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THE EFFECT OF MACROECONOMIC FACTORS ON THE PERFORMANCE OF AZERBAIJAN BANKING SYSTEM

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Danışman

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YEMİN METNİ

Yüksek lisans tezi olarak sunduğum "**The Effect of Macroeconomic Factors on the Performance of Azerbaijan Banking System**" adlı çalışmanın, tarafımdan, bilimsel ahlak ve geleneklere aykırı düşecek bir yardıma başvurmaksızın yazıldığını ve yararlandığım eserlerin kaynakçada gösterilenlerden oluştuğunu, bunlara atıf yapılarak yararlanılmış, olduğunu belirtir ve bunu onurumla doğrularım.

Tarih

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Elmir SEFERLI

İmza

ABSTRACT

Master Thesis

The Effect of Macroeconomic Factors

on the Performance of Azerbaijan Banking System

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The objective of this paper is to measure the performance of Azerbaijan banking system and to analyze the relationship between bank performance and macro economic indicators over the period 2003 – 2008, a period characterized by high economic growth and tight control by National Bank of Azerbaijan.

The analysis of the study consists of two parts. First part is determination of banks` performance with CAMELS performance measurement system. Second part - measurment of the relationship between performance of banks and such macro economic factors as GDP and inflation is done with panel data analysis.

The empirical results indicate that performance of banks decreased from 2005 to 2008. The main reasons for decreasing bank performance are problems related with reforms and regulations of National Banks, and effects of global crisis. Results of panel data analysis show that inflation and GDP has negative relationship with banks` performance. The results for the relationship between

inflation and performance of banks are consistent with the theory and results of previous researches.

On the other hand, the negative relationship between bank`s performance and GDP does not correspond to the theory.

Keywords: Azerbaijan, CAMELS performance system, Panel data analysis, performance of banks, National Bank of Azerbaijan.

ÖZET

Yüksek Lisans Tezi

Makro Ekonomik Faktörlerin Azerbaycan

Bankacılık Sistemine Etkisi

Elmir SEFERLİ

Dokuz Eylül Üniversitesi

Sosyal Bilimler Enstitüsü

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İngilizce İşletme Yönetimi Programı

Bu çalışmanın amacı yüksek ekonomik büyüme ve bankacılık sektörünün Azerbaycan Milli Bankası tarafından sıkı kontrol edilmesi gibi faktörlerle karakterize edilen 2003 – 2008 döneminde Azerbaycan bankacılık sisteminin performansını ölçmek ve bank performansı ile makro ekonomik göstergeler arasındakı ilişkiyi analiz etmektir.

Yapılan analiz iki kısımdan oluşmaktadır. Birinci kısım, CAMELS performans ölçüm sistemi ile bankacılık performansının belirlenmesidir. İkinci kısım – bankacılık performansı ile GDP ve enflasyon gibi makro ekonomik göstergeler arasındakı ilişkinin ölçülmesi panel data analizi ile yapılmıştır.

Çalışmanın sonuçlarına göre, bankaların performansı 2005 yılından itibaren düşüş göstermiştir. Bankacılık performansında düşüş olmasının en önemli nedenleri Merkez Bankasının reformları ve yaptığı düzenlemeler ile ilgili problemler ve küresel krizin etkileridir. Panel data analizinin sonucları, GDP ve enflasyonun bankaların performansı ile olumsuz bir ilişkisi olduğunu ortaya

koymuştur. Enflasyonla bankacılık performansı arasındakı ilişkilerin sonucu, teori ve önceki araştırmaların bulguları ile aynıdır. Öte yandan, artan GDP değeri ile performans arasındaki negatif ilişki teori ile tutarlı değildir.

Anahtar Kelimeler: Azerbaycan, CAMELS performans sistemi, Panel data analizi, Bank performansı, Azerbaycan Milli Bankası.

THE EFFECT OF MACROECONOMIC FACTORS

ON THE PERFORMANCE OF AZERBAIJAN BANKING SYSTEM

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CHAPTER 3

LIST OF ABBREVIATIONS

ABM	Automated Banking Machine
ADB	Asian Development Bank
AIC	Azerbaijan Investment Company
ATM	Automated Teller Machine
AZN	Azerbaijan New Manat
BIS	Bank for International Settlement
BTC	Baku Tbilisi Ceyhan
CAS	Country Assistance Startegy
CIS	Commonwealth of Independent States
DEA	Data Envelopment Analysis
DW	Durbin Watson
EBRD	European Bank for Reconstruction and Development
EU	European Union
GDP	Gross Domestic Product
IBA	International Bank of Azerbaijan
IMF	International Monetary Fund
HT	Hausmann Test
NBA	National Bank of Azerbaijan
PRGF	Poverty Reduction and Growth Facility

ROA	Return on Asset
ROE	Return on Equity
SOE	State Owned Enterprises
SME	Small and Medium Enterprises
SE	Standard Error
TSSR	Transcaucasus Soviet Socialist Republic
USSR	Union of Soviet Socialist Republic
UN	United Nation
USAID	United State Agency for International Development
WB	World Bank
WTO	World Trade Organization

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INTRODUCTION

During the last decade, the nature of financial institutions, especially banks have changed respectively. Development of globalisation strengthened competition sphere in banking sector.

Taking all these improvements into account, modern banks realise a variety of services such as payment, investment, online banking, and deposit and insurance issues.

The global changes affected the financial system of Azerbaijan as well. Azerbaijan financial system has started its operations very recently. The first stage began in 1990s with formation of legislative base of financial system after the collapse of Soviet Union. Number of banks, improvement of legislation and regulations, and liberalization increased rapidly in this period, which continued till 2000.

The second stage began after 2000. Strong growth in the economy, strengthening coordination with World Bank, IMF and international financial institutions are the characteristics of the second phase.

Stock exchange also started its operations in 2000. Insurance services also began to gain ground. Four state banks were consolidated into one bank. According to the statistics, there are fourty-six commercial banks operating in the country.

Banking system plays the most important role in financial system of the country. According to the developments, it is very interesting to analyze the banking system in Azerbaijan.

The purpose of the study is to measure the performance of the banks in Azerbaijan and to analyze the relationship between bank performance and macro economic factors over the period 2003-2008. In this period National Bank tightened its control over the commercial banks and practiced Basel principles for effective banking supervision.

The performance of banking system were measured by CAMELS performance mesurement method. The relationship between performance of banks and macro economic indicators as GDP and inflation were estimated with panel data analysis.

There are three chapters. The first chapter gives theoretical information about financial and banking system, financial institutions and performance measurement in banks.

The second chapter analyzes the history of the financial and banking system in Azerbaijan, and gives information about National Bank of Azerbaijan (NBA) and the quantative indicators of the banking system.

The third chapter discusses the related literature, explain the methodology and data, and give empirical results.

CHAPTER 1

1.1. FINANCIAL SYSTEM

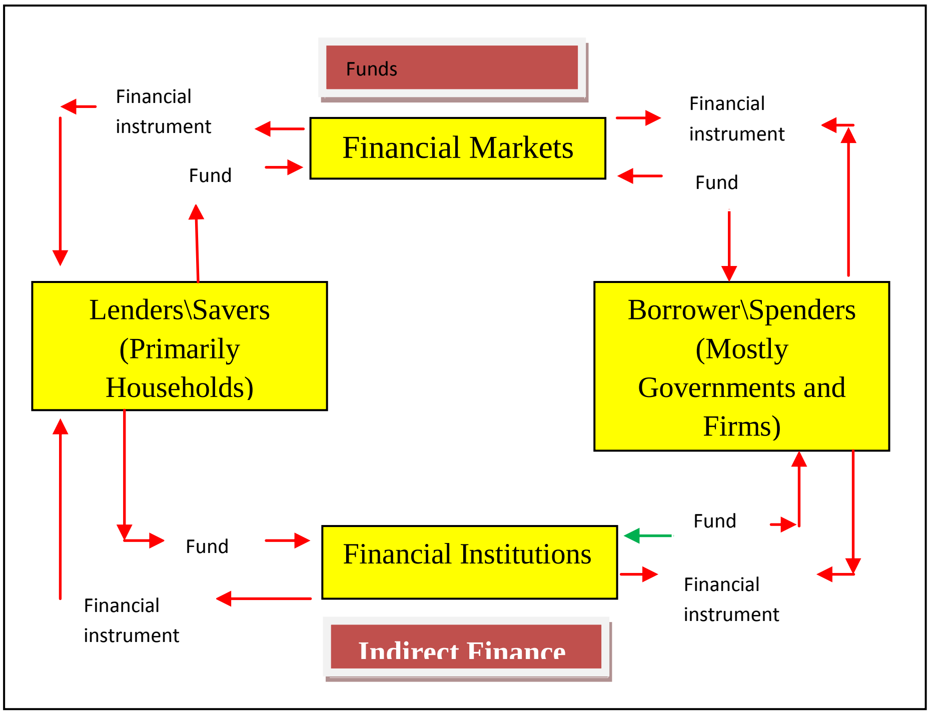
The financial system has five parts. Each of these plays a fundamental and urgent role in the economy. These parts are money, financial instruments, financial markets, financial institutions and central banks.

Financial instruments are used to transfer resources from savers to investors and to transfer risk to the best equipped to bear it in the financial market.

Financial market is a place where investors are able to buy and sell financial instruments quickly and cheaply. Financial institutions provide useful services, including access to the financial markets and collection of information about perspective borrowers to ensure they are creditworthy. Central banks monitor and stabilize economy.

According to Figure 1, the financial system channels funds in two types from lenders to borrowers: directly and indirectly. In direct finance borrowers achieve resources by selling financial instruments like bonds and stocks in financial markets directly to lenders. But in indirect finance one financial institution like a bank takes the resources as a deposit and provides as a loan to borrower.

Figure 1: Fund Flowing through the Financial System



Source: Cecchetti, S.G. (2008). "Money, Banking and Financial Markets".

Main functions of the financial system are given below (Sylla, 2003:453-454):

- Providing ways of making payments to facilitate trade.
- Providing ways of pooling capital resources and subdividing of public and private debts as well as shares of enterprises into units which are attractive to investors.
- Providing ways to transfer economic resources through time, across geographical boundaries, and among economic sectors and industries.
- Providing price information to coordinate decentralized decision making in an economy.
- Providing ways of dealing with incentive problems, caused by asymmetric information (that is, when some actors in the economy have more information than do others, and when "principal – agent problems" arise, for example, when managers of enterprises are different from the owners of enterprises and may have different interests than owners do).
- Providing ways of managing risks.

Many studies proved that the financial system of the country is associated with the value relevance of different accounting information. Ali and Hwang (2000) and Yosha (1995) have offered that banks in bank-based financial systems have an important role in funding capitals (Karjalainen, 2008:81).

On the other hand, in globalization stage, financial system also plays an important role on economic development. Till today, many papers and articles as Pagano (1993) and King and Levine (1993) have established a strong positive correlation between financial system and its characteristics, and economic growth and development (Hermes and Lensink, 2000).

Ergungor (2008) researched relation between financial systems and economic growth. He argued that the structure of the financial system is important for economic growth and bank-based financial systems are correlated with high economic development in countries with inflexible judicial system.

1.1.1. Financial institutions

Financial institutions serve as intermediaries by channelling the savings of individuals, businesses and governments into loans or investments. Some of financial institutions provide services for a fee, some institutions pay interest to savers, some institutions accept customers' savings deposits and give this money to other customers or firms (Gitman, 2003:21-22).

Transfer of fund between savers and those who need capital take place in the three different ways (Brigham, 1989:68):

- Direct transfers – Business sells its stocks or bonds directly to savers and funds flow from savers to the business directly too.
- Indirect transfers – trade exchange realizes between business and savers through Investment bankers.
- Indirect transfers through a financial intermediary.

Financial institutions activate both brokerage and asset transformation activities. As a broker, they provide access to financial markets, giving households and organisations access to indirect finance. Institutions transform assets by taking deposits, make loans and purchase stocks, bonds and real estates and make insurance contracts to households (Cecchetti, 2008:248).

Financial institutions are vital. Without financial institutions, individuals and households wishing to save would either have to hold their wealth in cash or figure out some way to funnel it directly to companies that could put it to use.

The assets of these household savers would be some combination of government liabilities and the equity and debt issues by corporations. All finance would be direct with borrowers obtaining funds straight from the lenders.The big financial institutions like the International Monetary Fund (IMF), the World Bank (WB), The World Trade Organization (WTO) and the Bank for International Settlements (BIS) are designed to assist the international community (Moshirian, 2003).

The main groups of financial institutions are explained below (Cecchetti, 2008:57):

- Depositary institutions – take deposits and make loans.
- Insurance companies - accept premiums which they invest in securities and real estate in return for promising compensation to policyholders.
- Pension funds – invest contributions of individual and companies in stocks, bonds and real estate in order to generate payments to retired workers.
- Securities firms – include brokers, investment banks and mutual fund companies.
- Finance companies – raise funds directly in the financial markets in order to make loans to individuals and organisations.
- Government sponsored enterprises – federal credit organisations that provide loans directly for farmers and home mortgagors.

In addition to the financial institutions listed above, credit unions-as another type of financial institutions- are significantly simple type of mutual financial institutions. The basic business activities of these companies are to provide saving facilities and to lend to individuals who are members or owner of companies.

Major characteristics include a non for profit objective, one member one vote governance and membership restricted to individuals satisfying a common bond requirement (Brown and Davis, 2008).

The major suppliers of funds to financial institutions and major demanders of funds from financial institutions are individuals, organizations and governments. Individuals are not only supplier of funds but also demanders. Individuals are net suppliers of fund. Governments do not borrow funds directly from financial institutions. They generally borrow through indirectly ways. Governments and business organizations are net demanders of funds (Gitman, 2003:22).

There is a close relation between bank-based financial system and weak legal institutions and bank financing may improve the corporate governance through hardening budget constraints (Du, 2004). Thus, financial institutions especially banks should hedge any risks that can be offloaded on fair – market terms.

Financial institutions also hold some capital as a device for absorbing those illiquid risks which cannot be hedged. Finally, given limited capital, financial institution should value illiquid risks much as an individual investor would (Froot and Stain, 1998).

1.1.2. Financial markets

Financial markets are places where supplier of funds and demanders of funds are able to contract business directly. Whereas the loans and investments of institutions are made without the direct knowledge of savers, simultaneously suppliers in the financial market know where their funds are being lent or invested (Gitman, 2003:23).

Financial market contains institutions and procedures that facilitate transactions in all types of financial claims. Some economic units spend more over the period of time they earn. Some economic units spend less than they earn.

Regarding, a mechanism is needed to facilitate the transfer of savings from those economic units have a savings surplus to those that have a savings deficit. Financial markets provide such a mechanism (Keown, et al, 2001:16).

Financial markets service three roles in the economy (Cecchetti, 2008:48-49):

1. Offering liquidity to suppliers of funds and borrowers – To be sure that owners of financial instruments can buy and sell them inexpensively and easily.
2. Pooling and communicating information – Pool and communicate information about some issues of financial instruments.
3. Allowing risk sharing – Provide places to buy and to sell risk, sharing them with others.

There are three methods to characterize financial markets. Firstly, it could be characterized between markets where new financial instruments are sold and those where they are resold or traded. Secondly, they can be classified according to their way for trading financial instruments – on a centralized exchange or not. Thirdly they can be grouped based on the type of instrument – that are used basically as a store of value or those that are used to transfer risk.

The main goal of financial markets in modern economy is to allocate savings efficiently to ultimate users. If economic units that saved were the same as engaged in capital formation, an economy could prosper without financial markets. In modern economies most nonfinancial organizations use more than their total savings for investing in real assets. Efficiency entails bringing the ultimate investor in real assets and the ultimate saver together at the least possible cost and inconvenience (Van Horne and Wachowicz, 2005:112).

According to another classification, there are two key financial markets. One of them is money market which includes transactions in short term debt instruments or marketable securities. Another is capital market where long term securities such as bonds and stocks are traded in this market (Brigham, 1989:66).

1.1.2.1. Money Markets

The money market is defined as buying and selling of short-term (less than one year original maturity) government and corporate debt securities (Van Horne, 2002:49).

"Most money market transactions are realized in marketable securities – short term debt instruments, such as U.S. Treasury bills, commercial paper and negotiable certificates of deposit issued by government, organization and financial companies respectively. In the money market, organizations and governments collect short – term funds by issuing a money market instrument. Parties who supply short term funds purchase the money market instruments. To issue or purchase a money market instrument one party must go directly to another party or use an intermediary such as bank or Brokerage Company to make the transactions" (Gitman, 2003:24).

The evolution of national financial markets into global financial markets has received much attention in the world press and in many articles about financial markets. Money market integration, especially, issues about interest rate in various geographic markets has been a major focus of study. International and multinational company and organizations constantly assess national money market relationships as they manage great payments and receipts and plan long –term strategies (Hsieh, Lin, and Swanson, 1999).

1.1.2.2. Capital Markets

The capital market is a place that enables suppliers and demanders of long term funds to make transactions. The capital market includes securities of companies, organizations and government. The major capital market securities are bond and stock.

Bonds are long term debt instruments used by companies and government to raise large sums of money. Capital market governance aims to the set the laws, rules and framework that govern the functioning of the capital markets.

The main purpose of capital market governance is to capture different facets of the interaction between insiders and outsiders of the organizations. There are important capital markets which activate all over the world. One of them is Eurobond market. In these market organizations and governments typically issue bonds denominated in dollars.

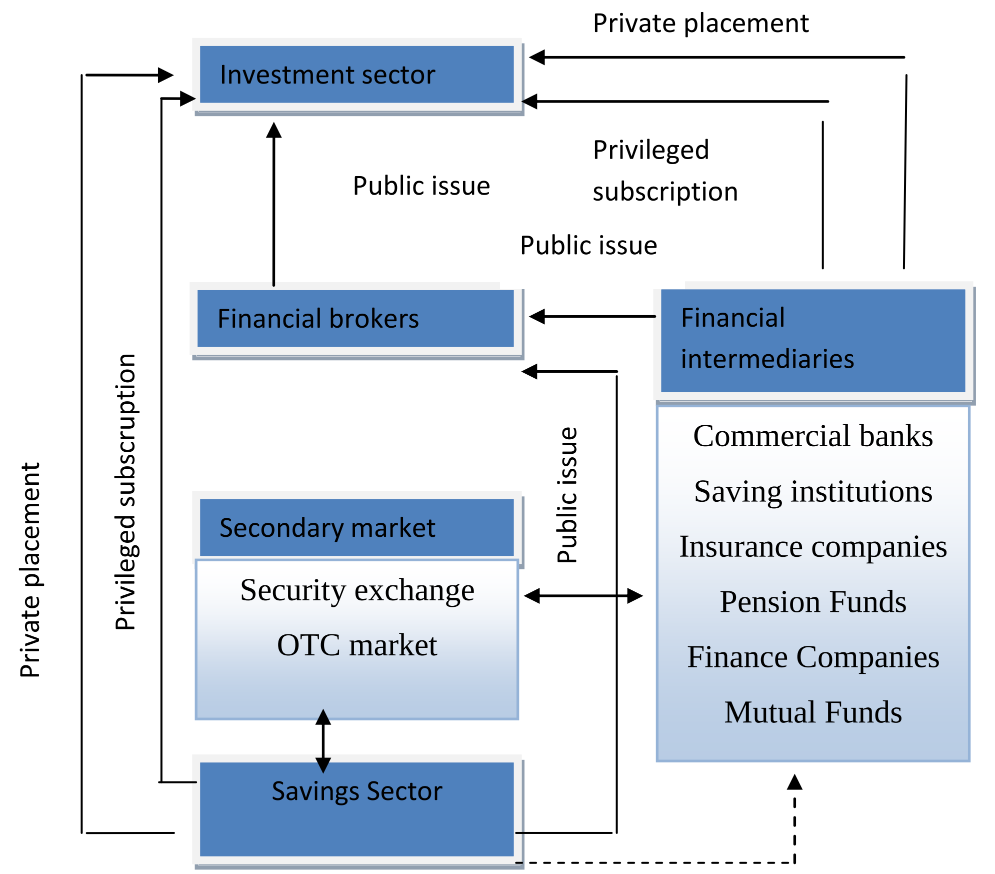
Another international capital market is foreign bond market. The foreign bond is a bond type by a foreign company and government that is denominated in the investor`s home currency and at the same time sold in the investor`s home market.

Finally, the last international capital market is international equity market. This market allows organization to sell blocks of shares to investors in a number of various countries simultaneously. Following figure shows the capital market for corporate securities.

From the Figure 2 we can demonstrate that the main position held by certain financial institutions in moving funds from the saving sector via three main ways: a public issue, a privileged subscription and a private placement.

Investment bankers, financial intermediaries and the secondary market are the key institutions that enhance the movement of funds (Van Horne and Wachowicz, 2005:502).

Figure 2: Capital Market for Securities



Arrows indicate direction of money flow

Broken line indicates that the financial intermediaries own securities flow to the savings sector

Note: No direct link exists between the investment sector and the secondary market : thus previously issued securities sold in the secondary market provide no new funds to the original security issuers

***Source**:* Van Horne, J.C. and Wachowicz, J.H. (2005). "Fundamentals of Financial Management". pp. 502

1.2. BANKS AND GENERAL PRINCIPLES IN BANKING SYSTEM

Banks are the most useful and important financial intermediaries in the modern economy. Banks are financial institutions that take deposit from savers and give as loans to borrowers. Banks are also depositary institutions. In generally depositary institutions include commercial banks, savings and loans and credit companies (Yohe, 1995).

Banks provide their funds from individual depositors and organisations, from other financial institutions and through the financial markets.

The major functions of banks are to manage its assets and liabilities. Assets of banks are uses of funds. But liabilities are sources of funds. According to the well known relation these aforesaid items are balanced by the bank capital (Mukuddem and Petersen, 2006).

Total bank assets = Total bank liabilities + Total bank capital

In this regard we can formalize balance sheet of banks:

$$R(t) + L(t) + S(t) = D(t) + B(t) + C(t)$$

$R: \Omega \times T \rightarrow R_{+}: \rightarrow$ Reserves

$L: \Omega \times T \rightarrow R_{+}: \rightarrow$ Loans

$S: \Omega \times T \rightarrow R_{+}: \rightarrow$Securities

$D: \Omega \times T \rightarrow R_{+}: \rightarrow$Deposits

$B: \Omega \times T \rightarrow R_{+}: \rightarrow$Borrowings

$C: \Omega \times T \rightarrow R_{+}: \rightarrow$Bank capital

There are some major activities in modern banking system, these are deposit, insurance, investment, payment, lending and online banking services (Hamzee and Hugs, 2006).

1.2.1. Commercial banks

As it is discussed before, generally there are three kinds of depository institutions in financial system. These are commercial banks, saving institutions and credit unions. But this diversification depends on banking system of countries. Commercial bank is an organization that accepts deposits and makes these deposits consumer, commercial and real estate loans. The assets of commercial banks includes cash items, securities, loans (home equity loans, consumer loans, auto loans and credit card loans, interbank loans and etc.) Sources of funds of commercial banks include checkable deposits, non-transaction deposits (savings and time deposits) and borrowings (Coyle, 2002).

1.2.2. Banking Risks

In the most basic literature, risk is defined as the chance of financial loss. Risks can be typed as firm-specific risks, shareholder-specific risks and firm - shareholder risks. Business and financial risks are more firm specific risks that are more important for financial managers. Interest rate risk, liquidity risk and market risk are types of shareholder specific risk and very important especially for stockholders. But event risk, exchange risk, purchasing power risk and tax risk are in firm and shareholder risks (Gitman, 2003).

The last decade has seen dramatic losses in financial and banking sector. Firms all over the world that had been performing well suddenly announced great losses and risks. Great losses in credit, interest rate, tax and liquidity issues affected firms and financial systems, especially banks and banking sector. As the result of these loses and risks, banks and financial managers began to strengthen their risk management and control systems (Santomero 1997).

According to another classification, risks and loses in commercial banks can characterize as following (Cecchetti, 2008:284):

- Liquidity Risk - a risk of a sudden demand for liquid funds in banks and financial institutions.
- Credit Risk – a risk of having loans not paid.
- Interest Rate Risk – a risk of mismatch between the maturities of the two sides of the balance sheet.
- Trading/Market Risk – a risk arising from reverse change in the value of an instrument.
- Other risks –foreign exchange risk, arises from holding assets denominated in one currency and liabilities denominated in another, sovereign risk, occurs if the borrowers may not repay their loans banks, or operational risk, related with operational problems.

1.3. PERFORMANCE MESUREMENT IN BANKING AND FINANCIAL SYSTEM

Performance measurement is very important for decision making and future planning in firms and organizations. So, the main goal of financial manager is to measure performance (Ross, Westerfield and Jordan, 2003; 54-55).

There are some methods for determining of performance. Analyze of balance sheet and income statements, efficiency measuring, CAMELS performance analyze system and ratio analysis are useful examples for these methods (Takan, 2002:665)

Ratio analysis is a method of calculating and interpreting financial ratios to analyze and control the performance of the firms. Four basic financial statements, especially income statement and balance sheet are the basic and major inputs for ratio analysis (Brigham, 1989:265).

Investors are interested in profitability, expected future earnings and the stability of these earnings. On the other hand, management uses ratio analysis to make internal control. The basic need of management is to control the performance of firms by periods (Van Horne, 2002:400).

There are five types of financial ratios. These are liquidity, activity, debt, profitability and market ratios. Liquidity ratios are generally used to measure ability of company and organization to meet short term obligations. For meet these obligations firms compare short term obligations with short term resources.

The liquidity ratios are important indicators for appearing of cash flow problems in companies and firms. There are two major basic liquidity ratios. These are current ratio and quick ratio (Van Horne and Wachowicz, 2005:135).

Activity ratio is defined to measure how effectively the firm is using its assets. Another name of activity ratio is efficiency ratios or turnover ratios. Some aspects of activity analysis are closely related to liquidity analysis. In activity ratios the firm prefers manage two specific asset groups – receivables and inventories – and its total assets in general. For calculating activity ratios we need to use year-end asset levels from the balance sheet.

As we say in liquidity ratios the financial statements of company must be consolidated and audited statements. There are four types of activity ratios. These are inventory turnover ratios, average collection period, average payment period and total asset turnover (Van Horne and Wachowicz, 2005:139).

Debt ratios give information about debt position of the firm. In general, the more debt company uses in relation to assets of company, the greater its financial leverage which is the magnification of risk and return introduced through the use of fixed – cost financing (Gitman, 2003:59).

Profitability ratios measure how effectively the firm used its resources to generate profits. There are two types of profitability ratios: one of them is profitability ratios in relation to sales and another is profitability ratios in relation to investment (Pike and Neale, 2003:160-161).

CHAPTER 2

2.1. HISTORY OF THE AZERBAIJAN FINANCIAL SYSTEM

2.1.1. The Sub-period I (till 1991)

One element which proves ancient Azerbaijan statehood is the discovery of local coins which were minted in Caucasus Albania and Atropatena. Results of the scientific historical researches show that first money found in Azerbaijan is related to the times of Alexander of Macedonia. These silver dirhams (drahmas) with “AT” and “ATR” monograms related to Atropatena periods which have been widely discovered in Azerbaijan, Georgia and Dagestan and were minted in Gabala , Ardabil and other cities. At the second half of the III. Century, Sassanid Empire occupied Azerbaijan territory and minted the silver coin in Nakhchivan areas. During VI. – IX. Centuries, Arabian Khilafet conquered Azerbaijan and began to mint golden and copper coins adjoining silver coins. Till XVIII. century, Seljuq Empires, Shirvanshahlar, Shaddadiler, Revvadiler, Mongol marches, Hulakiler and Safavids regularly minted their own coins and money in Azerbaijan. In the XVIII. century, Safavids state began losing their strength and Azerbaijan was basically divided into khanates. In these times, there was not a single monetary system. Every khan minted coins from special copper and silver. As a result of anarchy in khanates, Azerbaijan were divided in two parts with Turkmenchay treatment which signed between Russia and Iran in 1828. North Azerbaijan was the colony of Russian Empire and South Azerbaijan became the colony of Iran. Great National Bank of the Russian empire was established in 1860 and after one year a branch was opened in Baku. Basic purposes of Baku branch were to increase commodity turnover and expedite development of credit system. National Bank of Russian Empire accomplished transactions on registration of promissory notes, mortgage credits and others. During that time, the name of state treasury notes were ruble which was widely used in all of the Russian Empire. At the end of the XIX. century, Azerbaijan had the most developed credit banking system in Caucasus regions. At these times, Azerbaijan had about 200 financial institutions. So there were 28 branches of commercial credit banks, 7 mortgage banks and 8 credit societies, 5 banking agencies, 135 small banking agencies and numerous saving banks. Azerbaijan were the capital of banking and industry during this period.[1]

Main customers of banks in Baku were owners of oil and silk companies. In other cities of Azerbaijan, customers of banks were entrepreneurs in cotton, wine and alcohol industries (Ibrahimov and Kerimov, 1997).

In February of 1917, the revolution was lived and state power passed to the provisional government. Simultaneously emission of state credit notes (rubles) changed. As a result of the revolution, Bolsheviks seized the power. The colonies including Azerbaijan won their independency. With the support of Russian Bolsheviks, in early of 1918 Council of Baku People`s Commissars was established. In January 1918, paper money, which called Baku bons were put into circulation by municipality and City Economy Council. On 28 May of 1918, Azerbaijan established the first democratic republic in the Moslem World and was independent republic. Both of the Russian money and Baku bon were called as Transcaucasus bons, and widely used in Azerbaijan Democratic Republic. Baku branch of the former State Bank of Russia continued it activity as well. By the decision of the Government of the Azerbaijan Republic and Ministry of Finance the State Bank of Azerbaijan Democratic Republic was established on March 7, 1919. This bank was central bank in Azerbaijan. On September 16 1919, the Parliament of Azerbaijan Republic accepted the charter of State Bank of Azerbaijan Democratic Republic and government inaugurated State Bank on September 30, 1919. The first branch of State Bank was opened in Ganja on November 9, 1919 (NBA, 2009).

Basic goals of State Bank of Azerbaijan were to simplify money turnover, to assist trade, industry and agriculture. Emission authorization of bank notes belonged to the Central Bank. The Government determined exchange rate of Baku bon with other currencies to provide convertibility of national currency (Ibrahimov and Kerimov, 1997).

[1] NBA, http://www.nba.az/default.aspx?go=120&lng=en (10.11.2009)

All the credit organizations were controlled by State Bank of Azerbaijan. Money and credit system developed. Saving banks began to operate on December 1, 1919. On April 28 of 1920 Bolshevik Russia occupied Azerbaijan. Independence of the country was retained and called Azerbaijan Soviet Socialist Republic. Financial and credit system of democratic republic was also destroyed. On 31 May of 1920 by the order of Finance Commissariat, the State Bank of Azerbaijan was changed into Azerbaijan Peoples` Bank. With the decision of Revolutionary Committee of Azerbaijan, all banks and other credit organizations were nationalized with the Peoples` Bank on 9 June of 1920. Banking system turned into a monopolistic system. Major function of Azerbaijan Peoples` Bank was to emit paper money. Peoples` Bank was one part of the Finance Commissariat. This bank financed the public economy and was engaged in budgetary estimate[2].

At the end of 1920 the Bolsheviks used e new economic policy. On 16 October of 1921 the Board of the Peoples Commissariat of Azerbaijan decided to restore activity of State bank. The Financial Commissariat prepared the charter and this charter was approved successfully. On March 12, 1922, Federative Union of the Transcaucasus Soviet Socialist Republics (TSSR), which included Azerbaijan, Georgia and Armenian, was established. TSSR was included in the Union of the Soviet Socialist Republics (USSR) on December 30, 1922. The Transcaucasus countries moved to a single monetary system and emission activity of State Bank of Azerbaijan was terminated (Ibrahimov and Kerimov, 1997).

During that time State Bank often called as a National bank. On July 23, 1923 by the decree of the Council of the Peoples` Commissariat of Azerbaijan the state Bank of Azerbaijan was named the State Agricultural Bank of Azerbaijan. Functions of bank also were terminated. According to the constitution of the USSR, adopted in December 1936, Azerbaijan was included to USSR as a sovereign republic.

[2] NBA, http://www.nba.az/default.aspx?go=120&lng=en (10.11.2009)

2.1.2. The Sub-period II (after 1991)

In 1991 after the collapse of Soviet Union, Azerbaijan became an independent country. State Bank of USSR was destroyed as well. On 25 May of 1991 Azerbaijan created its own banking system. But officially in February 1992, National Bank was established on behalf of State bank, industrial –construction bank of former USSR, banks of Azerbaijan Republic of Agro – Industrial Bank of USSR. [3]

The first decade of transition was a strong progress in financial and banking sector for the former Soviet Union countries, especially for Azerbaijan. There were significant achievements in the privatisation, restriction of state banks, entry and development of new local and foreign financial institutions and developments in the legal, supervisory and regulatory framework (Buiter and Taci, 2002).

After independence of Azerbaijan Republic, the economy can be analyzed in two stages:

- Chaos economy and redeveloping of economy between 1991 – 1995.
- After 1996 - macroeconomic stability and dynamic economic develop.

After independence of country in 1991 Azerbaijan Republic needed to transform public – political and socio – economic systems. Unfortunately, a long lasting military conflict with Armenian Republic over Nagorno – Karabakh and recently formed government affected the country, and Azerbaijan began to live economic crises.[4]

Gross domestic product (GDP) of 2.7 billion AZM in 1991 decreased by 13-20% annually from 1991 to 1995. The continuous recession in production activities caused increasing unemployment rates. The actual salaries of population reduced in 8.2 times during the same period. Hyperinflation occurred due to serious decline in production, political unstableness, the war, spontaneous activity of market elements and other economic processes, as well as the multiplication of state debts, salaries and benefits to disadvantageous groups of population, and unreasoned money-credit, taxation-budget,

[3] NBA, http://www.nba.az/default.aspx?go=120&lng=en (10.11.2009)
[4] http://www.azerbaijan.az/_Economy/_GeneralInfo/_generalInfo_e.html (23.12.2009)

financial-baking and foreign trade policies which did not correspond to the country's real economic capacities (Azerbaijan Economic Ministry, 2008).

The years from 1991 to 1995, referred to as the period of economic recession, produced the following negative consequences as the result of unfavorable economic reforms and numerous unreasoned economic activities:

- paralysis of financial and banking systems.
- budget deficit formed 13% GDP in 1993.
- the coverage of budget deficits by the National Bank led to excessive money supply.
- money emission formed 40-45% population incomes in 1992-1994.
- the amount of credits formed 55-60% gross domestic product during 1992-1994.
- interest rates of the National Bank reached 250% in 1994.
- rapid inflation of Azerbaijan's new currency - Azerbaijani Manat, released to circulation in 1992 - and weakening of exchange rates against Russian Rouble in 9 times, and against US Dollar in 245 times until 1995.
- peak of inflation in Azerbaijan.
- foreign trade turnover reduced by 42% during 1992-1994.
- not a single dollar of foreign investments was made into national economy until 1994.
- actual cash incomes of population reduced significantly over the reported period.[5]

At the end of 1995, there were 180 banks and 4 of them were state owned, 10 of them were majorly owned by State Owned Enterprises. As shown in Table 1, all of these state owned banks accounted for 80.2 % of total assets, 83.1 % of total outstanding loans, 82.2 % of deposits, 67 % of branches and 69.9 % of employment in the banking sector as of 1995.

[5] http://www.azerbaijan.az/_Economy/_Reforms/_reforms_e.html (23.12.2009)

Table 1: Statistics about Banks-1995 (in percent)

	Assets	Loans	Deposits	Paid-in capital	Branches	Employment
Four State Owned Banks	80.2	83.1	82.2	23.4	67.0	69.9
Top 20 non state banks	10.2	6.7	11.4	41.5	7.0	6.9
Rest of the Banks	9.6	10.2	11.4	35.1	26.0	23.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank (WB). (1997). Azerbaijan Financial Sector Review. No.15422-AZ.

The Saving Bank accounted for 63% of total household deposits and the Agroprom Bank for another 23 %. The State – owned banks specialized in certain sectors and services (Bayulgen, 2001).

As shown in Table 2, total outstanding loans of the banking system to enterprises and households showed declining from 1992 to 1995. Outstanding loans to enterprises and households at the end of 1995 were about 20% of the corresponding loans at the end of 1992.

In 1995, there was a real increase of 15% in loans to enterprises and households. However, about 25% of the loans in 1995 were in the form of capitalized interest . There was a real decline of 16% in credits to enterprises and households in 1995.

Table 2: Share of Banks in Outstanding Credit to Entreprises and Households (in percent)

	1992	1993	1994	1995
Prominvest Bank	54.3	42.4	19.5	24.1
Agroprom Bank	33.1	23.1	26.7	41.2
Savings Bank	2.0	2.5	2.1	2.3
İnternational Bank	10.6	17.4	33.7	17.3
Other Bank	10.6	17.4	18.0	15.0
Total	100	100	100	100
Real Credit Index (1992=100)	100	37.5	16.9	19.5

***Source*:** WB . (1997). Azerbaijan Financial Sector Review. No.15422-AZ.

As indicated in table above, the percentages of Prominvest Bank, Agroprom Bank Saving Banks and International Bank are 24.1 %, 41.2 %, 2.3 %, and 17.3 % in 1995 respectively.

From the beginning of 1994, manat was the only means of payment of the country. In 1996, the laws on the National Bank of Azerbaijan renewed and banking system activities were adopted to revised form. New bank legislations helped to bring new experience from developed banks and central banks of different countries (NBA, 1996).

According to IMF, the total assets of banks amounted to 24% of GDP at the end of 1997. It means that average assets per bank are 9.3 million USD. State – owned banks capture 70% of total banking sector assets. Commercial banks' assets are slightly over 2 million USD (Laurila and Singh, 2000).According to the report of NBA (2002), there were 46 banks and 220 bank branches in the country. Two of these banks are state-owned, whereas another 15 have a share of foreign capital. 124 bank branches were run by state-owned banks, whereas remaining 96 belong to private banks. In 2002, licenses of 8 banks were abolished, and one bank with 100% foreign capital was given a banking license by the National Bank. As a result of the actions taken to promote the development of the banking system in 2005, bank assets and capital continued to grow rapidly. In 2005 total bank assets increased by AZM 294.5 billion or 35.4% and amounted to AZM 11,259.9 billion as of January 1, 2006. Ratio of the banking system's capital to GDP increased by 0.1 percent as compared to the previous year and totaled to 2.9%. In 2007, Azerbaijan's banking system was developing in parallel to the dynamically continuing economic growth and growing demand for banking services in an environment of unstable international financial markets and liquidity shortfalls (NBA, 2007).Total bank assets increased by 78%, capital by 93% and loans to economic sectors by 98% at the beginning of the 2000s. The major development of the banking sector was the stronger competition among market actors in all areas of the banking and the greater focus on improvement of the quality and reliability of services offered to customers. The market share of government-controlled banks continued to reduce in favor of the private banks.According to Table 3, the asset share of state-owned banks reduced from 51% to 42.4% and share of deposits went down from 60.7% to 51.6% as well. On the other hand, banks with foreign capital also grew stronger. The number of banks with foreign equity reached 21 (as opposed to 20 at the beginning of the year), their share of total assets increased to 28.5% (as opposed to 22.8% at the beginning of the year), while share of total bank deposits reached 24.1% (as opposed to 18.2% at the beginning of the year).

Table 3: Banking System Indicators

	Assets		Deposits	
	2006	2007	2006	2007
By ownership				
State-owned banks	51	42.4	60.7	51.6
Private banks	49	47.6	39.3	48.4
Including banks with foreign capital	25.2	28.5	20.8	24.1
By size				
Large scale banks	65.1	62.7	74.5	67.7
Mid-scale banks	19.4	21.7	17.5	22.9
Small banks	15.5	15.6	8.0	9.4

***Source**:* NBA. (2007). Annual Report.

It is clear that every country selects different strategies to develop their own financial and banking system. European Bank for Reconstruction and Development (EBRD) created one method to measure performance of the banks and financial institutions of a country as a whole. The system is a scoring system which calculates a grade ranging from 1 to 4+, one being the lowest. It shows which banking and financial regulations have been raised to the international standards. Indicators are given in Table 4. A country should accomplish all criteria in an order to get the highest grade.

Table 4: Classification of Indicators

Grade	Requirement
1	- Little progress beyond establishment of two-tier system
2	- Significant liberalization of interest rates and credit allocation; limited use of directed credit or interest rate liberalization ceilings.
3	- Substantial progress in establishment of bank solvency and of a framework for prudential regulation and supervision; full interest rate liberalization with little preferential access to cheap refinancing; significant lending to private enterprises and significant presence of private banks.
4	- Significant movement of banking laws and regulations towards Bank for International Settlements (BIS) standards; well-functioning banking competition and effective prudential supervision; significant term lending to private enterprises; substantial financial deepening.
4+	- Standards and performance norms of advances: full convergence of banking laws and regulations with BIS standards; provision of full set of competitive banking services.

Source*:* Konstandina, N. (2007). Measuring Efficiency and Explaining Failures in Banking: Application to the Russian Banking Sector. pp. 35-37.

The ranking of transaction countries from 1995 to 2006 with EBRD`s system is given in Table 5. Azerbaijan performed the same score from 1995 to 2000 and Azerbaijan banking system began to improve significantly after 2000. Azerbaijan scored 2.0 till 2000. But after 2000 as the result of developing banking and financial system the score of Azerbaijan increased to 2.3. The score of 2005- 2006 of Azerbaijan

Republic was equal to CIS countries average, but was under general average and Non-CIS average.

Table 5: EBRD`s Index of Banking System Between 1995-2006

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Azerbaijan	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3
Belarus	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.7	1.7	1.7	1.7	1.7
Georgia	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.7	2.7	2.7
Kazakhstan	2.0	2.0	2.3	2.3	2.3	2.3	2.7	2.7	3.0	3.0	3.0	3.0
Kyrgyz	2.0	2.0	2.7	2.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Moldova	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.7	2.7	2.7
Russia	2.0	2.0	2.3	2.0	1.7	1.7	1.7	2.0	2.0	2.0	2.3	2.7
Tajikistan	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.7	1.7	2.0	2.0	2.3
Turkmenistan	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ukraine	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.7	3.0
Uzbekistan	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Armenia	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.7	2.7
CIS average	**1.8**	**1.7**	**1.9**	**1.9**	**1.8**	**1.8**	**1.9**	**2.1**	**2.1**	**2.2**	**2.3**	**2.3**
Albania	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.7	2.7	2.7
Bosnia Herz.	1.0	1.0	1.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Bulgaria	2.0	2.0	2.7	2.7	2.7	3.0	3.0	3.3	3.3	3.7	3.7	3.7
Croatia	2.7	2.7	2.7	2.7	3.0	3.3	3.3	3.7	3.7	4.0	4.0	4.0
Czezh	3.0	3.0	3.0	3.0	3.3	3.3	3.7	3.7	3.7	4.0	4.0	4.0
Estonia	3.0	3.0	3.3	3.3	3.7	3.7	3.7	3.7	3.7	4.0	4.0	4.0
FYR Macedonia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Hungary	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Latvia	3.0	3.0	3.0	2.7	3.0	3.0	3.3	3.7	3.7	3.7	3.7	3.7
Luthuania	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.7	3.7
Poland	3.0	3.0	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.7	3.7
Romania	3.0	3.0	2.7	2.3	2.7	2.7	2.7	2.7	2.7	3.0	3.0	3.0
Serbia and Mont	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3	2.3	2.3	2.7	2.7
Slovak	2.7	2.7	2.7	2.7	2.7	3.0	3.3	3.3	3.3	3.7	3.7	3.7
Slovenia	3.0	3.0	3.0	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Non-CIS average	**2.5**	**2.5**	**2.7**	**2.7**	**2.8**	**2.9**	**3.0**	**3.2**	**3.2**	**3.3**	**3.4**	**3.4**
Average	**2.2**	**2.2**	**2.3**	**2.4**	**2.4**	**2.4**	**2.5**	**2.7**	**2.7**	**2.8**	**2.9**	**2.9**

Source : Konstandina, N. (2007). Measuring Efficiency and Explaining Failures in Banking: Application to the Russian Banking Sector. pp. 35-36.

The financial sector of Azerbaijan Republic is included banks, microfinance institutions and small credit unions, insurance companies and a few leasing companies (Commission of European Communities, 2005).

Banking system is the most important element of financial system in Azerbaijan Republic. The country developed two-tiered banking system which is based on market principles and functions. The first tier is National Bank of the Azerbaijan Republic and the second one is commercial banks and non–bank credit institutions. [6]

Today banking system in Azerbaijan was formalized as a credit – based system in which the allocation of fund is left to executive discretion. Credit is the base of the system of corporate finance and banking system`s ability to spread industrial credit is therefore crucial (Bayulgen, 2001).

Basic goals of the country are effective and safe transformation of oil revenues to non –oil sector, to improve chances of access of populations and regions to bank services and to develop financial mediation function of bank system for poverty reduction, strengthen of financial and banking system, to create 100% free and healthy competition sphere in bank services market. [7]

Special attention is being given to the promotion of mortgage lending and to forming a framework for deposit insurance. The draft Mortgage Law created by the NBA was enacted in 2005 (World Bank, 2006).In 2008 the portfolio of banking and financial system did not experience any serious negative changes. During the year, total bank assets increased by 52.7 %, equity by 47.8% and loans to economic sectors by 53.5 %. The ratio of bank assets to the GDP rose from 25.1 to 27% , ratio of equity to GDP increased from 3.8 to 3.9%, loans to economic sectors to GDP rose from 17 to 18.4% respectively.The enhancing role of mid-sized banks was a major trend in the banking system`s development in 2008. The number of banks with foreign capital increased to 23. Foreign capital accounted for 29.9 % of the total bank assets. At the end

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[6] http://www.azerbaijan.az/_Economy/_BankSystem/_bankSystem_e.html 08.12.2009

of 2008, there are 4 representative offices of foreign banks operating in Azerbaijan which are Latvia, France, Germany and Turkey. Number of bank branches increased from 485 to 567 and divisions from 94 to 99.

Table 6: General Information about Banks in 2008

	2005	2006	2007	2008
1. Number of banks	44	44	46	46
-state banks	2	2	2	1
-private banks	42	42	44	45
• Number of banks with foreign capitals	18	20	21	23
• Bank share of foreign capital from 50% to 100%	5	5	6	7
• Bank share of foreign capital less than 50%	11	13	13	14
• Local branches of foreign bank	2	2	2	2
2. Number of bank branches	374	420	485	567
• State banks	126	125	125	37
• Private banks	248	295	360	530
3. Number of banks with local branches	38	41	41	38
4.Number of bank divisions	24	69	94	99
5.Number of local bank representatives	1	0	0	0
6.Number of local representations of foreign banks	2	2	3	4
7.Number of bank unit operating abroad	4	4	5	9
• Affiliate banks	1	1	2	2
• Branches	1	1	1	1
• Representations	2	2	2	6

Source*:* NBA. (2009). January Statistic Bulletin.

The efforts to ensure institutional development of the banking system continued in 2008. Pursuant to the Presidential Decree of March 1, 2005 activities were continued to privatize the Joint – Stock Commercial Bank "International Bank of Azerbaijan" and Joint stock Company "Kapital Bank". Kapital Bank was completely privatized in 2008 (NBA, 2008).

2.1.3. NATIONAL BANK OF AZERBAIJAN

After dissemination of the Sovet Union, Azerbaijan regained state independence in october 18, 1991. A short while before independence of country in 25 may 1991, legal basis for establishment of Azerbaijan banking system was prepared and National Bank was formed. Decree of the President of Azerbaijan Republic on Establishment of National Bank in Azerbaijan was signed in February, 1992 and National Bank was founded instead of State bank, Industrial – Construction Bank of Soviet Union. National Bank was proclaimed a supreme agency. The main activities of the bank were to regulate state credit policy, money turnover, agreements and currency relations, activity of banking system as a whole and to fulfill duties of reserve bank. The laws on the National Bank of Azerbaijan renewed and banking system activities were adopted in revised form in 1996. [8]

The headquarters of National bank of Azerbaijan is situated in Baku. Additionally there are 11 regional branches in different regions of country. These regional offices are generally small and main activities of these offices are distribution of bank notes (NBA, 2008).

According to the Constitutional Law and Law about banking system and National Bank, there are basic functions of National Bank of Azerbaijan. These functions are listed below:

- Determination and implementation of the monetary policy.
- Organization of cash circulation, putting into and withdrawal of banknotes from the circulation.
- Determination and announcement of the official exchange rate of manat.

[8] NBA, www.nba.az (10.11.2009)

- Implementation of the foreign currency regulation and control.
- Maintaining and managing the gold and foreign currency reserves in its charge.
- Management of the drawing up of the reporting balance of payments and participating in the drawing up of the projected balance of payments of the country.
- Licensing, regulating and supervising banking activities of banks in accordance with the law of Azerbaijan Republic on Banks and other normative legal acts.
- Determination, coordination and regulation of activities of payment systems.
- Implementation of other functions stipulated by the legislation (NBA legislation, 2004).

Some supervisional actions are improving the risk management process, including capital adequacy and standards, through introduction of prudential reporting system; developing the methodological guidelines for organisation and implementation of the bank supervision process; and introducing on-site inspections of banks performance based on CAMEL rating system and assessment process in consistency with related international standards (The World Bank, Common wealth of independent States,2006)

The major objectives of National Bank of Azerbaijan are ensuring the stability of the manat, take measures to regulate its purchasing power and exchange rate versus foreign currency and determine monetary and credit policy, carrying out cash emission, paying off state debts in accordance with the current laws of Azerbaijan Republic, and participating in the preparation of balance payment forecasts and to draw up balanced payment reports of Azerbaijan (ADB, 2007).

In addition to the objectives mentioned above, the strategic goal of the National Bank of Azerbaijan is to develop and to integrate banking and financial systems toward European Union banking and financial system. Pursuant to this goal National Bank of Azerbaijan collaborates with different Central Banks and financial institutions of the European countries. Thus, National Bank of Azerbaijan always pays attention to its international relations. The major international cooperation which National Bank of Azerbaijan has relations can be listed as below:

European Integration – The top priority of National Bank of Azerbaijan is to integrate to European banking and financial system as a developing country. The Partnership and Cooperation Agreement signed in 1996 between Azerbaijan and European Union. The main objects of this agreement was to determine the legal basis for European Union and Azerbaijan`s relations and to form the new opportunities for Azerbaijan`s relation with European Union. On the basis of Decree of Azerbaijan President in 2005 there are established European Integration State Committee of Azerbaijan Republic.

Cooperation with International Financial Institutions – The main international financial institutions which Azerbaijan Republic have relations are IMF, The World Bank, The EBRD, The ADB and BIS. One of the high priorities is to corporate with World Bank. There are Country Partnership Strategy program in 2007-2010 and financial sector projects which are Financial Sector Technical Assistance and Financial Services Development Project. EBRD has outstanding financing commitments in 58 projects which have a share in equities of three banks in Azerbaijan – Unibank, Microfinance Bank and Azerdemiryolbank (Commission of the European Communities, 2005).

Cooperation with foreign central banks and institutions – The National Bank of Azerbaijan corporate with Swiss National Bank, Central Bank of Turkey, Bundesbank, National Bank of Poland, National Bank of Austria, National bank of England and etc. The relations with central banks of Pakistan, Estonia, Czech Republic, China, Romani, Italia, Spain, Kazakhstan, Russia, and Greece are planned to start (National Bank of Azerbaijan – International relations reports, 2009).

2.2. THE ECONOMIC INDICATORS IN AZERBAIJAN

In 1991 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, also as a war with Armenia for the control of the Nagorno Kharabakh region. After the independence, Azerbaijan lived bad political and economic years between 1991 – 1995. Government engaged in very loose monetary and financial policies which resulted in a budget deficit, hyperinflation and depletion 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 7. Population of republic was 8.8 million and population growth was 1.1 % annually (WB, 2008).

Table 7: Azerbaijan Country Profile

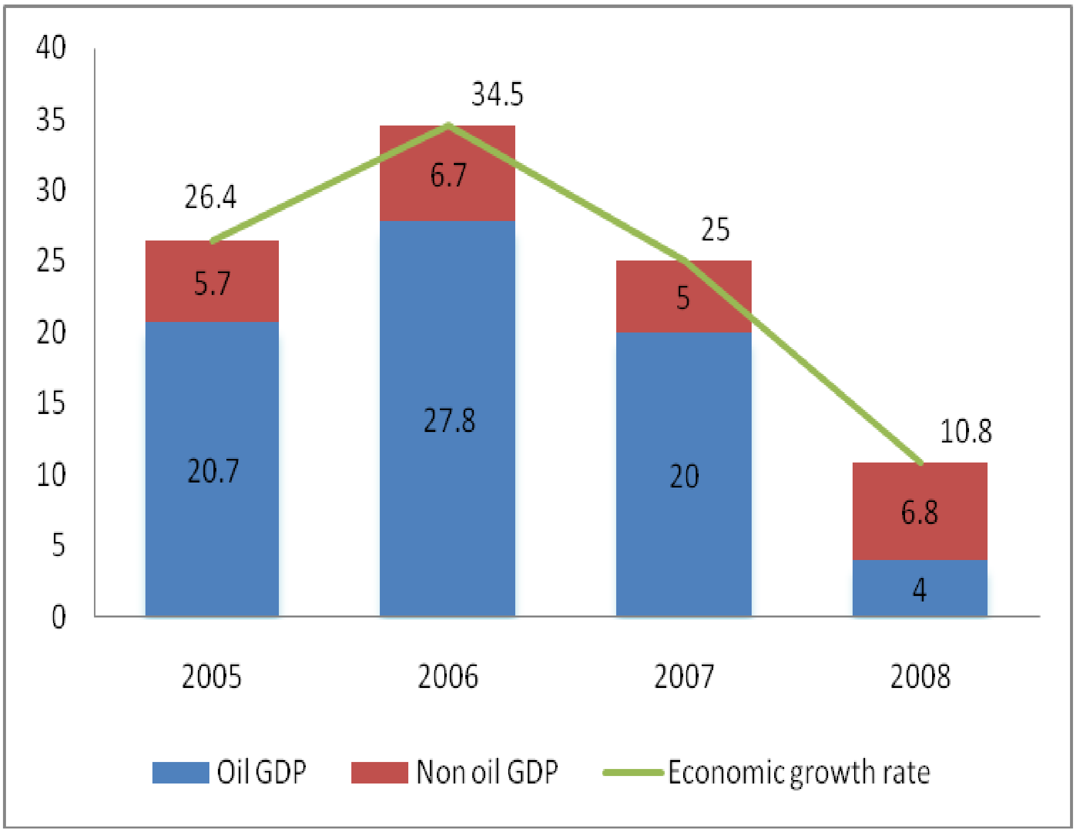
	2005	2007	2008	2009
Population, total (millions)	8.3	8.5	8.6	8.8
Population growth (annual %)	1.0	1.1	1.1	1.1
Surface area (sq. km) (thousands)	86.6	86.6	86.6	86.6

***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 3, 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 3: Economic Growth (in percent)

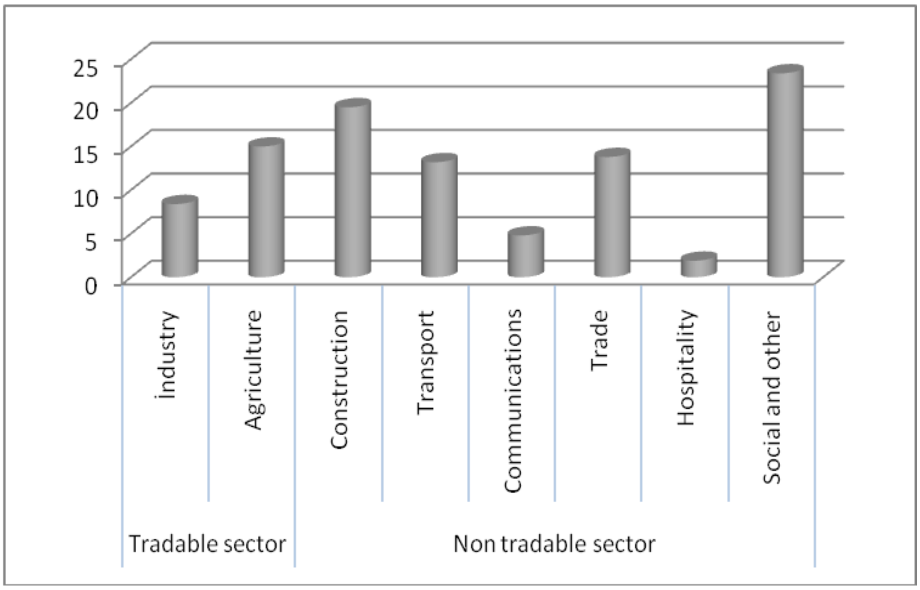


Source: NBA. (2008). Annual Report.

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 4, 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 4: Industry-based Structure of GDP Growth in Non – oil Industry in 2008 (in percent)

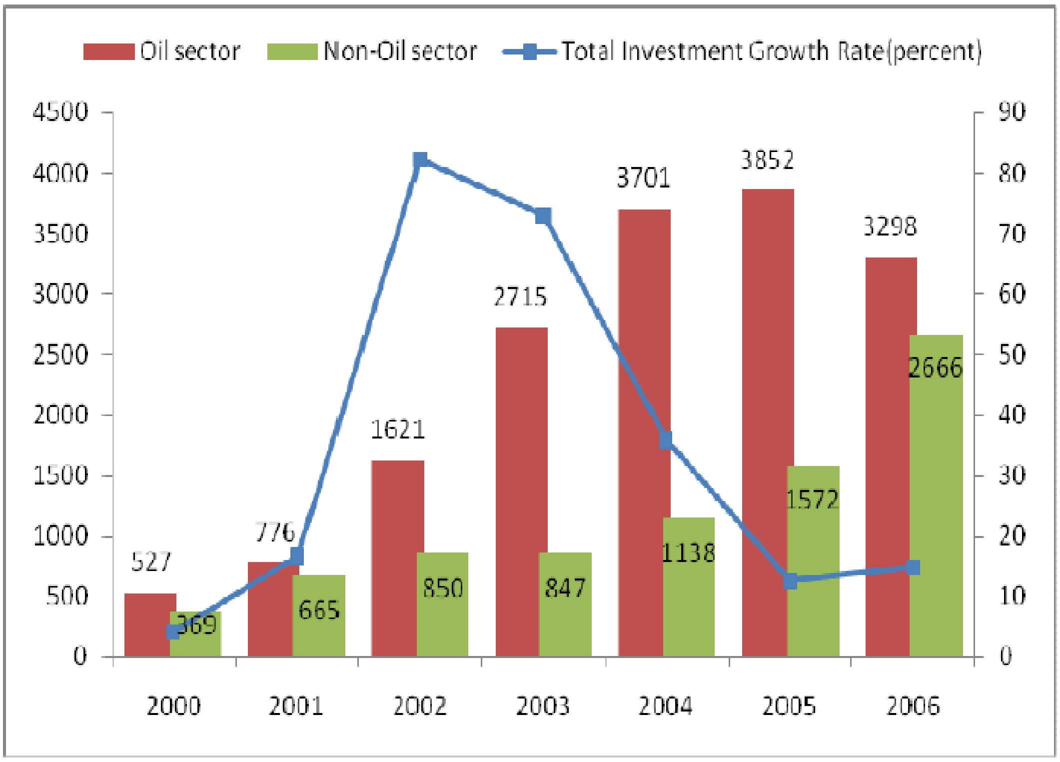


***Source**:* NBA. (2008). Annual Report. pp. 19.

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 5).

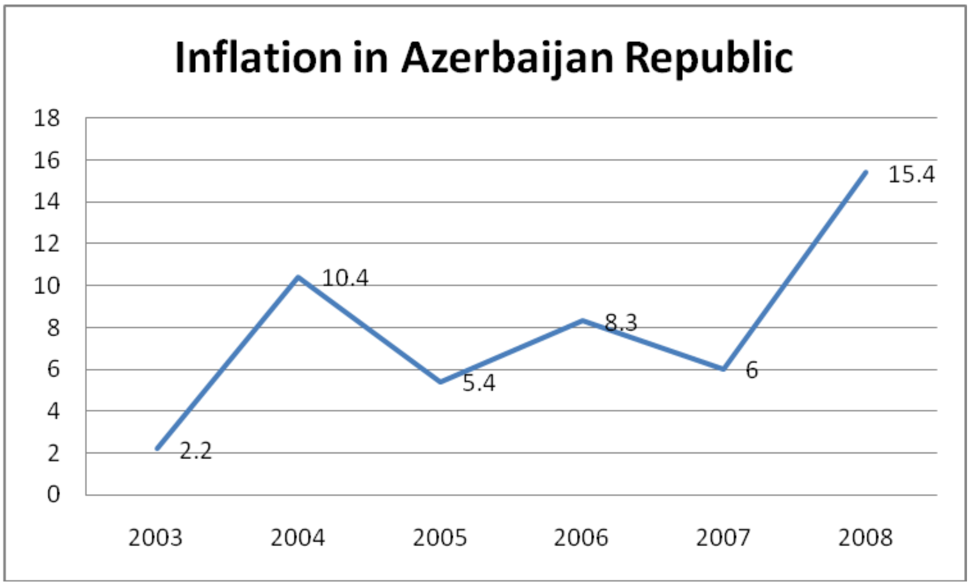
Figure 5: Statistics about Investments (million Azerbaijan manat)



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 6). The inflation rate for food was 19.3%, for non-food products 10.9% and 9.7% for services (NBA, 2008).

Figure 6: Inflation Rates



Source : WB. (2008). Country Profile.

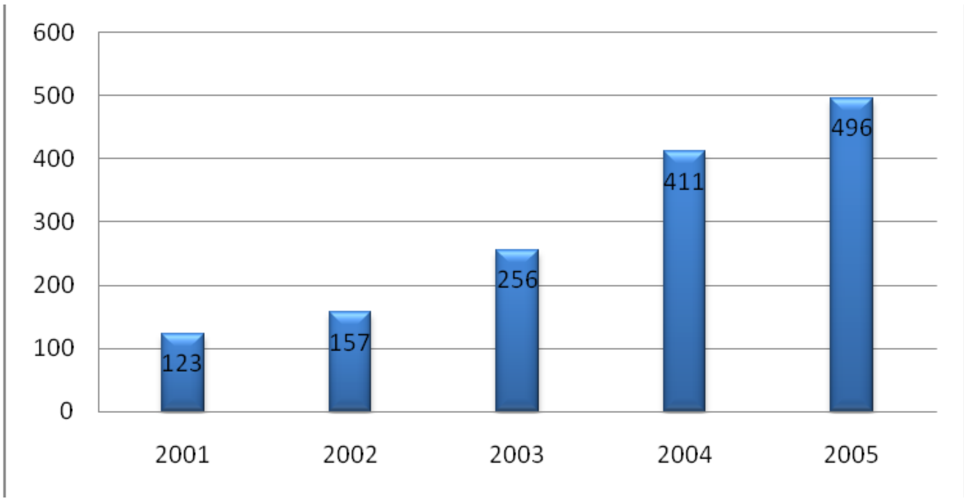
In 2008, employment rate increased. During the year, 123 thousands new job were created, 73 % of which are permanent and full-time jobs. Since October 2003, 766 thousand jobs were created (NBA,2008).

2.3. 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).

As shown in Figure 7, deposits of population were 256 million USD in 2003 and 496 million USD in 2005 which indicates a rapid and continuous increase.

Figure 7: Deposits of Population (million USD)



Source: Azerbaijan Investment Company. http://www.aic.az/download/pdf/Business.pdf (21.09.2009).

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.

2.3.1. 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 8 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).

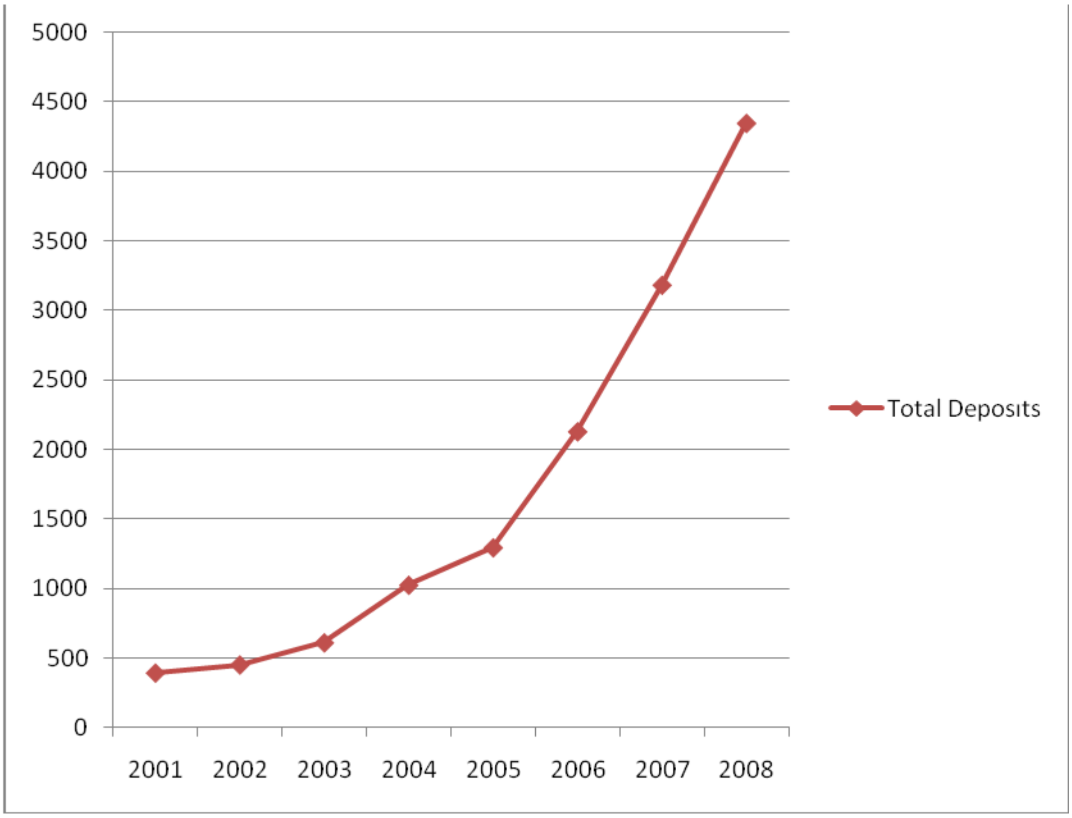
Table 8: Structure of Liabilities

	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.

Total deposits have continuously increased since 2001 (Figure 8).

Figure 8: Total Deposits (million manat)



***Source**:* NBA. (2009). Statistic Bulletin.

As indicated in Table 9, the individual manat-denominated deposits have increased since 2001. Although, individual manat deposits surpassed the foreign exchange dominated deposits for the first time in 2006, total of demand and time deposits in foreign currency is still higher than deposits in manat.

Table 9: Deposits by Currencies

Years	Manat		Foreign currency	
	Demand deposit	Time deposit	Demand deposit	Time deposit
2001	43.7	13.6	179.4	156.3
2002	59.7	11.8	171.6	208.3
2003	91.6	18.6	173.2	327.2
2004	179.5	26.3	244.1	575.4
2005	200.4	48.9	324.1	721.0
2006	542.3	284.1	540.1	762.7
2007	939.2	748.9	270.7	1224.9
2008	999.3	936.0	208.9	2204.3

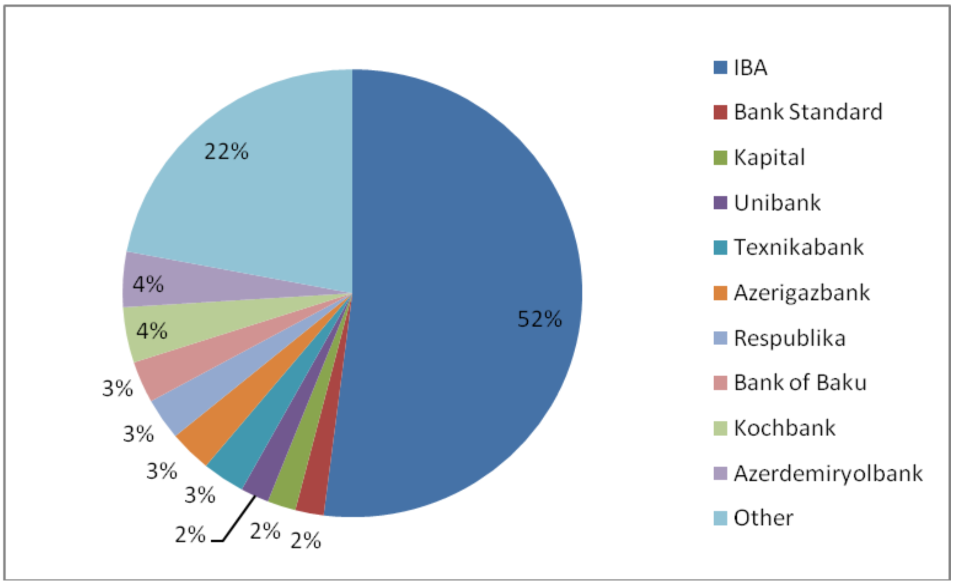
***Source**:* NBA. (2009). Statistic Bulletin.

The Deposit Insurance Fund that started operating in August 2007 further expanded its operations in 2008. The compensation amount on the fund-covered deposits was increased from 4000 AZN to 6000 AZN in 2008.

2.3.2. 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 9 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 9: Share of Bank Assets



Source: ADB. (2007). Country Report. pp. 4.

According to Table 10 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 10).

Table 10: Indicators of Assets in 2008

	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 11, hare 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 11 : Share of Total Bank Assets

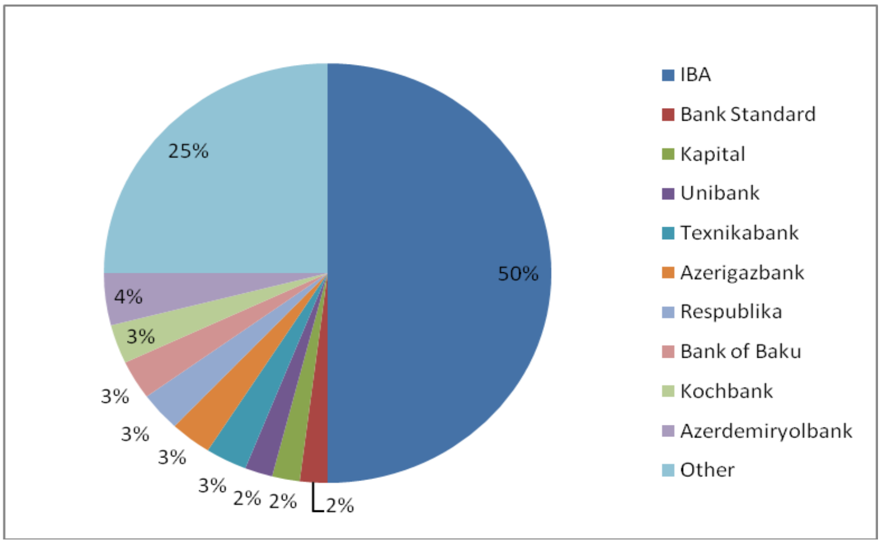
Country	2001	2002	2003	2004	2005	2006	2007
Azerbaijan	58.3	62.0	55.3	56.1	55.2	51.0	42.4
Belarus	53.2	61.9	61.6	70.2	75.2	79.0	76.5
Georgia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kazakhstan	3.5	5.2	5.1	3.7	3.1	2.0	0.2
Kyrgyz	16.6	9.7	7.2	4.1	4.8	3.4	8.7
Moldova	10.2	13.4	15.5	17.6	19.3	15.3	9.5
Russia	-	-	-	-	-	-	-
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. (2007) . 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.

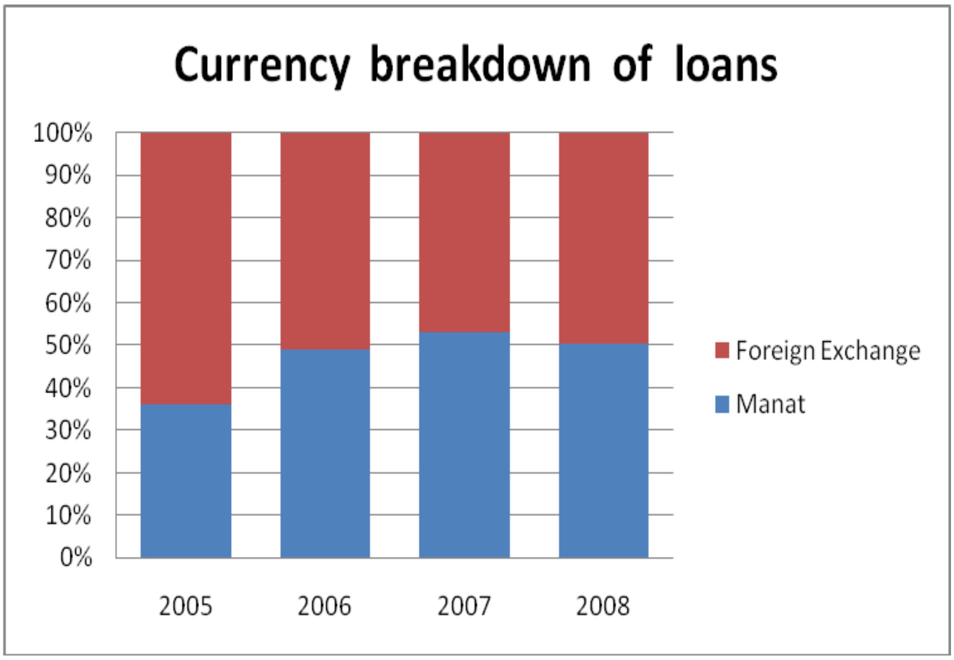
Figure 10: Share of Bank Loans



Source: ADB. (2007). Country Report. pp.5

According to Figure 10, 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 11: Currency Breakdown of Loans



Source: NBA. (2008). Annual Report.

As indicated in Figure 11, 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 12).

Table 12: 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
Agrıculture 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.

2.3.3 Capital of the banking sector

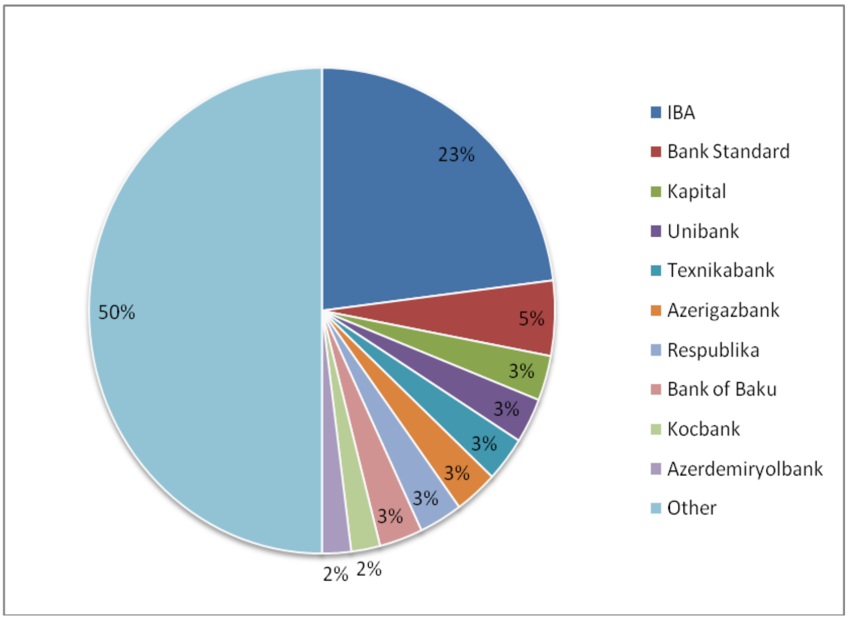
In 2008 country budget revenues increased and consolidated budget surplus was 11% of GDP. In investment policy major priority is given to the use of financial recourses that share is now 75%.

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 13: Structure of Capital in Banking Sector



Source: ADB. (2007). Country Report. pp. 7.

As indicated in Figure 13 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 13: Capital Indicators of Banking Sector

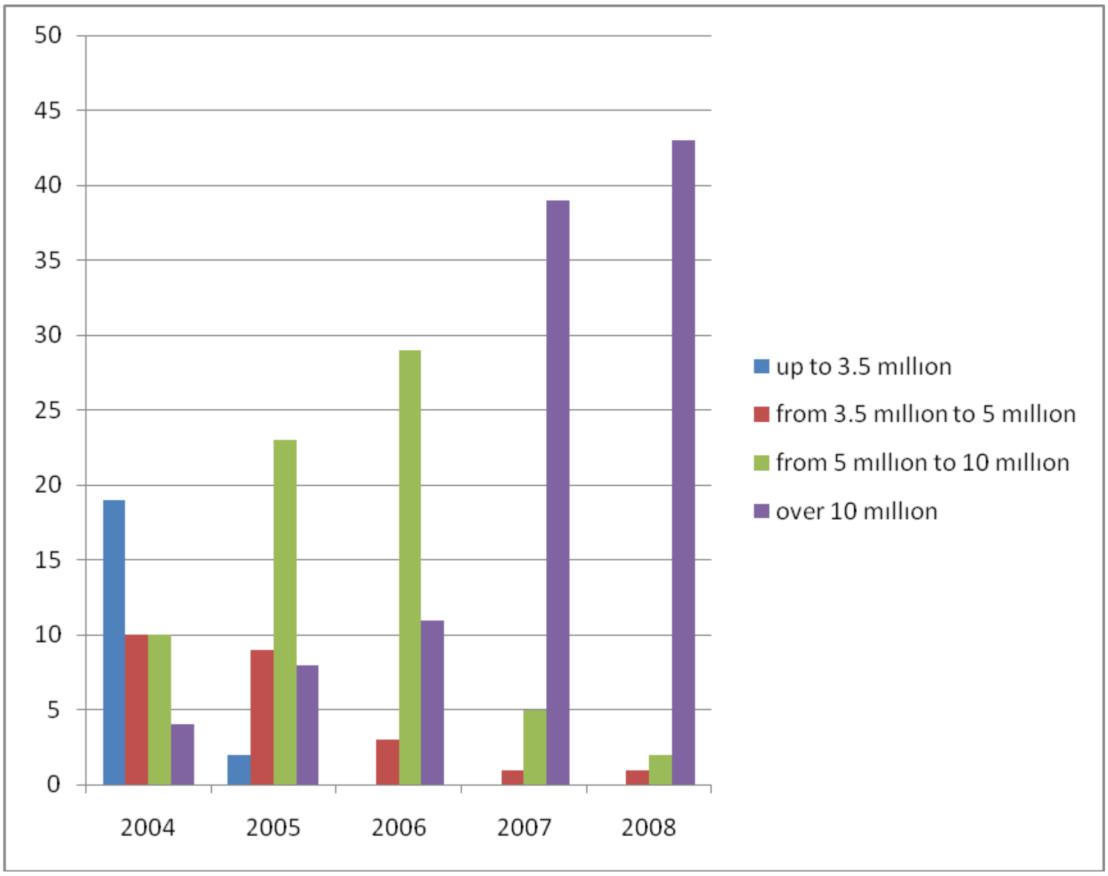
	01.01.2008		01.01.2009	
	AZN mln	percentage	AZN mln	percentage
Tier I capital	755.3	74.8	1091.8	73.2
Paid in capital	689.5	68.3	949.7	63.7
Surplus	20.3	2.0	32.3	2.2
Net undistributed	59.6	5.9	125.2	8.4
Tier II capital	305.4	30.1	449.0	30.1
Profits from the current year	132.8	13.1	192.1	12.9
General reserves	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 13 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 14 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 14: 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).

CHAPTER 3

3.1. PERFORMANCE ANALYSIS IN BANKING SECTOR AND EFFECT OF MACROECONOMIC FACTORS ON PERFORMANCE OF BANKS – LITERATURE SURVEY

There are various studies investigating the performance of the banks. Only selected studies are discussed. Taylor, et al (1997) measured the efficiency and profitability of Mexican banks with Data Envelopment Analysis. According to the results, the largest three bank of Mexico are the most profitable ones and size of banks is the main determinant of profitability of bank.

Bashir (2001) investigated the performance of Islamic Banks in Middle East countries for the period between 1993-1998 by using internal and external bank characteristics, macro economic factors, financial structure and taxation as determinants of performance and profitability. Regression analysis was used for measurement of relationship and it is found that book value of equity over total assets and ratio of loans to total assets have strong positive and significant relationship with profitability.

Kosmidou, Tanna and Pasiouras (2002) searched the effects of bank characteristics, macroeconomic conditions and financial market structure on profit of commercial banks in United Kingdom over the period 1995-2002 with fixed-effect regression analysis. The results show that capital strength of the banks has positive relation with profitability. Additionally, efficiency in expenses management and bank size are significant factors affecting profitability.

Maudos et al. (2002) analyzed the profitability and cost efficiency of the European banking system with DEA. The results indicate that profit efficiency level is lower than cost efficiency level. There are no non linear relationship between size and efficiency. Banks which operate with higher network density are low cost efficient. Market concentration is positively related with profitability.

Rezvanian and Mehdian (2002) analyzed cost structure and production performance of commercial banks in Singapore. Firstly, researchers used translog cost function to examine cost saving opportunities of banks through size expansion and product diversification. Secondly, they applied DEA to measure overall, technical and scale efficiency indexes in order to assess production performance of banks. According to the results of parametric approach the signs of output and input coefficients are positive and statistically significant which indicates positive relationship between cost and independent variables. Researchers also investigated the growth of efficiency measures over the period 1991-1997. The results show that all efficiency measures exhibit upward trend from 1991 to 1993 and a downward trend afterward.

Naceur (2003) investigated the effects of bank characteristics, financial structure and macro economic factors on net interest margins and profitability of Tunisian banking sector over the period 1980-2000. It is found that macro economic factors such as inflation and growth rate have no impact on bank`s net interest margin and profitability, on the other hand stock market development has positive effect on profitability.

Kosmidou (2003) analyzed the determinants of profitability of Greece banks during European Union financial integration period in 1990 - 2002. According to the results, high return on average assets is seen in well capitalized banks, and size is positive in all cases but significant only macroeconomic and financial structure variables are in the model. GDP also has significant and positive relation with return on assets, contrarily inflation is significant but has negative impact. Growth of money supply has no significant effect on profitability of banks. Stock market capitalization to total assets and concentration measures are all statistically significant and negatively related to return on assets.

Bonin, Hasan and Wachtel (2005) analyzed bank performance, efficiency and ownership in transition countries over the period 1996-2000. The standard measures of performance in study are return on assets and return on equity. According to the results, foreign-owned banks are the most cost efficient and the profitability of these banks is the highest. Also the service of these banks is better than government-owned banks.

Arif and Can (2008) analyzed cost efficiency and profitability of Chinese commercial banks over the period 1995-2004 by examining the influence of ownership type, risk profile, size, profitability and key environmental changes on bank efficiency.

According to the results, state-owned commercial banks have the lowest return on assets and highest cost to income. Joint stock commercial banks are not more profitable like city commercial banks but more cost efficient operationally. City commercial banks have the highest provision to loan ratio. Additionally, joint stock commercial banks are more cost and profit efficient than city commercial banks and state-owned commercial banks. Cost and profit efficiency are significantly in joint stock commercial banks.

Sufian and Habibullah (2009) measured the relationship between bank specific and macro economic factors and bank profitability in China over the period 2000-2005. The relationship between size and bank profitability was negative, contrarily the level of capitalisation has positive relation with profitability of banks. The impact of diversification strategy has significantly positive sign. The coefficient of overhead costs was negative and statistically significant. They proved that an increase (decrease) in these expenses reduces (increases) the profitability of banks. Besides, GDP and bank performance have positive association awhich is consistent with the results of Hassan and Bashir (2001), Pasiouras and Kasmidou (2002). Inflation has positive relation with the profitability of Chinese banks as well. Growth of money supply has significantly negative relationship with profitability of banks.It is consistent with the results of Sufian and Habibullah (2009).

Davis and Zhu (2009) investigated performance of individual banks from different countries and measured the relationship between commercial property price movements and the behavior and performance of banks. Effects of economic growth and inflation are consistent with existing literature. Higher economic growth affects banks in gaining higher margins (because the marginal rate of return is higher) and higher inflation reduces the present value of repayments. Hence return on assets is higher. Also bank level variables influence credit policies, risk and profitability. Higher commercial property prices encourage banks to lend more. The results of extended regression and robustness check also similar with baseline regression.

Tukenmez, Demireli and Akkaya (2009) examined the performance of the state-owned commercial banks in Turkey by CAMELS performance rating system over the period 2003 and 2007. The results show that there is 60% development in performance value of banks. The source of this development is liquidity elements.

Kaya (2001) analyzed performance of commercial banks in Turkey over the period 1997-2000. Researcher used CAMELS performance rating system in calculation of performance values. Simultaneously, parametric and non-parametric approaches were used in study to confirm the accuracy of research. It is seen in the results of analyses that small commercial banks in 1997 had the best performance value. But in 2000 large banks performed the maximum performance. The change is the result of crises lived in this period.

Muslumov (2005) investigated the effects of full deposit insurance system in 1994 on the financial performance of banks in Turkey. CAMELS performance rating system is used in calculation of performance of banks. The findings of the study show that bank subject to moral hazard behavior show significant increase in risk related to foreign exchange position. Simultaneously, it affects decreases in capital adequacy relative to their benchmark after the introduction of the full deposit insurance system.

Cinko and Avci (2007) analyzed the CAMELS rating system and forecasted financial failure in Turkish commercial banks over the period 1996-2000. The CAMELS component ratios are used in calculation of performance of banks. Discriminant analysis, logistic regression and neural network models are also employed. According to the results of discriminant analysis, decreases in interest expenses/total assets ratio cause increases in performance. The results of logistic regression and neural network models are consistent with the results of discriminant analysis.

3.2. MOTIVATION AND SCOPE

Azerbaijan banking system has started its operations very recently. According to the statistics there are 46 banks in country. Although the history of the banks are very short, asset and deposit sizes increase continuously. Additionally, the stock exchange has been founded in 2000. Statistics indicate that stock market does not help companies in capital raising process and does not fulfill its meditator function. Hence, the banks have a vital role in the Azerbaijan economy and they are the most important players of the financial system.

Nevertheles, the literature on Azerbaijan banks is limited. The purpose of the study is to measure the performance of the banks in Azerbaijan and to analyze the relationship between bank performance and macro economic factors. The results of the study provide benefits to legislators by giving information about the performance (and also risk in an indirect way) of the most important institutions of the economic system and soundness of the banking sector-this contribution is useful for deposit holders as well-, and by generating inferrences related with the factors affecting banks' performance which is useful in taking precautions and being proactive towards possible problems in the sector.

3.3. METHODOLOGY

This study aims at analysing the effect of macro economic indicators on performance of the banks in Azerbaijan. Hence, the study has two phases: the first part is the measurement of the performance of banks and the second part is the investigation of the effect of macro economic indicators on bank performance.

Performance of the banks are measured with CAMELS performance rating system whose major goal is to povide an accurate and consistent assestment of financial condition and operation, to identify the strengths and weaknesses of credit organisations in the area of Capital Adequacy, Asset Quality, Management, Earnings, Liquidity Management and Sensitivity to Market Risks (National Credit Union Administration, 2000).

According to annual report of State Bank of Pakistan each elements of CAMELS performance rating system means following identifications:

- Capital Adequacy – Capital base of financial organisations facilitates depositors and customers in forming their risk perception about organisations.

It is key elements for financial managers to maintain adequate levels of capitalization. The major indicator of capital adequacy is capital to risk-weighted assets ratio.

- Asset Quality – This element provides the robustness of financial organisation against loss of value in the assets. The deteriorating value of assets, being major source of financial problems are eentually written-off against capital, which ultimately dangerizes the profit capacity of the organisations. Non performing loans to advances, loan default to total advances and recoveries to to loan default ratios are the necessary indicators in asset quality.
- Management Soundness – management of financial organisations generally become valuable in terms of capital adequacy, asset quality, earnings and profitability, liquidity and risk sensivity ratings. Additionally leadership and administrative ability, technical competence, ability to plan and react to changing situations contains performance evaluation.
- Earnings and Profitability – This element is the major source of increase in capital. Earnings and profitability is examined with regards to interest rate policies and capital adequacy of provisioning. It also useful fot supporting of present and future operations of the organisations.

- Liquidity – Liquidity helps to financial organisations to obtain sufficient funds by increasing liabilities or converting assets of organisations quickly at a reasonable cost. Efficient liquidity management provides to a situation where a spread between rate sensitive assets(RSA) and rate sensitive liabilities (RSL) is maintained. The Gap is the most useful tool to exposure interest rate between RSA and RSL.

- Sensitivity to Market Risk – This element of risk refers to organisation to exposure interest rate risk, foreign exchange volatility and equity price risks.These risk are named as market risk. Risk sensivity is mostly valuable in terms of monitor and control market risk(State Bank of Pakistan, annual report 2001:96).

Each element of CAMELS performance rating system is assigned a numerical rating based on five key components (USAID, 2006:6):

“ 1 – Strong performance , sound management, no cause for supervisory concern.

2 – Fundamentally sound, compliance with regulations, stable, limited supervisory needs.

3 – Weaknesses in one or more components, unsatisfactory practices, weak. performance but limited concern for failure.

4 – Serious financial and managerial deficiencies and unsound practices. Need close supervision and remedial action.

5 – Extremely unsafe practices and conditions, deficiencies beyond management control. Failure is highly probable and outside financial assistance needed.

CAMELS performance value of the banks are calculated according to the method followed by Turker Kaya (2001):

First of all, the Trimmean function for all values of ratios are calculated by removing the highest- and lowest-20 percent. After measuring this function, the refence value of the banks were calculated. Reference value were computed as annual arithmetic average of ratios for all banks.

Secondly, index value was counted by ((Value of ratio/reference value)x100) ratio. After measuring index value, the next step isthe calculation of the deviation value. The calculation of deviation value depends on relationship between ratio and components. In the case of “+” relationship (((Value of ratio/reference value)x100) – 100) formula was used , but in the case of “-” relationship, ((100 - ((Value of ratio/reference value)x100)) formula was employed.

After calculation of deviation values, LN function was employed to minimize all values. After measuring and minimizing all deviation values for each ratios, the value of each components were computed by calculating the arithmetic average of ratios. Finally, computing arithmetic average of all values of components give the CAMELS performance value of banks.

After the calculation of CAMELS performance value of the banks, the relationship between performance value of banks and macro economic factors was estimated by panel data analysis.

According to the previous studies, Bashir (2001) used regression model in his analysis to measure effect of internal variables of bank and macro economic factors on profitability and performance of banks. He also used dummy variables in his analysis. Sufian and Habibullah (2009) measured the relationshipe between profitability of Chinese banks and macro economic factor with linear regression model. They used the profitability of bank as dependent variable and macro economic factors as independent variable. Baceur (2003) investigated his study with panel data analysis for measuring the impact of bank variables, macroeconomic factor and financial structure variables on profitability and performance of banks with panel data analysis.

The regression model to measure the relationship between bank performance of banks in Azerbaijan Republic and macroeconomic factors (as GDP and inflation) of the country is described as following:

$$Y_{it} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Y_{it} indicates the dependent varible which is performance value of Azerbaijan banks while the X_1 and X_2 represent the macro economic variables-GDP and inflation rate.

According to Gujarati (2004:637-638), there are some advantages of panel data analysis.These are:

1. “Since panel data relate to individuals, firms, states, countries, etc.,over time, there is bound to be heterogeneity in these units. The techniques of panel data estimation can take such heterogeneity explicitly into account by allowing for individual-specific variables, as we shall show shortly. We use the term

individual in a generic sense to include microunits such as individuals, firms, states, and countries.

2. By combining time series of cross-section observations, panel data give "more informative data, more variability, less collinearity among variables, more degrees of freedom and more efficiency."
3. By studying the repeated cross section of observations, panel data are better suited to study the *dynamics of change.* Spells of unemployment, job turnover, and labor mobility are better studied with panel data.
4. Panel data can better detect and measure effects that simply cannot be observed in pure cross-section or pure time series data. For example, the effects of minimum wage laws on employment and earnings can be better studied if we include successive waves of minimum wage increases in the federal and/or state minimum wages.
5. Panel data enables us to study more complicated behavioral models. For example, phenomena such as economies of scale and technological change can be better handled by panel data than by pure cross-section or pure time series data.
6. By making data available for several thousand units, panel data can minimize the bias that might result if we aggregate individuals or firms into broad aggregates."

There two type of panel data analysis: Balanced panel data analyses and unbalanced panel data analysis. Since the number of observations are changeable, unbalanced panel data analysis is employed. There are 104 unbalanced observations over the period 2003-2008. Period SUR in coefficient covariance method and random effect model in cross sectional unit are employed.

Regarding to Naceur (2003) the equation of regression model in random effect model analysis must be defined as

$$y_{it} = \beta' X_{it} + \varepsilon_{it} \qquad i = 1, \cdots, N \, ; \, t = 1, \cdots, T_i$$

where $\varepsilon_{it} = \mu_i + \upsilon_{it}$ reflects the error disturbances of elements. Y indicates the dependent variables. X is defined as determination of k explanatory variables. i=1,….,N; are constant coefficients specific to country.

The individual typical effects are random and distributed normally $\left(\mu_i \rightarrow \mathrm{IIN}\left(0, \sigma_\mu^2\right)\right)$.

Independent residual terms are randomly distributed $\left(\upsilon_{it} \rightarrow \mathrm{IIN}\left(0, \sigma_\upsilon^2\right)\right)$.

Gujarati (2004) prooved that composite error term consists of two components: one of them is cross section or individual-specific error component and another is combined time series and cross section error component.

According to all these theoretical informations, this study hypothesises the following statements:

Ho: There are no relationship between macro economic factors (GDP and Inflation) and performance of the banks

H1: At least one independent variable (GDP or Inflation) affects performance of the banks

3.4. VARIABLES AND DATA

The selection of variables is the most important part of the analysis. Bashir (2001) used two types of variables. One of them is endogenous variables which contains non interest margin (ratio of net non net interest income to total assets), before tax profit (ratio of before tax profit to total assets), return on assets and return on equity. Another variable is exogenous variable which contains bank characteristic indicators, macroeconomic indicators, taxation indicators, financial structure indicators.

Bank characteristic indicators consists of some variables such as book value of equity over total assets, ratio of loans to total assets, ratio of non interest earnings to total assets, ratio of consumer and short term funds to total assets, ratio of overhead to total assets, ratio of total liabilities to total assets and some interaction variables such as book value of equity over total assets and GDP per capita; ratio of loans to total assets and GDP per capita, ratio of non interest earnings to total assets and GDP per capita, ratio of consumer and short term funds to total assets and GDP per capita, ratio of overhead to total assets and GDP per capita.

Macroeconomic indicators consist of real GDP per capita, annual growth rate of real GDP per capita and annual inflation rate.

Reserves of banking system over deposits of banking system, as interaction variable reserves of banking system over deposits of banking system X GDP per capita, total taxes paid divided by before tax profits for each bank, second interaction variables total taxes paid divided by before tax profits for each bank X GDP per capita provide taxation indicators.

Financial structure indicators consist of ratio of total assets of the deposit money banks, ratio of stock market capitalization to GDP, interaction between stock market capitalization and GDP, market capitalization divided by total assets of the deposit of banks, as interaction variable ratio of stock market capitalization X GDP per capita, as interaction variable market capitalization divided by total assets of the deposit of banks X GDP per capita and total assets of banks.

Kosmidou, Tanna and Pasiouras (2002) divided the variables of analysis in their study as dependent and independent variables.Dependent variables contains the performance and profitabilityof banks of United Kingdom. There are five bank specific measures and four measures representing the influence of market structure and macroeconomic conditions which are independent variables and determinants of United Kingdom bank`s profit. Five bank specific measures are : cost to income ratio, ratio of liquid assets to customer and short term funding to represent liquidity, ratio of loan loss reserves to gross loans , ratio of equity to total assets and total assets of a bank representing its size. Market structure variables are concentration in the banking sector and stock market capitalisation.

In the study of Naceur (2003) dependent variable is the profitability and performance of Tunisian banks. Researcher described the independent variable as internal and external factor. Bank characteristics including capital ratio, overhead, and loan and liquidity ratio are internal factors. But macro economic factors such as inflation and growth and financial structure indicators such as bank, market size and concentration provide the external factors.

The study of Kosmidou (2003) is consistent with the study of Naceur (2003). Researcher divided the determinants of profitability into two groups which are internal and external variables. Five bank specific characteristics are used as internal factors of performance which are cost to income ratio, the ratio of equity to total assets, the ratio of bank`s loan to customer and short term funding, the ratio of loan loss reserves to gross loans and the bank`s total assets which represent expenses management, capital adequacy, liquidity, asset quality and size respectively.

Macroenomic and financial structure variables consist of annual change in GDP, annual inflation rate, the growth supply of money, the ratio of market capitalization to total assets of the deposit money banks, the ratio of total asset to GDP and concentration measure.

Fadzlan and Habibullah (2009) used return on asset (performance) as dependent variable. Independent variables consists of 2 factors. One of them is internal factor includes bank specific variables.

They used some ratios from balance sheet and income statement of banks to measure banl specific variables. Ratios used in study are the following: total loans/total assets; Natural logaritm for value of total asset of the bank in year t; loan loss provision/ total loans; non interest income / total asset; non interest expense / total asset; equity/total assets. Another factors used in analyses are external factors which consists of natural logaritm of GDP, the rate of inflation and growth of the supply of money.

The main variables which Davis and Zhu (2009) used in empirical work are 1) Macro economic variables including GDP, inflation and interest rates, 2) Commercial real estate prices which are taken from a database maintained by the Bank for International Settlements, 3) Bank specific variables taken from balance sheet and income statement information of individual and commercial banks.

Taking into account the variable selection method of the previous studies, the ratios used for calculating CAMELS performance value are assembled in five components. Main ratios are total equity/total liabilities,(invest. securities available for sale + invest. in associates(invest. hold in maturity)/total assets, net inc./total equity, (total assets in foreign currency - total liabilities in foreign currency)/total equity. All ratios are shown in Table 15.

Independent variables consist of macroeconomic factors such as GDP and annual inflation rate of Azerbaijan Republic.

Data used in investigation were obtained from Balance Sheets and Income Statements of Commercial Banks operating in Azerbaijan over the period 2003-2008. Data about GDP and inflation are gathered from the Central Bank of Azerbaijan (Table 14).

Table 14: Data Sources

Data	Frequency	Source
Balance Sheet Accounts and Income Statement data	Annually	Annual Reports of Commercial Banks
GDP	Annually	National Bank of Azerbaijan Republic
Inflation	Annually	National Bank of Azerbaijan Republic

Unfortunately data are not available for all banks through the years. Thus, 12 banks are included in the sample in 2003, 13 banks in 2004, 16 banks in 2005, and 22 banks in 2006, 24 banks in 2007 and 17 banks in 2008. As currency all data are shown in Azerbaijan Manat.

3.5. EMPIRICAL RESULTS

The results of CAMELS performance rating systems and results of panel data analysis are analyzed respectively.

3.5.1. CAMELS performance rating system

As a preliminary stage to calculating of value of components in CAMELS performance rating system, values of ratios was computed by years . The major components used in analysis are Capital, Asset, Management, Earnings, Liquidity and Sensitivity to Market Risks. Ratios, direction of relationship between ratios and components and reference values are presented in following tables:

Table 15: Direction of Relation Between Ratios and Components and Reference Values

Components and ratios	Direction of relation	2003	2004	2005	2006	2007	2008
1)Capital							
Total equity/total liabilities	+	0.35	0.28	0.55	0.25	0.24	0.28
Total equity/total loans	+	0.68	0.39	0.70	0.46	0.34	0.52
Share capital/total equity	+	0.94	0.81	0.74	0.75	0.71	0.89
(Total asset in foreign currency – total liabilities in foreign currency)/total equity	-	0.28	0.45	0.03	0.08	-0.18	-0.07
Net inc./Aver. total assets	+	0.02	0.02	0.03	0.02	0.028	0.02
(Total equity+net inc.)/ total assets	+	0.25	0.27	0.30	0.24	0.22	0.25
2)Asset							
Total Loans/total assets	+	0.53	0.66	0.67	0.62	0.64	0.69

Provision for loan losses/ total loans	+	0.07	0.02	0.01	0.02	0.02	0.03
.(Inves. securities available for sale + invest. in associates(invest. hold in maturity)/total assets	+	0.09	0.03	0.06	0.05	0.04	0.03
3)Management							
Provision for loan losses/ total loans	+	0.07	0.02	0.01	0.02	0.02	0.03
Non interest expense/ total assets	-	0.06	0.04	0.05	0.05	0.05	0.04
Non interest inc./non interest exp	+	0.83	0.87	0.91	0.69	0.74	0.67
4)Earnings							
Net inc./total assets	+	0.01	0.01	0.02	0.02	0.02	0.02
Net inc./total equity	+	0.09	0.10	0.16	0.10	0.14	0.14
Non interest inc./non interest exp	+	0.83	0.87	0.91	0.69	0.74	0.67
Total interest inc. / (Invest. securities available for sale + invest. in associates (invest. hold in maturity)	+	31.85	29.71	4.23	7.25	13.37	24.72
5)Liquidity							
Deposits/Total equity	-	2.79	3.39	2.65	3.00	2.96	2.25
((Cash+Cash balances with NBA)+invest. securities available for sale) / Total asset	+	0.14	0.16	0.15	0.14	0.17	0.14
((Cash+Cash balances with NBA) + investment	+	0.19	0.32	0.45	0.20	0.23	0.17

securities available for sale)/Total liabilities							
6)Sensitivity to market risk							
Total assets in foreign currency/total liabilities in foreign currency	-	1.07	1.06	1.03	1.06	0.82	0.90
Net inter. inc/total equity	+	0.05	0.03	0.05	0.05	0.04	0.05
(Total assets in foreign currency - total liabilities in foreign currency)/total equity		0.28	0.45	0.03	0.08	-0.18	-0.07

From the Table 15 and results of CAMELS performance analysis, it is seen that values of ratio by year are very changeable. These values imply that data are not stagnant.

Total equity/total liabilities and total equity/total loans ratios were maximum in 2005 comparatively 2003 and 2004. It means that total equity of banks were maximum in 2005 over the period 2003-2008.

According to figures net income, investment issues and non interest income were appraised maximum in 2005. After 2005 these values were diminished rapidly.

But contrary to these indices, total loans and total liabilities had increasing value over the period 2005-2008. It is clearly seen from total loans/total assets ratio that percentage of total loans is very high. Approximately total loans is equal to half of the total assets of banks.

Provision for loan losses/total loans ratio explained completely this claim. The results of this ratio indicated the increasing of total loans and total liabilities in discussion period. It is inescapable that there were more loan losses in those situations.

So all banks compensated some percentage of these loans for not meet with irresistable situations.

Regarding to deposits/total equity ratio the value of deposits were explained as wavy from 2003 to 2006. Unfortunately, deposits from customers showed decreasing in the latest 3 years. Generally the average percentage of deposits in total equity is higher in first 3 years than the latest.

Currency issues too affected the performance of banks. The influence of changeable currency value was reason of diminishing net profit. As theoretically, currency issues is one of the source of profit in bank. If currency waves more, net profit will decrease relatively.

Regarding to outcomes of analysis, the percentage of difference between total assets in foreign currency and total liabilitites in foreign currency to total equity decreased from 0.45 point to –0.07 point significantly.

Total assets in foreign currency/ total liabilitites in foreign currency was diminished from 1.07 in 2003 point to 0.82 in 2007 systematically. But the value increased to 0.90 in 2008.

It is revealed in analysis that non – interest income decreased significantly in te latest 3 years. Roughly, the average of non – interest income is less 20 percent in the latest 3 years, than the first three years.

Investment issues also reduced consistently as other components. According to balance sheet and income statement of banks there are two types of investments.One of them is investments available for sale, another is investments in associates,which banks hold in maturity.

Investments available for sale and investments hold in maturity provided together 9 percent of total assets in 2003. But this figure resulted with 3 percent in 2008.

Total interest income (without profit tax) is greater 31 time than the sum of the investments available for sale and investments hold in maturity in 2003. This value decreased to 4.23 in 2005 with unexpected degree. But this value increased to 24.72 in 2008 significantly.

One of the influenced sector in Azerbaijan was banking sector. Decreasing of deposit volumes , increasing of loans values, compensation of loans from gained profit, diminishing of cash balances and net interest incomes, increasing of operating expenses are the major factors for weakness of performance in all banks.

According to Bashir (2001) there is strong relationship between inflation and bank performance.When inlfation in one country increases the performance of banking sector decreases automatically.

The study of Fadzlan and Habibullah (2009) in China banking sector is also consistent with the study of A.H. Bashir (2001). Researcher prooved that there is negative impact of inflation on performance of banks.

3.5.2. Panel Data Analysis

This section provides empirical results of regression analysis between CAMELS performance value of banks and macro economic determinants (GDP and Inflation).

There are total 29 bank data over a period 6 years, so that our complete dataset includes 108 observations. These data could not applied standard regression model, because there exists some components and data that cannot be controlled easily. And datasets of banks are not stagnant, these are unbalanced data.Under these circumstances, there are used panel data regression analysis for measuring relationship between macroeconomic factors and performance of banks.

As presented in methodology section of thesis, basic regression equation for analysis is as following:

$$Y_{it} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

In this case Y represents the value of the dependent variable – CAMELS performance values, X_1 and X_2 are the indicator of macro economic determinants

(X_1 is the ndicator of GDP, X_2 is the indicator of inflation), additionally β_0 is coefficient of constants and other β are the coefficient of independent variables.

Taking into account of all these our panel data regression equation was as following:

$$\text{CAMELS performance value} = \beta_0 + \beta_1 \text{GDP} + \beta_2 \text{Inflation} + \varepsilon$$

GDP is an important component which was called the best single measure of the economic well-being of a country. According to Gregory Mankiw (2005) " Gross Domestic Product (GDP) is the market value of all final goods and services produced within a country in a given period time"

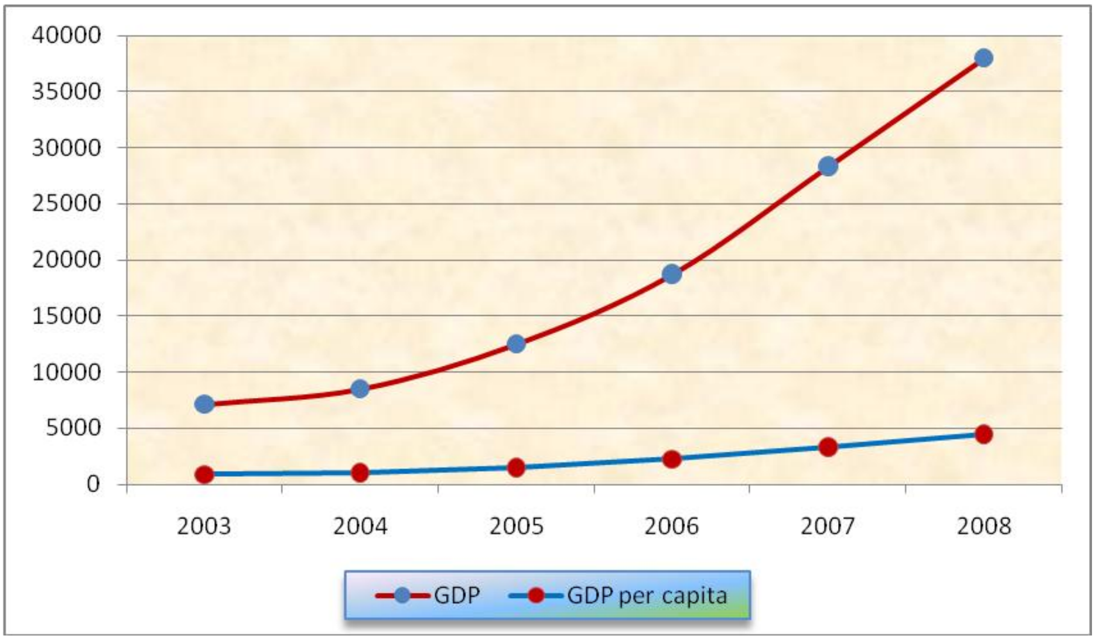
Real GDP tells us the current position of economies.Table 16 and Figure 15 demonstrates the statistics of GDP and GDP per capita in Azerbaijan Respublic over the period 2003-2008.

Table 16: GDP and GDP per capita

Years	***GDP*** (million Azerbaijan manat)	***GDP per capita*** (manat)
2003	*7146.5*	*880.8*
2004	*8530.2*	*1042*
2005	*12522.5*	*1513.9*
2006	*18746.2*	*2241.1*
2007	*28360.5*	*3351.8*
2008	*38005.7*	*4439.9*

Source: NBA. (2008). Annual Report.

Figure 15:GDP (million manat) and GDP per Capita (manat)



Source*:* NBA. (2008). Annual Report.

Table 16 and Figure 15 clarify that GDP and GDP per capita exhibit high values over the period 2003 and 2008. If the score of GDP 7146.5 in 2003 , it was 38005.7 in 2008 . It is roughly 3 time higher in 2008 than 2003.

From the first view to the table it is clearly seen that economy of Azerbaijan Republic developes with sharp speed. And it is indicator of growth of all economic sectors.

The main reason for decreasing values of ratios and components, especially performance, is increasing of inflation in country. In 2003 inflation in Azerbaijan Republic was 2.2 %. But this figure was 15.4% in 2008. These figures are presented in following Table 17 .

Table 17: Inflation Values by Years

Years	*Inflation in Azerbaijan Country*
2003	*2.2*
2004	*10.4*
2005	*5.4*
2006	*8.3*
2007	*6*
2008	*15.4*

Source: NBA. (2008). Annual Report.

It can be seen from Table 17 that inflation values are not stagnant, figures showed wavings over the period 2003-2008. In circumstance of increasing of inflation value in 2004, this value was diminished to 5.4% in 2005.

The maximum indicator of inflation in the latest 6 years was in 2008. But it was result of ruling global crises in every side of the world. Though Azerbaijan is a country of oil production, uncontrolled global crises affected Azerbaijan too. Being of financial crises in various sectors was major reason of increasing inflation.

Panel data regression method is measured in Eviews 6.0 program. Firstly, CAMELS performance values, GDP values were reduced with LN function for gain correct analysis.Secondly, all banks were coded beginning from 1.

All these variables were entered into Eviews program and general information as output from analysis are presented in the following Table 18.

Table 18: General Information about Analysis

Indicator	Explanation
Dependent Variable	Performance
Independent Variables	GDP and Inflation
Method	Panel EGLS (Cross-section random effects)
Sample	2003-2008
Periods included	6
Cross sections included	29
Total panel (unbalanced) observations	104
Coef . covariance method	Period Sur

To decide cross section method type of panel data is the main requirement in analysis. According to Ashenfelter, Levine and Zimmerman (2003) in choosing between fixed and random effects models it is important to take into consideration the advantages and disadvantages of models.

But with helping Hausman Test we can decide which model is very useful in analysis.Results of Hausman Test are presented in following table:

Table 19: Results of Hausman Test

Hausman Test		
Variable	***Fixed***	***Random***
Inflation	*-0.0567*	*-0.0576*
GDP	*-0.0028*	*-0.0977*

It is clearly demonstrated from the Table 19, Hausman Test offer to select cross section method of analysis as random effects. The results of panel data regression analysis are presented in following table.

Table 20. Results of Panel Data Regression Analysis

Variables	*Coefficients*	*Std. errors*
Constant	*5.1615**** *(8.3130)*	*0.6208*
Iınflation	*-0.0576**** *(5.7785)*	*0.0099*
GDP	*-0.0097* *(-0.1473)*	*0.0663*

Notes*:* *** indicates significance level at 10% and figures in parantheses represents T-statistics.

Taking the results in Table 20 into consideration, the unbalanced panel data regression equation with coefficients can be proposed as following:

CAMELS performance value of banks = 5.1615 -0.0097 GDP – 0.0576 Inflation

The coefficients of constant is 5.1615 and the sign is positive. The sign of coefficient for both variables are negative. Inflation is statistically significant with dependent variable and is consistent with economic evidence. This value indicates that 1 percent increase in inflation will decrease performance of bank -0.0576 percent.

In defiance of the inflation the coefficient sign of GDP is negative and it is statistically insignificant. It means that 1 percent increase in GDP will decrease -0.0097 percent performance of banks. But this result is not consistent with researchs in literature.

In the study of measuring relationship between performance of Islamic Banks and macro economic factors Abdel Hameed Bashir (2001) prooved that GDP and performance of banks have positive and significantly relationships.

The study of Kyrikai Kosmidou (2003) about relationship between performance of Greece banks and macro economic factors argued that GDP has positive impact on performance of banks.

Other statistics of analysis as R^2 , adjusted R^2 , Durbin-Watson Test ,Standard error of regression are demonstrated in following Table 21:

Table 21: Summary Statistics

Summary Statistics	
R-squared	*0.3357*
Adjusted R-square	*0.3226*
S.E of regression	*0.3106*
F.statistic	*25.5282****
Durbin-Watson stat	*1.7643*

Notes*:* *** indicates the significance level at 10%

The R^2 – explanation of degree is 0.3357, standard error of regression is 0.3106. Durbin –Watson Test statistic is used to find correlation between residuals. The findings of our analysis show that the model used in thesis does not suffer from autocorrelation problem. According to all these findings H_0 rejected.It means that one of the independent variables has relationship with dependent variable – performance of banks.

The relationship between inflation and performance of banks is expected results.But the result of GDP and performance of banks is unexpected. As seen from GDP values table GDP increased every years. But it is economically arguement that if GDP increase performance of bank will increase.

The main reason of increasing GDP might be increasing of investments and production values of oil sectors. After signing of “Contract of Century” regarding to oil production in Caspian Sea in 1995 and construction of “Baku – Tbilisi –Jeyhan” oil pipeline between 2002-2005 increased capital flows to country. Automatically, this capitals influenced increasing of GDP.

Beside the increasing of oil revenues, 2004 banking reforms, high economic growth , the ruling global crises too negatively affected banking sector. All of these said are major factors influencing to the performance and profitability of banks.

There are two investigations about Azerbaijan banking system and macro economic indicator. One of them is Emil Ibrahimov which researched “Efficiency in Azerbaijan Bankin system”. The results of study showes that there were pure technical efficiency in Azerbaijan banking system in 2007-2008. Also average efficiency of banking sector decreases sharply in 2007 (İbrahimov, 2009)

Another research is Elnur Alakbarov which investigated relationship between GDP and export-import in Azerbaijan Republic. Researcher theoritically analyzed that increase in GDP causes increasing of export-import. But he argued that this hypothesis is not valid for Azerbaijan.

CONCLUSION

The main purpose of this study is to investigate the performance of banks and banking sector in Azerbaijan Republic with CAMELS performance rating system and measure the relationship between CAMELS performance value of banks and macro economic determinants as GDP and inflation over the period 2003-2008

Banks are the most important financial instutions in financial system. Nowadays banking sector evolves its complex modern form and performs perfect services in financial system as accepting deposits, lending, brokerage, currency issues, investment and other services.

The study aims at analyzing the effect of macroeconomic factors on the performance of the Azerbaijan banks. First of all, the performance of the banks were measured with CAMELS performance rating system over the period 2003-2008. Data of 29 banks were gathered from balance sheet and income statements of banks and National Bank of Azerbaijan.

The results of analysis show that performance and profitability of banks increased by years from 2003 to 2005. Bur the findings of ratios and components used in analysis indicate that after 2006, especially in 2008 the performance of banks faced sharply decreases. The main reason of decreases is the effects of global crisis.

In the second part of the analysis, the effects of macroeconomic determinants as GDP and inflation on CAMELS performance values of banks are analyzed. Panel Data Regression Analysis was employed in relationship estimation. Total 104 observations were in investigation over the period 2003-2008. The data were not equal by years. Thus, unbalanced panel data regression analysis was preferred.

Regarding to results of panel data, there were negative and statistically significant relation between inflation and performance of banks. It is expected and consistent with results of previous studies.

On the other hand, the sign of relationship between GDP and performance of banks was negative and it was statistically insignificant. It was not consistent with the results of previous literature.

This analysis is the first study in Azerbaijan Republic that calculates the performance of banks with CAMELS performance rating system and measures the relationship between performance of banks and macro economic factors such as GDP and inflation.

There were some limitations that affect the results of analysis and constrain the generalization of the findings. First, there were not included all banks by years, because of data unavailability. Second, the research period covers 2003-2008. But taking the formalizing period, especially from 1994th would be very explanatory and preferable to gain sufficient results. World financial crisis in 2008 had inevitable impacts to Azerbaijan Republic. It will be very important in future investigations to analyze the period before and after crisis.

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