non-oil industry to reach its peakpoint of the growth in the last five years.

**Figure 1:** Economic Growth (in percent)
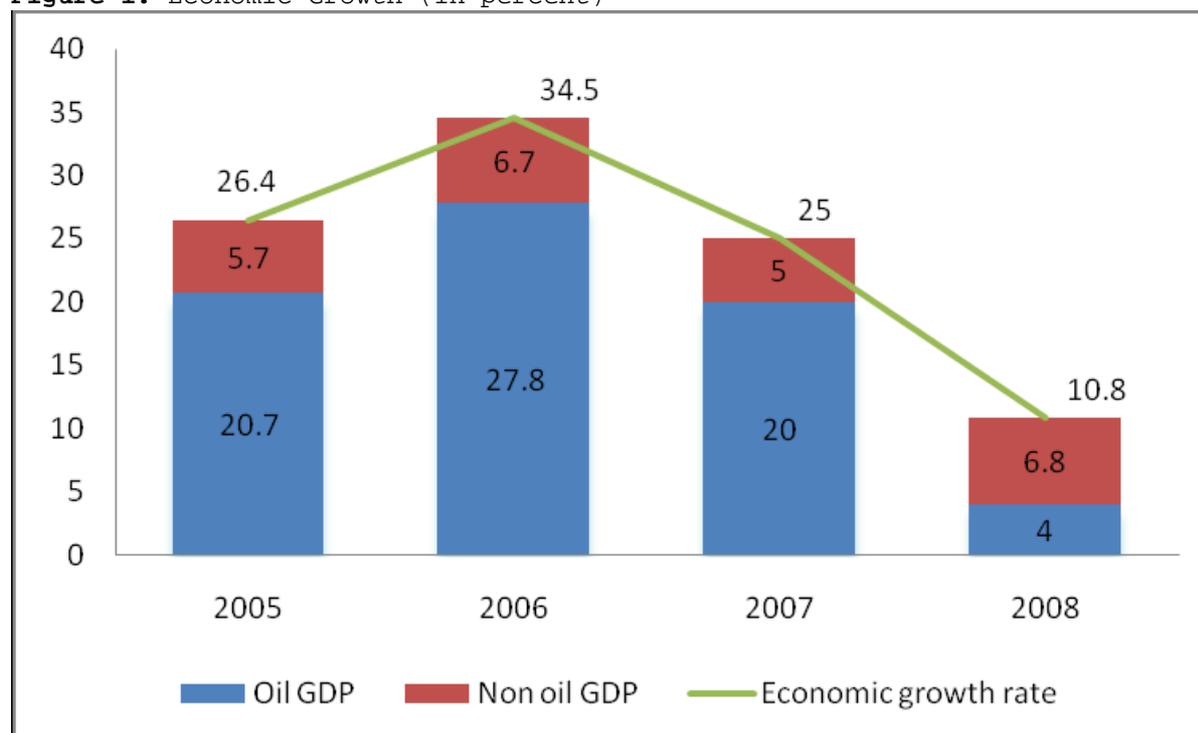
Source: NBA. (2008). Annual Report.

The economy of Azerbaijan depends on oil and gas related activities. The oil and gas industry accounted for more than 80 % of exports and 54 % of GDP. Foreign investments are largely spread in these industries (World Bank,2008). Several large-scale investment projects

in oil and gas industry are Baku-Tbilisi-Ceyhan oil export pipeline, the Azeri-Chiraq-Gunashli oil field, and the Shah-Deniz gas field (Ministry of Economic Development, 2006).

As shown in Figure 2, agriculture and industry increased 6% and 4 % in 2007 and 2008 respectively. Non-tradable industry also inceased, for instance construction, 36 %; hospitality business, 35%; communications, 28 %; trade, 15.5%, and transport, 13.5% (NBA, 2008).

Figure 2: Industry-based Structure of GDP Growth in Non – oil Industry in 2010 (in percent)
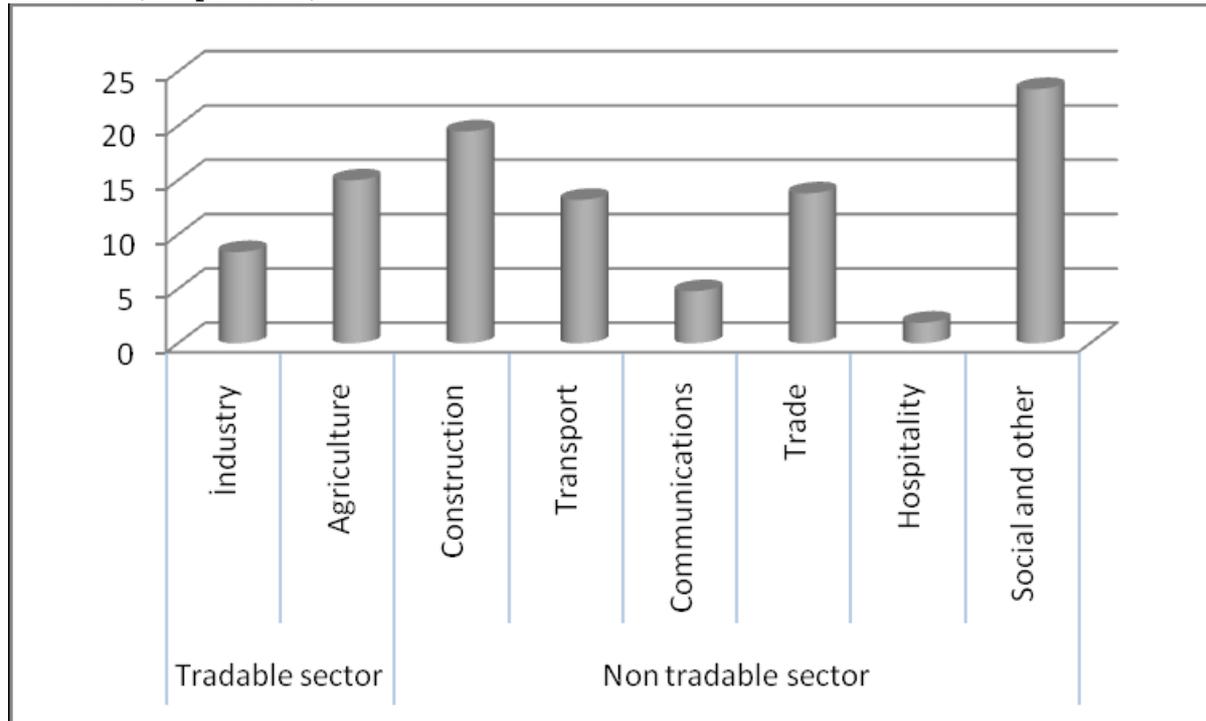

Source: NBA. (2010). Annual Report.

In 1995, Azerbaijan started privatization of state property by the program State Program of Privatization of State Property in the Azerbaijan Republic. At the beginning of 2007, there were 74,354 registered entities in Azerbaijan Republic. 80.6% of these were private entities (ADB, 2007).

The government of Azerbaijan Republic always welcomes the foreign investments. Investments in non – oil industry increased 57.8 % in 2006. But main investments were seen in oil industry. The major investments in the last five years were in Baku-Tbilisi-Ceyhan oil pipeline. Total inward investment in oil and gas projects is 28.9 billion USD in 2008 (Figure 3)

Figure 3: Statistics about Investments (million Azerbaijan manat)
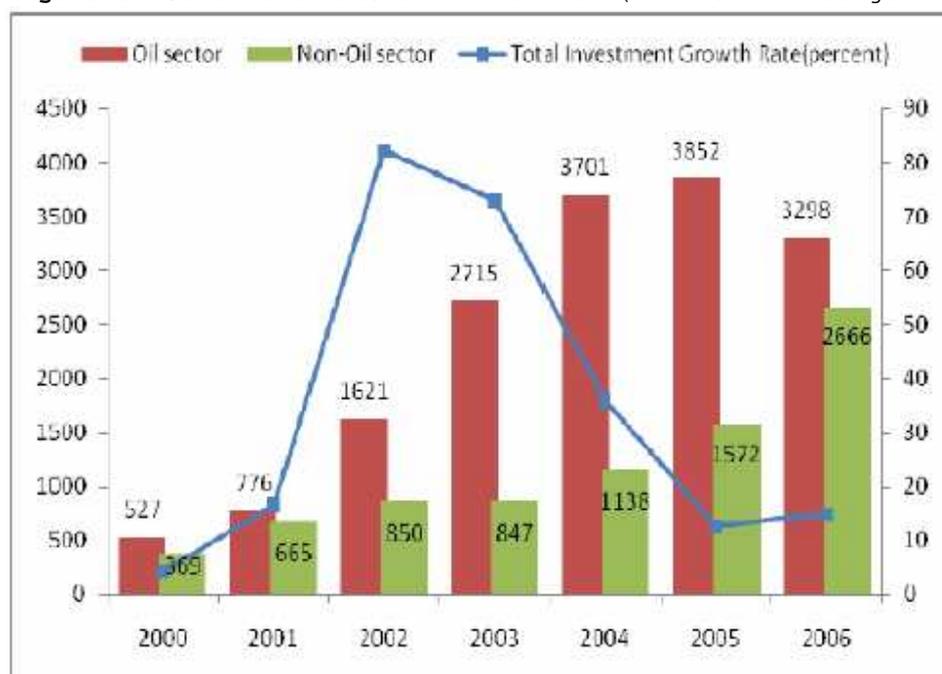
 Source: NBA. (2008). March Statistics Bulletin

In 2008 the increasing growth in government spending combined with economic crises and high food prices. World market prices of commodities decreased by 18.4 %, including a 36.5% decline in food prices. During the year, inflation rate in trading partner countries was 5.6 %. Annual inflation rate was accounted for 15.4 % (Figure 4). The inflation rate for food was 19.3%, for non-food products 10.9% and 9.7% for services (NBA, 2008).

Figure 4: Inflation Rates

Source : WB. (2008). Country Profile.

In 2008, employment rate increased. During the year, 123 thousands new job were created, 73 % of which are permanent and full-time jobs. Since October 2003, 766 thousand jobs were created (NBA,2008).

2. QUANTATIVE INDICATORS OF THE BANKING SECTOR

The financial and banking system in Azerbaijan includes the National Bank of Azerbaijan and credit organisations. There are two types of credit organisations. One of them is commercial banks which perform all banking operations allowed in the relevant legislation. Second one is the non-bank credit organisations which have licenses for conducting limited banking operations. The reforms to banking sector have let to improve the financial and banking system of country. Bank capital has increased several times during the last decade. Simultaneously, bank deposits and bank assets also significantly increased (WB, 2006).

In February 2007, Fitch Ratings increased default rating of Azerbaijan Republic from BB to BB+. The upgrade of Azerbaijan`s sovereign ratings are the results of strong and sustainable economic growth, low external debt level, increasing current account surplus, and improvement achieved by rapidly rising oil and gas production. In September of 2006, Moody`s Investors Service gave a foreign and local currency issuer rating of Ba1 to Azerbaijan Republic (ADB, 2007).

At the end of 2008, there were 46 banks which operate under license of the National Bank of Azerbaijan. There is only 1 state bank at the end of 2008. The banking system of Azerbaijan is fully privatized. The enhancing role of mid-sized bank was a basic trend in the financial and banking system`s development in 2008. The share of such banks in the total bank assets increased from 21 to 23.7%, while the shares in deposits grew from 22.9 to 26.5%. Larger banks have their share of total bank assets reduced to 62.7% and share of total share of total deposits from 67.7 to 61.6%. Despite of the financial crisis, foreign investments in Azerbaijan banking system which were financed by additional injections from owners and new investors increased by 57% totaling to 159 billion AZN (NBA,2008).

Profits earned by banks in 2008 (before taxes) amounted to 246 billion AZN. 82.2% of the banks made profit. The increased lending transactions of banks and some changes in interest rates drove the interest income up during the year. The banking system displayed sufficient liquidity levels in 2008. The liquid assets declined from 18.9% to 16.7 %. Still, liquidity level remained sufficiently high.

3. Banking system liabilities

The depth of bank intermediation activity in Azerbaijan is still low. The most important component of banking sector liabilities are deposits which of corporate and individual customers. Deposits increase by 50% in 2006 to 2.0 million AZN, which is 11 % of GDP (ADB, 2007).

Table 2 indicates that total banking sector liabilities reached 8,568 million AZN increasing 2,941 million AZN in 2008. The external liabilities of banks are in controlable level (Hajiyev and Murshudli, 2009).

Table 2: Structure of Liabilities

	01.01.2008		01.01.2009	
	Million manats	Share in total (%)	Million manats	Share in total (%)
1.Total liabilities	5627.61	83.67	8568.76	83.41
Total deposits	3437.94	51.12	4055.09	39.47
Credits to and deposits from financial sector	1720.15	25.28	3265.37	31.78
Other liabilities	469.51	6.98	1248.29	12.15
2.Capital	1098.11	16.33	1704.70	16.59
Total Liabilities & Capital	6725.72	100	10273.46	100

Source: NBA. (2009). Statistic Bulletin.

4. Banking system assets

The banking system`s assets represented only 21% of GDP in 2006, significantly below the ratios for the Russian Federation (53%) and Kazakhstan (91%). The volume of assets in banking system increased by almost 60% and totaled 4.344 million $ at the beginnging of 2007. The most important element in the structure of bank assets are loans related to customers, which totaled 2.537$ million. It is equal 58.4% of total assets. As shown in Figure 5 state-owned International Bank of Azerbaijan (IBA) holds half of the assets of banking system. Bank Standard and Kapital Bank have 4% of total assets of banking system (ADB, 2007).

Figure 5: Share of Bank Assets
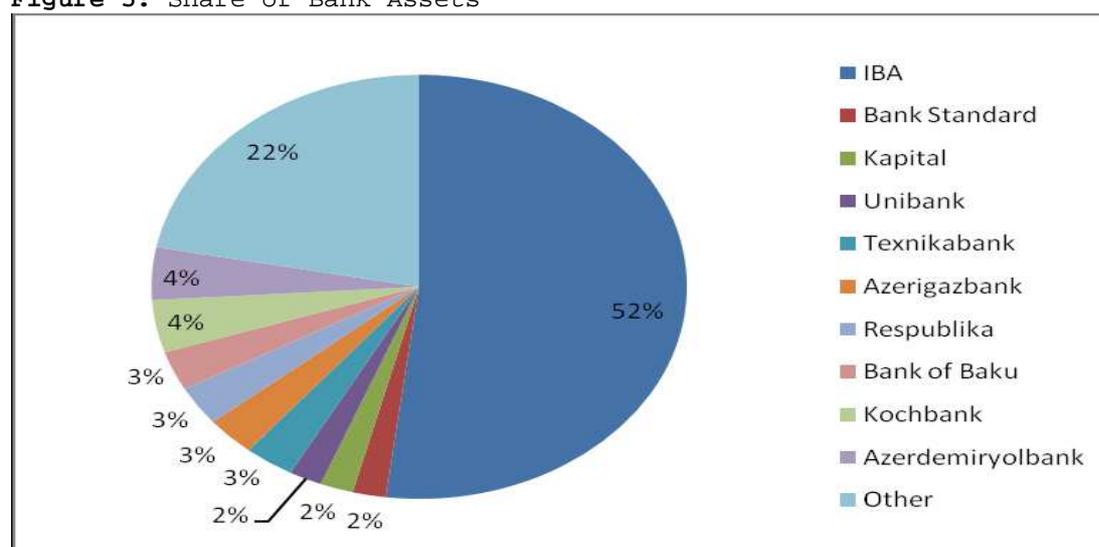
Source: ADB. (2007). Country Report

According to Table 3 total banks assets increased by 3547.9 million AZN or 52.7% in 2008 and reached to 10273.5 million AZN as of January 1, 2009 (Table 3).

Table 3: Indicators of Assets

	01.01.2008		01.01.2009	
	Million manats	Share in total,%	Million manats	Share in total,%
Cash	285.90	4.25	460.58	4.48
Correspondent accounts	693.12	10.31	959.52	9.34
Credits to and deposits from financial sector	287.26	4.27	414.82	4.04
Credits to customer	4393.94	65.33	6816.85	66.35
Investments	472.30	7.02	795.77	7.75
Other assets	593.19	8.82	825.92	8.04
Total assets	6725.72	100	10273.46	100

Source: NBA. (01.01.2009). Statistic Bulletin.

As shown in Table 4, share of total assets is high in 2002. Although the share of total assets is 58.3% in 2001, it decreased to 42.4% in 2007, still higher than most of the other countries of the region.

Table 4 : Share of Total Bank Assets

| Country	2001	2002	2003	2004	2005	2006	2007
Azerbaijan	58.3	62.0	55.3	56.1	55.2	51.0	42.4
Belarus	53.2	61.9	61.6	70.2	75.2	79.0	76.5
Georgia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kazakhstan	3.5	5.2	5.1	3.7	3.1	2.0	0.2
Kyrgyz	16.6	9.7	7.2	4.1	4.8	3.4	8.7
Moldova	10.2	13.4	15.5	17.6	19.3	15.3	9.5
Russia	-	-	-	-	-	-	-
Tajikistan	4.8	4.5	6.1	12.2	9.7	7.6	7.2
Turkmenistan	96.5	95.7	96.1	96.6	96.3	94.8	97.3
Ukraine	11.8	12.0	9.8	8.0	9.4	8.9	8.0
Uzbekistan	80.4	73.7	70.0	67.7	-	-	-
Armenia	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: EBRD. (2009) . Transition Report

The commercial banks of Azerbaijan Republic have used the rapidly increasing deposit base to enlarge their loan portfolios. As December

of 2006, consolidated lending by banks was 2.36 billion AZN. This indicator shows increase of 64% from the previous year. Consolidated lending by banks increased to 2.87 billion AZN in 2007 (ADB, 2007).
 Most private banks focus exclusively on lending to the private sector, primarily individual entrepreneurs. Because banks provide small and micro loans to these small- sized enterprises.
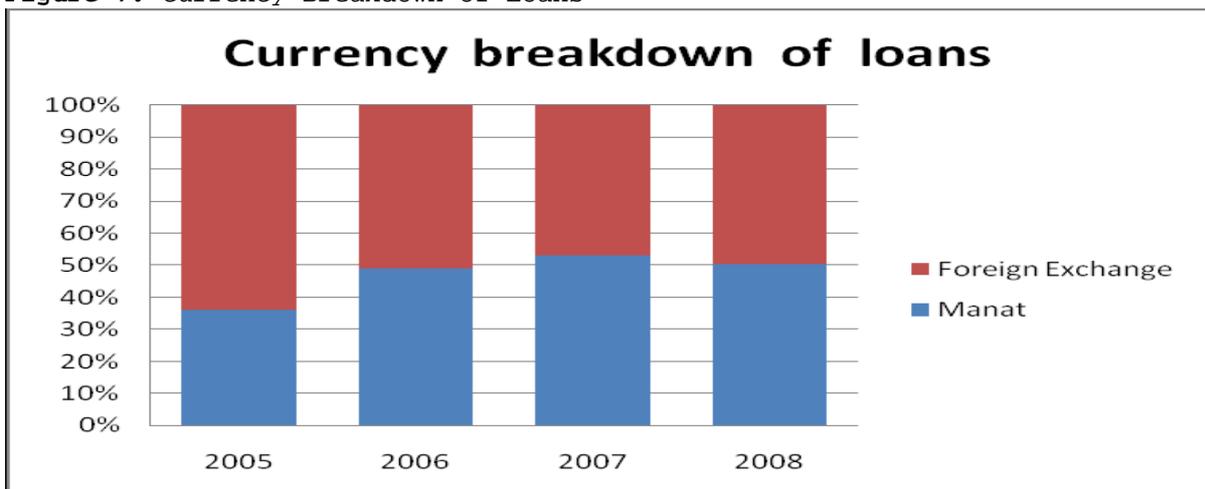
Figure 6: Share of Bank Loans
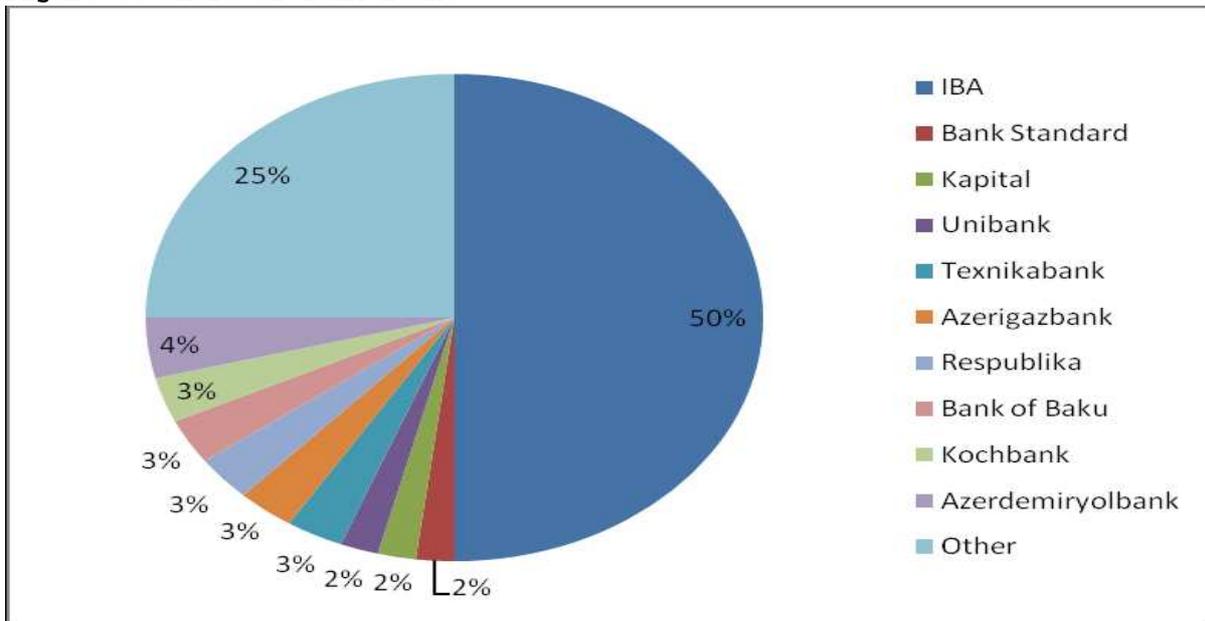
Source: ADB. (2009). Country Report

According to Figure 6, International Bank of Azerbaijan has the greatest share of bank loans with 50 % share, while Bank of Baku is one of the banks with lowest share of bank loans.

Figure 7: Currency Breakdown of Loans

Source: NBA. (2010). Annual Report.

As indicated in Figure 7, till 2007 foreign exchange had priority for instance 64% of total loans and 51 % of total loans are in foreign currency in 2005 and 2006 respectively. But after 2007 by the appreciation of local currency against foreign currency, amount of loans in national currency increased. 53 % of total loans and 51 % of total loans were in manat in 2007 and 2008. Loans to some sector decreased some of them increased in 2008. For example, loans to house holds decreased in 2008 to 31.1% as percentage, but value increased to 2175.8 in Azerbaijan manat. But loans to energy, chemistry and natural recources increased from 6.6% to 12.2 %. Loans to agricultural and processing sector, industry and production, and trade and services increased by 33.6 %, 38.8%, and 60.1%. Loans to trade and services sector amounted to 1910.4 million AZN as of January 1, 2009. Loans to individuals increased by 40.8% (Table 5).

Table 5: Loans by Sector

	01.01.2008		01.01.2009		Increase	
	AZN mln	%	AZN mln	%	AZN mln	%
Trade and services	1193.6	26.2	1910.3	27.3	716.9	60.1
Households	1545.7	33.9	2175.8	31.1	630.2	40.8
Energy, chemistry and natural resources	302.0	6.6	855.7	12.2	553.7	183.3
Agriculture and processing	191.1	4.2	255.4	3.7	64.3	33.6
Construction and property	312.2	6.9	461.3	6.6	149.0	47.7
Industry and production	307.9	6.8	427.3	6.1	119.4	38.8
Transport and communication	469.6	10.3	669.1	9.6	199.5	42.5
Other loans granted	231.5	5.1	233.3	3.3	1.8	0.8

Source: NBA. (2008). Annual Report

5. Capital of the banking sector

In 2008 country budget revenues increased and consolidated budget surplus was 11% of GDP. In investment policy major priority is given to the use of financial recourses that share is now 75%.

The country`s net international investment position was around 11.9 million $. Capital flows have been completely liberalized (Hajiyev and Murshudli, 2009).

"During 2008 the banking sector continued to capitalize too. During the year bank capital increased by 482.6 million AZN or 47.8% to 1491.7 million AZN . In 2007 this indicator was 485 million AZN or 92.6 % to 1009.1 million AZN" (NBA , 2008).

The ratio and quality of capitalization in the financial and banking system is a concern. Minimum capital requirements increased to 10.0

million AZN by July 2008. Currently 43 banks from 46 banks in Azerbaijan have 10 million capitals. (ADB, 2007)

Figure 8: Structure of Capital in Banking Sector
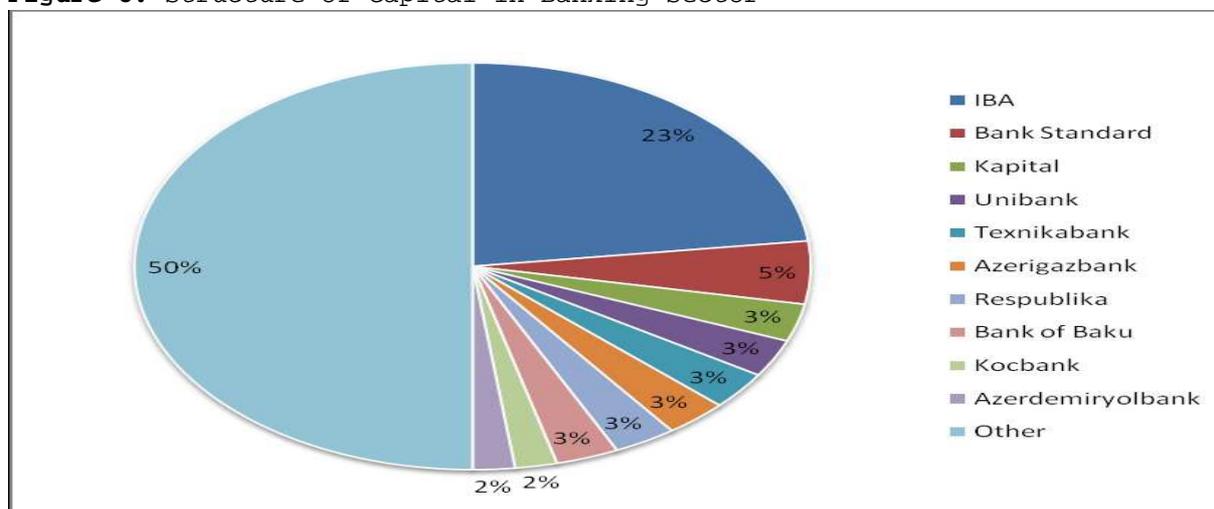
Source: ADB. (2009). Country Report

As indicated in Figure 8 capital of Kapital Bank and International Bank provides 73 % of total capital in Azerbaijan banking sector.
"The bank`s total capital increased due to the growth of the Tier –I capital. Tier-I capital increased by 336.5 million AZN or 44.6% to 1091.8 million AZN , which makes 69.7% of the total capital.
The total regulatory capital of banks exceeded 949.7 million AZN or increased over 37.7%"(NBA, 2008).

Table 6: Capital Indicators of Banking Sector

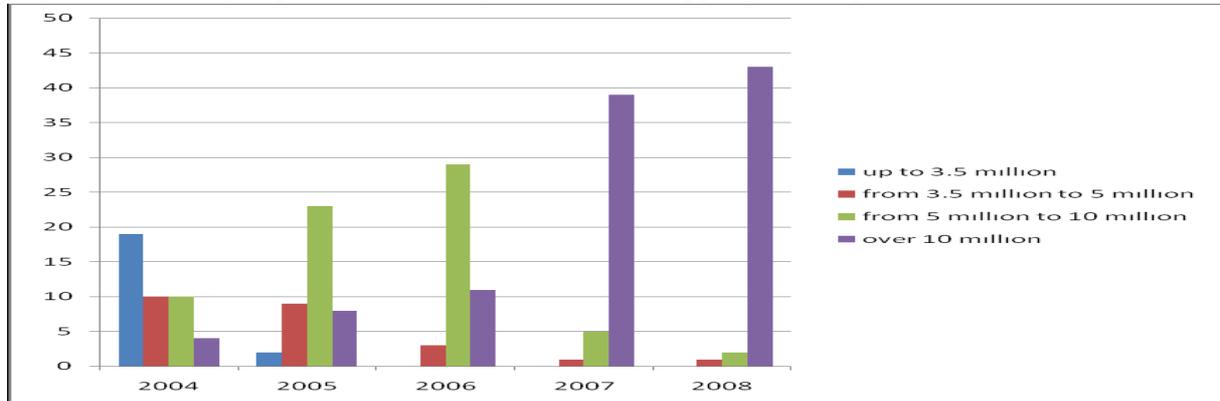|	01.01.2008		01.01.2009	
	AZN mln	percentage	AZN mln	percentage
Tier I capital	755.3	74.8	1091.8	73.2
Paid in capital	689.5	68.3	949.7	63.7
Surplus	20.3	2.0	32.3	2.2
Net undistributed	59.6	5.9	125.2	8.4
Tier II capital	305.4	30.1	449.0	30.1
Profits from the current year	132.8	13.1	192.1	12.9
General reserves	63	6.2	93.9	6.3
Other capital funds	159.3	15.8	169.7	11.4
Deductions from the total capital	49.4	4.9	48.7	3.3
Total capital after deductions	1009.1	100	1491.7	100

Source: NBA. (2008). Annual Report.

According to Table 6 Tier – II capital increased by 143.6 million AZN during 2008 to 449 million AZN. A reduction in the Tier-II capital structure derived from payments against debts by banks. The National

Bank`s measures to increase the reserve requirements with respect to asset classification caused the general reserves to increase.

According to following Figure 9 large sized banks provided a big input to the growth of the banking sector`s capital in 2008. Capital of the top 10 banks in terms of assets increased by over 70% during 2008 to 454 million AZN (NBA, 2008).

Figure 9: Groupings of Banks by Volume of Aggregate Capital

Source: NBA. (01.01.2009). Statistic Bulletin.

In order to put the bank capitalization process to on a faster track the existing laws were amended with a view to exempting the profits used for a capitalization from taxes starting from 2009 (NBA, 2008).

CONCLUSION

The aim of this paper is to analyze bank efficiency in Azerbaijan. For analysis purposes DEA, one of the most used efficiency method applied. One of the main advantages of DEA is that it does not require specific functional form. Thus, it is preferred when there are multiple inputs and outputs. Two models of DEA, CCR and BCC are most frequently used models. This paper applies both of them to measure efficiency and find source of inefficiency.

Study covers commercial banks operating in Azerbaijan during the period of 2002- 2007. Over the analysis period overall efficiency declines, but improves in 2007. However, pure technical efficiency scores were high, which shows that there were scale problems in banking sector. Prudential requirements, banking reforms, high economic growth and banking law of 2004 negatively affected efficiency scores of banks.

Another finding of this paper is that state banks are managed better than the private banks and state banks were more efficient than their private counterparts, except in 2004 and 2006. Analysis of pure technical efficiency scores reveal that banks have a problem of transforming deposits into loans. Source of inefficiency comes from excess use of resources. Also banks could not collect interest income, which in turn confirms EBRD's report on NPLs in Azerbaijan.

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